



Save the Children



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European Union



ChildFund  
Laos

# SCALING

Partnership for Improved Nutrition in Lao PDR Pillar 3:  
Sustainable Change Achieved through Linking Improved  
Nutrition and Governance (SCALING)

**END EVALUATION**

**FINAL REPORT**

15th January 2022



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Table of Contents

Acknowledgements .....	i
<b>EXECUTIVE SUMMARY .....</b>	<b>ii</b>
<b>ABBREVIATIONS .....</b>	<b>xiii</b>
<b>1 PROJECT OVERVIEW .....</b>	<b>1</b>
1.1 Scope .....	6
1.2 Objectives .....	6
1.3 Audience .....	8
1.4 Data collection .....	8
1.5 Data analysis .....	9
1.6 Limitations .....	11
<b>2 RESEARCH METHODOLOGY .....</b>	<b>14</b>
2.1 Component 1: Quantitative Survey .....	14
2.1.1 Survey Design .....	15
2.1.2 Key Indicators .....	16
2.1.3 Field Methods .....	18
2.1.4 Anthropometry .....	18
2.1.5 Statistical Analyses .....	19
2.1.6 Baseline Re-Estimation .....	20
2.2 Component 2: Qualitative Evaluation .....	20
<b>3 COMPONENT ONE: QUANTITATIVE SURVEY .....</b>	<b>21</b>
3.1 Survey Mechanics .....	21
3.1.1 Sampling Achieved .....	21
3.1.2 Demographics .....	21
3.1.3 Ethnicity .....	22
3.2 Quantitative Indicator Summary .....	22
3.3 Nutrition - Overview .....	25
3.3.1 Nutritional Status in 2021 .....	25
3.3.2 Chronic Malnutrition .....	25
3.3.3 Underweight .....	28
3.3.4 Acute Malnutrition .....	29
3.3.5 Low Birth Weight .....	31
3.3.6 Infant and Young Child feeding and Maternal Diet .....	31
3.3.7 Dietary Intake Children 6-23 Months .....	33
3.3.8 Minimum Acceptable Diet (MAD) Children 6-23 months .....	34
3.3.9 Minimum Dietary Diversity (MDD) AND Min. meal Frequency (MMF) Children 6-23 months .....	35
3.3.10 Mothers receiving advice on nutrition .....	35
3.3.11 Maternal Nutrition .....	35
3.4 Child Illness .....	38
3.4.1 Childhood Diarrhoea & Acute Respiratory Infection .....	39
3.4.2 Prevalence of Acute Respiratory Infection .....	41
3.4.3 Prevalence of Fever .....	41
3.4.4 Percentage of households accessing a health care facility when ill .....	42
3.5 Food Security .....	43
3.5.1 Food Consumption Score .....	44
3.5.2 Household Food Security .....	45
3.5.3 Animal Protein Consumption .....	46

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

3.5.4	Household Expenditures.....	46
3.5.5	Coping Strategies Index .....	47
3.6	Water, Sanitation and Hygiene .....	49
3.6.1	Type of water source .....	49
3.6.2	Use of Improved Water .....	50
3.6.3	Water Treatment .....	50
3.6.4	Bottled Water .....	52
3.6.5	Sanitation.....	52
3.6.6	Handwashing .....	54
3.6.7	Access to WASH Infrastructure and Services .....	54
3.7	Maternal and Child Health .....	55
3.7.1	Supplementation and Vaccination in Children.....	55
3.7.2	Supplementation in Pregnancy .....	56
3.7.3	Deworming Mothers.....	58
3.7.4	Assistance during Delivery and ANC .....	59
3.7.5	Birth Assistance .....	60
3.8	Decision-Making and Workload-Sharing .....	61
3.8.1	Women's Decision-Making .....	61
3.8.2	Workload sharing.....	62
3.9	Livelihoods .....	63
3.9.1	Households Producing Vegetables and Fruit .....	63
3.9.2	Households Producing Small livestock/aquatic animals or insects .....	64
3.9.3	Households Using Processing Technology .....	64
3.9.4	Households Collecting NTFPs.....	64
3.10	Participation .....	65
3.11	COVID-19 .....	65
3.12	Risk Analysis 2021 .....	67
3.13	Recommendations .....	68
<b>4</b>	<b>QUALITATIVE FINDINGS – COMPONENT 2.....</b>	<b>70</b>
4.1	Relevance .....	70
4.2	Coherence .....	72
4.2.1	Provincial Nutrition Governance: the PNC.....	73
4.2.2	District Nutrition Governance: The DNC .....	74
4.3	Effectiveness .....	82
4.4	Efficiency .....	89
4.5	Impact .....	94
4.5.1	Women's leadership training.....	112
4.6	Sustainability .....	114
4.6.1	Learning questions.....	116
<b>5</b>	<b>CONCLUSIONS .....</b>	<b>120</b>
<b>6</b>	<b>LESSONS LEARNED .....</b>	<b>121</b>
<b>7</b>	<b>RECOMMENDATIONS .....</b>	<b>122</b>
<b>ANNEX 1- SURVEY DESIGN .....</b>	<b>125</b>	
Baseline Survey Design .....	125	
Sample Size.....	125	
Post Estimation.....	126	
Endline Survey Design .....	126	

**ANNEX 2 – INDICATOR TABLES..... 127**

I-1.1 - Stunting in Children Under 60 Months of Age (%)	127
I-1.2 - Stunting Children Under 24 months	128
I-2.1 - Underweight – Children Under 60 Months of Age (%)	129
I-2.2 Underweight – Children Under 24 Months of Age	130
I-3.1 - Wasting Children Under 60 Months of Age (%)	131
I-3.2 Wasting CU2 Children Under 24 Months of Age (%)	132
I-4 - Low Birth Weight - Recorded for children under 60 months (%)	133
I-5 - Exclusive Breastfeeding 0-5 months (%)	134
I-6- Appropriate Breastfeeding 6- 23 months (%)	135
I-7 - Women’s Minimum Dietary Diversity Score (%)	136
I-8 - Low Maternal BMI – women aged greater than 19 years (%)	137
I-9 – Appropriate Diarrhoea Treatment of Children under 60 months (%)	138
I-10 - Immediate Breast Feeding (< 1 hour)	139
I-11.1 – Child Minimum Acceptable Diet (% Children 6-23 months )	140
I-11.2 - Child Minimum Dietary Diversity Score (% Children 6-23 months)	141
I-12 - Open Defecation (% households)	142
I-13 - Mothers Receiving Advice About Nutrition (%)*	143
I-14 - Handwashing with Soap (% mothers)	144
I-15 - Use of an Improved Water Source (% households)	145
I-16 - Treatment of Water in the Home (% households)	146
I-17 - Correct Disposal of child Faeces	147
I-18- Improved Sanitation (% households)	148
I-19 Women in Decision Making (% women with significant input)	149
I-20 Men’s Household Workload Sharing (% households men provide acceptable contribution)	150
I-21 - Access to WASH products (% households)	151
I-22 Four ANC Visits or more (%)	152
I-23.1 – Consumption of Animal Protein Within Last 24 hours (% women)	153
I-23.2 – Consumption of Animal Protein Within Last 24 hours (% children)	154
I-24 Food Expenditure as Fraction of Total	155
I-25 - Households Grow Vegetables	156
I-26 HHs producing small livestock/aquatic animals or insects	157
I-27 HHs using processing technology to extend access to nutritious food	158
I-28 Households collecting or growing NTFPs	159

**ANNEX 3 - ADDITIONAL TABLES ..... 160**

Nutritional Status of Children Less than 60 months (%)	160
Minimum Meal Frequency – Children 6-23months	161
Birth in Hospital or health Centre (%)	162
Assisted Birth (%)	163
Diarrhoea Prevalence (%)	164
Fever Prevalence (%)	165
ARI prevalence (%)	166
Child dewormed in the last 6 months	167
Vitamin A in last 6 months (% child 6-59 months)	168
Child Measles Vaccination (%)	169
Prevalence of Health Visits by Mother &/or Child (%)	170
Fe Folate Supplement –Mother (%)	171
Deworming – Mother (%)	172

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Vitamin A Supplement – Mother (%)	173
Vitamin B1 – Mother (%)	174
Household Food Consumption Score	175
Households With Poor or Marginal Food Security (%)	176
Household Total Expenditure (LAK/person/month)	177
Household Use of Bottled Water (%)	178
Coping Strategy Index	179
Covid19	180
Participation (%)	182
<b>ANNEX 4 BIBLIOGRAPHY</b>	<b>183</b>
<b>ANNEX 5 QUANTITATIVE SURVEY INSTRUMENT</b>	<b>188</b>
<b>ANNEX 6 QUALITATIVE RESEARCH COMPONENT SITE SELECTION CRITERIA</b>	<b>222</b>
<b>ANNEX 7 QUALITATIVE SURVEY INSTRUMENTS</b>	<b>225</b>
<b>ANNEX 8 KOBOTOOLBOX QUESTIONNAIRE FOR SCALING STAFF</b>	<b>235</b>

## MAIN DOCUMENT TABLES

TABLE 1 SCALING CONSORTIUM GEOGRAPHIC AND TECHNICAL RESPONSIBILITIES RESPECTIVELY	5
TABLE 2 COMPONENT 2: STAKEHOLDERS INTERVIEWED	9
TABLE 3 KEY INDICATORS FOR BASELINE AND ENDLINE COMPARISON	17
TABLE 4 - ANTHROPOMETRIC MEASURES CHILDREN UNDER FIVE	18
TABLE 5 - ANTHROPOMETRIC MEASURES PREGNANT WOMEN	19
TABLE 6 - ACTUAL INTERVIEWS UNDERTAKEN	21
TABLE 7 - GENDER AND ETHNIC COMPOSITION OF PARTICIPANTS IN 2018 AND 2021 SURVEYS	22
TABLE 8 - ETHNICITY OF TARGET POPULATION BY DISTRICT (2021)	22
TABLE 9 - INDICATOR SUMMARY (PROJECT LEVEL)	24
TABLE 10 - STUNTING BASELINE END-LINE COMPARISON 0-59 MONTHS	26
TABLE 11 - STUNTING BASELINE END-LINE COMPARISON 0-23 MONTHS	27
TABLE 12 - PREVALENCE OF UNDERWEIGHT IN CU5	28
TABLE 13 - PREVALENCE OF UNDERWEIGHT CU2	29
TABLE 14 - WASTING CU5	30
TABLE 15 - PREVALENCE WASTING CU2	30
TABLE 16 - TABLE 14 BIRTH WEIGHT (KG)	31
TABLE 17 - DIETARY ASSESSMENT TOOLS FOR CHILDREN 6-23 MONTHS (20)	34
TABLE 18 - ADVICE ABOUT FEEDING	35
TABLE 19 - DIETARY ASSESSMENT TOOLS - WOMEN	36
TABLE 20 - MEAN DIETARY DIVERSITY SCORE FOR WOMEN	37
TABLE 21 - PERCENTAGE OF WOMEN ACHIEVING MINIMUM DIETARY DIVERSITY SCORE	37
TABLE 22 - PERCENTAGE OF WOMEN CONSUMING INDIVIDUAL FOOD GROUPS	38
TABLE 23 - PREVALENCE OF UNDERWEIGHT MOTHERS (BMI<18.5KG/M2)	38
TABLE 24 - INCIDENCE OF DIARRHOEA	40
TABLE 25 - TREATMENT OF DIARRHOEA IN CHILDREN	41
TABLE 26 - CHANGE IN HEALTH CARE BEHAVIOUR - HEALTH CARE FACILITIES VISITED DURING LAST ILLNESS (% O CASES)	43
TABLE 27 - FOOD SECURITY ASSESSMENT TOOLS	44

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

TABLE 28 - HOUSEHOLD FOOD CONSUMPTION SCORES .....	45
TABLE 29 - FREQUENCIES USED TO CALCULATE CSI IN BASELINE .....	48
TABLE 30 - MAIN SOURCE OF DRINKING WATER BASELINE AND ENDLINE .....	50
TABLE 31 - TYPE OF WATER TREATMENT (% OF HOUSEHOLDS TREATING WATER) .....	51
TABLE 32 - WATER TREATMENT BY SUPPLY TYPE (2021).....	52
TABLE 33 - TYPE OF SANITATION .....	53
TABLE 34 - SOURCE OF ANC 2021 .....	59
TABLE 35 - BIRTH LOCATION .....	60
TABLE 36 - TYPES OF BIRTH ASSISTANCE.....	60
TABLE 37 - FOOD PRODUCTION (PERCENT OF HOUSEHOLDS UNDERTAKING LIVELIHOOD).....	63
TABLE 38 - HOUSEHOLD RECORDED PARTICIPATION .....	65
TABLE 39 - PROFILE OF SCALING STRATEGY BY EVALUATION QUESTION .....	70
TABLE 40 - GENDER DISTRIBUTION OF SCALING STAFF WHO RESPONDED TO THE STAFF SURVEY .....	72
TABLE 41 - ALIGNMENT OF SCALING OUTCOMES WITH THE NUSAP .....	72
TABLE 42 - NON-PROFIT ASSOCIATIONS (CSOS) SENDING INTERNS TO SCALING (47).....	78
TABLE 43 - TECHNICAL ADVISORS AND CONSORTIUM PARTNER BASE .....	80
TABLE 44 - ACHIEVEMENT OF MAIN ACTIVITIES BASED ON SELECT INDICATORS .....	82
TABLE 45 - WOMEN'S PARTICIPATION IN SCALING ACTIVITIES.....	85
TABLE 46 - STRENGTHS AND CHALLENGES OF THE LSS STRATEGY .....	106
TABLE 47 - SCALING STAFF REFLECTIONS ON THE CONSORTIUM .....	117
TABLE 48 - BASELINE SAMPLING DESIGN FOR DETECTING A 7-PERCENTAGE POINT REDUCTION IN STUNTING .....	126

## MAIN DOCUMENT FIGURES

FIGURE 1 SCALING RESULTS FRAMEWORK .....	2
FIGURE 2 LOCATION OF SCALING PROJECT ELEMENTS SOURCE: SCALING PROJECT INTRODUCTION 14.10.2018 .....	5
FIGURE 3 STUNTING Z-SCORE AND PERCENT STUNTING BY AGE GROUP .....	27
FIGURE 4 UNDERWEIGHT Z-SCORE AND PERCENT STUNTING BY AGE GROUP .....	29
FIGURE 5 WASTING Z SCORE AND PERCENT STUNTING BY AGE GROUP.....	30
FIGURE 6 WOMEN'S DIETARY DIVERSITY SCORE .....	37
FIGURE 7 COPING STRATEGIES INDEX FOR BASELINE (2018) AND ENDLINE SURVEYS (2021) .....	49
FIGURE 8 SCALING ORGANISATIONAL STRUCTURE. ....	81
FIGURE 9 PARTICIPATION BY MOTHER'S EDUCATION .....	86
FIGURE 10 PARTICIPATION BY WEALTH GROUP .....	86
FIGURE 11 BUDGET BREAKDOWN, BY CONSORTIUM PARTNER (49) .....	89
FIGURE 12 PROJECT EXPENDITURES, PROJECTED THROUGH END OF PROJECT .....	91
FIGURE 13 EXPENDITURE BY ACTIVITY CLUSTER .....	91
FIGURE 14 SCALING STAFF PREDICTIONS ABOUT SUSTAINABILITY ON A SCALE OF 1-5 WHERE 5 IS MOST LIKELY TO ENDURE .....	115

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Acknowledgements

This endline assessment, including a quantitative survey and a qualitative study, was conducted by Lao Social Research Ltd. (LSR) for Save the Children International (SCI) Netherlands for the Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance (SCALING). The activity was funded by the European Union through its umbrella initiative Partnership for Improved Nutrition in Lao PDR (EU PIN), and co-funded by SCALING consortium partners (SCI, CARE, CCL, ChildFund).

The research team comprised: Dr Laurie Zivetz as Lead Researcher, Statistician/Analyst Dr David Fredericks, Nutrition Consultant Anna Jolly M.Nutr&Diet Dr Zivetz was broadly responsible for Component Two – Qualitative Study, and Dr Fredericks for Component One: Quantitative Study. Anna Jolly provided analysis and expert commentary on all the nutrition related data. Coordination and management of the team of field researchers was undertaken by Bouasavanh Khanthaphat. Gertjan VanBruchem and Phonpasith Chanthanith of Save the Children Lao rendered invaluable assistance to the team of researchers, as did staff of CARE, CCL, ChildFund Laos (CFL), as well as provincial and district health and agriculture department staff in Lao PDR.

Main authors of the report were Laurie Zivetz, David Fredericks and Anna Jolly.

## EXECUTIVE SUMMARY

**The Sustainable Change Achieved through Linking Improved Nutrition and Governance (SCALING) project** is designed to enhance the nutritional status of adolescent girls, pregnant and lactating women, and children <5 years in 14 districts across the provinces of Luang Prabang (LBP), Luang Namtha (LNT), Phongsaly (PSL), and Huaphanh (HUA) in the Lao PDR. The program is being implemented from December 2017 to December 2021<sup>1</sup> by a consortium of INGOs--Save the Children (SCI), CARE, ChildFund Laos (CFL), and Comité de Coopération avec le Laos (CCL) with European Union support under its broader Partnership for Improved Nutrition in Lao PDR (PIN). The total budget amounts to € 11,111,111, including 10% matching funds from the consortium partners. The lead member of the consortium is SC International in Laos (SCI), and the contract holder is SC Netherlands (SCNL).

The SCALING consortium includes organisations which, with one exception, were already implementing nutrition-related programming in the same geographic areas.<sup>2</sup> SCALING implemented a broad range of nutrition-relevant initiatives across four provinces, 14 districts and 422 villages. Each partner was responsible for implementation in one province with the number of sites varying amongst partners. Existing on-the-ground presence contributed to effectiveness and rapid scale, as did the contribution of the diversity of partner technical expertise on different aspects of the project.

**The final evaluation** was commissioned by SCI in May 2021, to run from June to December same year. Lao Social Research Ltd (LSR) was awarded the contract and undertook the endline survey of 1,813 households through interviews with mothers of CU5 (Children Under Five). Anthropometric measurements were taken from a CU5 from each household as well as pregnant women in the household. The baseline survey was carried out in October/November 2018 and the results published in January 2019. The endline survey was designed to measure change from the baseline along 28 nutrition-relevant variables (Component 1). A qualitative component was guided by 21 evaluation and learning questions related to project relevance, coherence, effectiveness, efficiency, impact and sustainability (Component 2). Over 400 participants, government officials, project staff, funder representatives and other key informants were interviewed. The evaluation also included document review including the project logframe and financial data and special studies undertaken by the project. A rapid staff survey was undertaken to which about 2/3 of staff responded.

The evaluation faced several **limitations** that need to be considered in reviewing the findings. Limitations include uneven Lao language version of the original baseline survey, which created uncertainty in the interpretation of original results, an uneven roll out of the program, with some villages engaging in few or sometimes no activities<sup>3</sup>, and COVID-19 restrictions, which closed schools in some districts and meant qualitative data collection in one of the four provinces (LNT) was undertaken entirely remotely. Also, many of the factors that control nutrition, and which were included in the survey (e.g., supplements, school feeding etc.) were not delivered by the project but by government or other development partners. The delivery of this assistance also varied widely between districts. Precursor and on-going nutrition-relevant programming by consortium partners, government, and other development agencies in the same sites complicated attempts to attribute change to the project.<sup>4</sup>

<sup>1</sup> Due to delays experienced in implementation as a result of the late signing of the MoUs at provincial level and the impact of COVID-19, SCALING has received a six-months No Cost Extension (NCE) of activities in all four provinces until June 2022.

<sup>2</sup> Nutrition was a new area for ChildFund Laos, working in Huaphanh

<sup>3</sup> A few villages surveyed at baseline did not have project activities as they were erroneously selected

<sup>4</sup> Nutrition-related projects have been active in all four project provinces, but probably less so in Phongsaly Province.



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The research lead, nutrition expert and statistician worked entirely remotely due to travel restrictions. Indeed, most of the team worked remotely for much of the time of the evaluation, due to the COVID-19 travel and meeting barriers.

Since the evaluation was carried out before the project closed, logframe and financial information does not cover the full project period. Costing estimates are also based on rough, aggregated figures provided by the project, and should not be read as definitive.

#### *Findings: Component 1*

- A high-level summary of longitudinal data suggests positive, statistically significant change in most nutrition-relevant indicators over a three-year period.
- Significant improvements in levels of stunting and underweight in CU5 were found as well as significant improvements in dietary diversity scores for children and pregnant women.

**Cross sectional data** also highlighted some notable variations amongst sites, ethnic groups and wealth quintiles. Factors associated with stunting in the target population in 2021 include:

#### **Location**

*District* – children in Namtha (LNT), Xam Neua (HUA), Pak Xeng (LPB) are at greater risk of stunting than children in the reference district (Luang Prabang, LPB)

*Distance to Health Centre (HC)* – proximity to a HC lowered the risk of stunting

#### **Family Characteristics**

*Ethnicity* – Hmong households (HHs) are more than twice as likely to be stunted than Lao Tai children

#### **Child Characteristics**

*Low birthweight children* are nearly three times as likely to be stunted

The prevalence of **underweight** in CU5 fell between baseline in 2018 and 2021. The change in the prevalence of underweight children was greater for girls, who are significantly less likely to be underweight in 2021. The percentage of underweight children declined for all ethnic groups, but the decline was statistically significant only for Akha and Khmu ethnic groups.

Mean **Birth weight (kgs)** is significantly higher in 2021 than in 2018 ( $p = 0.0382$ ). However, there was no significant difference in the prevalence of Low Birth Weight (LBW) between 2018 (where it was 7.1%) and 2021 (7.0%), nor between provinces, districts, ethnic groups or wealth class.

**Breastfeeding** within the first hour of birth has increased significantly from 2018 (83.1%) to 2021 (89.5%). There was an increase in exclusive breastfeeding for the project area between 2018 (65.1%) and 2021 (85.2%). Breastfeeding for girls increased by 30 percentage points, whereas the increase for boys was only 9 percentage points. A pattern of less exclusive breastfeeding was found amongst wealthier HHs in both 2018 and by 2021.

There was no significant difference in the level of continued breast feeding (5-23 months) in 2018 (74.5%) and 2021 (71.3%). No significant differences were observed at the province or district level, by ethnic or wealth group.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

The percentage of **children 6-23 months** meeting the **Minimum Acceptable Diet (MAD)**; a composite measure of frequency and diversity of meals, was 23% in 2021<sup>5</sup>. These levels are similar to those reported by the Scaling UP Nutrition (SUN) Movement Monitoring, Evaluation, Accountability and Learning (MEAL) results which combine data from Multiple sources (FAO, UNICEF etc.) which reported MAD sitting at 26% nationally in 2017 (1).

There was a stunning improvement in children 6-23months meeting the **Minimum Dietary Diversity (MDD)** increasing from 12.8% in 2018 to 46.1% in 2021.

The number of **women** meeting minimum requirements for adequate **Dietary Diversity** (eating from at least five food groups in the preceding 24 hours) jumped from just 21.9% in 2018 to 61.8% in 2021.

There was a significant reduction in **diarrhoea incidence** at the project level from 2018 to 2021, with a modest improvement in treatment of diarrhoea using Oral Rehydration Solution (ORS) from 5% to 9%. The incidence of Acute Respiratory Infection (ARI) at both baseline and endline was low (<5%), no significant change was detected. The possible effect of COVID-19 on both incidence and reporting should not be overlooked.

There was a significant reduction in the percentage of **HHs seeking health care for sick mothers or children** between 2018 and 2021, with poor HHs being less likely to seek health assistance in 2021. There is a significant difference in the **types of health care used** ( $p<0.001$ ), with the greatest reduction being visits to a Health Centre (HC) which fell from 61.2% in 2018 to 56.7% in 2021. The drop from the baseline may be related to COVID-19; reduced ability to travel, fear of contracting COVID-19 at a HC, potential stigma associated with presenting with ARI type symptoms, loss of income, shifting financial priorities or increasingly busy HCs.

**Food Consumption Scores (FCS) an indicator of food security** improved from the baseline and across geographic, ethnic and wealth groups. There has been a significant increase in the FCS from a mean score of 54.4 in 2018 to a mean score of 60.5 in 2021 ( $p<0.001$ ). The largest increases in FCS tended to occur in districts and in ethnic groups with the lowest scores in the baseline.

The fraction of **expenditure spent on food** has increased from 47% in 2018 to 52% in 2021, which is correlated with deteriorating food security. Poorer HHs generally spent a higher fraction on food than above average income HHs.

There was no significant difference in the **Coping Strategy Index** from baseline to endline, which is unexpected given the substantial increase in HH expenditure and food consumption reported in the 2021 survey.

The use of improved **water sources** has increased from 86.9% of HHs in 2018 to 91.9% in 2021.

The level of **water treatment** has increased for all sources of water except unprotected springs and other water sources. There has been a substantial growth in the use of **bottled water** within the project area from 8.0% in 2018 to 27.8% in 2021.

There has been an increase (22.6 percentage points) in the **use of flush/pour toilet systems** for HHs. The percentage of HHs practicing **open defecation** was reduced from 43.9% of HHs in 2018 to 23.9% of HHs in 2021. The percentage of mothers **safely disposing of their child's faeces** has increased from 42% to 59% and improvement were observed across all provinces, ethnic groups and wealth groups.

**Handwashing with soap** (or detergent) has increased from 71.9% of mothers and carers in 2018 to 84.0% in 2021 ( $p<0.001$ ). Improvements occurred in all provinces and districts, for all ethnic groups except the Lao Tai (which

<sup>5</sup> Meal frequency data for children 6-23 months was suspected to be incorrectly collected/coded at baseline, resulting in likely inaccurate reporting of MAD (which in relies on MMF as a composite indicator) in the baseline report, thus no comparison could be made to baseline data.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

had very high levels of handwashing at baseline - 93.7% so minimal improvement seen) and all wealth groups, however not all improvements were statistically significant.

**Vitamin A coverage** has increased from 52.0% of children (6-59 months) having received Vitamin A supplement in the last 6 months in 2018, to a coverage rate of 66.9% in 2021 ( $p < 0.001$ ), and from 71.6% of mothers in 2018 to 84.5% in 2021.

The delivery of **deworming treatments** has significantly decreased from 86.3% of children receiving a deworming treatment in the last 6 months in 2018 to only 75.1% in 2021. This reduction may be due to reduced need (less symptomatic cases seeking treatment), reduced access to treatment or reduced supply during COVID-19. However, deworming of mothers increased from a low 4.5% in 2018 to 13.2% in 2021.

There has been no significant change in the coverage of **measles vaccinations** and 86.12% of children in the survey had been vaccinated in 2021 though there are statistically significant differences in vaccination rates between provinces, districts, ethnic groups, and wealth groups.

The **provision of iron/iron folate supplement to pregnant women** has increased significantly ( $p < 0.001$ ) from 71.6% of respondents in 2018 to 84.5% in 2021. There have been substantial (and statistically significant improvements) in **Vitamin B1/Thiamine supplement consumption** for the project area (increasing from 32.5% coverage of pregnant women in 2018 to 62.7% in 2021).

### Findings: Component 2<sup>6</sup>

#### Intermediate Outcome 1 (IOc1) Improved nutrition and hygiene-related behaviours and access to quality nutrition and RNMCH services in 14 target districts

Activities addressing IOc1 included a number of volunteer social and behaviour change initiatives delivered through volunteers i) reaching women and children in the 1000 days during pregnancy and post-partum (Community Facilitators); ii) in community-wide nutrition events; and iii) in lower secondary schools (LSS). The project also sought to improve Maternal, New-born and Child Health services delivered by HCs through a range of health systems strengthening (HSS) interventions. Key findings include:

#### Social Behaviour Change Communication 1000-day HH volunteers (Community Facilitators)

The project trained 1,159 Community Facilitators, who reached over 11,000 HH with nutrition information and motivation. Volunteers provided an important link with health services.

Community and HC respondents credited Community Facilitators for positive changes in the health status of women and young children, and improvements in pregnancy outcomes.

Motivated by the opportunity to learn new information, volunteers also struggled with juggling volunteer commitments with their own childcare and livelihood responsibilities and frequent absences of their clients during peak agricultural seasons. Many volunteers said they were unlikely to continue unless they received remuneration for their work.

<sup>6</sup> Findings in the report are organized around the 21 evaluation and learning questions. For brevity purposes, findings in this Executive Summary are presented by Intermediate Objective.

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Roughly, this component cost an estimated €36 per new HH, which includes government training costs, but excludes SCALING staff costs.

#### Nutrition event volunteers

A different cadre of volunteers—village authority members (mostly male), who are also members of the Village Development Committee (VDC) where it exists—convened regular community events, which often involved cleaning the village, and also included cooking demonstrations.

Some of these volunteers have transitioned to (paid) positions under the Nutrition Sensitive Agriculture Project (NUSAP).

#### LSS nutrition and reproductive health

In after-school sessions, 980 student (peer) facilitators aged 11-14 (50% female) delivered a 7-module interactive training on nutrition, sexual and reproductive health and hygiene to some 7,713 students across 79 schools. The modules included informational materials available from other projects and sources, as well as games and videos. Trained teachers supervised.

The approach was enthusiastically received by students and teachers, and there is provincial-level interest in mainstreaming, evidenced particularly in Luang Namtha.

The estimated €25/student cost in the project may come down at scale.

#### HSS

The project provided training for District and HC staff<sup>7</sup> in growth monitoring, infant and child feeding and integrated outreach services and family planning; supported mobile clinic outreach to remote communities; enabled 115 hospital-staff-mentoring visits to HCs; and provided Reproductive, Maternal, New-born and Child Health (RMNCH) equipment for some 90 HCs and 10 mobile clinics. Training in the national DHIS2 system was also carried out. SCALING also piloted a well-received community-clinic accountability approach in 28 HCs.

These interventions appear to have diversified and improved HC and outreach services; strengthened vertical linkages between HCs, provincial hospitals and community volunteers; boosted service provider morale; and improved clinic-based MNCH outcomes.

Participation in mobile clinics was high amongst survey respondents (94%), compared with the figure at baseline of 0,1%.

#### Intermediate Outcome 2 (iOc2) Local environment mitigates adverse underlying causes of malnutrition in 14 target districts

Activities addressing iOc2 include gender interventions designed to protect women's health based on her increased control over resources, work and decision-making in and outside of the HH; improvements in water supply and access selected WASH products including latrine construction materials and water filters; and

<sup>7</sup> Training provided to 6000 clinicians in total, though many individuals received more than one training.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

supporting national policies to promote accountability and informed consumption of breast milk substitutes. Synergies with the NUSAP project anticipated availability of a greater diversity of nutritional food through HH production initiatives.

#### **Gender initiatives**

##### **Village Savings and Loan Associations (VSLA)**

Working in concert with the Lao Women's Union (LWU), SCALING established 203 VSLAs. The size of VSLAs vary considerably, with an average estimated 39 female participants per VSLA across the four provinces. SCALING studies and evaluation findings suggest groups are ethnically diverse. The project provided a governance structure and equipment for safekeeping money and bookkeeping, but otherwise the VSLA is designed to function independently.

VSLA members report benefits including capital to invest in small businesses and agriculture; access to funds for medical emergencies; safekeeping of savings (including from spouses); personal agency and solidarity with other women.

Available data suggests VSLA offers good value for money. Setting up and LWU facilitation costs averaged €645/group while an average group saved €72/participant over the life of the VSLA, though levels of savings and lending vary considerably across groups.

##### **Women's Workload Reduction/Gender Equality in Relationship (WWR/GER)**

Led by trained LWU facilitators, some 13,126 women and 4,996 couples participated in community-based workshops where they discussed cultural norms that overly burden women with household responsibilities, and affect their health. Couples' workshops were added after the project recognized that male engagement was essential to achieve the objectives.

Recent SCALING reports and testimonials in the evaluation suggest that there was great interest in the workshops and some unmet demand to participate. Evaluation respondents and a recent study by CARE report that work-sharing and to a lesser extent HH decision-making has changed, and that participants are offering new role models including in conservative ethnic communities. The quantitative survey data shows no significant change from the baseline in this regard, however, as noted above.

##### **Women's leadership training**

Training by the LWU was provided for an average of two women/village in leadership. The training was valued by the LWU and participants, but women's inclusion in village decision-making structures appears to have shifted only marginally.

##### **Monitoring of Breastmilk Substitute (BMS) Code**

SCALING, and in particular SCI, offered important international expertise to a national task force that developed protocols for monitoring the new Lao BMS decree of 2019 on retail marketing of BMS products. SCALING conducted the two rounds of monitoring the international BMS Code in the 14 target districts in 2019 and 2020. It shared the methodology and lessons learnt with MoH and UNICEF in preparation of the Implementation Guidelines (completed end 2020) and monitoring framework (completed in 2021) of the Lao BMS decree.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### WASH initiatives

##### **Water Systems**

SCALING invested 26% of its activity budget in rehabilitating or establishing new water supply systems in 73 of the 422 project villages.

The tripartite effort included newly established or empowered community Water Management Committees; expertise from government agencies (*Nam Saat*); and expertise from consortium partner CCL and district consortium staff. Local communities generated significant human and financial resources for building and maintenance.

Participant comments as well as reports about resources generated, suggest that household metered water systems trialled in SCALING indicate this as a viable model.<sup>8</sup>

##### **WASH Marketing**

Twenty private sector vendors and 377 community-based Village Sales Agents were trained by the project. They promoted and sold equipment and materials for latrine construction to 7,905 HHs, and water filters to 877 HHs. Demand was higher in more remote villages with less access to markets.

187 SCALING villages were declared Open Defecation Free (ODF) by the government as part of the national target to ensure that all villages in Lao will be ODF by 2025.

Active vendors have increased their profits.<sup>9</sup>

#### Links with NUSAP

Under the broader EU Partnership for Improved Nutrition in Lao PDR (PIN), SCALING and NUSAP were designed to launch more or less concomitantly and provide synergistic contributions to nutrition outcomes in overlapping project sites.

NUSAP was slower to launch in part because of internal financial management issues which suspended project activities followed by COVID challenges. NUSAP was also constrained by having a lighter footprint in project sites. NUSAP addressed this by remunerating community-based volunteers, a design discrepancy that challenged collaboration between the two projects. Anticipated synergies were only realized in some sites.

**Intermediary Outcome 3 (iOc3) Nutrition governance strengthened at district, *kumban* and community levels in 14 target districts**

<sup>8</sup> Particularly successful in Phongsaly (note from SCIL)

<sup>9</sup> Latrine materials and water filters were sold through the private sector vendors, while water filters were also sold by GoL staff.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

SCALING supported a number of priorities in Laos' National Nutrition Strategy (NNS) 2016-2025 and National Plan of Action 2016-2020 (NNSPA) and aligned closely with pillars outlined in the EU's PIN. A focus on nutrition governance and programming convergence informed capacity building and collaborative implementation with government multi-departmental district and provincial nutrition committees (DNCs and PNCs). Consortium partners provided eight internships to five local Civil Society Organizations (CSOs) to extend awareness and integration of nutrition-sensitive programming.

#### **Nutrition Governance**

##### **Collaboration with PNCs and DNCs**

Evaluation findings suggest that PNCs and DNCs in the four SCALING provinces and a number of districts were nascent at the launch of SCALING.

PNCs and DNCs received briefings on the NNS/NNSPA and SCALING interventions, training as trainers, and participated in supervision visits to project sites, which contributed to exposure and engagement.

SCALING supported 62 DNC meetings. SCALING produced 53 presentations using nutrition-relevant data, and 38 nutrition stakeholder maps to inform DNC planning and district-level coordination.

Inputs promoted participation, particularly amongst key players from health, education, agriculture, (district) Planning and Investment Office (DPIO) and the LWU. Notably, members of about half of the DNCs interviewed for the evaluation see the committee's primary role as supporting the work of the project.

PNCs and DNCs are constrained by the siloed nature of sectoral responsibilities and funding streams that preclude collaboration. Other challenges include turnover of membership; a perceived dependence on funding to convene; and insufficient clarity on role and purpose. The majority of SCALING staff see the nutrition governance element of the project as its least sustainable element.

##### **Engagement and advocacy at national level**

SCALING enabled district and provincial level officials from LNT and LBP to participate in the annual National Nutrition Forum.

SCI and CARE are active participants in the national Scaling Up Nutrition Civil Society Alliance (SUN CSA) which provides a forum for sharing amongst international and national civil society organizations (CSOs) working on nutrition in the country. GoL resistance to engaging with CSOs somewhat limits SUN CSA from being a conduit for advancing grassroots level lessons for strengthening nutrition policy and national programming, however.

SCALING ends the project with a range of documented lessons learned on key nutrition-relevant strategies and an operational manual on water supply system construction. Mechanisms for dissemination rely on the project's initiatives like provincial-level exit strategy meetings and a planned national dissemination workshop. Lessons learned will be uploaded on the SUN CSA website.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Factors that contributed to project outcomes:

Contributors to success	Challenges to success
Alignment of project objectives and initiatives with the NNS/PA framework	Delays in project launch related to difficulties obtaining MoUs
Historical and sustained relationships with key government partners by the consortium	COVID-19, which limited implementation of activities for the second half of the implementation period, shifted the public health focus of government partners, and negatively impacted HH livelihood and food security.
Extensive on the ground presence in implementation sites	Inherent fragility of multi-agency government governance structures
Diversity of expertise within the consortium	Linguistic challenges in ethnic communities
Proven strategies adopted in the project design	SCALING staff turnover
Flexibility of SCALING and the EU to refine and adapt strategies	Resistance to addressing gender norms amongst local leaders and community in general—
Strong management systems in the consortium	Overly ambitious assumptions about SBCC volunteer capacity and time availability (1000 day and LSS peer facilitators)
Shared vision and targets and amongst staff	
An emphasis on data and learning loops	
Attention to gender issues at every level of program planning and implementation	

#### Recommendations

Because this is an end of project evaluation, many of the recommendations arising are as relevant for government and future funders—in terms of sustainability and scale—as they are for consortium partners who may be best placed to integrate recommendations into on-going or next generation programming. The intended audience is noted alongside each recommendation below.

#### Recommendations about specific programmatic elements

##### **SBCC 1000-day HH volunteers** (Community Facilitators)

1. Advocate for mainstreaming community-based volunteers into the health delivery system. (GOL, EU, SCALING partners)
2. As SBCC becomes a mainstay of the NNS/NPA, advocate for remuneration for volunteers. (EU, GOL, SCALING)
3. Include family planning in training and referral linkages, and contraception in volunteers' offerings, for instance through a social marketing approach. (GOL, SCALING)

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## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

4. Include refresher training and supervision for volunteers from HC and DHO staff as a cornerstone of any community-based nutrition or health volunteer program. (GOL)
5. Revise reporting forms with an eye to the time availability and literacy of volunteers. (SCALING)
6. Revisit ingredients used in cooking demonstrations with resource scarce households in mind. (SCALING)

#### LSS nutrition and SRH peer education

7. Promote mainstreaming of key nutrition and reproductive health information into the LSS curriculum. (GOL)
8. Build in refresher training for teachers and student facilitators. (GOL, SCALING)
9. Trial inclusion of older students as facilitators. (SCALING)
10. Promote peer networking amongst peer facilitators. (SCALING)

#### Health Systems Strengthening

11. Advocate for sufficient resourcing for mobile clinic outreach for remote villages. (GOL, EU, SCALING)
12. Include village volunteer management responsibilities in job descriptions and performance metrics for HC staff. (GOL)
13. Integrate family planning services more prominently in RHMCH. (GOL, SCALING)
14. Aggregate findings from community accountability pilots for presentation to MoH. (SCALING)

#### VSLA

15. Introduce nutrition, gender, and financial literacy information through the VSLA. (SCALING)
16. Continue support to VSLA through LWU—good value for money. (SCALING)
17. Support well-established VSLA to share advice with new or recently formed VSLA. (SCALING)
18. Explore whether and how the VSLA can be a stepping stone to the formal banking sector. (SCALING)

#### WWR/GER

19. Develop materials to enable LWU to mainstream this WWR/GER at a practical cost point. (SCALING)
20. Bring media attention to gains made in gender equality, through profiles of individual couples. (SCALING)

#### WASH Systems

21. To engage private sector WASH engineering providers to address unmet demand for village water systems and water systems maintenance and ensure quality, consider a quality assurance branding approach. (EU, SCALING)
22. Help the Nam Saat department Centre for Environmental Sanitation under MoH develop a digital support function for remote WASH maintenance troubleshooting. (GOL, EU)

### Recommendations about mainstreaming multi-sectoral integration

#### Nutrition governance

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

- 23. Share lessons learned with national decisionmakers about nutrition governance and multi-sectoral approaches achieved at subnational level. (SCALING, EU)
- 24. Advocate for the development of standards and guidelines for PNCs and DNCs that include expectations related to joint programming, resourcing options, and performance criteria that extend beyond simply convening.
- 25. Promote cross visits and sharing amongst PNCs and DNCs. (GOL, EU)
- 26. Anticipate exit and sustainability strategies in project design. (EU, SCALING)
- 27. Conduct a costing analysis for each component to inform planning at scale. (SCALING)<sup>10</sup>

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<sup>10</sup> This recommendation pre-emptorily taken up by SCALING in Nov 2021

## SCALING

Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

## ABBREVIATIONS

Abbreviations and Acronyms	
AF	Adolescent Facilitator (in LSS)
AFD	Agence Française de Développement /French Development Agency
ANC	Antenatal care
ANCP	Australian NGO Cooperation Programme: Reproductive, Maternal, New-born, Child Health and Nutrition Project
ARI	Acute Respiratory Infection
BL	Baseline
BMS	Breast Milk Substitute
BoQ	Bill of Quantity (for constructions)
CCL	Comité de Coopération avec le Laos
CFL	ChildFund Laos
CF	Community Facilitator (home visit volunteer)
CMU	Consortium Management Unit
CSI	Coping Strategies Index
CSO	Civil Society Organisation
CU2	Children Under Two
CU5	Children Under Five
DAFO	District Agriculture and Forestry Office
DDS	Dietary Diversity Score
DESS	District Education and Sports Services
DHHP	Department of Hygiene and Health Promotion (part of the Ministry of Health)
DHIS	District Health Information System
DHO	District Health Office
DLWU	District Lao Women's Union
DNC	District Nutrition Committee
DP	Development Partner
DPIO	District Planning and Investment Office
EBF	Exclusive Breastfeeding
EENC	Early Essential New-born Care
EL	Endline
EQ	Evaluation Question
EU	European Union
EUD	EU Delegation (in Laos)
EVR	Expenditure Verification Report (external)
FCS	Food Consumption Score
FDD	Food and Drug Department (MoH)
FP	Family Planning
GESI	Gender Equality and Social Inclusion
GFWS	Gravity Fed Water System
GMP	Growth Monitoring and Promotion
GoL	Government of Lao PDR

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<b>HAZ</b>	Height for Age Z-score
<b>HC</b>	Health Centre or “small hospital”
<b>HH</b>	Household
<b>HSS</b>	Health Systems Strengthening
<b>HUA</b>	Huaphanh province
<b>HWTS</b>	Household Water Treatment and Safe storage
<b>IMAM</b>	Integrated Management of Acute Malnutrition
<b>iNGO</b>	International Non-Governmental Organisation
<b>iNuW</b>	integrated Nutrition and WASH (behaviour change approach under USAID/SCI Nurture programme)
<b>iOc</b>	intermediary Outcome
<b>IPPT</b>	Indicator Performance Tracking Table
<b>IRD</b>	Institut de Recherche pour le Développement
<b>IVR</b>	Interactive Voice Response
<b>IWRM</b>	Integrated Water Resource Management
<b>IYCF</b>	Infant and Young Child Feeding
<b>LANN</b>	Linking Agriculture, Natural resources management, and Nutrition
<b>LAK</b>	Lao Kip (local currency)
<b>LNT</b>	Luang Namtha province
<b>LoE</b>	Level of Effort
<b>LPB</b>	Luang Prabang province
<b>LSS</b>	Lower Secondary School
<b>LWU</b>	Lao Women’s Union
<b>MAD</b>	Minimum Acceptable Diet
<b>MAF</b>	Ministry of Agriculture and Forestry of Lao PDR
<b>M&amp;E</b>	Monitoring and Evaluation
<b>MAM</b>	Moderate Acute Malnutrition
<b>MCH</b>	Maternal and Child Health
<b>MEAL</b>	Monitoring, Evaluation, Accountability and Learning
<b>MMF</b>	Minimum Meal Frequency
<b>MNCH</b>	Maternal, New-born and Child Health
<b>MoFA</b>	Ministry of Foreign Affairs of Lao PDR
<b>MoH</b>	Ministry of Health of Lao PDR
<b>MOU</b>	Memorandum of Understanding
<b>MPI</b>	Ministry of Planning and Investment of Lao PDR
<b>MTR</b>	Mid Term Review
<b>MUAC</b>	Mid-Upper Arm Circumference
<b>Nb</b>	Number at baseline
<b>Ne</b>	Number at endline
<b>NNC</b>	National Nutrition Centre
<b>NNS</b>	National Nutrition Strategy (2016-2025)
<b>NNSAP</b>	National Nutrition Strategy Action Plan (2016- 2020)
<b>NUFNIP</b>	Northern Uplands Food and Nutrition Security Improvement Project
<b>NUSAP</b>	Nutrition-Sensitive Agriculture Project (EU/AFD funded, implemented by MAF)

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<b>ODF</b>	Open Defecation Free
<b>OP</b>	Output
<b>ORS</b>	Oral Rehydration Solution
<b>ORT</b>	Oral Rehydration Therapy
<b>OSCE</b>	Objective Structured Clinical Examination
<b>PAFO</b>	Provincial Agriculture and Forestry Office
<b>PCOM-RAT</b>	Political Commitment and Opportunity Measurement Rapid Assessment Tool
<b>PD</b>	Project Director
<b>PESS</b>	Provincial Education and Sports Services
<b>PHC</b>	Primary Health Care
<b>PHO</b>	Provincial Health Office
<b>PI</b>	Priority Intervention (in NNSAP)
<b>PIN</b>	Partnership for Improved Nutrition in Lao PDR (EU)
<b>PM</b>	Project Manager (under SCALING at provincial level)
<b>PNC</b>	Provincial Nutrition Committee
<b>PNC</b>	Post Natal Care
<b>PoFA</b>	Provincial Office of Foreign Affairs
<b>PPI</b>	Provincial Planning and Investment
<b>PSL</b>	Phongsaly province
<b>p-value</b>	a measure of the probability that an observed difference could have occurred just by random chance
<b>PWD</b>	People with Disability
<b>PY</b>	Project Year
<b>Q</b>	Quarter
<b>RMNCH</b>	Reproductive, Maternal, New-born and Child Health
<b>SAM</b>	Severe Acute Malnutrition
<b>SAP</b>	Strategic Action Plan
<b>SBCC</b>	Social Behaviour Change Communication
<b>SCALING</b>	Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance (SCALING)
<b>SCI</b>	Save the Children International
<b>SCNL</b>	Save the Children Netherlands
<b>SD</b>	Standard Deviation
<b>SDA</b>	Small Doable Action
<b>Std Err</b>	Standard Error
<b>SEM</b>	Standard Error of the Mean (Sample Standard Deviation)
<b>SO</b>	Specific Objective (in NNS)
<b>SUN-CSA</b>	Scaling Up Nutrition Civil Society Alliance (Laos)
<b>SUPA</b>	Scaling Up convergent Programme Approaches to improve food and nutrition security in the northern uplands (project funded by the EU)
<b>TA</b>	Technical Advisor (under SCALING)
<b>ToR</b>	Terms of Reference
<b>ToT</b>	Training of Trainers
<b>UNICEF</b>	United Nations International Children's Emergency Fund

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### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

<b>USAID</b>	United States Agency for International Development
<b>USD</b>	United States Dollar
<b>UXO</b>	Unexploded Ordnance
<b>VDC</b>	Village Development Committee
<b>VDP</b>	Village Development Plan
<b>VNC</b>	Village Nutrition Committee
<b>VNP</b>	Village Nutrition Plan
<b>VSA</b>	Village Sales Agent
<b>VSLA</b>	Village Savings and Loan Association
<b>WASH</b>	Water, Sanitation and Hygiene
<b>WAZ</b>	Weight for Age Z-Score
<b>WHZ</b>	Weight for Height Z-Score
<b>WVL</b>	World Vision Laos
<b>WWR/GER</b>	Women's Workload Reduction/Gender Equality in a Relationship

### 1 PROJECT OVERVIEW

The Sustainable Change Achieved through Linking Improved Nutrition and Governance (SCALING) project is designed to *enhance the nutritional status of adolescent girls, pregnant and lactating women, and CU5 in 14 districts* across the provinces of Luang Prabang (LBP), Luang Namtha (LNT), Phongsaly (PSL), and Huaphanh (HUA) in the Lao PDR. The program was implemented in the period December 2017-December 2021<sup>11</sup> by a consortium of iNGOs--Save the Children (SCI), CARE, ChildFund Laos (CFL), and Comité de Coopération avec le Laos (CCL) with European Union (EU) support under its broader Partnership for Improved Nutrition in Lao PDR (PIN). The total budget amounts to € 11,111,111, including 10% matching funds from the consortium partners. The lead member of the consortium is SCI Laos, and the contract holder is SC Netherlands.

The SCALING consortium includes organisations which, with one exception, were already implementing nutrition-related programming in the same geographic areas (nutrition was a new area for CFL, working in HUA). The project was designed to leverage this on-the-ground presence, expertise, and implementation innovations from amongst the partners to achieve three Intermediate Outcomes:

Intermediate Outcomes	
Intermediate Outcome 1	Improved nutrition and hygiene-related behaviours and access to quality nutrition and RNMCH services in 14 target districts
Intermediate Outcome 2	Local environment mitigates adverse underlying causes of malnutrition in 14 target districts
Intermediate Outcome 3	Nutrition governance strengthened at district, kumban and community levels in 14 target districts

Figure 1 presents a snapshot of the project's Results Framework, or Theory of Change (ToC). The ToC assumes synergies among strategies designed to positively influence household decision-making related to infant and child feeding, gender norms and health seeking and sanitation behaviours. Improvements in these behaviours combined with improvements in availability of and access to health services and water and sanitation infrastructure, and engagement from multi-sectoral local government agencies are expected to contribute to improvements in nutrition and health outcomes for infants and CU5.

11 Due to delays experienced in implementation as a result of the late signing of the MoUs at provincial level and the impact of COVID-19, SCALING applied for and has been given a six-months No Cost Extension (NCE) of activities in all four target provinces until 15 June 2022.



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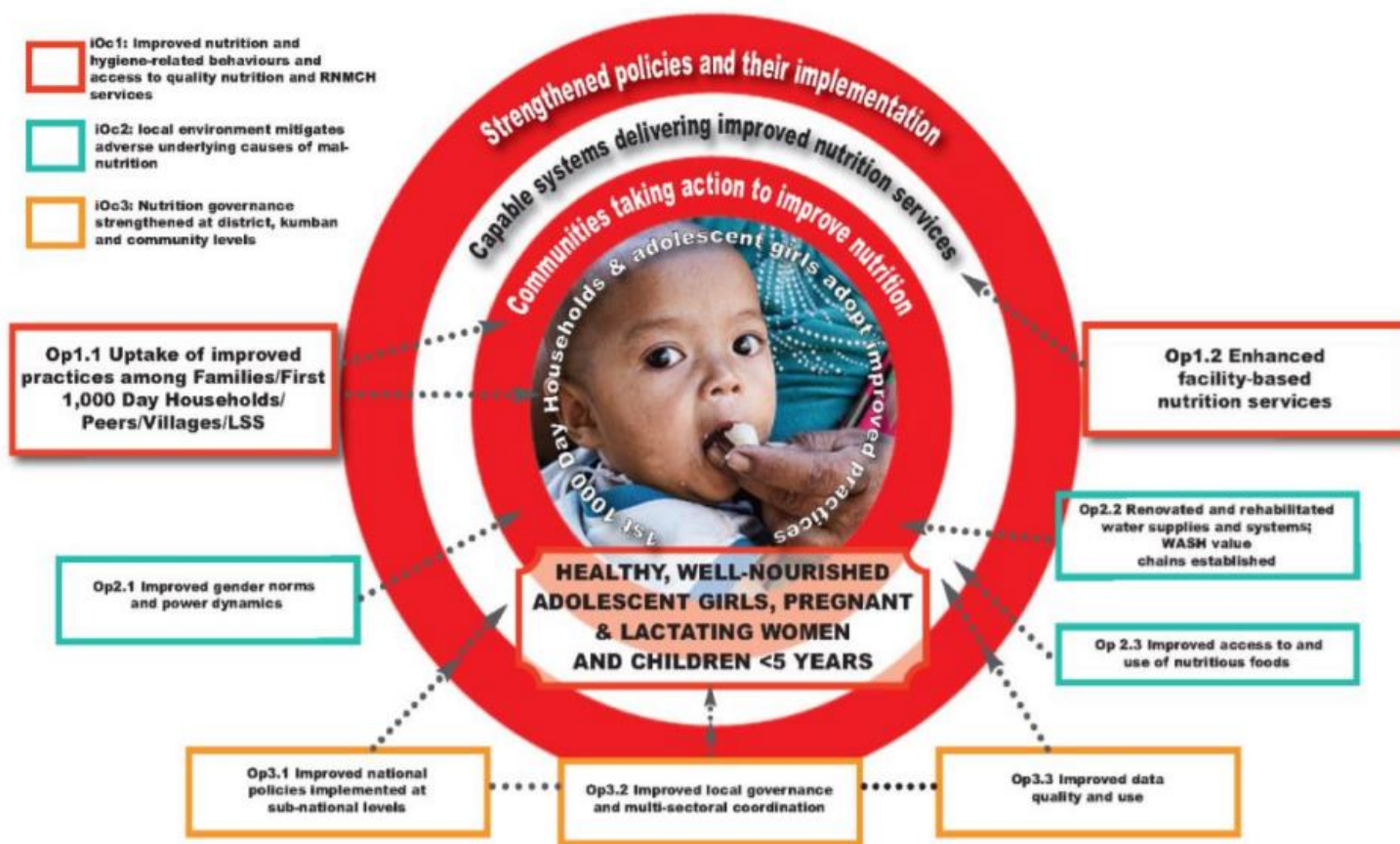


Figure 1 SCALING Results Framework



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

The project worked in 4 provinces, 14 districts and 422 villages and reached an estimated 332,726 direct and indirect beneficiaries as at June, 2021 (2). It adopted a range of interventions to achieve three intermediate objectives (iOcs), listed below.

#### **iOc1 Improved nutrition and hygiene-related behaviours and access to quality nutrition and RNMCH services in 14 target districts**

Social and Behaviour Change Communications initiatives “Our Promise, SBCC”

- Community Facilitators, 1,000-day household visits
- Peer support groups amongst pregnant women and women with CU2
- Nutrition events
- Lower Secondary School peer support groups in nutrition and sexual and reproductive health

Health Systems Strengthening

- District and Health Centre training and equipping
- Strengthening mobile clinic outreach
- Strengthening Health Centre data management (District Health Information System 2 - DHIS2)
- Supervision and monitoring by District Health Office and Provincial Health Office (DHO/PHO)
- Community accountability to improve quality of Health Centre services

#### **iOc2 Local environment mitigates adverse underlying causes of malnutrition in 14 target districts**

Gender initiatives

- Village Savings and Loan Associations for women
- Women leadership training,
- Women Workload Reduction and Gender Equality in a Relationship training for women and couples (WWR/GER)
- Monitoring of Breast Milk Substitutes (BMS) Code implementation in small shops, pharmacies and public health facilities
- 

WASH initiatives

- Construction/rehabilitation of water supply systems in selected villages
- Support to establishment of Water Management Committees
- Promote marketing of WASH products (latrines, water filters) through private sector vendors and community sales agents
- Link with projects enhancing food availability (ex NUSAP)

#### **iOc3 Nutrition governance strengthened at district, kumban and community levels in 14 target districts**

- Participation in national task forces (Strategic Action Plan & BMS) and fora
- Strengthening local civil society advocacy on nutrition
- Support to GoL multi-sector nutrition governance structures at provincial and district levels (PNC and DNC)
- Facilitate National & Provincial Assembly visits to project sites, and exchange visits between target districts
- Produce nutrition data dashboards, stakeholder maps, Political Economy Analysis (PEA) reports

Although the project launched in December 2017 for a four year period (through December 2021), actual

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

interventions at community level covered a period of less than three years as the MoUs in two Provinces (LPB and LNT) were only signed at the end of January 2019. The period between the baseline (conducted in October/November 2018) and endline (conducted in August/September 2021) was also just under three years. In November 2021, the project received a 6 month no cost extension (NCE) through 15/06/2022. This will allow the project to reach more villages and continue to deliver interventions to more people.

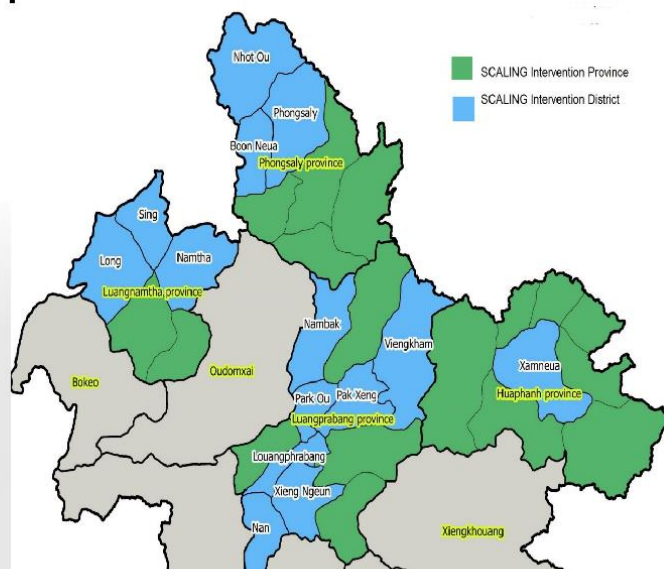
Figure 2 shows the project sites. Project districts and villages were selected by GoL based on a set of selection criteria<sup>12</sup>. Site selection also focused the project on districts and villages not reached by other on-going nutrition-related interventions in northern Laos. Nonetheless, as noted above, many of the sites already enjoyed support from SCALING consortium partners<sup>13</sup>, which would have already contributed to lifestyle or livelihood outcomes potentially impacting on child or maternal nutritional status or at very least preparing the groundwork for SCALING interventions.

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<sup>12</sup> Selection criteria – high rates of malnutrition; designated poor village; priority given to villages with non Lao Tai populations; a balance of villages accessible throughout the year and those only accessible during the dry season; selection by Kumban, not by individual village (SCALING Annual Narrative Report Dec 2017-Dec 2018) p 6. However, it is not known to what extent the district governments actually used this schema in the village selection.

<sup>13</sup> Target villages where SCALING consortium partners worked already on nutrition related interventions before the start of SCALING: 30 villages each in Nan, Nambak, Viengkham and Pak Ou districts (LPB) by SCI under the PHC programme; 10 villages each in Sing and Long districts (LNT) by CARE under the SUPA project; and 10 villages in Nyot Ou district (PSL) by CCL under the SUPA project. Total 150 villages out of 422.

### Geographic Reach



SCALING Introduction  
August 2020

Figure 2 Location of SCALING project elements Source: Scaling Project introduction 14.10.2018

The consortium approach featured four organisations with complementary expertise relevant to the project goals. Each organisation was already established in one of the four provinces, as noted above.

Existing partner strategies including Linking Agriculture, Nutrition and Natural Resource Management (LANN), Community-Led Total Sanitation (CLTS), and those developed by SCI's NURTURE program to deliver a multi-channel communication program provided a springboard for additional innovation and adaptation. The distribution of geographic and technical responsibility is presented in Table 1.

Table 1 SCALING Consortium geographic and technical responsibilities respectively

Geographical Area	Organisation	Thematic Specialisation
Luang Prabang (LPB) 7 districts, 210 villages	SCI	SBCC, Adolescents, HSS, WASH Marketing, Nutrition Governance, Community Mobilisation
Luang Namtha (LNT) 3 districts, 100 villages	CARE	Gender, Women's Empowerment, Nutrition, Community Mobilisation
Phongsaly (PSL) 3 districts, 80 villages	CCL	WASH Water Supply Systems, Community Mobilisation
Huaphanh (HUA) 1 district, 30 villages	CFL	Community Mobilisation

Source: (3)

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

A range of other concurrent or precursor programs operating in the same localities as SCALING almost certainly contributed to nutrition outcomes, and thus challenge attribution to SCALING alone as discussed below. With funding under the PIN, SCALING launched at the same time as the Nutrition-Sensitive Agriculture Project (NUSAP)<sup>14</sup>. NUSAP was designed to provide synergising inputs through enhancing agricultural production. Although SCALING was significantly delayed due to delays in signing MoUs, NUSAP has gotten off to a slower start for a number of reasons (see Sections 6.4 and 6.20). NUSAP is operating in 10 of the 14 SCALING districts<sup>15</sup>.

There is also overlap in 6 of the 14 districts with precursor and concurrent programming from SCALING partners including the SUPA project in Nyot Ou (PSL), Sing and Long (LNT); SCI's PHC programme in Viengkham, Nambak, Nan and Pak Ou (LPB). There are other on-going initiatives at national and local levels which may have also contributed to SCALING outcomes. Documents and people interviewed mentioned WFP, World Vision, IFAD, UNICEF. Village leaders in HUA were also familiar with Child Fund since 2018. On-going government interventions also addressed health and nutrition priorities. The impacts of exogenous factors such as climate variations, COVID 19, and proximity to services and markets are of course also relevant in this regard.

#### 1.1 Scope

The final evaluation is designed to measure the results achieved and assess to what extent and what level of quality the project has achieved its intended results (3). The evaluation was carried out from June to December 2021, by Lao Social Research Ltd, based in Vientiane. The evaluation was organized into two major components:

1. A household survey, which used an adaptation of the baseline instrument to collect data from households in the same villages as at baseline (conducted in October and November 2018). The survey component of the final evaluation focused largely on iOC's 1 and 2 and was carried out in August and September 2021.
2. A qualitative component that investigates a set of evaluation questions around OECD/DAC criteria of relevance, coherence, effectiveness, efficiency, impact and sustainability. This component focused largely on iOC 3, although it explored elements of iOC1 and iOC2 as well. The ToR particularly highlights a focus on interventions related to adolescents in Lower Secondary School (LSS) under iOC1 and results related to improved access and use of nutritious food under iOC2 (3).

#### 1.2 Objectives

The original ToR for the final evaluation included a number of guiding questions under each of the two components.

**Component 1 was designed to provide longitudinal statistically measurable perspectives on change related to a number of nutrition-relevant indicators:**

- Characterize basic demographics of the target population;
- Measure (and compare to baseline data) nutritional status of children 0-5 years (CU5);
- Measure (and compare to baseline data) nutritional status of pregnant and lactating women;
- Measure (and compare to baseline data) nutritional status of adolescent girls;

<sup>14</sup> Funded by EU and AFD, implemented by MAF, original project period Aug 2018-July 2022. Pending requests for extension until Dec 2022 (EU) and July 2023 (AFD).

<sup>15</sup> Originally there were 11 districts in common with SCALING. In 2019 NUSAP exchanged Luang Prabang for Chomphet district (LPB) on request of PAFO LPB, reducing the overlap to 10 districts.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

- Describe (and compare to baseline data) feeding practices for CU5;
- Measure (and compare to baseline data) prevalence and frequency of diarrhoea in CU5;
- Document (and compare to baseline data) knowledge, beliefs and practices on health seeking behaviour, care of sick children, micronutrient supplements for CU5, pregnant women and adolescent girls;
- Measure (and compare to baseline data) access to safe water and sanitation
- Measure (and compare to baseline data) access to quality nutrition services.
- Measure the results achieved by the Women Workload Reduction and shared decision-making approaches

Additional questions related to the impact of COVID-19 on livelihood and food security were also anticipated in the ToR. Cross sectional analysis was anticipated to “identify possible causes of malnutrition” (4).

**Component 2 considers project performance and impact based on questions organized around the OECD DAC criteria.**

#### *Relevance*

1. To what extent was the project able to provide appropriate activities and approaches / methods in line with the priorities of the people and their specific context (livelihood opportunities, social organization, general environment, ...), taking into account the specific needs of the most vulnerable groups, including women, children and disabled persons?
2. To what extent and how was gender sensitive programming implemented?

#### *Coherence*

3. To what extent were the project objectives and results coherent with the Government of Laos National Nutrition Strategy (NNS) and its action Plan (NNSAP)?
4. To what extent were the project objectives and results coherent with the other components of EU's Partnership for Improved Nutrition (PIN)?
5. To what extent were the project objectives and results coherent with the broader strategies, programs and strengths of the consortium partners in Laos.

#### *Effectiveness*

6. To what extent were the originally defined objectives realistic?
7. To what extent did the project achieve its purpose?
8. To what extent was the project successful in including vulnerable households?
9. What factors were crucial for the achievement or failure to achieve the project objectives?

#### *Efficiency*

10. Were the financial resources and other inputs efficiently used to achieve results?
11. Was there good value for money for the activities undertaken?

#### *Impact*

12. What has happened in the communities reached as a result of the project?
13. How did the project change the life of people in the community and several level of beneficiaries: community volunteers, groups (peer groups, water management committee members, VSLA), direct beneficiaries (1000-day HHs, students in LSS) and indirect beneficiaries?

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

14. Did the project contribute to gender transformative changes?
15. Were there any unexpected, negative effects on the communities, as a consequence of the activities implemented?

#### *Sustainability*

16. To what extent did the intervention reflect and consider factors which have a major influence on sustainability, i.e. economic, ecological, social and cultural aspects?
17. To what extent has the project been able to hand-over the follow-up of key activities to the government counterparts and target communities?

**The TOR also references learning questions**, developed at the project's inception. These were addressed generically in the Mid Term Review (MTR) but are similarly used as a framework in this report (see Sections 6.18-6.20). The learning questions include:

#### *Working in a consortium:*

1. Did the consortium approach improve the quality and effectiveness of project implementation without affecting the efficiency?
2. What evidence is available on cross-learning and capacity strengthening among the Consortium Partners?
3. How did the consortium approach keep SCALING engaged in lobby and advocacy on Nutrition at the National level?

#### *Community volunteers:*

4. What are current models for community volunteers to stay engaged and motivated throughout the project cycle?
5. What are the enabling factors and barriers for sustained engagement and motivation of community volunteers?

*How has the collaboration with the NUSAP project worked so far (particularly in the first four districts of joint operation in LPB)? (Additional question)*

6. What are the main challenges?
7. What is the added value of the collaboration?
8. What are the lessons learned?

## 1.3 Audience

The evaluation was commissioned by SCI, which leads the SCALING consortium. In addition to SCI and other consortium partners CARE, CFL and CCL, the evaluation is likely to be of interest to participating government partners—particularly sectoral departments represented on Provincial Nutrition Committees (PNCs) and District Nutrition Committees (DNCs). The EU, which funds this and a range of other initiatives under its national PIN initiative, is a key audience. Members of the Scaling Up Nutrition Civil Society Alliance (SUN CSA) may also be interested.

## 1.4 Data collection

### *Component 1*



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Data for Component 1 was gathered through a repeat of the baseline survey. A random selection of households with children less than 5 years of age were selected from same villages selected for the baseline, in the same districts, in order make the comparison as close as possible.

Most interviews (96%) were undertaken between 08 and 30 August 2021, when data collection was suspended due to COVID restrictions. The remaining 4% of the data was collected 24-27 September.

Data was cleaned by the LSR data quality staff and sent to the statistician for processing.

#### Component 2

Key informant interviews with senior SCALING staff, EU and several other key informants were carried out virtually using zoom.

Four teams of two facilitators and a locally recruited notetaker were in the field for data collection. Interviews were conducted at provincial, district and village level, as well as in Health Centres and Lower Secondary Schools September 7-30, 2021. Interviews in LNT were conducted remotely because of COVID travel restrictions. LSR provided a list of stakeholders and formats for interviews (i.e. individual or group) and SCALING partners set up schedules. Instruments for different stakeholder groups were used to guide interviews (see Annex 7). Debriefs with the research lead were convened virtually over several evenings throughout the fieldwork, and several team debriefs held at the conclusion. Table 2 presents the breakdown of types of respondents. See Annex 7 for the interview protocols.

Table 2 Component 2: Stakeholders interviewed

Stakeholder Group	Number of respondents		
	Male	Female	Total
SCALING consortium staff	14	20	34
EU and other PIN informants	3	4	7
Government, national and provincial	11	13	24
Government, district, Health Centre, LSS Principal, LWU	41	61	102
Village Authority members, other committee members (such as VDC)	43	8	51
Project volunteers (SBCC, LSS)	23	42	65
Other community members	45	105	150
Others	3	2	5
<b>TOTAL</b>	<b>179</b>	<b>253</b>	<b>432</b>

Thirty-seven (37) SCALING staff responded to the survey (49% male: 51% female). Respondents were from SCI (16); CCL (7); CARE (7); CFL (7). See Annex 8 for the questionnaire.

A validation workshop is to be held after submission of this draft report with SCI and the consortium partners, which will provide another opportunity to cross check insights and factual data.

## 1.5 Data analysis

### Component 1

A quantitative survey was undertaken of 1803 CU5 years of age and their mothers. The quantitative survey

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

included collection of data on 28 key indicators identified by the project for the baseline survey plus a comprehensive investigation of additional indicators of child nutrition, feeding practices for infants and young children, maternal and child diet, maternal nutrition, food security, household expenditure including food expenditure, water and sanitation, maternal and child health, use of health services, household decision making and workload sharing, livelihoods, participation in the project, and perceived impacts of COVID-19 on the household.

The analysis focussed on a comparison of data between 2018 and 2021 from the same villages used in the baseline (a like for like comparison or paired village approach) to determine the magnitude of change in the above areas.

Comparisons were considered statistically significant if the probability of the result occurring by random chance was less than 5% ( $p < 0.05$ ).

A statistical comparison of baseline and endline data requires a use of the original data and recalculation of all indicators. The baseline statistics reported here differ from those originally reported because three of the original villages were dropped from the comparison (found to be out of scope in terms of project activities). The data from these villages was excluded when we did the re-analysis of baseline data and subsequent comparison with endline data. This only affects Phongsaly Province but of course contributes to the overall data as well, as the dropped villages were all from Phongsaly.

There were also methodological differences in calculation of some indicators<sup>16</sup>, and some minor errors were identified in the baseline. Thus, the baseline data originally provided by the project for the logframe analysis and reporting on targets needed to be updated with these revised baseline estimates.

Other factors causing differences between the original baseline and the re-analysed baseline are the weightings used on the original data, which may have been due to issues met during sampling and survey roll-out (e.g. actual villages selected for sampling may have differed from the random selection in a systematic way - anecdotal evidence that villages further away from the main roads may sometimes have been excluded due to village refusal to carry out survey or for expediency). However, we have no way of knowing these weightings as records from the baseline had not been kept.

The original baseline also reported on polychotomous results (multiple answers) whereas the endline evaluation converts these to dichotomous indicators to enable a temporal and cross-sectional analysis (as tabulation for multiple answers x Province/District/Ethnic/Wealth x baseline/endline would generate many more tables than the current rather huge number in the survey).

A multivariate logistic regression analysis was undertaken to determine the factors associated with malnutrition of CU5. A wide range of potential controlling factors such as geographic location, ethnicity, socio-economic status, education, family size, participation in the project were included.

#### *Component 2*

Field notes were posted by field team leaders in Google Forms. Analysis looked for congruity and variation of views between stakeholder groups and locations with a focus on specific project components and potential synergies amongst them. Extensive debriefing with field teams during and immediately after fieldwork contributed valuable insights. Staff survey results were analysed and provide an additional point of triangulation.

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<sup>16</sup> It was unclear how some baseline indicators were calculated, particularly when using multiple response questions.



### 1.6 Limitations

#### Quantitative Survey

The quantitative survey faced similar issues to those faced by qualitative evaluation. Additional limitations were:

- The survey design is a simple baseline / endline comparison without a control group. The lack of a control group prevents any attribution of change to the project. Project outcomes (stunting) are benchmarked against trends provided in national surveys where possible.
- The project had numerous components which were rolled out to a different extent in different locations, which makes quantification of activities for statistical analysis difficult.
- Project impacts and intermediate outcomes are also affected by a wide range of external factors that are not easily incorporated in the survey.
- The survey investigates health and livelihood factors that were not directly delivered or supervised by the project (e.g. vaccinations and the provision of supplements).
- The survey was very long and included numerous indicators. This is a major imposition on the respondents and often leads to diminished data quality through fatigue.
- The survey was designed to detect a 7% reduction (4) in stunting and may not have sufficient interviews to detect changes in other indicators with lower prevalence and smaller changes.
- The survey targets a relative narrow cross-section of the population of the Lao PDR and within each province and district. The target population therefore has a very limited range in wealth, education, etc. which reduces the capacity of some analyses (e.g. the risk analysis and the cross-sectional analysis) to detect differences between groups.
- Some indicators are potentially confounded by other effects (e.g., an increase in the percentage of food expenditure is an objective of the project but generally decreases with increasing income).
- Some indicators (e.g. the women's decision index) were not adjusted to reflect the specific concerns and decision making context of the target population and may not be sensitive to actual changes. For example, the decision-making index focuses on who makes decisions rather than how much input comes from the woman and the Likert scale for decision-making includes a category "Respondent and husband jointly" that covers a wide range of meaningful input by the women.
- The reach of project interventions is difficult to judge<sup>17</sup>. The endline survey included some questions designed to determine the reach of the project within the target population (e.g. the percentage of mothers of children under 5 years of age). However, the survey included many social interventions and respondents appeared to conflate different aspects of the project.
- Socio-economic surveys are affected by various types of recall bias (systematic error caused by differences in the accuracy or completeness of the recollections) and estimation biases/accuracy (systematic difference between an estimate and its true value)
- The baseline and endline surveys were undertaken by different consultants. Additionally, there was no baseline survey manual or training guide available for the endline consultants. While every care

<sup>17</sup> For example, the project monitoring data provide data on the number of participants in various activities but not the number of women with children under 5 (the target population for this survey) who participated in those activities as a proportion of the total number of such women

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

was taken to reproduce the methods of the baseline, the unavailability of detailed information about the conduct of the baseline survey means there remains a possibility of unintentional bias, particularly where qualitative data is collected (e.g. where Likert scales are used etc).

- The project was undertaken over a nominally 4-year period (but reduced in practice to about 3 years) due to delays in signing MOUs. It may have been optimistic to postulate statistically significant change in attitudes and behaviours over that limited period of time.
- Indicators such as stunting and women's empowerment are lagging indicators, they respond gradually to changes and may require years to improve following project interventions (e.g. provision of improved water sources, nutritional advice etc).

The original design anticipated that early survey results would inform the line of questioning in the subsequent qualitative element of the evaluation. However, the volume of survey data and delays in completing the survey data collection due to COVID lockdowns precluded this sequencing, and the launch of Component 2 overlapped with the finalization of data gathering for Component 1.

Logframe and budget data referred to in the analysis under Component 2 refers to information received during the data collection period, which ended October 31<sup>18</sup>. Specifically, logframe data through PY4Q2 is referred to throughout.

#### Qualitative Component

The qualitative component faced several challenges.

- Lockdowns in LNT Province prevented the launch of the fieldwork in the four provinces simultaneously. All interviews in LNT had to be conducted virtually.
- School closures because of COVID-19 in a number of districts similarly hampered reaching the goal of one LSS for each of the 10 districts (Students and teachers and principals from 8 LSS were interviewed; in Pak Xeng (LBP) in the school, and others in their villages or remotely (LNT)).
- COVID-19 restrictions meant that the research lead was unable to travel to Laos and to be in the field for data gathering. All of the findings in this report have been synthesized from field notes (and multiple consultations with field teams), zoom interviews with key informants, a staff survey, and document review.
- Language was also an issue. Field teams relied on local interpreters to help with interviews at village level when respondents were not Lao speakers. This constrained both the depth and duration of interviews. Interviews in LNT were all virtual and the addition of unfamiliar technology and an interpreter presented multiple barriers to a candid conversation.
- Availability of respondents was uneven due to a number of factors. A few official PNC and DNC members sent replacement representatives with little understanding of the structure or project. In some cases, there was some confusion amongst participants about the purpose of the meeting. Community respondents were sometimes too busy to join focus groups or interviews.

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<sup>18</sup> Logframe and expenditure data, including projections through the approved period of the project's No Cost Extension, were provided to the team in early December, and have not been included in the analysis.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

- SCALING staff who responded to the staff survey tended to rate almost all project activities uniformly high on the 5 point Likert scale. This made it challenging to draw insights from this data set.

## 2 RESEARCH METHODOLOGY

### 2.1 Component 1: Quantitative Survey

The quantitative survey undertaken in 2021 repeated the baseline survey, with a slightly adjusted questionnaire. The survey used the same sampling design and interviewed a random selection of households in the same villages included in the baseline. This design was adopted to minimise variance that could be introduced by reselecting villages with different non-project factors such as ethnicity, location, distance to services etc.

Most interviews (96%) were undertaken between 08 and 30 August 2021, when data collection was suspended due to COVID restrictions. The remaining 4% of the data was collected 24-27 September 2021.

The baseline survey was conducted by the Institut de recherche pour le développement (IRD) in Lao PDR jointly for NUSAP and SCALING. The baseline survey was implemented in only 9 of the 14 project districts because other similar surveys had already been recently conducted in the 5 other districts. The survey was only deployed in villages targeted for intervention and is not therefore representative of the districts or the provinces as a whole.

Questionnaires were translated from English into Lao, and interviews were preferentially conducted in the primary language of the respondent, although this was not always possible.

The objectives of the baseline survey were to:

- Characterize basic demographics of the target population;
- Measure nutritional status of CU5;
- Measure nutritional status of women with CU5;
- Describe feeding practices for CU5;
- Measure prevalence and frequency of diarrhoea in CU5;
- Document knowledge, beliefs and practices for health seeking behaviour, care of sick children, micronutrient supplements for CU5, pregnant women and adolescent girls;
- Describe access to safe water, sanitation and hygiene;
- Describe access to quality nutrition services;
- Describe access to local production of nutritious food (vegetables, fruits, oil seeds, animal protein, NTFPs) for own consumption.

#### Data Collection/Interview

The data was collected through personal, face-to face interviews, and recorded using a tablet, with answers entered into the Kobo data collection app [[www.kobotoolbox.org](http://www.kobotoolbox.org)]. Mothers or self-identified caregivers responded for the child interviews.

#### Questionnaire Structure

The questionnaire was divided into ten sections:

Section 1 - General Information

Section 2 - Household Demographic Characteristics

Section 3 - Environmental Characteristics

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

9. Water Supply
10. Water Treatment
11. Sanitation
12. Access to WASH products
13. Hygiene

#### Section 4 - Dietary Intake

1. Mothers Dietary Intake
2. Childs Dietary Intake

#### Section 5 - Food Security and Expenditure

1. Expenditure
2. Household Dietary Diversity
3. Food Production Effort
4. Household Coping Strategies (Food)
5. Livelihood Activities and Income
6. Food Availability and Coping Strategies
7. COVID-19 Impacts

#### Section 6 - Child Illness and Treatment

#### Section 7 - Maternal and Child Health

1. Child Health
2. Most Recent Pregnancy

#### Section 8 - Decision Making and Workload

1. Women's Input to Decision Making
2. Men's Household Workload

#### Section 9 - Anthropometry

1. Pregnant Women Anthropometry
2. Mother and Child Anthropometry

#### Section 10 - Recognized Activities & Interventions

##### 2.1.1 Survey Design

The baseline survey was a two-stage, stratified clustered sampling design with villages/sections of large villages as sampling units. Villages were selected by systematic random sampling using population proportional to size, with the number of CU5 years of age as the size metric. This ensures that all children have an equal chance of selection. A minimum sample size of 1706 children was estimated using standard sampling equations and assuming an initial

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

prevalence of stunting of 45%, a targeted reduction of detecting a 7 percentage point reduction in stunting<sup>19</sup>, a design effect of 2 and a no response rate of 10%. A final target of 1755 households was used, based on a stratification of 9 Districts, 15 clusters per district, and 13 samples per cluster.

#### 2.1.2 Key Indicators

The baseline survey identified 31 key indicators. However, this list was rationalised to 28 indicators for reporting purposes by condensing indicators that were replicated for different groupings (e.g. stunting was reported as separate indicators when it was disaggregated by gender, province and district).

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<sup>19</sup> The project aims to reduce stunting by 5 percentage points but the sample size was selected using 7% percentage point reduction in stunting as a compromise between accuracy, cost and logistics (4)

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 3 Key Indicators for baseline and endline comparison

No.	Indicator
1.1	Prevalence of stunted children <5 years
1.2	Prevalence of stunted children <1000 days
2.1	Prevalence of Underweight children <5 years
2.2	Prevalence of Underweight children <1000 days
3.1	Prevalence of Wasted children <5 years (disaggregated by key parameters including Gender)
3.2	Prevalence of Wasted children <1000 days
4	Prevalence of low birth weight
5	% infants < 6 months EBF (Exclusive breastfeeding)
6	% children 6-23 months with continued breastfeeding
7	% women meeting minimum DDS (Minimum Dietary Diversity)
8	Prevalence of women of reproductive age who are underweight
9	% of children fed more liquids /food during illness
10	% of infants who are breastfed within the first hour after birth (Early initiation of breastfeeding)
11	% of children 6-23 months achieving Minimum Dietary Diversity (MDD) <sup>20</sup>
12	% of population practicing open defecation
13	% of Mothers receiving advice on child nutrition
14	% of population using a hand washing facility with soap and water
15	% of HH using an improved drinking water source
16	% of HH practicing correct use of recommended HH water treatment methods
17	% of caregivers of children 0-23 months who dispose of children's faeces appropriately
18	% of HH using an improved sanitation facility
19	% of increase on decision-making index
20	% of increase on workload sharing index
21	% of HH population in target communities gaining access to WASH infrastructure products and services
22	% of women with a live birth who attended ANC 4 or more times
23	Increase in (HH produced) animal protein intake
24	Increase in % of HH income allocated to the purchase of food (also proxy-indicator for improved decision-making power by women)
25	% of HHs producing vegetables and fruit for own and local consumption
26	% of HHs producing small livestock/aquatic animals or insects
27	% of HHs using processing technology to extend access to nutritious food
28	% of households raising or collecting NTTP's

<sup>20</sup> MDD was reported instead of MAD as there was an error in calculation in MAD at baseline (incorrectly compiled liquids and fluids together in the MMF). Therefor decision was made to use MDD for which we had data at both baseline and endline for comparison to be made.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 2.1.3 Field Methods

Birthdates were recorded from the Child Health Monitoring Book (possibly more commonly known as Vaccination Book by village residents), whenever such documents were available, otherwise by asking the mother.

Height was taken using stadiometers supplied by the relevant Health Centres for children over two years measuring to the closest 1cm, and for children under two using a length measure, lying the infant down and stretching the legs out.

Weight was taken using electronic scales, shoes were removed and children in light clothing measured to 0.5kg. For infants the measure was taken by weighing the mother first and then with the baby and deducting the mother's weight from the combined weight. Scales were provided by the National Nutrition Centre.

MUAC was taken using a soft measuring tape with the arm bent 90 degrees at the elbow to find the midpoint between the elbow and the shoulder then relaxed again with the measurement taken to the closest 5mm. The instruction was: *Place the tape measure around the LEFT arm (the arm should be relaxed and hang down the side of the body) and measure at the mid-point.*

#### 2.1.4 Anthropometry

Height (in children 2-5 years) or Length (in children <2 years), weight (in kilograms to 0.05kg) and date of birth were taken for children in order to calculate Height-for-age Z-score (HAZ), Weight-for-age Z-score (WAZ) and Weight-for-height Z-score (WHZ). These were calculated using Stata data reduction files downloaded for the UNICEF website which utilizes the 2006 World Health Organization Child Growth Standards (4). Mid Upper Arm Circumference (MUAC) for CU5 was collected at baseline. As the measuring tape would have been reused for multiple children it was not collected at endline in an effort to reduce risk of COVID-19 transmission.

The following measures for assessing nutritional status via anthropometry were used for CU5.

Table 4 - Anthropometric Measures Children Under Five

Children Under Five		
Measure	Measurement	Interpretation
<b>Height for Age (HAZ)</b> This measure indicates longer term effects of poor nutrition.	Height for age < -2 SD of the WHO Child Growth Standards median	Moderate Stunting
	Height for age < -3 SD of the WHO Child Growth Standards median	Severe Stunting
<b>Weight for Height (WHZ)</b> This measure indicates shorter term effects of acute undernutrition.	Weight for height < -2 SD of the WHO Child Growth Standards median	Moderate Wasting
	Weight for height < -3 SD of the WHO Child Growth Standards median	Severe Wasting
<b>Weight for Age (WAZ)</b> This measure represents a combination of the effect of both shorter and longer term undernutrition.	Weight for age < -2 SD of the WHO Child Growth Standards median	Moderately Underweight
	Weight for age < -3 SD of the WHO Child Growth Standards median	Severely Underweight

(3)



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

For mothers, Body Mass Index (BMI) was calculated (Weight in Kilograms /Height in Meters<sup>2</sup>). BMI was classified into 4 categories according to the WHO 2006 classifications (5). This includes underweight (BMI<18.5 kg/m<sup>2</sup>), normal weight (BMI=18.5-22.9 kg/m<sup>2</sup>), overweight (BMI=23-24.9 kg/m<sup>2</sup>) and obese (BMI> 25 kg/m<sup>2</sup>). For pregnant women the BMI is not a valid tool, thus MUAC (to 5mm) was taken and assessed against the Food and Technical Assistance (FANTA) 2016 guidelines (6).

Table 5 - Anthropometric Measures Pregnant Women

Pregnant Women		
Measure	Measurement	Interpretation
<b>Mid Upper Arm Circumference (MUAC)</b> This measure is an appropriate and validated proxy for acute malnutrition in pregnant women. However, it is not validated in pregnant adolescents.	190mm-230mm	Moderate Acute Malnutrition (MAM)
	≤190mm	Severe Acute Malnutrition (SAM)

(6)

Implausible measurements for height, weight (i.e. those less than or greater than 6 SDs from the reference mean) were excluded from analysis.

#### 2.1.5 Statistical Analyses

Descriptive statistics for cleaned variables were determined using Stata 15.1 for Windows. Most of the data were dichotomous frequency data or were converted to dichotomous frequency data to enable comparison between province, district, main ethnic group, and wealth tercile (based on total per capita expenditure). The frequency and percentage were used to describe the population characteristics and related variables.

The analysis focussed on a comparison of data between 2018 and 2021 to determine the magnitude of change in the above areas. Comparisons were made at the project level (the survey was designed to detect significant change in stunting at this level) as well as at the province and district level. Comparisons were also made by ethnicity (5 main ethnic classifications) and by wealth group (poor, average, and above average) based on per capita total household expenditure. Comparisons were considered statistically significant if the probability of the result occurring by random chance was less than 5% ( $p < 0.05$ ). A probability value of less than 0.05 is the standard cut-off for statistical significance and indicates the observed result has a less than 5% chance of occurring because of random chance in selection of households for interview.

Multivariate analyses were conducted using conditional logistic regression to determine the factors associated with malnutrition of CU5, using the same methodology as the baseline (4). All potential factors such as socio-economic status, food accessibility, sanitation, were examined through bivariate analyses.

Frequency data were weighted by the number of children in target population of district/number of children included in that district. Household data was weighted by the number of households in the target population of each district/ number of households included in the survey for that district. In practice, the data were fairly evenly weighted, and the use of sample weights made little difference to the overall averages.

Most indicators are reported as a percentage. Rounding errors mean that the sum of disaggregated indicators do not always add to 100%.

### 2.1.6 Baseline Re-Estimation

A statistical comparison of baseline and endline data requires a comparison of the original data and recalculation of all indicators. The baseline statistics reported here differs from those originally reported because three villages used in the original baseline were dropped from this analysis (found to be out of scope in terms of project activities), the weightings used in the original survey were unavailable, a small number of households were dropped from the original survey without explanation, some village codes were corrected in this survey<sup>21</sup>, MAD was calculated inappropriately in the baseline, no clear explanation was provided for how some indicators were calculated from multiple response answers (i.e. treatment of water in the home, correct disposal of child faeces), one indicator (exclusive breastfeeding) did not use all the available data from one province.

The fraction of household expenditure on food was calculated using the mean of the fraction of expenditure on food calculated for each household or as a ratio (mean of food expenditure /mean of total expenditure<sup>22</sup>). We were unable to satisfactorily reproduce the baseline calculations using either method and are unable to explain the discrepancies without access to the original calculations.

## 2.2 Component 2: Qualitative Evaluation

Qualitative data was gathered in several waves:

1) **Document review** was carried out throughout the evaluation. Thematic studies underway by SCALING partners were provided as they became available, some in early draft format. ANNEX 4 BIBLIOGRAPHY provides a complete bibliography of documents reviewed.

2) **Interviews with 21 senior project staff** and technical advisors and the EU were carried out by the Research Lead (June-October 2021)

3) **Key Informant Interviews and Focus Group discussions** were carried out with 432 stakeholders in 4 provinces, 8 districts and 10 villages in September 12-30 2021 by four teams of facilitators following a three-day training on Sept 7-9 2021.

4) **A short on-line survey with SCALING staff** was undertaken in September 2021.

Consultations and sharing of information with a concurrent evaluation of the EU's support to UNICEF under PIN was requested by the EU and has informed some of the findings of this evaluation.

<sup>21</sup> It is unclear if they were corrected in the original.

<sup>22</sup> Mean of total expenditure could be calculated either by sum of the components of expenditure or from the separate respondents estimate of total expenditure. Expenditure is not normally distributed and the use of the mean food fraction is less prone to bias from outliers or errors of estimation.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

## 3 COMPONENT ONE: QUANTITATIVE SURVEY

### 3.1 Survey Mechanics

#### 3.1.1 Sampling Achieved

The number of interviews undertaken slightly exceeded that survey design target (Table 4).

Table 6 - Actual interviews undertaken

District	2018		2021	
	Villages	Interviews	Villages	Interviews
Phongsaly	17	196	17	214
Boun neua	15	195	16	204
Namtha	14	195	14	200
Sing	15	194	15	206
Long	13	196	13	200
Luang Prabang	11	194	11	198
Xieng Ngeun	14	196	14	195
Pak Xeng	15	195	15	198
Xam Neua	15	195	15	198
<b>TOTAL</b>	<b>129</b>	<b>1,756</b>	<b>130</b>	<b>1,813</b>

#### 3.1.2 Demographics

There were 14 separate ethnicities identified over the two surveys. These groups were aggregated into four main groups (Lao Tai, Hmong, Khmu, Akha and a combined group of other minorities) to enable meaningful statistical comparisons.

There was no significant difference in the gender balance or ethnic composition between the baseline and endline surveys, minimizing any bias in comparison of the two surveys.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 7 - Gender and ethnic composition of participants in 2018 and 2021 surveys.

	2018 Baseline	2021 Endline
Female	49%	48%
Male	51%	52%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>
Lao Loum	10%	9%
Hmong	22%	21%
Khmu	29%	30%
Akha	25%	24%
Other minority	14%	15%
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

#### 3.1.3 Ethnicity

The target population in each district has a distinct ethnic composition (Table 6). The target population district in Sing District (LNT) is entirely Akha whereas in Pak Xeng District (LPB) the target population is 82% Khmu and with no Akha included. As a result, any difference in the delivery of project activities or outcomes between districts will also result in differences between ethnic groups.

Table 8 - Ethnicity of target population by district (2021)

District	Lao Tai	Hmong	Khmu	Akha	Other	TOTAL
Phongsaly	2%	0%	3%	15%	80%	100%
Boun Neua	0%	0%	0%	80%	20%	100%
Namtha	4%	18%	37%	21%	22%	100%
Sing	0%	0%	0%	100%	0%	100%
Long	1%	16%	0%	57%	27%	100%
Luang Prabang	30%	36%	33%	0%	1%	100%
Xieng Ngeun	6%	28%	66%	0%	0%	100%
Pak Xeng	7%	11%	82%	0%	0%	100%
Xam Neua	16%	48%	22%	0%	15%	100%
<b>TOTAL</b>	<b>9%</b>	<b>21%</b>	<b>30%</b>	<b>24%</b>	<b>15%</b>	<b>100%</b>

## 3.2 Quantitative Indicator Summary

A comparison of baseline and endline values for all 28 project indicators are provided in **Table 7**.

### Impact Indicators

There are four impact indicators for the project identified in the baseline survey: stunting, underweight, and wasting in CU5 years of age, and the percentage of children with a low birth weight.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

- The percentage of CU5 who are stunted has been reduced from 44.3% in the baseline survey to 31.5% in the endline survey a reduction of 12.8 percentage points ( $p < 0.001$ ), substantially bettering the target of a 7 percentage point reduction in stunting.
- The percentage of underweight children has decreased by 6.6 percentage points
- There was no significant change in the percentage of wasted children, but the prevalence of this indicator is low ( $< 4\%$ ) making it difficult to evaluate any change with a survey of this size<sup>23</sup>.
- There was no significant change in the percentage of low birthweight of the children (all children under 5 years with recorded weight) included in the survey

The percentage of underweight mothers also showed a slight, but statistically significant ( $p = 0.047$ ) decrease from 8.0% to 6.2% of mothers.

#### Intermediate Indicators

Intermediate indicators used in this project are changes in diet, behaviour, access to and use of services that are needed or will help to improve child nutritional outcomes. There were positive improvements in 13 of these indicators including treatment of diarrhoea in children, breast feeding practices, antenatal visits and birth assistance, use of improved water, sanitation, handwashing, dietary intakes.

Treatment of water in the home decreased but this may reflect the greater use of improved water sources. This was accompanied by a small, but significant ( $p < 0.001$ ), decrease in the fraction of expenditure on food. While the project has attempted to increase the proportion of food in the household budget, such a decrease is consistent with increasing incomes/expenditure.

There was no significant change in women's involvement in decision making in the household or men's involvement in household chores. These are, however, long term indicators of cultural change and may be challenging to alter over the course of a 4-year project.

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<sup>23</sup> The survey was designed to detect changes in stunting and is not necessarily suitable to detect smaller changes in other indicators, particularly where the prevalence is low.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 9 - Indicator summary (Project Level)

Indicator	Variable	Nb	Base line	Ne	End line	p value	Difference
I1.1	Stunted CU5 (%)	1665	44.3	1792	31.5	0.000	-12.8
I1.2	Stunted CU2 (%)	717	34.2	1148	24.7	0.000	-9.4
I2.1	Underweight total (%)	1665	21.9	1760	15.3	0.000	-6.6
I2.2	Underweight CU2(%)	738	17.1	1156	11.2	0.001	-5.9
I3.1	Wasting CU2(%)	1690	3.3	1758	2.8	0.475	-0.5
I3.2	Wasting CU2 (%)	768	3.4	1154	3.0	0.646	-0.5
I4	Low Birth Weight (%)	867	7.1	1183	7.0	0.979	0
I5	Exclusive breastfeeding (%)	199	65.1	288	85.2	0.000	20.1
I6	Continued breastfeeding (%)	591	74.5	876	71.3	0.219	-3.2
I7	Mothers Dietary Diversity Score (%)	1730	22.2	1772	61.8	0.000	39.6
I8	Low Maternal BMI (%)	1730	8.0	1772	6.2	0.055	-1.8
I9	Appropriate Diarrhoea Treatment (%)	468	79.1	379	81.0	0.525	1.9
I10	Breastfed within 1h (%)	1730	77.2	1772	81	0.048	3.8
I11.1	Children MAD (%)				23		
I11.2	Children Minimum DDS (%)	591	12.2	876	46.1	0.000	33.9
I12	Household open defecation (%)	1730	43.9	1772	23.9	0.000	-20.1
I13	Mothers receive feeding advice (%)			1740	84.4		
I14	Handwashing with soap (%)	1730	71.9	1772	84.0	0.000	12.1
I15	Improved water source (%)	1730	86.9	1772	91.9	0.017	5
I16	Appropriate water treatment (%)	1730	72.9	1772	62.3	0.000	-10.7
I17	Safe disposal child faeces (%)	1730	42.3	1772	58.5	0.000	16.3
I18	Improved Sanitation (%)	1730	56.1	1772	78.9	0.000	22.8
I19	Women have a voice in decisions (%)	1730	87.8	1772	87.9	0.922	0.1
I20	Sufficient male household work (%)	1730	49.4	1772	46.6	0.167	-2.9
I21	Access to WASH products (%)	1730	82.2	1772	91.5	0.000	9.4
I22	Minimum 4 ANC visits to mother (%)	1730	48.0	1772	64.4	0.000	16.4
I23.1	Woman consumes animal protein (%)	1730	68.1	1772	79.9	0.000	11.8
I23.2	Child consume animal protein (%)	591	51.2	1446	73.0	0.000	21.7
I22	Food expenditure (% total expend)	1730	47.0	1772	52.0	0.050	5.0
I25	Growing vegetables (%)	1730	85.4	1772	84.3	0.422	-1.1
I26	Raising animals for consumption (%)	1730	87.7	1772	87.5	0.935	-0.1

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 3.3 Nutrition - Overview

##### 3.3.1 Nutritional Status in 2021

Significant gains were made with respect to nutritional status of children during the project timeframe. There were significant reductions in the prevalence of stunting and underweight for CU5. The reduction in stunting far exceeds the goal of 7% reduction set forth by the project. It should be noted that similar but less dramatic results have also been seen nationally for Lao PDR<sup>24</sup> (7).

##### 3.3.2 Chronic Malnutrition

Nutrition for CU5 is fundamental for individuals to reach both cognitive and physical potential (9). Stunting is a reduction in the rate of growth experienced by children resulting from poor nutrition, recurrent infections, such as diarrhoea and helminthiasis, and poor psychosocial stimulation. Stunting is identified by taking the weight and height of the child and comparing it against the WHO Growth standards (2006). Children with a Weight for Height Z Score (WHZ) <-2.0 are defined as stunted (4).

Stunting is considered a long-term indicator of inadequate nutrition, and where not addressed early is found often to have permanent effects on physical and mental development. The critical window of intervention is most commonly considered as the first 1000 days of life (from conception to 2 years) and is therefore the target age group of interventions to address stunting. However, there is some emerging evidence that suggests some modest reversal in stunting can be seen right up until the pubertal years (8).

The reduction in the percentage of CU5 with stunting is one of the Sustainable Development Goals set forth by the United Nations and therefore commonly an indicator to measure improvement in childhood nutrition (10). However, it is imperative to highlight that many nutrition focused interventions will have positive affect, but not all observe significant changes in stunting at the population level due to the long-term nature of the indicator (11).

As stunting is a longer-term indicator of nutrition, changes at population level can take considerable time to become evident even where significant short-term improvements in nutrition are seen (11).

Baseline line collected anthropometric data for CU5, however the project only operated for a maximum of 4 years due to start-up and delivery of project outputs taking more time than anticipated, particularly to more remote districts and villages. As a result, many of the older children in the project area were only partially impacted by the project, the significant benefit will have likely been on those who had maximum exposure time to interventions, that is the full 1000 days falling within the 3 years of the implementation phase of the project.

Data analysis of key anthropometric indicators is disaggregated by age, with outcomes for both CU5 and CU2 reported. The analysis also compares the trajectory of declining nutritional status of children with age between the baseline and end-line surveys.

##### 3.3.2.1 Stunting CU5 (I -1.1)

Substantial gains have been made with respect to the levels of stunting in Lao PDR over the past 10 years. In 2012 the level of child stunting at a national level was around 44%, one of the highest in South-East Asia. By 2017 stunting nationwide had declined to around 33%, and most recent data from 2020, shows a further decline to 30.2% (7). However, prevalence remains disproportionately skewed, with much higher levels seen in poorer and rural areas (12).

<sup>24</sup> Data from <https://ourworldindata.org/hunger-and-undernourishment#too-little-height-for-age-stunting> indicate a long term decline in stunting of about 1% per year



## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Between 2018 and 2021 a significant reduction in stunting has been observed across the project area as a whole. Significant differences existed between provinces, districts, ethnic groups, and wealth terciles in 2018, these differences remain in 2021.

### Key findings:

- Stunting has declined from 44.3% to 31.5% for the project area as a whole.
- The project objective of a 7% reduction in stunting has been exceeded, and the improvement is of statistical significance.
- The improvement in stunting was greater for girls than for boys
  - Girls have significantly less stunting than boys in 2021
  - There was no difference between girls and boys in 2018
- There was a significant improvement in all provinces xxx
- Improvement detected in all districts but not all improvements were statistically significant (low numbers)
  - Xam Neua (HUA) had the highest prevalence of stunting (58.7%) in 2018 and while this has improved, stunting remains high (49.2%)
- Improvement has been detected for all ethnic groups but not all improvements were statistically significant
  - Lao Tai had the lowest levels of stunting in 2018 and while there has been an improvement it was not statistically significant.
  - Hmong had the highest levels of stunting in 2018 and while there has been a considerable and statistically significant improvement, stunting remains high (~40%).
- Significant improvement for all wealth groups
  - Poor and average households showed the greatest improvements
  - Poor households still have high rates of stunting (~40%)
- Severe stunting (<-3SD) has reduced from 15% in 2018 to 10% in 2021.

Table 10 - Stunting baseline end-line comparison 0-59 months

Variable	Nb	Stunting BL	Ne	Stunting EL	p-value	Difference
<b>TOTAL</b>	1665	44.3	1792	31.5	0.000	-12.8
<b>Male</b>	847	45.3	944	34.3	<b>0.000</b>	-11.0
<b>Female</b>	818	43.4	848	28.5	<b>0.000</b>	-14.9
<b>p-value</b>		0.470		<b>0.020</b>		

### 3.3.2.2 Stunting CU2 (I-1.2)

Prevalence of stunting for children under 2 years of age was lower than for CU5. And again, there was a significant fall in the rate of stunting from 34.15% in 2018 to 24.74% in 2021. The patterns of differences between districts and provinces were similar to those of CU5 but not as many of the differences were statistically significant.

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 11 - Stunting baseline end-line comparison 0-23 months

Variable	Nb	Stunting BL	Ne	Stunting EL	p-value	Difference
<b>TOTAL</b>	717	34.2	1148	24.7	0.000	-9.4
<b>Male</b>	374	33.8	593	29.0	0.126	-4.8
<b>Female</b>	343	34.5	555	20.2	0.000	-14.3
<b>p-value</b>		0.870		0.00		

### 3.3.2.3 Stunting Trajectory

The baseline survey found that child age was a risk factor for stunting with the risk of stunting increasing with child age (0-59 months). The decline in average child nutrition (increasing in stunting) with age is demonstrated by plotting height/length-for-age z-scores<sup>25</sup> and the percentage of stunted children against child age (refer Figure 4) which shows:

1. The range in height-for-age scores for each age group (width of whiskers) is large when compared to the overall change in z-score with age
2. The youngest age group has a significantly higher z-score and lower levels of stunting in 2021 than in 2018.
3. There is a decline in the nutritional status of children over the first 24 months of the child's life in both the 2018 survey and the 2021 survey.
4. Nutritional outcomes are better for the 24-59 month age cohort in 2021 - stunting in this age group was reduced from 53% in 2018 to 45% in 2021 ( $p < 0.03$ ).

A regression of weight-for-age z-scores against age indicated a significantly less negative average z-score at birth in 2021 (-0.56) than in 2018 (-1.17) supporting the above observations.

The project has witnessed a reduction in malnutrition in new-borns reflecting improved maternal nutrition as well as reducing levels of stunting throughout the first five years of life. Stunting still increases in the first 24 months of life indicating that environmental conditions (in the broadest sense) continue to have an impact on child development.

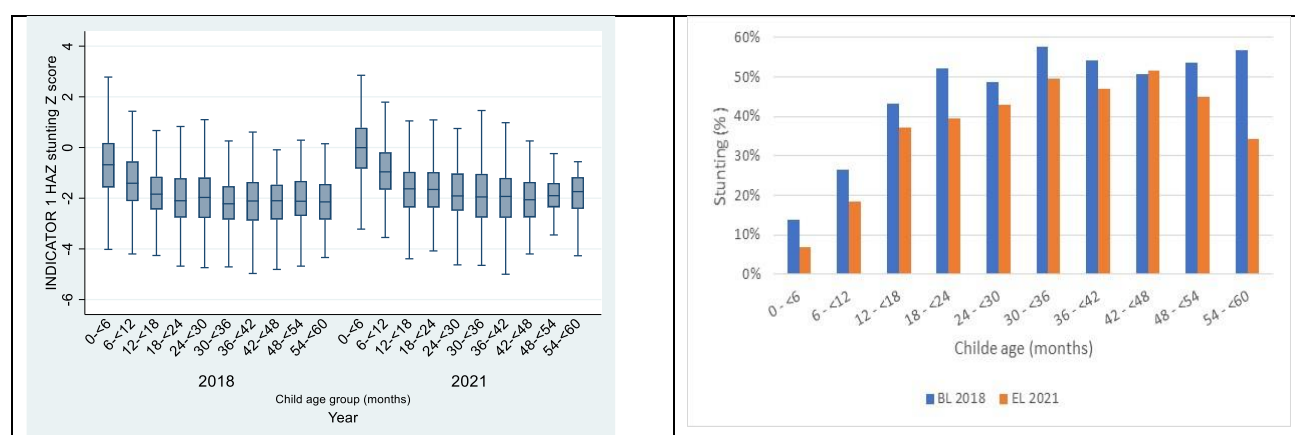


Figure 3 Stunting Z-score and percent stunting by age group

<sup>25</sup> The z-scores are plotted as box and whisker plots. The whiskers represent the estimated range of values for the population, the box provides the 25<sup>th</sup> percentile (bottom of), median (middle) and 75<sup>th</sup> percentile (top of box).

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

### 3.3.3 Underweight

Being underweight is associated with an increased risk of disease in children. National rates of underweight have been falling in Lao PDR over the past 20 years. They were as high 35.6% in 2000, but in 2017 had fallen to a national level of 21.1% (13). The measure of underweight looks at the comparison of a child's weight to standards for that age group, differentiated by sex. The measure represents a combination of the effect of both shorter- and longer-term undernutrition. Underweight in children is expressed as Weight-for-Age-Z score (WAZ)  $< -2.0$  as per the WHO Growth Standards (2006) (4).

#### 3.3.3.1 Prevalence of Underweight CU5 (I-2.1)

Prevalence of underweight in CU5 fell between baseline in 2018 and 2021. However, it is statistically more difficult to detect a change in underweight as compared to stunting.

The overall percentage of children underweight was observed to be 21.88% in 2018 (similar to other nationally available figures) to 15.25% in 2021 (13). The change was greater for girls (8.43% reduction) than boys (5.03% reduction), girls are significantly less likely to be underweight in 2021.

The percentage of underweight children declined in all provinces (the decline was not statistically significant in Huaphanh, but sample size was much smaller as only one district was included in the project).

The percentage of underweight children declined for all ethnic groups, but the decline was statistically significant only for Akha and Khmu ethnic groups.

Looking cross sectionally, while there have been improvements in the percentages of children who are underweight, these differences have not been universal and there are now significant differences between provinces, districts, ethnic and wealth groups.

Table 12 - Prevalence of underweight in CU5

Variable	Nb	Underweight BL	Ne	Underweight EL	p-value	Difference
<b>TOTAL</b>	1665	21.9	1760	15.3	0.000	-6.6
<b>Male</b>	851	22.3	927	17.2	0.017	-5.1
<b>Female</b>	814	21.5	833	13.1	0.000	-8.4
<b>p-value</b>		0.74		0.02		

#### 3.3.3.2 Underweight CU2 (I-2.2)

In 2021 the prevalence of underweight in CU2 (11.9%) was lower than prevalence in CU5 (15.25%). Total prevalence of underweight for CU2 had fallen since 2018 where it was 17.09%. Of most interest in 2018 there was no significant difference between males and female rates of underweight in this age group, but in 2021, females fared significantly better with just 7.5% prevalence compared to 14.59% prevalence in males.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 13 - Prevalence of Underweight CU2

Variable	Nb	Underweight BL	Ne	Underweight EL	p-value	Difference
<b>TOTAL</b>	738	17.1	1156	11.2	0.001	-5.9
<b>Male</b>	386	17.8	599	14.6	0.204	-3.2
<b>Female</b>	352	16.4	557	7.5	0.001	-8.8
<b>p-value</b>		0.630		0.000		

#### 3.3.3.3 Underweight Trajectory

The percentage of underweight children also increases with age. The increase is demonstrated by plotting weight-for-age z-scores<sup>26</sup> and the percentage of underweight children against child age (refer Figure 4 Underweight Z-score and percent stunting by age group) which shows trends observed for stunting and height/length for age z-scores. However, differences in the percentage of new-borns that are underweight, and the prevalence of underweight children aged 24-59 months between 2018 and 2021 are not statistically significant.

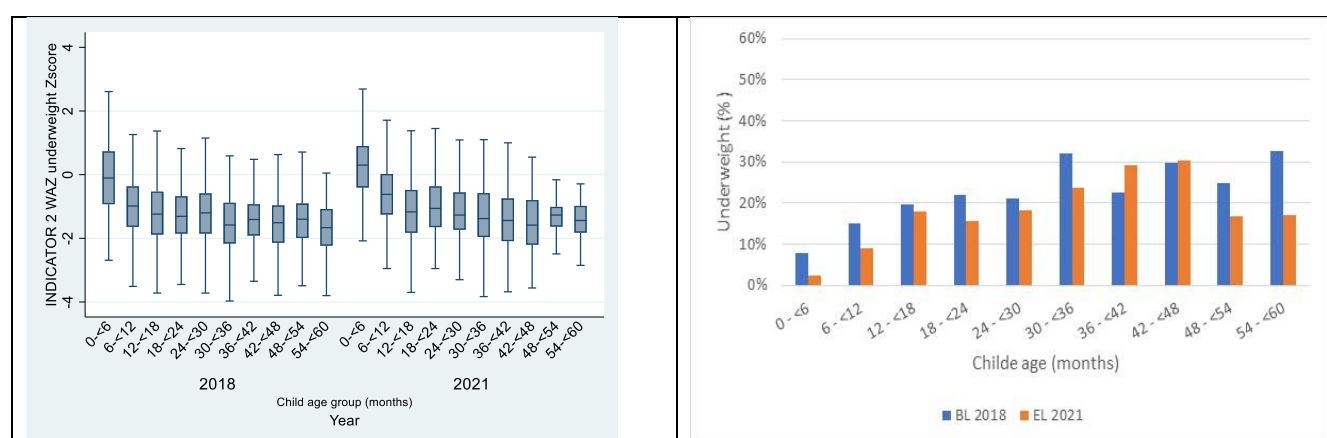


Figure 4 Underweight Z-score and percent stunting by age group

#### 3.3.4 Acute Malnutrition

Wasting is an acute measure of nutrition status, more likely the result of recent weight loss where there has been inadequate oral intake due to illness or severe restriction in food access. Wasting is measured using weight of the child and measuring it against standards for height for that age group, differentiated by sex. Wasting is defined as a Weight for Height Z score of  $<-2.0$  as per the WHO Child Growth Standards. Wasting (where it is moderate or severe) is typically associated with an increased risk of mortality (9).

##### 3.3.4.1 Wasting CU5 (I - 3.1)

Nationally levels of wasting in CU5 in Lao PDR have fallen from as high as 17% in 2000, to 9% in 2017 (5). Data from the current project at baseline (2018) and endline (2021) had prevalence of wasting at very low levels ( $<4\%$ ).

<sup>26</sup> The z-scores are plotted as box and whisker plots. The whiskers represent the estimated range of values for the population, the box provides the 25<sup>th</sup> percentile (bottom of), median (middle) and 75<sup>th</sup> percentile (top of box).

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

There was a significant reduction in Phongsaly which began with a relatively high levels of wasting in 2018 (4.59%) compared to 2021 (1.9%). There was an increase in Luang Namtha – 0.7% in 2018 to 2.3% to 2021.

There was found to be a variation between genders in 2021 following improvements for girls and slight worsening for boys. However, low prevalence makes it difficult to identify consistent differences.

Table 14 - Wasting CU5

Variable	Nb	Wasting BL	Ne	Wasting EL	p-value	Difference
<b>TOTAL</b>	1690	3.3	1758	2.8	0.475	-0.5
<b>Male</b>	854	3.5	921	3.7	0.865	0.2
<b>Female</b>	836	3.0	837	1.8	0.077	-1.2
<b>p value</b>		0.510		0.040		

#### 3.3.4.2 Wasting CU2 (I-3.2)

Levels of wasting in children in the first 1000 days of life (CU2) were also found to be at very low levels in 2018 (3.43%) and 2021 (2.97%). The reduction in prevalence was not found to be significant. No significant changes were observed across districts, provinces, ethnicities or wealth levels.

Table 15 - Prevalence Wasting CU2

Variable	Nb	Wasting BL	Ne	Wasting EL	p-value	Difference
<b>TOTAL</b>	768	3.4	1154	3.0	0.646	-0.4
<b>Male</b>	393	3.6	593	4.2	0.697	0.6
<b>Female</b>	375	3.2	561	1.6	0.143	-1.6
<b>p value</b>		0.80		0.04		

#### 3.3.4.3 Wasting Trajectory CU2

Levels of wasting are low (< 5% for all age groups) and only show a small change with increasing child age. Levels of wasting at birth and for children aged 24 months and older are not significantly different between 2018 and 2021.

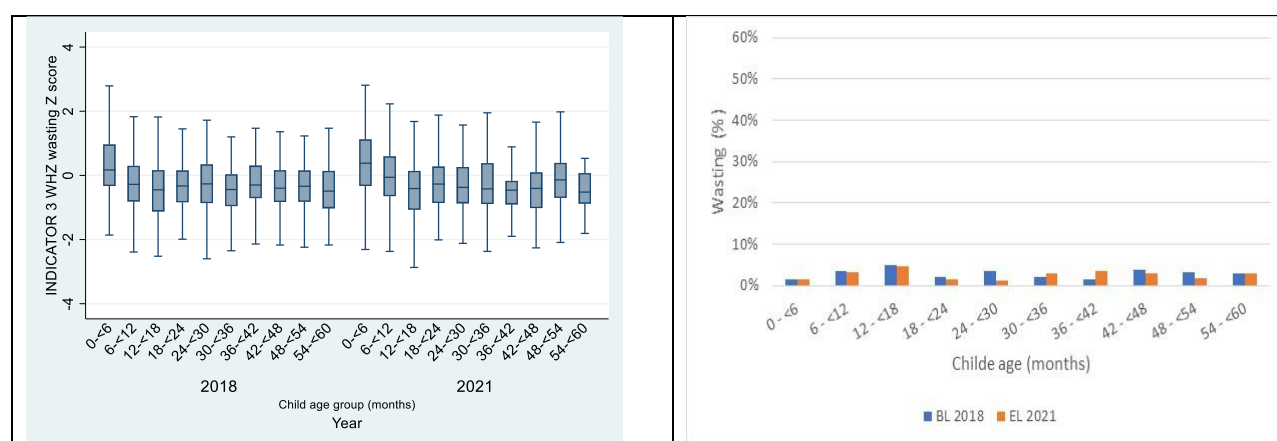


Figure 5 Wasting Z score and percent stunting by age group

### 3.3.5 Low Birth Weight

Low Birth Weight (LBW) is defined as the weight for a baby born under 2500g. LBW may be the result of pre-term delivery, or restricted growth in utero. LBW is influenced by the longer-term nutrition status of the mother, her own dietary intake through pregnancy as well as the potential presence of infections, smoking, medical complications, or physically demanding activities (14) (15). LBW is associated with mortality and morbidity of the neonate. LBW is also associated with restricted physical growth and cognitive development, as well as higher prevalence of chronic disease throughout life. Prevalence of LBW is highest in countries with poorer socio-economic conditions (16).

There was no significant difference in the prevalence of LBW, where it was recorded, between 2018 (7.1% of record weights) and 2021 (7.0% of recorded weights), nor between provinces, districts, ethnic groups, or wealth class. Importantly a large proportion of children had no birth weight recorded in 2018, this proportion of households had reduced significantly in 2021, which may bias the data. Whilst there was no significant change in LBW, encouragingly the mean birthweight was significantly higher in 2021 than in 2018, ( $p = 0.0382$ ).

Table 16 - Table 14 Birth Weight (kg)

Birthweight related Indicator	2018	2021
Birth weight (kg)	3.074	3.122
No birth weight recorded (%)	50.57	34.53

### 3.3.6 Infant and Young Child feeding and Maternal Diet

#### 3.3.6.1 Breastfeeding

Exclusive breastfeeding (EBF) for the first six months of life supports ideal growth and development in the infant (17). Formula-fed infants show patterns of poorer weight gain and higher rates of morbidity compared to breastfed infants. Early initiation of breastfeeding including the feeding of colostrum in the early hours and days post-birth is key to establishing successful milk supply, strengthening maternal bonds to the baby, and promoting immune function in the infant. Continuation of breastfeeding up to 2 years is advised to support adequate nutrition as complementary foods are introduced, supporting continued healthy growth and development of the child (18).

#### 3.3.6.2 Immediate breastfeeding (I-10)

Immediate breastfeeding (within the first hour after birth) is crucial for provision of colostrum and helping to stimulate the breasts for milk production. Breastfeeding within the first hour has increased from 77.2% in 2018 to 81.0% in 2021 ( $p = 0.048$ ). There was no significant difference in immediate breastfeeding between male or female infants in either survey.

Boun Neua District recorded a very low rate of immediate breastfeeding (37.4%<sup>27</sup>) in the baseline which has more than doubled to be 91.6% (refer appendix).

Lao Tai recorded a significant decrease in rates of immediate breastfeeding (from 92.5% to 81.5%) and Akha recorded a significant increase (69.2% to 88.2%).

<sup>27</sup> We assume the baseline data was correct, enumerators were district based and Boun Neua recorded a very high percentage (58%) of mothers breastfeeding after 24 hours compared to all other districts in 2018.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

In 2018 the wealthiest tercile (had the lowest level of immediate breastfeeding ( $P = 0.0037$ ) – but this has changed in 2021 and there are now no significant differences between wealth groups.

Overall improvements in immediate breastfeeding have led to a reduction in differences across provinces, districts and wealth levels in 2021 compared to 2018.

#### 3.3.6.3 Exclusive Breast feeding 0-5 months (I-6)

Breastfeeding behaviours were assessed based on the mother's reporting of the previous 24 hours. It should be noted this approach is limited in that it assumes that the previous 24 hours were representative of usual practice, which may miss changes in practice due to season, and variations in mothers' activities.

Exclusive Breastfeeding	Defined as
<b>A child &lt;6 months whose mother reported:</b>	<b>Yes</b> to receiving breastmilk yesterday, during the day, or at night <b>and</b> <b>No</b> to receiving non breast milk liquid (such as canned, powdered or fresh animal milk, infant formula, juice, or thin porridge); fluid from a bottle with a nipple; vitamin or mineral supplements; or solid or semi-solid food (such as porridge, rice, pre-chewed foods, fruits, bread, meat, eggs or vegetables).

The number of children less than 6 months of age is small (<300) in both surveys which limits the effectiveness of the survey in evaluating this indicator. Exclusive breastfeeding is also age dependent (the percentage of exclusive breastfeeding decreases with age of child) so that an age selection bias (there is a difference in age structure between surveys) can affect the results.

There was an increase in exclusive breastfeeding for the project between 2018 (65.1%) and 2021 (85.2%). However, the data set as a whole lacks consistency in longitudinal trends:

- Exclusive breastfeeding for girls increased by 30 percentage points whereas the increase for boys was only 9 percentage points.
- Most of the change in exclusive breastfeeding occurred in Luang Prabang Province (31 percentage point increase) and particularly in Xieng Ngeun District which recorded an increase in exclusive breastfeeding from 32.76% to 88% of children 0-5 months being exclusively breastfed. The very low rate of breastfeeding in the baseline suggests a potential data collection error, or challenges experienced in translation.

A pattern of less exclusive breastfeeding was found amongst wealthier HHs in both 2018 and by 2021, possibly reflecting greater use of infant formula - 27% of mothers from the wealthiest households had fed their child (< 6 months) from a bottle on the previous day compared to only 12% of poor mothers ( $p=0.02$ ).

There is a discrepancy in the estimates of exclusive breastfeeding in 2018 reported here and those reported in the baseline, particularly for Luang Prabang Province. The discrepancy arises from a difference in the number of children of the correct age used in the analysis. Rechecking the raw baseline data confirm the number of children in that province of the correct age matched the number used in this analysis. It is not clear why the baseline used fewer children in the analysis.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 3.3.6.4 Breastfeeding 5-23 months (I-5)

The continuation of breastfeeding beyond the first 6 months and up to 2 years is recommended for all children. Children who are breastfed up to 2 years of age have a lower risk of mortality than those who are not (17).

There was no significant difference in the level of continued breastfeeding between 2018 (74.5%) and 2021 (71.3%). Significant differences in continued breastfeeding occur between provinces, districts, ethnic and wealth groups in 2021. Huaphanh Province/Xam Neua District (60.9%), Lao Tai (60.39%) and Khmu (62.4%) have the lowest levels of continued breastfeeding. Poor households have higher levels of continued breastfeeding (around 70%) than average or above average households.

#### 3.3.7 Dietary Intake Children 6-23 Months

Adequate dietary intake for growth and development of children impinges on both the variety and frequency of foods being consumed to ensure ample macronutrient (fat, carbohydrate and protein) as well as micronutrients (vitamins, minerals and fibre) consumption. The nutritional intake of children 6-23 months can be measured using a series of tools. Minimum acceptable diet (MAD) for children 6-23 considers both the frequency of meals and the diversity of foods eaten in the diet. It is essentially a composite measure of two other tools: the Minimum Meal Frequency (MMF) and the Minimum Dietary Diversity (MDD). See the table below for an outline of the tools, how the data was collected and what information it provides (19) (20).



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 17 - Dietary Assessment tools for children 6-23 months (20)

Dietary Assessment Tools for Children 6-23 months		
Tool Name	How is the data collected	What does it tell us
<b>Minimum Meal Frequency (MMF)</b>	A questionnaire that asks carer to comment on number of times the child ate solid, semi solid or soft foods in the preceding 24 hours.	Adequacy is defined as: <i>2 meals daily for breastfed children 6-9 months;</i>  <i>3 meals daily for breastfed children 9-23 months;</i>  <i>4 meals daily for non-breastfed children 6-23 months.</i>
<b>Minimum Dietary Diversity (MDD) for Children 6-23 months</b>	A questionnaire that asks carer to comment on items consumed in preceding 24 hours as classified into 7 food groups  1. Grains, roots, and tubers 2. Legumes and nuts 3. Dairy products (milk, yogurt, cheese) and includes Breastmilk 4. Flesh foods (meat, fish, poultry, and liver/organ meats) 5. Eggs 6. Vitamin A-rich fruits and vegetables 7. Other fruits and vegetables	If an infant is eating from 4 food groups or more this is considered <i>adequate</i> in terms of dietary diversity
<b>Minimum Acceptable Diet (MAD)<sup>28</sup></b>	This is a combination result of both the MMF and MDD, it is calculated from responses to those tools	If they meet both the MMF (for their age and breastfeeding status) and the MDD of 4 from 7 food groups they are said to be meeting the <i>Minimum Acceptable Diet</i> .

#### 3.3.8 Minimum Acceptable Diet (MAD) Children 6-23 months

The percentage of children in the target population meeting the MAD was 23.0% in 2021. There was no significant difference in MAD between genders, provinces, or wealth groups. There were, however, significant differences in MAD between districts and ethnic groups. Hmong children (12.9%) have by far the lowest MAD and districts with

<sup>28</sup> Unfortunately, it is suspected the baseline study contained an error in collecting data on the MMF for breastfed children, and as the MAD is a combination of the MMF and MDD, no comparisons in MAD between baseline and endline could be made. Therefore only the separate MDD was used in comparison with baseline, and MDD and MFF reported as static measures.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

a high proportion of Hmong also have low MADs: Boun Neua (PSL) 17.8%; Namtha (LNT) 17.3%; Luang Prabang (LPB) 18.2%)

Although comparison of the MAD cannot be made to baseline (see foot note 17), we can look to previously collected data on MAD for some context. Similar levels were reported by the Scaling Up Nutrition (SUN), Movement Monitoring, Evaluation, Accountability and Learning (MEAL) results which combine data from Multiple sources (FAO, UNICEF etc) and reported MAD sitting at 27% nationally in 2017 (1).

#### 3.3.9 Minimum Dietary Diversity (MDD) AND Minimum meal Frequency (MMF) Children 6-23 months

The percentage of children reaching MDD (46.1%), and MFF (74.7%) in 2021 is much higher than the percentage of children reaching MAD (23%), this hints towards frequency not always aligning with diversity, that is children who were fed an adequate number of meals were not necessarily fed with adequate diversity of food type.

The percentage of children reaching the minimum dietary diversity score increased from 12.2% in 2018 to 46.1% in 2021 ( $p < 0.001$ ) and a similar improvement was seen for males and female children. Significant improvements occurred in all provinces, with the greatest improvements occurring in Phongsaly Province (37.9 percentage points) and the lowest in Huaphanh (27.9 percentage points).

Most districts also showed a significant improvement, the exceptions being Sing District (LNT) and Luang Prabang District (LPB) both of which had relatively high base rates of children meeting MDD (38.2% and 24.7% respectively) compared to the baseline average of 12.2%.

Most ethnic groups also showed a significant improvement in MDD, however, Hmong children showed the lowest improvement (10.8 percentage points) compared to other ethnicities (28.0-50.8 percentage points) and Hmong children have the lowest MDD in 2021 (27.4%)

All wealth groups showed a similar improvement in MDD (about 34 percentage points for all groups: ranging from 32.5-35.2 percentage points). In 2021, a higher percentage of children met the MDD where wealth (categorised by HH expenditure) was above average (49.4%) conversely a lower percentage met the MDD in poorest households (39.7%), though the difference between groups is no longer statistically significant ( $p = 0.100$ ).

#### 3.3.10 Mothers receiving advice on nutrition

In 2021 84.4% of mothers recall receiving advice about childhood nutrition, this may well be from the 1,000 day volunteers.

Table 18 - Advice about Feeding

Variable	Advice about feeding BL	Ne
<b>TOTAL</b>	84.4	1740
<b>Male</b>	84.9	919
<b>Female</b>	83.8	821
<b>p value</b>	0.490	

#### 3.3.11 Maternal Nutrition

Poor maternal nutrition including poor dietary intake and low pre-pregnancy Body Mass Index (BMI) is associated with negative outcomes for the child, including LBW, premature birth, increasing risks of both mortality and

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

morbidity (16) (21) (22). Pregnancies in adolescence pose particular risk both for the baby (LBW, intrauterine growth restriction, higher likelihood of complications and mortality) as well as for the adolescent mother (higher maternal mortality and risks of stunting in final years of adolescent growth while nutrients are diverted to the unborn child) (22).

### 3.3.11.1 Minimum Dietary Diversity for Women (MDD-W) (I-7)

A diet diverse in food from a variety of core food groups is crucial to good health, and prevention of disease. Its importance for women particularly in childbearing years is paramount. Poor dietary diversity can lead to both micronutrient deficiencies (for example Iron and Folic Acid) for the mother and this can be deleterious for the healthy growth in utero (6). The MDD (outlined in the table below) measures the range of foods an individual is eating over a 24-hour period. The tool is positively correlated with micronutrient adequacy and where used at population level can provide evidence for improvements in dietary quality. It is important to note however that it does not provide any insight into adequacy of diet in relation to quantity of foods consumed (20).

Table 19 - Dietary Assessment Tools - Women

Dietary Assessment Tools for Women		
Tool Name	How is the data collected	What does it tell us
<b>Minimum Dietary Diversity For Women (MDD-W) (20)</b>	<p>A questionnaire which asks respondent to comment on food consumed in preceding 24 hours as classified into 10 food groups</p> <ol style="list-style-type: none"> <li>1. Grains, Roots or Tubers</li> <li>2 Pulses</li> <li>3. Nuts and Seeds</li> <li>4. Milk or other dairy products</li> <li>5. Meat, poultry and fish</li> <li>6. Eggs</li> <li>7. Dark green, leafy vegetables</li> <li>8. Fruit or vegetables that are orange or yellow inside</li> <li>9. Other vegetables</li> <li>10. Other fruits.</li> </ol>	<p>If a woman is eating from 5 food groups or more this is considered <i>adequate</i> in terms of <i>dietary diversity</i>.</p>

29

The dietary diversity scores of women between 2018 and 2021 shifted upwards significantly. The average number of food groups that a women ate from in 2018 was just 3.44 (from a possible 10), compared to 5.18 in 2021. This

<sup>29</sup> In 2018 an older version of this tool – the Women’s Dietary Diversity Score (WDDS) which categorises food according to 9 food groups (not 10) was used. For ease of comparison using the most current tool, the 2018 data was reanalysed according to the 10 food groups of the MDDW. Therefore, the reported 2018 numbers in this document will differ slightly from that reported on in the 2018 baseline report.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

is an important improvement as it suggests the average woman is much more likely to be meeting the minimum dietary diversity benchmark (expressed as a score of 5 from 10 food groups). The percentage of women meeting the minimum of 5 food groups in the preceding 24 hours jumped from just 22.2% in 2018 to 61.8% in 2021 (12).

Table 20 - Mean Dietary Diversity Score For Women

Year	Mean	Std. Err.	[95% Conf. Interval]
2018	3.44	0.05	3.34 3.53
2021	5.17	0.07	5.03 5.30

Table 21 - Percentage of women achieving minimum dietary diversity score

Variable	Nb	% Meeting MDD-W- BL	Ne	% Meeting MDD-W EL	p-value	Difference
TOTAL	1730	22.2	1772	61.8	0.000	39.6

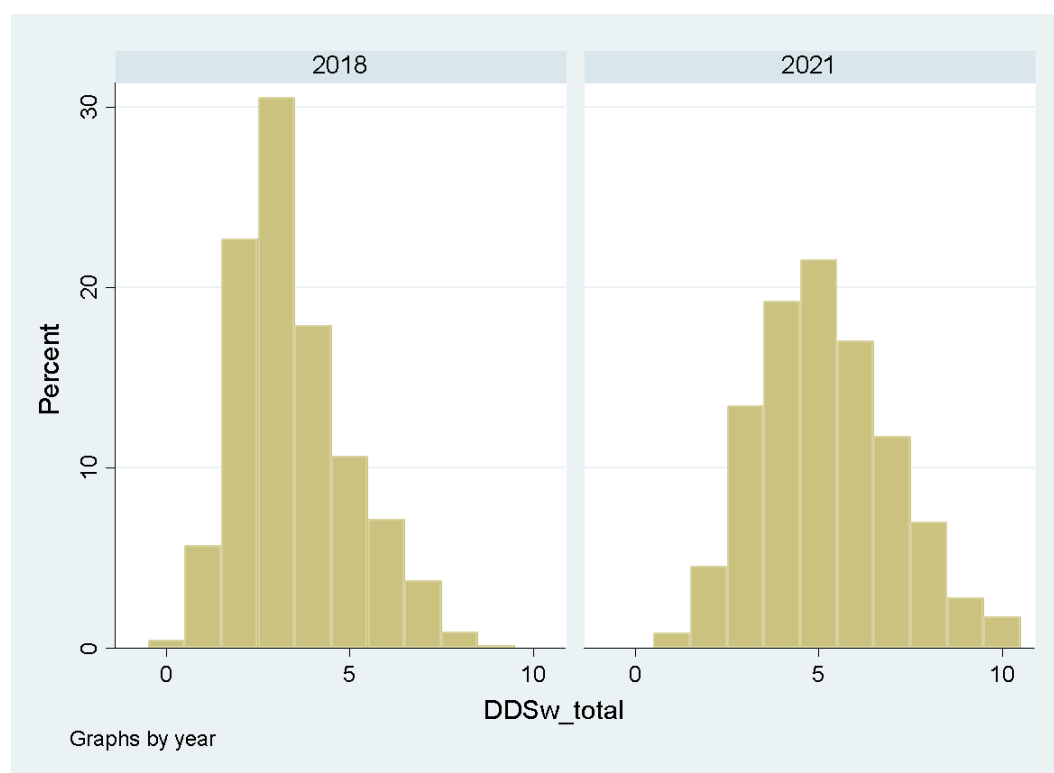


Figure 6 Women's Dietary Diversity Score

Examination of women's diets with respect to the variety of food groups consumed in the preceding 24 hours showed some impressive changes between 2018 and 2021.

Importantly consumption of dark leafy greens (a naturally high source of folate crucial for healthy foetal development in early pregnancy) increased from 41% in 2018 to 85% in 2021. The consumption of nuts and seeds (high in healthy fats, multiple micronutrients, and a reasonable source of non-animal protein) increased from 8% in 2018 to 30% in 2021. Dairy, which was rarely consumed in 2018 (3%), jumped to from 3% to 23% in 2021.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 22 - Percentage of Women consuming individual food groups

Food Group	Consumed in past 24 hours - 2018	Consumed in past 24 hours - 2021	Difference
Grains, roots, and tubers	86%	98%	12%
Pulses	8%	24%	16%
Nuts and seeds	8%	30%	22%
Dairy	3%	23%	20%
Meat, poultry, and fish	68%	80%	12%
Eggs	30%	32%	2%
Dark leafy greens and vegetables	41%	85%	44%
Other Vitamin A-rich fruits and vegetables	16%	32%	16%
Other vegetables	57%	60%	3%
Other fruits	25%	54%	29%
Mean Dietary Diversity Score (Adequacy 5 from 10)	3.4	5.2	1.7

#### 3.3.11.2 Low Maternal Body Mass Index (I-8)

Low maternal weight, measured by pre-pregnancy BMI is strongly correlated with LBW, as well as stunting and wasting in children (15) (23). Levels of underweight (BMI <18.5kg/m<sup>2</sup>) were found to fall slightly from 7.98% in 2018 to 6.23% in 2021, however the change was not statistically significant due to the small sample size.

There are significant differences in prevalence of low BMI mothers between provinces, districts, ethnic groups in both 2018 and 2021. Sing District (LNT) had the highest prevalence of low BMI at 14.56% and Huaphanh the lowest at just 3.03%. Further details by province, ethnicity etc are found in the Appendix.

Table 23 - Prevalence of Underweight Mothers (BMI<18.5kg/m<sup>2</sup>)

Variable	Nb	Low Maternal BMI BL	Ne	Low Maternal BMI EL	p-value	Difference
TOTAL	1730	8.0	1772	6.2	0.055	-1.8

#### 3.3.11.3 MUAC in Pregnant Women

For pregnant women, MUAC is used as a valid proxy for nutrition status, as BMI is not validated during pregnancy. In the 2018 baseline survey there were 138 pregnant women aged > 19years of whom 13% had a MUAC <230mm indicating they were malnourished. By 2021, this had increased to 24.8% of the 149 pregnant women found in the survey sample. These findings mirror another recent study Northern Lao PDR which found similar levels (42% using a slightly higher 235mm cut off) (27).

## 3.4 Child Illness

The burden of childhood illness is greatest in areas of low wealth and remoteness. Illnesses such as diarrhoea and acute respiratory infections (ARI) are common in childhood. However, their affect in children who are already malnourished is significantly amplified. Infections that produce diarrhoea on repeated occasions reduce the body's ability to absorb nutrients, even when they are consumed in adequate amounts, contributing towards the

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

development, or worsening of malnutrition. Death because of pneumonia (a leading cause of death in children) is more common in those already afflicted with malnutrition. Incidence and severity of childhood illness can be reduced by improved breastfeeding practices, adequate dietary intakes, safe access to safe water and food, improved sanitation, immunization, supplementation, and appropriate and timely treatment of illness (23) (24).

#### 3.4.1 Childhood Diarrhoea & Acute Respiratory Infection

Diarrhoeal disease may result from infection with parasitic, bacterial or viral organisms. The infection is usually the result of person to person contact or from eating and drinking contaminated food or water. Diarrhoea causes more child mortality and morbidity than any other cause globally. Prevention via improved water access, sanitation and hand hygiene are key, as are improved practices in food hygiene, as well as continued breastfeeding (25).

ARI may result from adenoviruses (including pneumonia), pneumococcus or rhinoviruses. ARI usually begins in the nose or throat but can spread to the lungs, causing significant difficulties in breathing and even death where it is not treated. Pneumonia itself is responsible for 14% of global deaths in CU5 (24).

The incidence of diarrhoea and ARI fluctuates considerably between years and across seasons. The effect of COVID-19 on the incidence of these and other communicable diseases must be considered in the interpretation of the 2021 results. There have been changes to people's behaviour (handwashing, social distancing), as well as changes to the movement of people (due to lockdowns, changes in employment) as a result and these are likely to have influenced results.

To determine incidence of diarrhoea and ARI in CU5, mothers or primary caretakers were asked about symptoms in the preceding 2 weeks.

Illness	Was suspected
Diarrhoea	When the child had three or more loose stools or one or more bloody stool in the period of 24 hours.
Acute respiratory infection (ARI)	In children who were reported to have had a cough and difficulty breathing due to congestion in the chest.

##### 3.4.1.1 Incidence of Diarrhoea

There was a significant reduction in diarrhoea incidence at the project level from 26.3% of mothers reporting diarrhoea in 2018 to 20.9% in 2021 ( $p < 0.001$ ). The largest reductions were seen at the district level, particularly where baseline levels were high. For example, in Boun Neua District the prevalence of diarrhoea fell from 44.9% in 2018 to 21.7% in 2021. Conversely, there was a significant increase in Xam Neua District from 13.9% in 2018 to 25.3% in 2021.

Akha mothers reported the highest levels of diarrhoea in children at baseline (35.1%) and have shown the greatest reductions in diarrhoea, reporting 21.6% in 2021.

Significant differences are observed between districts, ethnic groups, and wealth terciles in 2021. Large differences were seen between ethnic groups in 2018, these were less pronounced in 2021. HHs in the wealthiest terciles have seen greater reductions in diarrhoea over the project timeline.



Table 24 - Incidence of Diarrhoea

Variable	Nb	Diarrhoea BL	Ne	Diarrhoea EL	p-value	Difference
<b>TOTAL</b>	1727	26.3	1772	20.9	0.000	-5.4
<b>Male</b>	880	29.6	931	22.3	0.002	-7.3
<b>Female</b>	847	22.8	841	19.4	0.090	-3.4
<b>p-value</b>		0.000		0.430		

### 3.4.1.2 Diarrhoea Treatment

Diarrhoeal disease severity, duration and impact can be reduced by some simple and cost-effective interventions in children:

- Oral rehydration salts (ORS) - a combination of sugars, salt and water are well established as a lifesaving treatment (24) (26).
- Continuation of feeding a nutritious diet as well as breastfeeding through the duration of diarrhoeal illness is also associated with improved outcomes (24) (26).
- Zinc supplements are also recommended (24) (26) to reduce diarrhoeal duration (however this was not examined in this study).

There were some modest improvements in the treatment of diarrhoea across the project timeline. The use of ORS increased from 5% in 2018 to 9% in 2021. The use of Nam Tha Lay (rehydration drip in health centre) remained the same at 63%. The numbers of mothers/caretakers reporting continuation of feeding (food and/or breastfeeding) was somewhat mixed. Whilst those who fed about the same amount remained stable at 22%, those who gave 'Much Less' increased from 5% to 10% and those who gave 'More' fell from 14% to 8%.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 25 - Treatment of diarrhoea in children

Questions relating to treatment of diarrhoea in children	2018	2021
<b>How much was the child given to drink during diarrhoea? (including breast milk)</b>		
Much less	4%	4%
Somewhat less	39%	29%
About the same	18%	20%
More	36%	44%
Nothing to eat/drink	2%	3%
Don't know	1%	0%
P< 0.0001	100%	100%
<b>Was child given ORS/homemade fluids during diarrhoea?</b>		
Yes, Nam Tha Lay	63%	63%
Yes, Recommended	5%	9%
No	20%	27%
Don't know	12%	1%
P <0.0001	100%	100%
<b>How much was the child given to eat during diarrhoea?</b>		
Much less	5%	10%
Somewhat less	56%	57%
About the same	21%	22%
More	14%	8%
Nothing to eat/drink	2%	3%
Don't know	2%	1%

#### 3.4.2 Prevalence of Acute Respiratory Infection

The prevalence of ARI in both the baseline and endline surveys was low (<5%) and no significant change was detected between the two surveys. The only significant difference identified was in Namtha District (LNT) which started with a higher baseline level (6%) than other districts in 2018 and fell to 2% in 2021.

There were no significant differences in ARI between provinces, districts, ethnic or wealth groups, which is not surprising given the low prevalence.

The possible effect of COVID-19 on both incidence and reporting should not be overlooked. Coronavirus itself could account for some of the suspected cases, but conversely reporting of such symptoms may have been suppressed due to fears/concerns over the associated stigma of diagnosis of COVID-19. The mitigation strategies of lockdowns, social distancing, masks, and increased hand hygiene may well have helped to reduce incidence of other causes of ARI.

#### 3.4.3 Prevalence of Fever

Mothers were asked if their child had a fever in the last 2 weeks. Prevalence of fever in children has significantly reduced from 42% (2018) to 28% (2021). The decline was consistently observed across all provinces, districts,

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

ethnic and wealth groups. The greatest improvements were in Phongsaly and Luang Prabang Provinces and Boun Neua and Xieng Ngeun Districts (all reduced from a high baseline incidence).

Lao Tai have shown greatest improvement with fever (from 32% down to 10%) from a relative low base and now have by far the lowest incidence of childhood fever.

The poorest HHs have shown the greatest reduction in fever (from 40% down to 23%) compared to other wealth terciles. The higher wealth terciles report higher rates of child fever in both the baseline (42-44%) and endline (30-31%).

#### 3.4.4 Percentage of households accessing a health care facility when ill

Access to healthcare facilities during illness is crucial for both diagnosis and timely, appropriate treatment. Several factors affect people's access to healthcare including distance to healthcare facilities, cost, power and decision making at the HH level, the needs for work, household duties and care for children, as well as the perceived authority/legitimacy of healthcare providers.

Mothers were asked if they had sought care for either themselves or their child in the last 2 weeks. Use of health care facilities decreased from 78.3% in 2018 to 73.2% in 2021 ( $p=0.022$ ). This reduction was largely driven by changes in Huaphanh Province/Xam Neua District which saw a reduction in health visits from 92.6% of mothers seeking care in 2014 to only 66.7% in 2021.

There were significant differences in health seeking behaviour between provinces and districts in 2018 primarily because some areas had very high levels of mother seeking health care when they or their child was ill / perceived to be ill. The significant reductions in mothers seeking assistance when an illness occurs are associated with groups with a very high level of dependence on health advice/assistance in the baseline.

Poor households were less likely to seek health assistance in 2018 and are still less likely to seek health assistance (66.1%) than the two wealthier groups (75-78%) in 2021.

It is difficult to interpret this health care indicator as it is a compound indicator for both mother and child, and because it is affected by multiple factors including wealth, transient levels of illness (such as diarrhoea, ARI etc), severity of illness, and confidence in the health care system. The reduction in seeking formal health assistance in 2021 may also be related to COVID-19 (reduced ability to travel, fear of contracting COVID-19 at a healthcare centre, potential stigma associated with presenting with ARI type symptoms, or increasingly busy health care centres) and is unlikely to be due to low income as incomes have increased for most communities.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 26 - Change in health care behaviour - health care facilities visited during last illness (% of cases)

Type of Facility visited	2018	2021
Government hospital	46.5	45.4
Health centre	61.3	56.0
Village health worker	3.2	0.6
Outreach team	0.2	0.0
Private hospital/clinic	9.8	7.2
Private physician	3.0	0.9
Private pharmacy	9.0	8.3
Mobile Clinic	0.1	0.2
Relative or friend	0.2	1.1
Shop	2.8	1.4
Traditional healer	0.9	0.6
Other	0.9	0.0

### 3.5 Food Security

Securing enough safe, nutritious, and culturally appropriate food is key to general health and wellbeing. Increasingly the importance of that food being produced in an environmentally and socially sustainable way is all integral to achieving a global state of food security. Sadly, global food insecurity has been slowly on the increase from 22.6% in 2014 to 26.6% in 2019. COVID-19 has accelerated the rise with global levels of nearly 30.4% in 2021 (26).

The recently published report; *The state of Food Security and Nutrition in the World 2021*, places Lao PDRs levels of moderate to severe food insecurity from 2018-2020 at 29.4% (26).

Significant interventions in Lao PDR over the last decade have born some positive outcomes such as a diversification of agricultural practices, positives changes in biodiversity and soil conservation as well as improvements in women's empowerment, purchasing power and in turn an improvement in dietary diversity for both women and children (26).

There are a range of tools used to assess various dimensions of food security. In the current project the following have been used.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 27 - Food Security Assessment Tools

Tool	How is the data collected			What it tells us
Food Consumption Score (FCS)	A recall of food consumed in the preceding 7 days is taken and classified according to the following food groups each with specific weighting assigned to them.			It is a validated tool for tracking food security across time.  It is useful in capturing usual dietary practices as it is over 7 days rather than 24 hours which many food recall tools use.
	Food Group	Weighting	“To calculate the FCS from these results, the consumption frequencies are summed and multiplied by the standardized food group weight (see the food groups and corresponding weights below). Households can then be further classified as having "poor," "borderline," or "acceptable" food consumption by applying the WFP’s recommended cut-offs to the food consumption score” (19).	
	Main Staples	2		
	Pulses	3		
	Vegetables	1		
	Fruit	1		
	Meat/Fish	4		
	Milk	4		
	Sugar	0.5		
Oil	0.5			
Coping Strategies Index (CSI)	The five standard coping strategies and their severity weightings are: 1. Eating less-preferred foods (1.0) 2. Borrowing food/money from friends and relatives (2.0) 3. Limiting portions at mealtime (1.0) 4. Limiting adult intake (3.0), and 5. Reducing the number of meals per day (1.0).			A validated tool which measures the level of food security experienced. Expressed as a numeric score.

#### 3.5.1 Food Consumption Score

The Food Consumption Score (FCS) at the HH level is a telling indicator of food security. The FCS tool is validated as a tool which reflects levels of food security and is particularly useful for measuring changes across time (19).

There has been a significant increase in the FCS from a mean score of 54.4 in 2018 to a mean score of 60.5 in 2021 ( $p < 0.001$ ). An increase in FCS was observed for all disaggregations (province, district, ethnic and wealth groups) though the increase was not always statistically significant ( $P < 0.05$ ).

The largest increases in FCS tended to occur in districts and in ethnic groups with the lowest scores in the baseline. Pak Xeng District had the lowest FCS in 2018 (49.7) and the greatest improvement (increase of 12.6 points).

All ethnic minorities (Hmong, Khmu, Akha, and others) had low FCS (<55 points) compared to Lao Tai (68.27) in 2018 but showed a much greater improvement (5-8 points) than the Lao Tai (0.8 points) thus narrowing the food security gap in 2021. However, all wealth groups showed a similar improvement.

While the food security gap between districts and ethnic groups has narrowed in 2021, significant difference still occurs between districts, ethnic and wealth groups. Namtha (54.7) and Long Districts (56.9) (both in LNT) have the lowest FCS as do Hmong households (55.4) and poor households (55.0).

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 28 - Household Food Consumption Scores

Household Food Consumption Scores				
	2018		2021	
	Mean	SEM	Mean	SEM
<b>TOTAL</b>	54.4	0.4	60.5	0.4
<b>Huaphanh</b>	56.5	1.5	57.9	1.1
<b>Luang Namtha</b>	53.3	0.6	56.7	0.6
<b>Luang Prabang</b>	55.1	0.7	63.0	0.7
<b>Phongsaly</b>	53.0	0.6	62.2	0.8
<b>District</b>				
<b>Phongsaly</b>	52.9	1.0	61.4	1.1
<b>Boun Neua</b>	53.0	0.8	62.9	1.1
<b>Namtha</b>	50.7	1.0	54.7	1.1
<b>Sing</b>	57.1	0.7	58.8	1.0
<b>Long</b>	52.8	1.1	56.9	1.0
<b>Luang Prabang</b>	62.7	1.3	65.9	1.1
<b>Xieng Ngeun</b>	49.8	1.1	62.4	1.2
<b>Pak Xeng</b>	49.7	0.9	59.1	1.1
<b>Xam Neua</b>	56.5	1.5	57.9	1.1
<b>Ethnicity</b>				
<b>Lao Tai</b>	68.3	1.6	69.1	1.3
<b>Hmong</b>	50.1	1.0	55.4	1.0
<b>Khmu</b>	53.9	0.7	62.3	0.7
<b>Akha</b>	54.7	0.5	59.9	0.6
<b>Other minority</b>	51.6	0.9	59.7	0.9
<b>Wealth</b>				
<b>Poor</b>	48.8	0.6	55.0	0.6
<b>Average</b>	55.0	0.6	60.7	0.6
<b>Above average</b>	59.7	0.7	66.2	0.6

### 3.5.2 Household Food Security

The percentage of households with poor or borderline food security as indicated on the FCS score decreased from 11.23% in 2018 to 7.08% in 2021 ( $p < 0.001$ ). Decreases occurred in all provinces but were only statistically significant in Luang Prabang Province ( $p = 0.003$ ) which recorded a decrease from 12.01% of households in 2018 to 5.32% in 2021.

A more mixed picture emerged at the district level. All districts, except Sing and Long Districts (both in LNT), recorded a decrease in the percentage of households with poor or borderline food security. Xieng Ngeun District recorded the greatest decrease from 18.37% of households in 2018 to only 5.64% in 2021. There was a small but not statistically significant increase in household food insecurity in Luang Namtha District (LNT) ( $p = 0.15$ ) but in Sing District (LNT) households with poor or borderline security increased from 0.52% in 2018 to 7.28% in 2021.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Only Hmong (7.8 percentage points) and Khmu (4.9 percentage points) recorded a significant improvement in food security, with Hmong households recording the lowest levels of food security (22.5%) in 2018 and in 2021 (14.7%).

All wealth strata improved their food security with the greatest improvements occurring for the poorest households (from 19.2% poor/marginal food security to 12.2% in 2021).

#### 3.5.3 Animal Protein Consumption

Protein from animal sources is thought to be more bioavailable, that is humans are better able to digest and utilize the nutrients from it. The consumption of high-quality protein which is bioavailable is particularly important in populations more prone to illness and disease as the body's protein requirements increase with metabolic shifts associated with inflammation. Inadequate protein intake is associated with increased rates of malnutrition, and poor resilience to infection (27) (23).

The consumption of protein in the proceeding 24 hours was measured both for mothers and for children 6-23 months.

The percentage of women consuming animal protein in the last 24 hours increased from 68.4% in 2018 to 79.9% of women in 2021. The majority of groupings (province, district, ethnic and wealth groups) showed an increase but this was not universal. Sing District (LNT) saw a decrease in animal protein consumption from 91.8% of respondents in 2018 to only 82.5% of respondents in 2021<sup>30</sup>.

For children, data on protein consumption was only collected for the 6-23 months of age cohort which consists of only 591 children (combining both surveys).

A significant increase in the frequency of meat consumption by children occurred between 2018, when 51% of children consumed animal protein and 2021, when 73% of children consumed animal protein in the last 24 hours.

#### 3.5.4 Household Expenditures

##### 3.5.4.1 HH income allocated to the purchase of food (I-24)

In the baseline survey, respondents were asked to estimate total cash expenditure in the last 4 weeks on (1) food, (2) housing, gas, electricity and fuel, (3) education, (4) healthcare and (5) other goods and services. The fraction of expenditure on food could be calculated either as a mean of the fraction of expenditure calculated for each house or by comparing overall mean. We were unable to satisfactorily reproduce the estimates of the fraction of household expenditure on food reported in the baseline (even when accounting for the exclusion of 3 villages) using either method and, without access to the original calculation, are unable to explain the discrepancies. An analysis of national data (33) indicates that market expenditure on food in rural areas constituted about 37% of total expenditure in 2013/14 and about 47% of total expenditure in 2018/19, somewhat closer to our estimates than the values originally reported in the baseline (33%)

In this report the fraction of expenditure on food was estimated for each house and the mean of these fractions compared between baseline and endline. The fraction of expenditure spent on food has increased from 47% in 2018 to 52% in 2021. While the project has encouraged households to increase expenditure and production of food, an increase in food fraction expenditure is correlated with deteriorating food security.

<sup>30</sup> The very high proportion of women consuming protein in the last 24 hours in Sing District (LNT) is suspicious and may reflect a data collection error or specific conditions (e.g. festivals) at the time of data collection.



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

In 2021 there has been a somewhat mixed picture in the disaggregated data – most sub-groups showing an increase in the fraction of total expenditure spent on food but some (e.g. Luang Namtha and Luang Prabang Provinces, and Sing District (LNT)) showed a significant decrease in food fraction of expenditure.

Differences between groups were generally larger than differences between the two surveys. Poorer HHs generally spent a higher fraction of expenditure on food than above average income HHs.

#### 3.5.4.2 Household Expenditure

Poverty analysis typically and evaluation of household economic wellbeing generally use per capita household consumption including both cash expenditure and the imputed value of food produced and consumed within the household and gifts/support provided to the household (e.g. Poverty Profile in Lao PDR, Poverty Report for the Lao Expenditure, and Consumption Survey 2018-2019). Evaluation of the total value of household consumption is complex to administer, so the baseline survey used cash expenditure as a simple proxy for economic wellbeing.

Household expenditure is expressed on a per capita basis (LAK/person/month) and has been corrected for inflation using CPI sourced from the Bank of Lao. Expenditure is not normally distributed, and a logarithmic mean was used to minimize the impact of extreme values and outliers.

Mean household expenditure has increased from 151,752 LAK/person/month in 2018 to 245,242 LAK/person/month in 2021, an increase of 62% compared to the baseline. Increases in expenditure have occurred across-the-board, in every province and district, for each ethnic group, and for each wealth category.

Greatest relative increases in household expenditure occurred in Luang Namtha Province (84%), in Long District (151%) in LNT, and for the Hmong ethnic group (73%). The poorest households also showed the largest increase in expenditure (105%) though coming off a very low base (45,707 LAK/person/month).

Significant differences in household expenditure remain between all groups in 2021:

- target populations in Phongsaly Province reported above average household expenditure nearly three times higher than Huapanh Province which had the lowest household.
- Sing (LNT), Boun Neua (PSL) and Luang Prabang (LPB) Districts reported household consumption about three times greater than Xam Neua District (HUA).
- Akha and Lao Tai groups had the household expenditures about three times higher than Khmu
- Above average wealth groups had expenditure nearly seven times greater than the poorest households.

#### 3.5.5 Coping Strategies Index

The reduced Coping Strategies Index (CSI) has been developed to compare food security across different contexts. It is a sub-set of the context-specific CSI but is calculated using a specific set of behaviours with a universal set of severity weightings for each behaviour. Thus, the reduced CSI uses a standard set of five individual coping behaviours that can be employed by any HH, anywhere. It is very useful for comparing across crises or geographic targeting because it is measuring only the same set of behaviours (Table 26).

Core CSI behaviours in the survey were:

1. Rely on less preferred, less expensive foods?
2. Borrow food or money from friends or relatives?
3. Limit portions at mealtimes?

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

4. Limit adult intake?
5. Reduce the number of meals per day?

The baseline survey asked respondents “In the **past month**, how often have you used any of the methods when you did not have enough food or money to buy food?” and required answers on a Likert scale that provided a range of weekly frequencies (Table 26).

Table 29 - Frequencies used to calculate CSI in baseline

Code	Answer	Frequency used to calculate baseline CSI
1	Once a week	= 1
2	1-2 times per week	= 1.5
3	3-4 times per week	= 3.5
4	5-6 times per week	= 5.5
5	Daily	= 7
6	Never/ less than once per week	= 0

Field testing of the questionnaire revealed that enumerators and respondents found this format confusing and found it easier to obtain a specific frequency for each coping strategy. This was the format used in the second survey.

CSI is calculated by multiplying the weekly frequency of the behaviour by the weight of the behaviour and summing for all behaviours. Lower values of the CSI indicate greater food security and a value of zero indicates that the household does not face any issues with obtaining sufficient food for their needs.

We estimated a baseline CSI of 6.05 whereas the baseline reported a reduced coping strategies index of 2.8 which indicates very little food insecurity. There was no significant change in the CSI between 2018 and 2021 (CSI=2021) which is surprising given the substantial increase in household expenditure and food consumption that was also reported for the 2021 survey.

There was no significant difference in CSI between 2018 and 2021 for any of the provinces. There was a mixture of positive and negative changes at the district level with some districts showing improvement and some deterioration in food security for different districts. The observed changes are complex and best analysed graphically (refer Figure 7). The wide variation in results at the district level compared to the results for provinces, ethnic and wealth groups suggests that the CSI in the baseline or endline may be inaccurate because of the difficulties encountered with the indicator, is strongly affected by local conditions at the time of the survey (or that composition of the district teams had an impact).

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

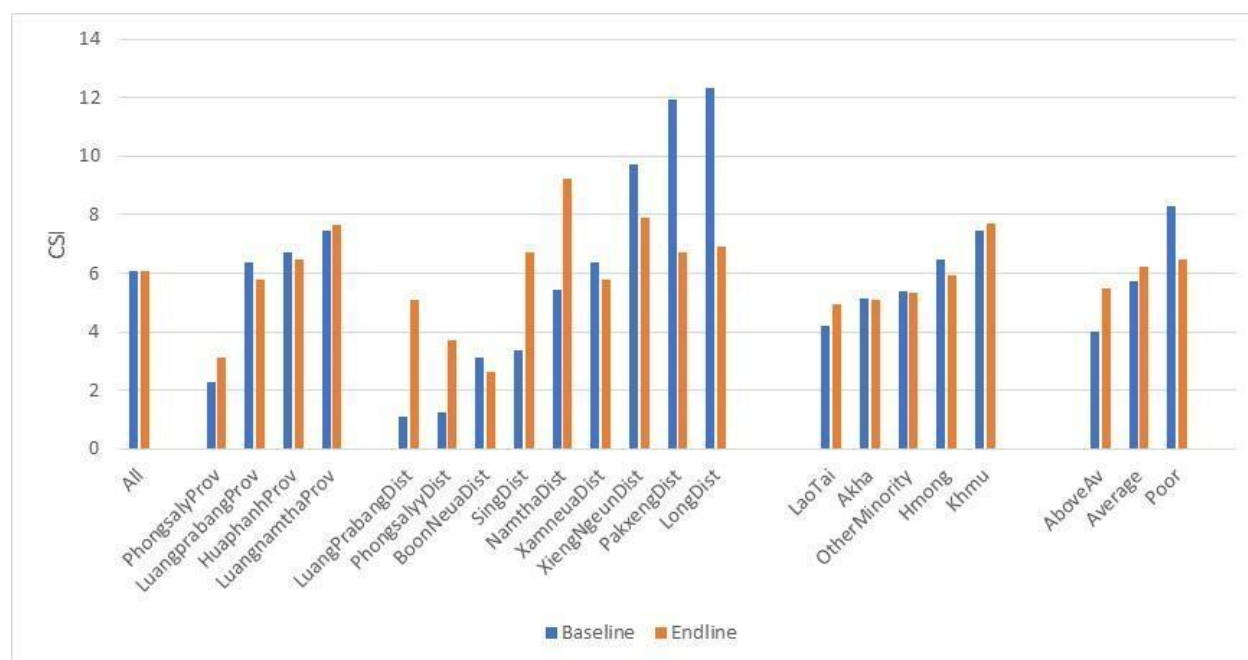


Figure 7 Coping Strategies Index for baseline (2018) and endline surveys (2021)

Values are disaggregated by province, district, ethnic and wealth groups. Groups are sorted by CSI values in 2018

Significant differences between groups province, district, ethnic, and wealth groups remain in 2021:

- Target populations in Phongsalay province have greater food security (lower CSI) than other provinces
- Lao Tai have the greatest food security and Hmong and Khmu the lowest
- Poor households have lower food security than wealthier households.

### 3.6 Water, Sanitation and Hygiene

Many communities in Lao PDR, especially those in poor or rural areas, do not yet have improved access to water supply and sanitation. Water supply, sanitation, and hygiene influences a child's growth in multiple ways. A child who is stunted early in life often has reduced physical and mental development.

One of the key objectives of the project was to improve water supply infrastructure and strengthen local authorities' ability to monitor, evaluate, and provide technical support to communities, with the aim of reducing women's workload, improving child health, and contributing to reduced stunting in high-priority areas.

#### 3.6.1 Type of water source

There has been significant change in the main source of drinking water used by households between 2018 and 2021. The most used drinking water source in 2018 were protected springs (44.5% of households) but the use of these sources declined dramatically and only 17.9% of households used protected springs as their water source in 2021. The reduction in use of protected springs is accompanied by significant increases in the use of bottled water and to a lesser extent water piped to the dwelling.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 30 - Main source of drinking water baseline and endline

Drinking Water Source	Baseline	Endline	Diff
<b>TOTAL</b>	1730	1772	
Protected spring	45.1	18.2	-26.9
Piped into dwelling	14.1	22.5	8.4
Public tap/standpipe	10.1	10.6	0.5
Bottled water	8	27.8	19.8
Other	6.9	-	-6.9
Piped into compound	6.8	9.8	3
Unprotected spring	3.8	1.5	-2.3
Unprotected well	1.9	0.3	-1.6
Tube-well or borehole	1.4	1.1	-0.3
Piped into neighbor's compound	0.9	1.2	0.3
Protected well	0.6	0.7	0.1
Surface water	0.5	6.4	5.9
Cart with small tank/drum	-	0	0

P < 0.0001

#### 3.6.2 Use of Improved Water

Improved water sources (I15) include piped water into dwelling, plot, or yard; piped water into neighbour's plot; public tap/standpipe; tube well/borehole; protected dug well; protected spring; and rainwater.

The use of improved water sources has increased from 86.9% of households in 2018 to 91.9% in 2021 (p=0.017). However, improvements were not uniformly achieved across all districts with four provinces. Luangnamtha, Luangprabang, and Huaphan recorded increases of between 5.8 and 9.8 percentage points, but there was no significant difference in use of improved water sources in Phongsaly (p=0.177).

Significant improvements in the use of improved water were recorded for Lao Tai (12.3%) and Khmu (6.4%) but there was no improvement recorded for Hmong and Akha households.

There are still significant differences in use of improved water between provinces and Phongsaly Province (80.9% use) has the lowest use of improved water sources in 2021 compared to other provinces (>90% use). There are also significant differences in use of improved water between districts in both surveys. Phongsaly District (78.0%) has the lowest use of improved water sources in 2021. There are significant differences between ethnic groups in both surveys – Akha have the lowest use of improved water sources (88.5%) in 2021.

#### 3.6.3 Water Treatment

The primary objectives of a program to supply safe water are the minimization of contamination of source waters, the reduction or removal of contamination through treatment processes and the prevention of contamination during storage, distribution, and handling of drinking-water (29).

Respondents were asked which methods of water treatment were used in a multiple response question. Boiling is the most common form of water treatment with about 95% of households stating that they boiled their drinking water (see Table 28). Straining through a cloth and allowing water to settle were the next most common form of treatment however neither of these methods is effective in removing biological contaminants that pose a health risk.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Overall, the level of water treatment has decreased from 72.9% of households treating water in some way in 2018 to 62.3% of households. However, it is more important to evaluate the level of effective treatment by the type of water source (*Table 32*). The treatment of water is correlated to the type of water sources (eg treatment of bottled water versus surface water).

A household was defined as using a safe water treatment in this analysis if they identified at least one safe method in their responses (boiling, water filter, bleach, or solar disinfection). The recalculation of safe water treatment results in a discrepancy between the original baseline and the current estimate of safe treatment at baseline. The baseline report does not define how they calculated safe water use either in terms of what was considered safe or how they treated multiple response.

The level of safe water treatment has increased for all sources of water except unprotected springs and other water sources. These water sources represent only a small proportion of water used by households in 2021 -1.5% of households currently use unprotected springs and no households recorded “other water source”<sup>31</sup>.

There is no consistent pattern of change in water treatment across the project. Most disaggregated groups (Province, District etc) show a decline in safe water treatment, but Long District (LNT) showed an increase in water treatment.

Significant differences exist between wealth groups – water treatment is least common amongst the above average wealth groups who are also the biggest users of bottled water.

There has been no detectable increase in the use of water filters, despite promotion by the project. This is not surprising given the relatively limited roll out - 877 filters (2) - compared to the size of the target population.

*Table 31 - Type of water treatment (% of households treating water)*

Type of Water Treatment (multiple answers)	% using in 2018	% using in 2021
Boil	95.3	94.1
Stand and settle	6.2	8.8
Straining through a cloth	11.5	3.6
Use water filter	3.1	2.2
Bleach/chlorine	2.2	0.5
Coagulation	0.0	0.1
Solar disinfection	0.1	0.1
<b>TOTAL</b>	<b>118.5</b>	<b>109.4</b>
<b>Treat water</b>	<b>72.9</b>	<b>62.3</b>

<sup>31</sup> Note that 6% of households were recorded as using other sources in 2018.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 32 - Water treatment by supply type (2021)

Type of Water treatment	% using Approved treatment 2018	% using Approved Treatment 2021	Difference
Piped into dwelling	70.3	76.7	6.4
Piped into compound	78.0	83.8	5.8
Piped into neighbour's	68.8	86.4	17.6
Public tap/standpipe	81.9	81.5	-0.3
Tube well or borehole	55.6	64.0	8.4
Protected well	61.5	90.0	28.5
Unprotected well	75.0	50.0	-25.0
Protected spring	71.0	74.9	3.9
Unprotected spring	75.7	82.1	6.4
Surface water	88.9	100.0	11.1
Bottled water	64.5	78.5	13.9
Other	61.0	13.8	-47.1
<b>TOTAL</b>	<b>71.7</b>	<b>63.0</b>	<b>-8.6</b>

#### 3.6.4 Bottled Water

There has been a substantial growth in the use of bottled water within the project area. Bottled water was the primary source of drinking water for 8.0% of households in 2018 but this increased to 27.8% of households in 2021. Bottled water is a highly desirable and convenient source of safe water but it is expensive compared to other sources. The increase in the use of bottled water reflects increasing disposal incomes (refer ANNEX 3 - ADDITIONAL TABLES Household Total Expenditure (LAK/person/month)), improved transportation and the spread of cheap reverse osmosis water treatment & bottling plants. The greatest growth in the use of bottled water has been in Luang Prabang Province and District, amongst Lao Tai households, and by average and above average wealth groups.

#### 3.6.5 Sanitation

Sanitation is defined as access to and use of facilities and services for the safe disposal of human urine and faeces. A safe sanitation system is a system designed and used to separate human excreta from human contact at all steps of the sanitation service chain from toilet capture and containment through emptying, transport, treatment (in-situ or off-site) and final disposal or end use (26).

Safe sanitation is essential for health, from preventing infection to improving and maintaining mental and social well-being. The lack of safe sanitation contributes to diarrhoea, a major public health concern and a leading cause of disease and death among CU5 years in low- and middle- income countries; poor sanitation also contributes to several neglected tropical diseases, as well as broader adverse outcomes such as undernutrition. Lack of access to suitable sanitation facilities is also a major cause of risks and anxiety, especially for women and girls (26).



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 3.6.5.1 Type of Sanitation

There has been a significant change in the type of sanitation facilities used in the project area, primarily an increase (22.6 percentage point) in the use of flush/pour systems for households which previously had no sanitation.

Table 33 - Type of Sanitation

Type of Sanitation	% using in 2018	% using in 2021	Diff
Flush/pour flush	54.6	77.1	22.6
Flush to piped sewer	1.5	1.4	-0.2
Ventilated improved pit latrine	1.5	0.3	-1.2
Pit with slab	0.0	0.0	0.0
Pit without slab	0.1	0.1	0.1
Bucket	0.1	0.0	-0.1
None	42.3	21.1	-21.2
<b>TOTAL</b>	<b>100</b>	<b>100</b>	

P<0.0001

#### 3.6.5.2 Improved Sanitation I-15

Flush/pour slabs are by far the most important form of improved sanitation (flush systems, VIP and pit toilets). The use of improved sanitation has increased from 56.1% of households in 2018 to 78.9% of households in 2021. An increase in improved sanitation was recorded for all provinces, districts, ethnic and wealth groups, though the increase was not always statistically significant.

The smallest improvements were recorded for Phongsaly District (5.91 percentage points), and amongst Lao Tai households overall (4.0 percentage point increase). There remain significant differences in the use of improved sanitation between provinces, districts, ethnic groups and wealth groups. Phongsaly Province has the lowest use of improved sanitation (51.9% of households), as do the two districts in this Province included in the project. The Akha (66.17%) and the other minorities (68.7%) have very low use of safe sanitation compared to Lao Tai households (97.7%).

#### 3.6.5.3 Open Defecation I-12

The occurrence of open defecation is closely correlated with the lack of improved sanitation for a household (30). The percentage of households practicing open defecation was reduced from 43.94% of households in 2018 to 23.85% of households in 2021. Improvements occurred in all provinces, districts, ethnic and wealth groups. Lowest improvements occurred in Phongsaly District PSL (6% reduction) and Luang Prabang District (6% reduction), though Luang Prabang District had a very low rate of open defecation in 2018 (15.5%).

Phongsaly Province has the highest rates of open defecation in 2018 (65%) and in 2021 (44%) with most improvement occurring in Boun Neua (24%) rather than Phongsaly District (6%).

#### 3.6.5.4 Correct Disposal of Child Faeces I-17

Children's stool disposal is often overlooked in sanitation programs of any country. Unsafe disposal of children's stool makes children susceptible to many diseases that transmit through faecal-oral route. The incidence of diarrhoea in children whose stools were disposed of unsafely is higher than that of children whose stools were disposed of safely (29).



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Respondents were asked what methods of disposal they used and were allowed multiple responses. A household was considered as using a safe method if they identified at least one safe method. The prevalence of safe disposal for the baseline reported here differs from that given in the baseline and the logframe. It is not clear how the original prevalence was calculated in terms of what was considered safe or how multiple responses were handled. The recalculated data provide a comparison of like with like as the prevalence of safe disposal is calculated the same way for both surveys.

The percentage of mothers safely disposing of their child's faeces has increased from 42.26% of mothers in 2018 to 58.53% in 2021. Improvements occurred in all provinces, but large and statistically significant improvements only occurred in Luang Namtha Province (30.7 percentage points) and Luang Prabang Province (17.5 percentage points). At the district level, significant increases occurred in Namtha, Sing, Long, Xieng Ngeun and Pak Xeng Districts. There was an increase in safe disposal for all ethnic groups and wealth groups.

#### 3.6.6 Handwashing

Good hand hygiene is a highly cost-effective way of maintaining public health. It protects against a range of diseases, including pneumonia and diarrhoea (24).

Handwashing with soap (or detergent) has increased from 71.85% of mothers and carers in 2018 to 83.99% in 2021 ( $p < 0.001$ ). Improvements occurred in all provinces and districts, for all ethnic groups except the Lao Tai (which have very high levels of handwashing) and all wealth groups, however not all improvements were significant:

- Little improvement (<5%) was recorded in Phongsaly and Huaphanh Provinces
- Phongsaly, Boun Neua, Luang Prabang and Xam Neua Districts all recorded <10% improvement in handwashing
- There was no change in handwashing for Lao Tai households, who already had a high rate of handwashing (>90%) and less than 5% improvement for Hmong households
- Above average wealth households (89.7%) have higher rates of hand washing than poor households (77.0%).

There remain significant differences in handwashing between groups (provinces, districts, ethnic and wealth groupings) in 2021:

- Huaphanh Province / Xam Neua District has the lowest rate of handwashing (70.2%)
- Handwashing by Hmong households (71.1%) is about 10 percentage points lower than for other ethnic groups (>82%)
- Poor households (76.96%) have lower rates of handwashing than above average wealthier households (89.7%).

#### 3.6.7 Access to WASH Infrastructure and Services

Respondents were asked if they had "access to WASH infrastructure products (e.g. latrines or water filters)" at community level or at the market level. A combined indicator (community OR market access) is used in this analysis.

Access to WASH products increased from 82.2% of households in 2018 to 91.5% in 2021. However, the increases were largely restricted to Phongsaly Province, which recorded a 31 percentage point increase in access and Luang Prabang Province which recorded an 8 percentage point increase in access. Improvements in access to WASH

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

products was even more restricted at the district level with significant improvements only recorded in Phongsaly District (43 percentage point increase), Boun Neua District (23 percentage points) and Pak Xeng District (29 percentage points). An 11-percentage point increase in access also occurred in Long District (LNT) but the improvement was not statistically significant ( $p=0.09$ ).

The Khmu, Akha and other ethnic minorities recorded the greatest increase in access to WASH products (10-20%), there was no change for Hmong, who already had high levels of access (>90%), and Lao Tai households recorded a slight decline with 93.8% of households still having access in 2021.

All wealth groups recorded an improvement in access (8-10 percentage points).

#### 3.7 Maternal and Child Health

Substantial gains in maternal and child health (including the periods of pre-conception, conception, pregnancy, birth, infancy, and early childhood) have been made within Lao PDR in recent decades (31). The complex intersection of social, environmental, economic, political drivers on the physical and mental health of women and children cannot be underestimated. However, several key targeted interventions have been the focus of driving improvements in this area. These have generally centred around vitamin and mineral supplementation (such as Iron and Folic Acid to pregnant women, and Vitamin A to children), deworming for children and pregnant women, childhood vaccinations, antenatal care, and encouragement of breastfeeding.

##### 3.7.1 Supplementation and Vaccination in Children

Mixed results were observed in the areas of vaccination and vitamin supplementation in CU5 between baseline and endline. Where positive ground was lost the potential impact of COVID-19 on both supply chains of products may be partly responsible.

###### 3.7.1.1 Vitamin A supplementation within last 6 months (6-59 months)

Vitamin A is a fat-soluble vitamin, typically found in bright orange and green leafy vegetables. Vitamin A deficiency is associated with negative effects on eyesight and immune function. Vitamin A deficiency is highly prevalent in areas of the world such as Lao PDR that eat white rice as a staple.

Vitamin A supplementation in children 6-59 is recommended by the WHO where night blindness exceeds >1% or where deficiency at population level exceeds 20%.

Overall coverage has increased from 52.0% of children (6-59 months) having received Vitamin A supplement in the last 6 months in 2018 to a coverage of 66.9% in 2021 ( $p<0.001$ ).

Improvements in the delivery of Vitamin A supplements have not been uniform across the project. Phongsaly, Luang Namtha and Luang Namtha Provinces all recorded significant increases in the delivery of Vitamin A supplements (10-30 percentage point improvements) but there was no significant change in Huaphan Province.

Five districts (Boun Neua, Namtha, Long, Xieng Ngeun and Pak Xeng Districts) recorded significant increases in Vitamin A coverage (18-47 percentage point increase in coverage) with the remaining four reporting no significant change.

All ethnic groups recorded a significant improvement (10-20 percentage points) in Vitamin A supplementation except for the Lao Tai who reported no significant change. Other ethnic minorities (79%) and Lao Tai (72.0%) have highest coverage in 2021 and Hmong children (56.3%) and those in the poorest wealth group (62.1%) have the lowest coverage.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 3.7.1.2 Deworming within last 6 months (12-59 months)

Parasitic infections are associated with increased incidence of diarrhoea, poor nutrition and stunting, anaemia and LBW babies (23). Deworming of children and non-pregnant women of childbearing age as well as pregnant women is recommended annually by the WHO where prevalence is over 20% in children (biannually where incidence is over 50%) (25).

The delivery of deworming treatments has significantly decreased from 86.3% of children receiving a deworming treatment in the last 6 months to only 75.1% in 2021.

Improvements in the delivery of deworming have not been uniform across the project. A decline in deworming treatment only occurred in some provinces: Luang Prabang Province (23 percentage point decrease) and Huaphanh Province (25 percentage points), whereas no significant change occurred in Luang Namtha, and Phongsaly Province recorded an increase (11 percentage points).

A similar pattern was observed at the district level. Phongsaly (PSL), Boun Neua (PSL) and Namtha (LNT) Districts all recorded an increase in coverage (6-23 percentage points) though the changes were not all statistically significant. Four districts, Luang Prabang (LPB), Xieng Ngeun (HUA), Pak Xeng (LPB) and Xam Neua (HUA) all recorded statistically significant decreases ( $p < 0.05$ ) of 19-26 percentage points.

Greatest declines in coverage occurred for Lao Tai and Khmu households (~ 22 percentage point decrease) and for poor and average households (11-17 percentage point decreases).

Difficulties with supply during COVID-19 may have meant pregnant women were prioritised over children, explaining some of reduction in treatment delivery.

#### 3.7.1.3 Measles Vaccinations (9-59 months)

Measles is a particularly contagious and deadly disease, for which immunisations are very effective. Global cases of measles continue to crop up globally where vaccinations levels are low. The Lao PDR Government recommends Measles immunization at 9 months of age.

There has been no significant change in the coverage of measles vaccinations and ~ 86% of children in the survey had been vaccinated in 2021.

Vaccination rates are largely independent of location (province or district), ethnicity, or wealth group, except that Boun Neua recorded a drop in vaccination rates of ~ 9 percentage points.

There are statistically significant differences in vaccination rates between provinces, districts, ethnic groups and wealth groups. Huaphanh Province/Xam Neua District has the lowest vaccination rate (73.01%) compared to other provinces and districts that had vaccination rates of 80-90%

There are also large differences between ethnic groups, with Hmong households having the lowest vaccination rate (66.2%) compared to other ethnic groups who had vaccination rates of >87%.

Poor households also have the lowest vaccination rate but the difference between wealth groups is relatively small (81.63% for poor households compared to 89.4% for above average households).

#### 3.7.2 Supplementation in Pregnancy

Supplementation in pregnancy in areas where dietary diversity is poor improves outcomes for the mother and the foetus. Historically, high dose Iron and Folic Acid to address risk of anaemia and Calcium to address risk of pre-eclampsia have been provided as blanket approaches for all pregnant women (32) (33). More recently use of multi-micronutrient (MMN) supplements which contain smaller amounts of a range of vitamins and minerals in have gained attention in the humanitarian setting in achieving similar positive outcomes, around vitamin

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

deficiencies and pose less issues related to compliance due of the side effects associated with higher dose Iron (constipation, gastrointestinal upset). MMN supplements have also been found to be positively associated with reduced incidence of LBW (33).

#### 3.7.2.1 Iron / Iron Folate

Requirements for both Iron and Folic Acid (FA) increase substantially during pregnancy for both the development of the foetus, but also increased blood volume and demand during pregnancy and birthing. Deficiency is associated with poorer health outcomes for both mother and foetus.

Supplementation with Iron/FA is recommended for pregnant women. Its use has been shown to prevent maternal anaemia, reduce incidence of puerperal sepsis, LBW, and preterm birth (32).

Respondents were asked if they had taken iron or iron folate supplements during their most recent pregnancy. The provision of iron/iron folate supplement has increased significantly ( $p < 0.001$ ) from 71.6% of respondents in 2018 to 84.5% in 2021.

Improvements occurred for all provinces 6-20 percentage points) and districts (10-21 percentage points) except Xieng Ngeun District, which reported no significant change. Significant increases in the provision of iron supplements occurred for Hmong, Akha and other ethnic groups (14 – 23 percentage point increases) but no significant improvements were recorded for Lao Tai and Khmu households.

All wealth groups reported an increase in the provision of supplements, but the increase was greatest for above average households.

Significant differences between provinces, districts, ethnic and wealth groups still occur in 2021.

- o Phongsaly (70.9%) and Huaphanh (77.8%) Provinces have the lowest supplementation
- o Phongsaly District has a very low rate (<65.6%)
- o Lao Tai have the highest (97.7%) and Hmong (74.5%) and Akha (78.9%) have the lowest rates
- o Poor households (78.38%) have lower rates of supplement use than above average households (90.0%).

#### 3.7.2.2 Vitamin A

Vitamin A whilst important for eye function and immune function, also plays a crucial role in foetal development. Vitamin A deficiency is most likely to occur in the final trimester where growth is highest and blood volume increases significantly. Vitamin A supplementation during pregnancy is only recommended where night blindness (an inability to see well in reduced light) is considered a severe public health concern (32). This is the case for Lao PDR.

Respondents were asked if they had taken Vitamin A supplements after their last pregnancy. The provision of this supplement has risen significantly from 25.7% of mothers in 2018 to 42.4% of mothers in 2021.

Increases in the provision of supplements was mixed. Only Luang Namtha Province reported a significant increase (54.0%) and only four of the nine districts: Boun Neua PSL (12 percentage points), Namtha District LNT (42 percentage points), Sing LNT (54 percentage points) and Long LNT (65 percentage points).

Only two ethnic groups (Akha and Hmong) reported a significant improvement in the provision of Vitamin A supplements because of the narrow geographic distribution of improvements. However, all wealth groups (which are distributed more evenly distributed across the target population) showed an improvement (11-25 percentage points).

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Significant differences in the provision of Vitamin A occurs between provinces, districts, ethnic groups and wealth groups.

- Luang Namtha Province has the highest coverage (64.4%) compared to Phongsaly Province (28.0%) which has the lowest
- Sing (63.1%) and Long Districts (72.1%), both in LNT, have the highest coverage and Phongsaly District has the lowest (24.3%)
- Akha households have the highest coverage (50.9%) as a result of the concentration of efforts in Luang Namtha Province, Hmong households have the lowest coverage (32.8%)
- Poor households have lowest coverage (35.4%) compared to wealthier households (41-51%)

#### 3.7.2.3 Vitamin B1/Thiamine

Thiamine is found in abundance in wholegrains, legumes, seeds and fish. Populations for whom rice consumption is high and for whom it displaces other more nutrient rich food sources have historically had high prevalence rates of Thiamine deficiency. High consumption of alcohol is also associated with Thiamine deficiency. Thiamine deficiency at its worst can cause Beri Beri (a disease that affects the cardiovascular or nervous system) and is associated with infant mortality. Thiamine deficiency rates have historically remained high in Lao PDR (34).

Mothers were asked if they were given or had purchased a Vitamin B1 supplement during the last 3 months of their most recent pregnancy. There have been substantial (and statistically significant improvements) for the project area (increasing from 32.5% coverage in 2018 to 62.7% in 2021). Increases occurred in all provinces, with the greatest increase occurring in Luang Namtha Province from 21.0% coverage in 2018 to 73.3% in 2021.

Improvements occurred in all districts, but the scale and statistical significance of the increase varied. Namtha, Sing and Long Districts (all in NT) recorded the greatest improvements (49 to 57 percentage point increases) but there was no significant change in Xieng Ngeun District (LPB).

Significant differences in coverage remain in 2021. Huaphanh Province/ Xam Neua District has the lowest coverage (25.5%) with the other districts reporting coverage rates of 49% to 86%. There are also significant differences between ethnic groups: Hmong (50.5%) and other ethnic minorities (43.9%) have the lowest coverage and Lao Tai the greatest (67.1%). Disparities in coverage also occur by wealth class with poor households (52.3%) having significantly lower coverage than wealthier groups (65-71%).

#### 3.7.3 Deworming Mothers

As with children the deworming of women in pregnancy reduces risk of diarrhoea and anaemia and possible restrictions of the growth of the foetus where infestation greatly reduces absorption of nutrients from food (32).

The percentage of mothers who had taken a deworming tablet during their last pregnancy increased from 4.5% of mothers in 2018 to 13.2% of mothers in 2021 ( $p < 0.001$ ). However, the improvements were limited to three of the four provinces (no change in Luang Namtha Province). Results at the district level are also mixed: seven districts show significant improvements (5 to 25 percentage point increase), one districts shows a significant decrease (11 percentage points) and one districts show no change.

Akha households recorded the largest improvement in deworming during pregnancy increasing from 2.35% of mothers in 2018 to 19.0% in 2021 ( $p < 0.001$ ).

There are significant differences in deworming rates between provinces, districts, and ethnic groups in 2021. Less than 10% of mothers took a deworming tablet in their last pregnancy in Phongsaly, Luang Prabang, Xieng Ngeun,



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

and Pak Xeng Districts. In contrast more that 25% of mothers took a deworming tablet in Namtha, Sing, and Long Districts (all in LNT).

The high levels of focus on deworming in Luang Namtha (which has the highest proportion of Aha) has resulted in the Akha mothers having the highest coverage (19.0%) compared to all other groups (~11%).

Overall, poor households continue have slightly lower rates of deworming (11.4%) than wealthier households (12-16%).

#### 3.7.4 Assistance during Delivery and ANC

Positive pregnancy experiences should be supported through regular ANC visits. They should promote a healthy pregnancy for mother and baby, by preventing, identifying, and treating illness. They should also promote a positive transition to the labour and birthing process and building relationships with individuals that may facilitate this process, as well as fostering positive transition into motherhood. The WHO recommended model of ANC care referred to as the Focused Antenatal Care (FANC) includes a minimum of 4 ANC visits during pregnancy, the first between 8- and 12-weeks' gestation and the last between 36 and 38 weeks' gestation (32).

A minimum of 4 ANC visits is a key indicator for the current project. In 2021, ANC visits were performed almost entirely by trained medical staff.

Table 34 - Source of ANC 2021

Source of Antenatal Care	N	Response (%)	Cases (%)
Doctor	851	44.2	55.4
Nurse/midwife	943	49.0	61.4
Medical assistant	126	6.6	8.2
Traditional birth attendant	3	0.2	0.2
Community health worker	1	0.1	0.1

##### 3.7.4.1 ANC Visits

Mothers were asked how many times they had received ANC during their last pregnancy, with 4 visits stipulated as the target.

The percentage of mothers who had 4 or more ANC visits increased from 48.0% in 2018 to 64.4% in 2021 ( $p < 0.001$ ). There was an increase in minimum levels of ANC in all provinces (9-26 percentage points). There was also an increase in all the districts included in the survey (6 to 32 percentage points), but the increase was not statistically significant in Xieng Ngeun (6 percentage points LPB). Very large increases ( $> 17$  percentage points) were recorded in Phongsaly (PSL), Boun Neua (PSL), Sing (LNT), Long (LNT) and Pak Xeng (LPB) Districts.

The large increases in ANC in Luang Namtha and Phongsaly Provinces resulted in the largest increases in care occurring for Akha (23 percentage points) and other ethnic minority women (23 percentage points).

Significant differences in ANC occurs between provinces, districts, ethnic and wealth groups in 2021. Luang Prabang and Pak Xeng district (LPB) have the highest scores of ANC ( $> 83\%$ ). Boun Neua PSL (38.2%), Phongsaly PSL (43.6%) have the lowest levels of ANC.

Access to ANC also has an ethnic and socio-economic dimension. Akha (48.6%) have the second lowest levels next to Hmong (46.6%), despite the substantial increase in levels between 2018 and 2021 for these groups. Poor households (53.7%) continue to have low levels of ANC compared to the two wealthier groups (66.1-74.2%).

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 3.7.4.2 Birth Location

Mothers were asked for the location of birth of their last child. Home birth and government hospitals were the two most important birth locations in 2018 survey and 2021 survey, accounting for more than 80% of births (refer table below). There has been a significant increase ( $p < 0.0001$ ) in the percentage of mothers whose last child was born in a government hospital or health centre between baseline and endline survey and a corresponding decline in home births (Table 32).

Table 35 - Birth Location

Birth Location	2018	2021
Home	47.7	34.1
Government hospital	38.1	45.3
Government clinic/health centre	12.1	19.2
Other	1.7	0.5
Other's home	0.2	0.7
Government health service place	0.2	0.3
Private hospital/clinic	0.0	0.0

There has been a significant increase ( $p < 0.0001$ ) in the percentage of mothers whose last child was born in a medical facility from 50.4% in 2018 to 64.8% in 2021. Increases were largest in Luang Namtha (28 percentage point increase) and Huaphanh Province/Xam Neua District (14.42%). At the district levels, the largest improvements were observed in Namtha, Sing, and Long Districts (all in LNT), which all recorded greater than 25 percentage point increase in births at a medical facility. No significant improvements were observed in Phongsaly and Luang Prabang Districts.

Akha women showed the greatest increase in births at a medical facility because of the focus of improvements in Luang Namtha District.

There remain significant differences in use of medical facilities for birthing in the 2021 survey:

- Poor mothers (55.2%), Akha (51.8%) and other Minorities (49.8%) have the lowest access to medical birth
- Above average wealth mothers (74.2%) and Lao Tai (90.7%) women have the highest access.

#### 3.7.5 Birth Assistance

Mothers were asked who assisted during their last birth. Birth assistance is closely related to the location of birth with 96% of home births attended by relatives or friends, and medical professional predominant at hospitals.

There was a significant difference in birth assistance between 2018 and 2021, which reflects the change in birth location (see previous section): the percentage of women who reported that friends/relatives were their birth attendant declined from 43.8% in 2018 to 30.2% in 2021.

Table 36 - Types of Birth Assistance

Birth Assistance Type	2018	2021
Relative/friend	43.8	30.2
Nurse/midwife	31.0	49.3
Doctor	29.9	42.9



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Other person	7.5	0.0
Medical assistant	5.4	10.5
Community health worker	2.3	0.8
Don't know	0.4	0.0
<b>TOTAL</b>	<b>126.0</b>	<b>135.4</b>

Types of birth assistance were divided into trained and untrained. The percentage of women with a trained assistant present at birth increased from 54.1% in 2018 to 66.3% in 2021 ( $p < 0.0001$ ). Improvements were not uniform across the project, with the biggest improvements occurring in Luang Namtha (27.0%) and Long Districts (26.8%) both located in LNT.

Significant difference between provinces, districts, ethnic and socio-economic groups remain in 2021. Lowest levels of professional birth attendance occur in Phongsaly (32.8%) and Boun Neua (58.1%) Districts with highest attendance occurred in Luang Prabang, where 92.8% of mothers were attended by a professional.

Significant differences in the attendance occur between ethnic groups, with Akha and women from other ethnic minorities having lowest attendance (<53%) and Lao Tai the highest. Only 56.9% of poor women had a professional attend the birth whereas 76.1% of mothers of above average wealth had 76.1% attendance.

### 3.8 Decision-Making and Workload-Sharing

#### 3.8.1 Women's Decision-Making

Women's empowerment is increasingly seen as an intrinsically important global issue for gender equality, and to achieve development goals. The latter dimension stems from research demonstrating that various proxies of women's empowerment are associated with greater well-being for children and households in terms of schooling, nutrition investments, and food (35).

An index of women's empowerment was constructed by asking questions about responsibility for decision-making on key points, such as whether staple crops were kept for consumption or sold, making purchases, and family planning. Answer options included the woman alone, the husband alone, a joint decision, or decisions made by other family members. To calculate the index, the following steps were followed:

- Score 1 point for each activity on which the respondent fully or partially decided (= answers 1, 3, 5) and sum the total number of points for each respondent
- Calculate an average score, excluding activities the household did not participate in (total score/number of relevant questions answered).

The closer the value of the Index is to 1, the more women are involved in HH decision-making. Women are classified as actively participating in household decisions if the index is  $> 0.67$ .

In this study 87% of women were actively involved in household's decision-making in 2018 but no significant increase occurred between 2018 and 2021, when the same percentage of women were involved in decision-making. There was no consistent pattern in the change in decision making between 2018 and 2021 with some provinces and districts showing an increase and some showing a decrease, with the change being statistically significant in only a few cases.

There are, however, clear patterns in the women's input to decision making between the various disaggregated groups in 2021. Women's empowerment is strongly embedded in culture and more Lao Tai women (93.72%) are actively involved in decision-making than Akha women (80.92%) who have the lowest involvement.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Socio-economic status is not statistically related to women's involvement in decision making.

There are some limitations to the Women's Decision-Making Index:

- The index was not adjusted to reflect the specific concerns and decision-making context of the target population and may not be sensitive to actual changes. The index focuses on who makes decisions rather than how much input comes from the woman
- It is also unclear what the reach of the interventions was in the target group of the survey (women with children under 5 year of age) as respondents appeared not be able to differentiate between the various interventions.

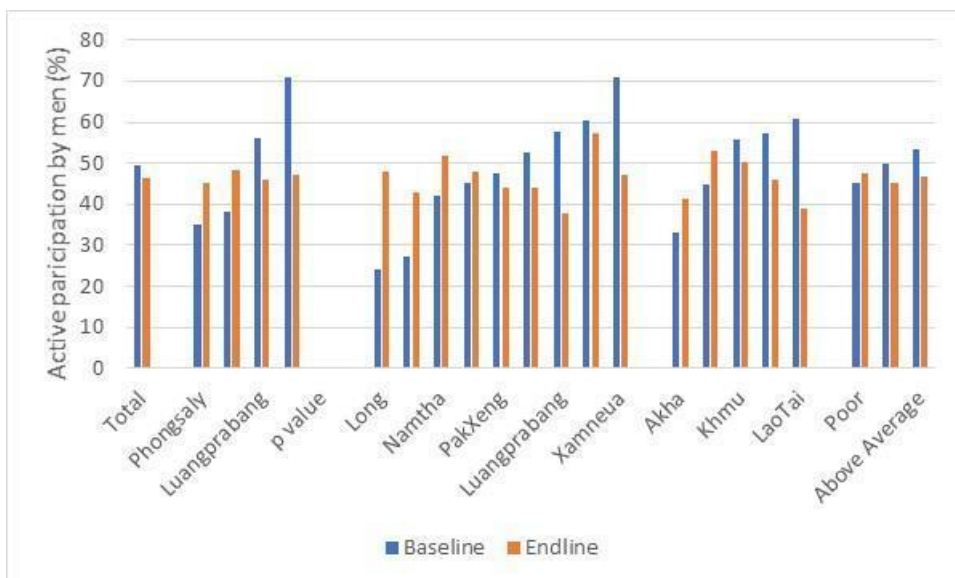
#### 3.8.2 Workload sharing

Women spend much of their time engaged in energy-consuming household chores, such as collecting water and firewood and processing and preparing food. This burden often negatively affects their health and nutrition, education, income-generation opportunities, and ability to ensure adequate childcare.

The baseline survey therefore includes a measure of male partners who participated in a fixed number of household chores (36).

Respondents were asked eight questions about workload-sharing, such as by asking who in their HH usually prepares food, fetches water, cleans the house, and takes care of sick children. They answered by saying whether they did this alone, the husband did most of the work, the work was equally shared, or somebody else in the HH did it. For the purposes of this survey, active participation was set at 3 chores.

There was no significant change in men's participation in household chores between 2018 (49.4% active participation) and 2021 (46.6%). There were significant differences found at the province and district levels, for different ethnic and wealth groups and but no consistent pattern of change i.e. there were both increases and decreases and no clear explanation for the difference.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 3.9 Livelihoods

The project (SCALING and NUSAP combined) aimed to increase nutritional outcomes and household food security through the promotion of vegetable growing, raising livestock, and collecting NTFPs for home consumption. Under SCALING this was largely limited to behaviour change. Practical support is being provided by NUSAP but the roll out has been slower than for SCALING.

While increasing home production can have an impact on nutrition in the short-term, long-term trends of increasing wealth may result in reduced home production if households increase wealth by specializing (e.g. if households increase employment, businesses or cash cropping).

Table 37 - Food production (percent of households undertaking livelihood)

Type of Food Production	2018	2021	Total
Grow oil seeds	15.2	33.4	18.2
Grow fruits	52.0	60.1	8.1
Gather NTFPs	78.3	84.5	6.2
Raise fish or frogs	13.4	16.5	3.1
Grow vegetables	83.8	85.1	1.3
Raise poultry (chicken/ducks)	86.5	86.8	0.4
Raise pigs, goats or cattle	67.4	55.2	-12.2
Total activities/HH	3.91	4.15	0.24

P<0.001

There has been a significant ( $p<0.001$ ) shift in household livelihoods between 2018 and 2021 with increases in the percentage of households growing oil seeds, growing fruit, and gathering NTFPs. However, there has also been a significant decrease in the number of households involved in raising animals.

The number of livelihood activities a household undertakes can increase household income in the short term and may increase household resilience as an individual household has more livelihood options they can fall back on. The average number of activities per household has increased from 3.91 to 4.15.

##### 3.9.1 Households Producing Vegetables and Fruit

The percentage of HHs growing vegetables was high in both surveys (~85% of all households) but there was no significant increase in vegetable growing between 2018 and 2021. There was no consistent pattern of change in vegetable growing at the province, district level or by ethnic or wealth group. However, Boun Neua District recorded a significant ( $p=0.02$ ) decrease in vegetable growing from 93.8% of households in 2018 to 83.77% in 2021.

Households' vegetable growing is strongly controlled by location/ethnicity and wealth:

- Luang Prabang District have lowest percentage of vegetable growers (56.06%) and Namtha, Sing, Long, and Xam Neua had the highest (90%)
- Lao Tai have the lowest percentage of vegetable growers (63.93%) and Akha and other ethnic minorities the highest (>90%)
- Poor households have the highest (91.45%) and above average the lowest (79.31%) rates of growing vegetables

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 3.9.2 Households Producing Small livestock/aquatic animals or insects

There was not significant change in the percentage of households producing animal, aquatic animals, or insects with about 87% of households producing livestock and other animal protein rich food in both surveys.

There were, however, significant increases in the production of livestock by Hmong (9 percentage point increase) and Khmu households (6 percentage points) which was offset by reduction by Akha and other ethnic minorities (8 percentage points reduction).

There are significant differences in livestock production in 2021:

- Hmong have the highest percentage (92.7%) and Lao Tai the lowest (76.2%) of household production
- Poor households (91.4%) have the highest percentage and above average households (84.5%) the lowest level production.

#### 3.9.3 Households Using Processing Technology

Respondents were asked if they processed food to preserve it. There has been a small but statistically significant increase in the preservation of food from 60.3% of households preserving food in 2018 to 65.3% in 2021. Largest increases occurred in Phongsaly District (41 percentage points) Bon Neua District (31 percentage points) in PSL and Long District (36 percentage points) on LNT. Two ethnic groups have benefitted the most: Akha (26 percentage point increase) and other ethnic minorities (27 percentage points).

#### 3.9.4 Households Collecting NTFPs

Forest resources are an important source of food and an important fallback for households if faced by internal and external stresses. However, poor households are generally more reliant on the collection of NTFPs than wealthier households. An increase in the percentage of households collecting NTFPs may reflect the successful implementation of a livelihood program or a response to income stresses. This indicator is difficult to evaluate as an increase in collection of NTFP may reflect:

- increased food stress, or
- successful promotion of NTFP collection by the project.

A decrease in the collection of NTFPs may reflect

- a decline in the resource, or
- a shift away from forest products as incomes grow,.

The percentage of households collecting NTFP has increased from 75.4% in 2018 to 81.6% in 2021 ( $p=0.001$ ). This increase, combined with an increase in household expenditure, improved food intake, reduction in the need for coping strategies and improved nutritional outcomes suggest that households have been enabled to increase incomes by collecting NTFPs (positive outcome) rather than responding to significant stress.

By far the greatest increase in the collection of NTFP was reported in Phongsaly District where the percentage of households collecting NTFPs increased from 72.9% in 2018 to 96.8% in 2021. Similarly, it was the other ethnic minorities (who mainly live in Phongsaly District) who recorded the greatest increase in the collection of NTFPs, increasing from 77.0% of households in 2018 to 97.4% in 2021.

There are significant differences in the percentage of households who collect NTFPs in 2021. Highest rates of NTFP collection occur in Namtha, Sing and Long District (LNT), and Xam Neua District/Province (>90%), for Akha (90.8%)

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

and other ethnic minorities (97.9%) and for poor households (86.3%). Lao Tai households (57.6%) and above average households (76.3%) have the lowest rates of NTFP collection.

#### 3.10 Participation

Respondents were asked a series of questions about participation in project related activities (Table 35).

Mobile clinics (94%), village information about healthy eating (90%), and advice about feeding their babies were the most common events. Meeting participation rates were lower, reflecting a limited appeal for these activities (meetings) and the difficulties women face in participation when time is always at a premium. Participation in some events is also low, in part because not all aspects of the project were provided at each village. For example, water supply systems were only constructed/rehabilitated in 82 villages by Sep 2021 (19% of total), also impacting the number of water management committees. VSLA groups were formed in 203 target villages only (48% of total) according to design.

Conversely, participation in some project activities were clearly over estimated (eg participation in leadership training which was limited to 2 women per village) probably because of confusion between activities. We were also not able to normalise receiving information about nutrition in secondary school to the number of households with enrolled secondary students.

Table 38 - Household recorded participation

Project Related Activity	Total
A mobile clinic visit (village)	94%
An informational event about healthy eating (village)	90%
Advice about feeding your baby (at house)	84%
A workshop about sharing workloads	74%
Purchased or installed a latrine	69%
A leadership training for women	60%
A committee to manage water & sanitation systems	49%
A women's savings and lending group	47%
A new water system in your village	44%
Child in Lower Secondary School received information about nutrition	33%

#### 3.11 COVID-19

The COVID-19 pandemic is an ongoing global pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The COVID-19 pandemic has had far-reaching economic consequences beyond the spread of the disease itself and efforts to quarantine it. As the SARS-CoV-2 virus has spread around the globe, concerns have shifted from supply-side manufacturing issues to decreased business in the services sector. The pandemic caused the 2nd largest global recession in history, with more than a third of the global population being placed on lockdown in 2020 (37).

Monitoring of impact on the Lao PDR (39) found:

- The second wave of COVID-19 and its lockdown measures hit employment. Around 51% of respondents were without work or had to stop working in April–May 2021, against 17% in February–March 2021.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

- Employment disruption is widespread in the services sector. More than half of workers in wholesale and retail trade and other services had to stop working or switch jobs during the lockdown.
- By May 2021, 5.5% of businesses had permanently closed, while 33% were temporarily closed. Among businesses that remained in operation, 65% experienced a fall in revenue from pre-lockdown levels.
- Around 43% of households experienced a decline in household income in March 2021 relative to before lockdown.
- The ratio of respondents who were very concerned about food insecurity for people in their community increased from 16% before the second wave arrived, to 26% during the lockdown.

The endline survey included a section on COVID-19 impacts on the target population. Respondents were asked a series of questions about their income, expenditure, access to health services, savings and debts compared to pre-pandemic conditions.

- 84% of respondents felt that it was harder or much harder to meet their families food needs.
- The most common reasons for the increased difficulties in meeting food needs were
  - Food items were more expensive (77%)
  - Travel restrictions (65%)
- 64% of respondents felt that they had lost income during the pandemic
- Of those who lost income
  - 42% felt they had lost nearly half their income
  - 21% felt they had lost more than half their income
- 75% of respondents felt it was harder to access health services
- 47% of respondents with a debt felt that their debts had increased
- 61% of respondents with savings felt that their saving had decreased.

The responses to the questions about COVID impacts are difficult to reconcile with other responses in the survey. The endline survey has shown that, compared to the 2018 baseline:

- Food intake has improved for mothers, children and households including consumption of meat,
- Nutritional status of children has improved, and
- Total per capita expenditure (corrected for inflation) has increased substantially over the baseline.

These data are all consistent with improvements in household economic wellbeing. However, at the same time the COVID pandemic, which has occurred over two of the four years, has had an apparently significant negative impact on households. Possible explanations for these contradictions include the following.

1. The respondents were overly negative about COVID losses. Loss aversion is the tendency to prefer avoiding losses to acquiring equivalent gains is a well-known phenomenon in behavioural economics (39) likely to bias recall of losses over gains. Unusual events, such as COVID impacts, are also likely to be better recalled than regular events (40)
2. The baseline survey has systematically under collected relevant data or the endline has systematically over-estimated data. The baseline data was collected by government staff under the



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

supervision of the survey consultant company, whereas all endline data was collected by a different consulting company employing professional enumerators (a recommendation included in the baseline survey).

#### 3.12 Risk Analysis 2021

We undertook a logistic regression analysis to determine the risk factors associated with undernutrition in children (0-59 months) in 2021 using the same methodology as applied in the baseline survey (4). Logistic regression provides a relative risk ratio for stunting between groups in the analysis<sup>32</sup> holding all other factors in the analysis constant e.g. comparisons between ethnic groups are made while accounting for other factors such as education, wealth, location etc.

Stunting is a long-term indicator of nutritional outcome for children, so we only included factors that are relatively fixed (e.g. location, ethnicity) and avoided short term factors such as recent diarrhoea.

The quantitative survey has an enormous number of factors that could be used. To avoid spurious correlations, we only included factors that are known to, or are likely to have an influence on nutritional outcomes for children prior to the analysis. These were

1. Location: district, distance to health centre
2. Family characteristics: ethnicity, household population, education of household head, decision making, sharing of workload by men
3. Mother: education, DDS, mother's BMI
4. Child characteristics: birthweight, deworming (ever) vit A(ever)
5. Services: access to/use of improved water, sanitation, water treatment, use and type of health services

Provision of services by the project was not included in the risk analysis because:

1. The services were directed to households with the greatest deficiencies (e.g. villages and households with access to improved water)<sup>33</sup>.
2. Stunting is a long-run indicator of improving nutrition. Improvements in factors controlling stunting will take multiple years to translate into nutritional outcomes

Factors associated with stunting ( $p < 0.05$ ) in the target population in 2021 are:

#### Location

1. District – children in Namtha (LNT), Xam Neua (HUA), Pak Xeng (LPB) are at greater risk of stunting than child in the reference district (Luang Prabang)
2. Distance to health centre.

#### Family Characteristics

<sup>32</sup> As such, one group must always be the reference group.

<sup>33</sup> While nutritional outcomes improved, these target villages often still had lower than average nutritional outcomes resulting in spurious correlations. We also tried correlating changes in nutritional outcomes at the village level with project activities which revealed few results, probably because the survey was not designed to measure average nutritional outcomes at the village level with any accuracy.



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

1. Ethnicity – Hmong households are more than twice as likely to be stunted than Lao Tai children

#### Child Characteristics

1. Low birthweight children are nearly 3 times as likely to be stunted
2. Children who have received a deworming tablet have a higher risk of being stunted but this is likely a result not a cause (e.g. deworming treatments are given to children that are already underweight) and District, ethnicity, and low birthweight were associated with the highest risks of a child being stunted.

This analysis was repeated to determine the risk factors associated with child being underweight and found a similar result.

### 3.13 Recommendations

Detailed objectives of the quantitative survey were to:

- Characterize basic demographics of the target population;
- Measure (and compare to baseline data) nutritional status of children 0-5 years;
- Measure (and compare to baseline data) nutritional status of pregnant and lactating women;
- Measure (and compare to baseline data) nutritional status of adolescent girls;
- Describe (and compare to baseline data) feeding practices for children 0-5 years;
- Measure (and compare to baseline data) prevalence and frequency of diarrhea in children 0-5 years;
- Document (and compare to baseline data) knowledge, beliefs and practices on health seeking behavior, care of sick children, micronutrient supplements for children 0-5 years, pregnant women and adolescent girls;
- Measure (and compare to baseline data) access to safe water, sanitation and;
- Measure (and compare to baseline data) access to quality nutrition services.
- Measure the results achieved by the Women Workload Reduction and shared decision making approaches

The quantitative survey was required to mirror the approaches, methods and tools used in the SCALING baseline study, and in the cross-sectional in-depth analysis identifying possible causes of malnutrition.

1. There was a very large number of indicators, some of which were closely related. For example, open defaecation and use of a latrine, various dietary consumption indicators and consumption of animal protein (which is part of the construction of dietary scores) etc
2. The baseline survey targeted mothers with children under 5 years of age. It was therefore impossible to report on the nutritional status of, and provision of supplements to pregnant women, lactating women or adolescent girls. Analysis of project impact on these cohorts would require a separate or additional survey
3. The TOR required assessment of some outcomes that were not directly supported by the project, for example the provision of nutrient supplements to children.
4. The baseline survey included 31 project indicators for the combined SCALING / NUSAP project. Many of the NUSAP activities were not carried out and these indicators should have been dropped from both the questionnaire and the analysis.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

5. Some of the (NUSAP) indicators were potentially confounded by increasing income / economic wellbeing. For example, the baseline included the percentage of households using NTFPs to supplement diet, and the percentage of household expenditure spent on food both of which were to be promoted by the combined project. However, both indicators tend to decrease with increasing income / economic wellbeing.
6. Some of the indicators will have a significant lag between intervention and change. This is likely to be true for nutritional interventions and the rate of stunting for CU5 (which provides a 5 year average) and gender interventions which are attempting broad societal change. While a change was observed in child anthropometrics no change was observed in the decision making or workload sharing index which may reflect the limited time frame for change to occur.
7. All baseline surveys should include a survey manual that explains the questionnaire and possible responses in greater detail. Survey manuals are essential for minimising enumerator bias.
8. The baseline survey (and endline) was designed to detect a change in stunting at the project level. The outcome targets specified in the baseline report and the logframe require disaggregation to the district level. However, disaggregation reduces the statistical power of the comparison. There were 9 districts included in the survey with approximately 150 surveys undertaken in each district in the endline, this severely limits the power of the survey to detect any statistically significant change at this level.
9. The survey is similarly limited in detecting changes in other indicators with different baseline prevalence and a different target for improvement. The survey might provide a statistically valid evaluation but may require substantially greater number of interviews to accurately evaluate the indicator and its associated target.
10. A baseline / endline survey is appropriate for determining if a target has been achieved but cannot readily attribute the observed change to the project without a control group or counterfactual. The changes in indicators reported in this evaluation may well have been the result of non-project factors.
11. The baseline survey design was sound (stratified cluster sampling). However, there are significant differences between villages (sampling unit) such that resampling of villages is likely to introduce a sampling bias, particularly at the district level (since the number of samples are so low).
12. Focus of the analysis should be on the baseline / endline assessment of change. A cross-sectional analysis is useful in understanding the target population but adds little to the final assessment. The multivariate logistic regression (risk analysis) provides better information about changing conditions (risk factors in the project area)

### 4 QUALITATIVE FINDINGS – COMPONENT 2

This chapter considers each of the evaluation questions (EQs) from the ToR as well as learning questions first addressed during the MTR. Individual project strategies are used to illustrate findings for these EQs throughout. A deep dive into specific project components is provided under a number of evaluation questions.

Table 39 - Profile of SCALING strategy by evaluation question

Evaluation Question	Project component
6.3 Coherence with NNS/NPA	Op 3.2, 3.3 Governance structures, convergence
6.12 Community impact	Op 1.2 Quality RNMCH services Op 2.2 WASH infrastructure
6.13 Life changes for beneficiaries	Op 1.1 HH and LSS SBCC for improved nutrition
6.14 Gender transformative change	Op 2.1 WWR/GER, VSLA, leadership training

#### 4.1 Relevance

**6.1 To what extent was the project able to provide appropriate activities and approaches/methods in line with the priorities of the people and their specific context (livelihood opportunities, social organization, general environment...) taking into account the specific needs of the most vulnerable groups, including women, children and disabled persons?**

Interviews with village leaders in 10 communities included in this evaluation surfaced a range of perceived development challenges.<sup>34</sup>

- Traditional animal husbandry practices, disease (4 mentions)
- Families too poor to build toilets (4)
- Poverty, landlessness constrains amount and variety of food (3)
- Water scarcity (3)
- Remoteness: lack of telephone, electricity, information (2)
- Access to markets, agricultural loans and inputs (1)

Some of these issues bear directly or indirectly on maternal and child nutrition and are included in the project's ToC and strategies.

The project worked largely at district and village/community levels. Development realities and socio-cultural issues were well understood, as the partners had already been working in the provinces before the project. Many of the approaches had been successfully applied by one or more of the partners, including in ethnic communities. This contributed to rapid scale. In addition to the design of interventions mentioned above, two additional factors were widely recognized as contributing to the project's ability to connect with segments of the population that don't always participate in or benefit from community-based initiatives: 1) a significant presence on the ground that allowed consistent engagement with local communities and local government, and extended the project's reach to remote areas; and 2) paid district-based translators (mostly female) who enabled greater participation

<sup>34</sup> This inventory should be taken as illustrative, not representative, given the small number of respondents and the overall purpose of the focus groups, about which respondents were aware.

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

from non-Lao speaking women—who are often excluded. Adolescents were also reached in an effective school-based initiative (see Section 6.13). The project did not include targets for or have a strategy specifically focused on people with disabilities.

The diversity of initiatives under the SCALING umbrella enabled the project to tackle multiple needs simultaneously, and nutrition outcomes suggest the convergence approach is effective. Nonetheless, some stakeholders note that diversification of livelihoods, including better access to markets and inputs, is of high priority—and more critical during COVID-19 which impacted negatively on supply chains and tourism. NUSAP was designed to address some of these issues through improvements in household agricultural production. Delays in NUSAP implementation are unfortunate in this regard.

The close relationship between nutritional status and birth spacing arguably received too little attention in the project's Theory of Change and interventions. The integration of interventions in nutrition and family planning have demonstrated a mutual reinforcement of potential improvements in each domain (38). The 2011 Demographic Health Survey records a national unmet need for contraception which was significantly higher in remote (28%) and amongst Hmong women (31%) (45). Adolescent pregnancy remains high at 83/1000 girls 15-19 years old; 136/1000 in rural areas (46). The project provided relevant information through the LSS peer education strategy, and trained health clinic workers, but missed an opportunity to provide doorstep services through female volunteers in the project.

COVID-19 has somewhat shifted priorities for communities and offers some insight into the resilience and adaptability of SCALING strategies. Project linkages with PHO, DHO and Health Centres (HCs) offered a conduit for distribution of PPE and public health messaging. VSLA savings reportedly provided important safety net support for participating members to purchase food and other basic necessities, as well as to defray medical expenses (38). On-going project research into new COVID-19 realities may shine future light on the extent to which community-based initiatives continue without the past level of external support from the project and local government.

### 6.2 To what extent and how was gender sensitive programming implemented?

In the original SCALING proposal, gender was put forward as a central, and cross cutting issue (39). Patriarchal norms, particularly in ethnic communities, were recognized as important determinants of nutritional outcomes based on consumption, workload, and health seeking decision making patterns in the household. Gendered education and livelihood options, and women's exclusion from the public domain, were more pronounced in ethnic communities.

A number of gender-specific and gender-relevant strategies were advanced in the project. Gender-specific components include village savings and lending groups (VSLA); training to advance awareness and household dialogue about the health, equity and livelihood implications of gendered workload and decision-making within the family (WWR/GER); and women's leadership training (LT). The project also had intentional strategies to promote girls and women into leadership positions at school (LSS) and in communities (through SBCC volunteering) and encouraged greater participation in village decision-making structures such as water management committees. A gender review of training curricula was undertaken to ensure messaging was gender sensitive. The results of these efforts are explored in more detail in sections 6.13 and 6.14. Halfway through the project, a study entitled *Gender and Power Analysis* (CARE, 2020) was undertaken in LNT (3). It offered granular recommendations for gender and inclusion in SCALING. It appears that only a few were adopted, as the project was already underway. It is not known whether the others were considered.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

The profile of the SCALING team also sent a tacit message about the project's commitment to gender equality. Based on information from the staff survey carried out for this evaluation (about 2/3 of the staff), it appears that the team had a good gender balance, which was slightly skewed at senior management level, as shown in the (self-selected) respondents to the staff survey:

Table 40 - Gender distribution of SCALING staff who responded to the staff survey

Role	Male	Female	Total
National Level Manager	5	2	7
Technical Advisor	1	3	4
Provincial technical Staff	4	1	5
Provincial or District project staff	8	13	21
<b>TOTAL</b>	<b>18</b>	<b>19</b>	<b>37</b>

## 4.2 Coherence

### 6.3 To what extent were the project objectives and results coherent with the Government of Laos National Nutrition Strategy and its Action Plan?

This section considers the project's contribution to nutrition governance at provincial and district levels, and SCALING's participation in national nutrition governance.

SCALING was designed to align with key strategic objectives as laid out in the National Nutrition Strategy 2016-2025, and strategies are consistent with the National Plan of Action 2016-2020 (NNSAP)<sup>35</sup> as shown in Table 39 (41).

Table 41 - Alignment of SCALING outcomes with the NUSAP

NNS Strategic Objective	SCALING Objective
SO5	Adolescent girls, pregnant and lactating women, and caregivers of children <5 years practicing improved feeding, caring, and hygiene and sanitation behaviours
SO7	Op 1.2 Increased access to quality Nutrition and RNMCH care is delivered in health centres and via outreach
SO5	Op 2.1 Gender norms enable improved care and feeding practices, women's decision-making, reduced workload, and control over resources and health
SO6	Op 2.2 Water and sanitation infrastructure is functional
SO4	Op 2.3 Improved access to and use of nutritious foods
SO8	Op 3.1 National policies and strategies informed by global evidence and local experience
SO8/9	Op 3.2 Provincial and District, kumban and village development plans are convergent and nutrition sensitive, and districts have functioning nutrition committees
SO10	Op 3.3 Sufficient, quality nutrition related data from 14 target districts is available

<sup>35</sup> Project activities also contribute to Sustainable Development Goal 2, related to improved nutrition. WASH activities, in particular WASH marketing promotion of latrine construction contributed to the country's Open Defecation Free (ODF) goal that every household will have a latrine by 2025.

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

As noted in Table 39 above, SCALING objectives and activities mapped closely with NNSAP Strategic Objectives. The National Nutrition Strategy (NNS) anticipates a role for development partners in *“improving the multi-sectoral coordination framework in order to facilitate increased NNS support and assistance for vulnerable communities, households and individuals...”* (National Nutrition Strategy, pg 16). The NNS and the Action Plan establishes nutrition targets for sectoral departments—in particular district departments of health, education and agriculture. Achievement of national goals of the NNSAP relies on a coherent “convergent” approach that is both horizontal (multi-sectoral) and vertical (with engagement from each administrative level of government) (40). Active nutrition committees represent one of seven conditions for EU budget support to the GoL under the EU’s PIN. Resources are available through UNICEF as well as other donors for convening, though not every province or district has an established or viable nutrition committee.<sup>36</sup>

Evaluation findings suggest that PNCs and DNCs in the four SCALING provinces and a number of districts were fairly nascent at the beginning of the project (and remain so in other parts of the country).

### 4.2.1 Provincial Nutrition Governance: the PNC

Although SCALING focused implementation at District and village levels, consortium partners signed MOUs with Provincial governments, and members of the PNC were essential gatekeepers. The project sought to support PNCs and DNCs through better understanding of the NNS, alignment of strategies with NNS and with each other, exposure to the multi-sectoral strategies (undertaken by SCALING; and through advocacy/dialogue at national level. Focus group discussions with PNCs in each of the four participating provinces produced the following findings:

- **Membership:** There are up to 17 departments represented in a PNC, sometimes with two members representing each department, depending on the province. The Provincial Governor chairs the PNC, which convenes every 6 months. Most active are the PHO, PESS, PAFO, and LWU. The PNC secretariat is supposed to help with work planning, but a secretariat was not mentioned in the evaluation interviews (39). SCALING representatives had attended meetings in LPB and LNT and provided support to workplan preparation. Other funders (WFP, IFAD) also attended in provinces where they work.
- **Purpose:** PNCs broadly see their role as coordination amongst sectoral departments, and enabling permissions for the DNC members to do their work in communities and schools.
- **Meeting:** All PNCs reported that staff turnover without proper handover has challenged continuity in attendance. Competing demands on members’ time and priorities pose difficulties to holding regular meetings. COVID-19 has prevented in-person meetings and field visits and diverted attention particularly amongst PHO representatives.
- **Financing:** Lack of budget support was frequently mentioned as a constraint to convening, and financing appears to determine the frequency of PNC meetings. Although under the PIN, UNICEF has earmarked funding to support PNC and DNC to meet, a number of PNCs reported quarterly meetings had been convened with World Food Program (WFP) support, IFAD support, as well as SCALING as well as UNICEF support. The funding source also appears to guide the focus of the meeting. SCALING also supported cross visits amongst PNCs (mentioned by the LNT PNC) and PNC representation at select national nutrition fora.
- **The project:** Some members of the PNC who were interviewed for this evaluation appeared

<sup>36</sup> The DNC in Phongsaly and Nyot Ou districts (PSL) were only established in 2019 and Boun Neua (PSL) only in 2020. In the other SCALING target districts DNC existed before the project started, at least on paper.



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

informed about SCALING activities and could articulate many of the project outcomes in some detail. Understanding of the project was based on visits to the project sites (typically a subset of PNC members in key technical areas and mostly for one-off visits); briefings about project strategies (e.g., on SBCC and WASH Marketing); training as trainers for SCALING-supported trainings (e.g. as LSS ToTs for PESS; WWR/GER and VSLA for Provincial LWU); and report-backs on project activities to the PNC by SCALING representatives (mentioned by LPB PNC). In some cases, knowledge of SCALING appears to be the result of direct partnership with an individual department (typically the PHO). At least one PNC complained that project reports did not come before the committee.

#### 4.2.2 District Nutrition Governance: The DNC

The District Nutrition Committee (DNC) was the project's key modality for promoting nutrition governance and mobilizing multi-sectoral government engagement at district level. Since SCALING was a grassroots-directed initiative, engagement with DNCs was more hands-on and frequent than with PNCs.

The project provided a range of types of support to capacitate and motivate the DNC, and members of the DNC:

- Financial support for convening meetings of the DNC (62 in all, or an average of 1.1 meeting/district/year over the life of the project, target of 3 meetings/year or a total of 168<sup>37</sup>)
- Training and exposure on technical areas related to NNSAP and SCALING (which significantly exceeded its target, reaching 222 DNC members—some in multiple trainings, vs a target of 20)
- Fourteen inter district and inter project exchange visits, one per target district (as planned).
- DNC participation in the annual National Nutrition Forum (2 fora, 17 participants)
- Production and presentation of 55 nutrition-relevant data analysis (vs a target of 168)
- Preparation of 38 nutrition stakeholder mapping documents to promote DNC coordination of nutrition-related projects (vs target of 42)
- Preparation of political economy analyses in six districts, using an adaptation of the Political Commitment and Opportunity Measurement rapid Assessment tool (PCOM-RAT) to assess DNC functioning, planning, and provide indicators of progress used to inform SCALING support—reportedly for internal use only (documents not shared with the evaluation team).

Focus groups with representatives of eight DNCs highlighted the following outcomes from project interventions:

- **Membership:** while in principle membership is supposed to mirror the PNC, reported membership was between 5 and 13 members, with the largest representation from DHO and related health agencies (hospital, MCH Department). Most active appear to be DHO, DAFO, DE\SS and LWU, as well as the District Planning and Investment Office (DPIO). The Vice-District Governor chairs at least two of the DNCs. SCALING presence is common, in an observer role, but also as a conveyor and content provider. SCALING was mentioned as a member in Long District, LNT Turnover of department staff has led to changes in DNC membership over time, which some complain makes it difficult to retain continuity and cohesiveness. Often SCALING was expected to brief and train new members—which was not always possible.
- **Purpose:** DNC respondents were divided on the purpose of the DNC. About half saw the DNC as an active partner in implementing the project-- *"To participate in project implementation and management"*

<sup>37</sup> In principle, convenings are supposed to be supported with financial assistance through UNICEF. Few PNC and DNC members were able to validate this and seemed to see SCALING and other on the ground partners as supporting convenings.



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

-- while others recognized the convergence purpose-- *“coordinate with the various departments in nutrition committee to ensure that each sector is responsible for its work”* . Many focused on the DNC’s oversight role of community concerns, in particular in terms of village level nutrition plans *“Make the nutrition team at each level strong, know how to work according to the plan, especially for the nutrition committee at the village level, village nutrition team, village volunteer team to have the courage and ability to work better”* .

- *Meeting:* Frequency of meetings varied considerably, between monthly and irregularly, with several DNCs saying they meet quarterly. Five of the nine DNCs appear to be convened by SCALING or say they are meeting to carry out SCALING work planning. In Nyot Ou District, which got a late start, the DNC says it has only met when SCALING or the PNC requested.
- *Financing:* Like PNCs, DNCs rely on external funding to convene. SCALING has reportedly supported DNC convening, in part as it was integral to project planning efforts. Sometimes the DNC even met in SCALING offices. SCALING also financed monitoring, supervision, training and exposure visits for DNC members. DNC members seem acutely aware of per diem amounts paid by the project, which reportedly have changed over time.
- *The project:* Five of the nine DNCs interviewed reported that their meetings largely focus on the work of SCALING. In Xam Neua District, HUA, and Long District, LNT, DNCs meet monthly for project briefings and joint work planning. Some of the DNC members who were interviewed had been trained as SBCC trainers and then trained community volunteers and LSS peer educators and teachers. DNC respondents knew about project activities in great detail and shared highlights of activities in their district, based on first-hand engagement. Some cited statistics related to project outputs, and nutrition-relevant outcomes as evidence of change. All of those interviewed had visited SCALING project sites and provided supervision and advice. Some noted that they submitted reports on their findings through their line ministries. Most had also participated in work planning, reporting, and village nutrition plan support.

### Story of Change: Achieving nutrition outcomes - a team effort

Huaphanh Province in northern Laos is ethnically diverse and nutritionally stressed. High levels of child stunting contribute to Laos being ranked amongst the lowest in nutritional status in Asia. Recognizing that an effective response requires a multi-sectoral collaboration, the GoL National Nutrition Strategy (2016-2024) mandates the establishment of multi-departmental nutrition committees at provincial and district levels.

The Huaphanh district nutrition committee (DNC) is an example of how cooperation across typically siloed departments can achieve results. The DNC includes representatives from 17 offices, with 2-3 representatives from each office. In practice, about half of the members attend regular meetings, with representatives from the District Health Office, the District Office of Education and Sports and the District Agriculture and Forestry Office and the Lao Women's Union being the most frequent attendees. These representatives also form core teams responsible for overseeing SCALING activities in the field.

SCALING worked closely with this DNC and provided opportunities for members to receive technical training and exposure to new approaches to addressing complex nutritional issues. The DNC was a pivot point for departmental collaboration. The DNC is mostly seen by members as supporting the implementation of SCALING activities, however. Planning meetings are held every month at the office of SCALING consortium partner, Child Fund Laos. Quarterly supervision visits are organized by the DHO and supported by SCALING. These visits have given DNC members the opportunity to see project initiatives in action and interact with and advise volunteers and village-based development committees in the project sites.

DNC members are especially excited about the progress they have seen in women's savings (VSLA groups), gender (Women's Workload Reduction initiatives), new water systems, and cooking demonstrations which help pregnant women and children eat more nutritious foods. They note a tenfold increase in the number of pregnant women and new mothers going to the Health Centre because of the encouragement during SBCC volunteer 1000 day household visits. The DNC has also become a coordination point for COVID response with inputs provided by SCALING. The District Health Office has been disseminating thermometers and masks; the District Education Office has provided hand sanitizer, soap and hand washing facilities as well as computers to schools; and information about COVID protection and masks provided are being disseminated through the Lao Women's Union.

Political support has also encouraged the committee. Over the last few years, the governor's office convened quarterly meetings of the DNC. Links with the provincial members of the PNC are largely bilateral within departments, with little reported interaction between committees. DNC support to village development committees is less encouraging, and members seem frustrated that VDCs don't follow a planning approach.

SCALING has been incrementally handing over decision making and resource management to the DNC and is working on an exit strategy. But DNC members worry that without project resources, specific initiatives may not continue, and without a travel budget their supervision work as a committee may no longer be possible.

DNCs offered an entry point for exposure and capacity building through briefings, and the activities already noted as well as joint work planning, training of trainers, and joint supervision visits. DNC members note that SCALING helped individual departments meet their own workplan targets through collaboration and funding in the delivery of activities. A full time SCALING staff member was responsible for ensuring PNC and DNC members were well-versed in NNS principles, including how the 22 priority interventions of the NNS align with SCALING. In terms of convergence, in the best-case scenario the DNC promoted cross sectoral cooperation—for instance engaging health professionals in supporting nutrition and health education in schools (in the LSS component). In the most

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

difficult cases, the DNC was formed late, or received briefing or training but never met again, and there was little local leadership or incentive to do so.

It is not clear to what extent learning and insights from participation in SCALING will advance collaboration or convergence going forward. District departments are chronically underfunded, and capacity is uneven. Committee members appear to see the committee as an end in itself, rather than a mechanism for achieving service delivery efficiencies or programmatic synergies. Traditional siloed sectoral programming and departmental resistance to collaboration is reinforced by funding streams. The lack of firm guidelines, accountability and consistent financial support for PNCs and DNCs make these inter-departmental governance entities rather precarious, particularly in the absence of project support, and focus.

Project staff seem more pessimistic about the sustainability of this element of the program than other community-based interventions. Many of these challenges are systemic and beyond the project's ability to address. It may also be the case that the consortium partners were more comfortable working at community level. Indeed, the focus of the project, and expertise of the team was technically more aligned with development interventions at community level than governance or systems change.

**National participation.** SCALING was designed to contribute to scaling up nutrition sensitive support by enhancing the enabling environment in district and communities where it worked (39). Nonetheless, the consortium contributed to shaping national nutrition strategies on a number of fronts.

- **Breast Milk Substitute (BMS) code monitoring.** At the outset of the project a National Task Force had been established by the GoL to develop protocols for monitoring of retail marketing of breastmilk substitutes. SCALING, particularly SCI and CARE, participated actively on the BMS Code monitoring task force, contributing experience from other countries, and helping with drafting of guidelines. SCALING conduct two trial rounds of monitoring, which further contributed to national guidelines.

SCALING set itself a target of 140 visits to retail shops (5 visits/district in years 2-4) to look at product coding. Although task force discussions only concluded at the end of 2019, the project made 274 visits to shops—many on repeat visits—to monitor BMS sales after that (2).

- **Contributing evidence for scale.** SCALING had a robust system of knowledge management, and by the end of the project had documented most of key strategies with mini studies, case studies, or manuals. The project produced a regular newsletter in English and Lao that shared emerging lessons and spotlighted successes. SCALING is an active member of SUN CSA. An SCI staff member is the current Chair of SUN CSA, and other members of the SCALING consortium play an active role in SUN CSA. SCALING shares tools with other members through this mechanism, and participates in provincial and national level knowledge sharing initiatives. Although not explicitly part of its original scope, these efforts could be seen as contributing to the national dialogue on a multi-sectoral/convergence response to nutrition. Nonetheless, as noted elsewhere, government encouragement of civil society participation is somewhat muted, even on public health issues. Indeed, SUN CSA has only recently been given a seat at the table under the NNSAP. The MTR recommended that SCALING promote its successes with convergence (integration) through this mechanism. It is not clear whether this happened, and while in principle this may have been a sound strategy, in practice the recommendation may have been premature.

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 42 - Non-Profit Associations (CSOs) sending interns to SCALING (47)

Non – Profit Associations sending interns to Scaling
Friends of Pha Tad Ke Association (FPTK), Chomphet district, LPB
Aid Children with Disability Association (ACDA), VTE
Sustainable Development Association (SDA), LPB
APL+ (Association of People Living with HIV/AIDS), VTE
Association for Preservation of natural resources, Environment and Community Development (APECD), Paek District, Xieng Khouang
Friends of Pha Tad Ke Association (FPTK), Chomphet district, LPB
Association for Preservation of natural resources, Environment and Community Development (APECD), Peak District, Xiengkhouang
Association for Preservation of natural resources, Environment and Community Development (APECD), Peak District, Xiengkhouang

**NPA internships.** In order to extend technical expertise capable of meeting the goals of the NNS, SCALING engaged with local CSOs (NPAs)—typically associations working on issues that were indirectly related to nutrition. Over the life of the project, SCALING partners hosted eight interns from five organisations active in one of the four implementation provinces or with an interest in nutrition issues. Participating CSOs were also all members of SUN CSA. Each intern participated in the project for two months. Six interns were female.

The internship included on-the-job exposure to SCALING strategies and approaches.

Two interns were interviewed for this evaluation. Each mentioned a range of information and approaches related to gender, SBCC, WASH etc. that they had been exposed to. Each also described how things they learned during their time with a SCALING partner had been integrated into their organisation’s program. One also appreciated learning about work planning methods. While other INGOs also host interns, they are more often university students. This activity was popular with SCALING staff and appears to have added value to the participating NPAs in terms of sensitizing and adapting their programs to integrate nutrition priorities.

### 6.4 To what extent were the project objectives and results coherent with the other components of EU’s Partnership for Improved Nutrition?

The EU recognizes that malnutrition has been a significant barrier to Laos’ aspiration to achieve LDC graduation, which is now slated for 2026. The EU is a major donor in the nutrition area in Laos, and the EU’s Partnership for Improved Nutrition Program (PIN) represents the largest component of its portfolio (42). In line with the NNS 2016-2025, PIN prioritizes three Pillars:

1. Strengthening nutrition governance for multi-sectoral response
2. Scaling up nutrition-specific actions
3. Nutrition sensitive interventions.

The EU earmarked €50million for five projects, including SCALING, that address these pillars at national and subnational levels. In 2019, another €50million was provided in direct budget support to the GoL for nutrition, though about €4m has been redirected for the COVID-19 response.

The EU-funded nutrition portfolio review carried out in June 2019, frames nutritional status as an outcome of PIN, and underscores the need for a multi-sectoral, integrated response. Gender initiatives related to women’s

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

disproportionate workload burden, WASH implications of workload and as a determinant of poor child health outcomes, and the need for comprehensive SBCC initiatives are highlighted, among other factors. The review also notes that *the portfolio has seen a rapid evolution from service delivery through a traditional project approach to a more strategic use of development assistance focused on reinforcing national and sub-national efforts to 'scale up'* (43). On both counts, SCALING is aligned with the PIN's goals and this emerging approach. SCALING is designed largely to contribute to Pillar 3, though it also has also made contributions to pillars 1 and 2 (45). The project's attention to nutrition-specific and wrap around strategies; hands on engagement with multi-sectoral government structures (PNCs and DNCs); and service delivery stakeholders (HCs); and documentation and sharing of tested tools and lessons learned are consistent with Pillars 1 and 2. The project's major focus was on reaching nutritionally vulnerable populations, consistent with Pillar 3.

The award to SCALING allowed the EU to garner the on-the-ground presence and expertise of four INGOs, lowering donor administrative costs.

**NUSAP.** SCALING was designed to be implemented in concert with the Nutrition-Sensitive Agriculture Project (NUSAP), also supported under the PIN. NUSAP Strategic Objectives included:

S.O.1: Improved capacities of government services at provincial and district level to mainstream nutrition issues in their interventions.

S.O.2: Improved knowledge on Nutrition Sensitive Agriculture and nutrition related attitudes at community level.

S.O.3.: Improved access to and use of nutritious food for vulnerable households (pregnant and lactating women, adolescent girls, CU5, especially during the first 1,000 days of life) in target villages.

Broadly speaking, NUSAP was designed to address supply side issues (food production) while SCALING addressed the demand side (consumption norms). Both worked with government partners at provincial and district levels, and both included SBCC components. NUSAP's project period (July 2018-July 2022) broadly overlapped with SCALING (45).

The collaboration between SCALING and NUSAP is considered in Section 6.20.

Links with other PIN partners did not surface in the evaluation. Questions were asked about UNICEF, which appears to have a limited footprint in the SCALING sites. One observer notes that UNICEF has funded PNC and DNCs to meet, but the committees face delays and other bureaucratic hurdles in getting this funding.

#### **6.5 To what extent were the project objectives and results coherent with the broader strategies, programmes and strengths of the consortium partners in Laos?**

The SCALING consortium was designed to leverage geographic presence and technical expertise of the four partners. The project implemented the same activities in all sites across the four provinces, with each partner contributing to achievement of project targets based on the number of villages they were working in. The overall design drew on expertise from each of the partners, and a shared approach contributed to coherence within the consortium.

The project also enabled partners to continue to innovate and refine established approaches—for instance in gender, WASH, and SBCC—and to adapt them in a broader range of geographic contexts. Innovation and cross pollination were spearheaded by Technical Advisors from three of the consortium members. Technical Advisors continued to be based in their own organisations and contributed to the project under CMU coordination. were deployed to support implementation across the program. This approach allowed each consortium member to play to their strengths, while adding value to the whole program, and building organizational capacity amongst the other consortium members. This is discussed again in Section 6.18.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Table 43 - Technical Advisors and Consortium Partner Base

Technical Advisor	Consortium partner base
SBCC Advisor	SCI
MEAL Advisor	SCI
HSS Advisor	SCI
Governance and Communication Advisor	SCI
WASH Marketing Officer	SCI
Nutrition Advisor	CARE
Gender Advisor	CARE
WASH Advisor	CCL

As shown in Figure 8 below SCALING fits within the broader organizational structure of each of the consortium members, with an eye to enhancing reciprocal technical benefits to SCALING and other programming in each of the consortium partners. This structure contributed to the technical heft of the overall program, as it drew on tools and expertise from beyond the project. The rigorous MEAL and management systems of the larger INGOs SCI and CARE also contributed to coherence within a geographically dispersed program and has reportedly contributed to capacity of the smaller partners.



## SCALING

Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

### Organizational Structure

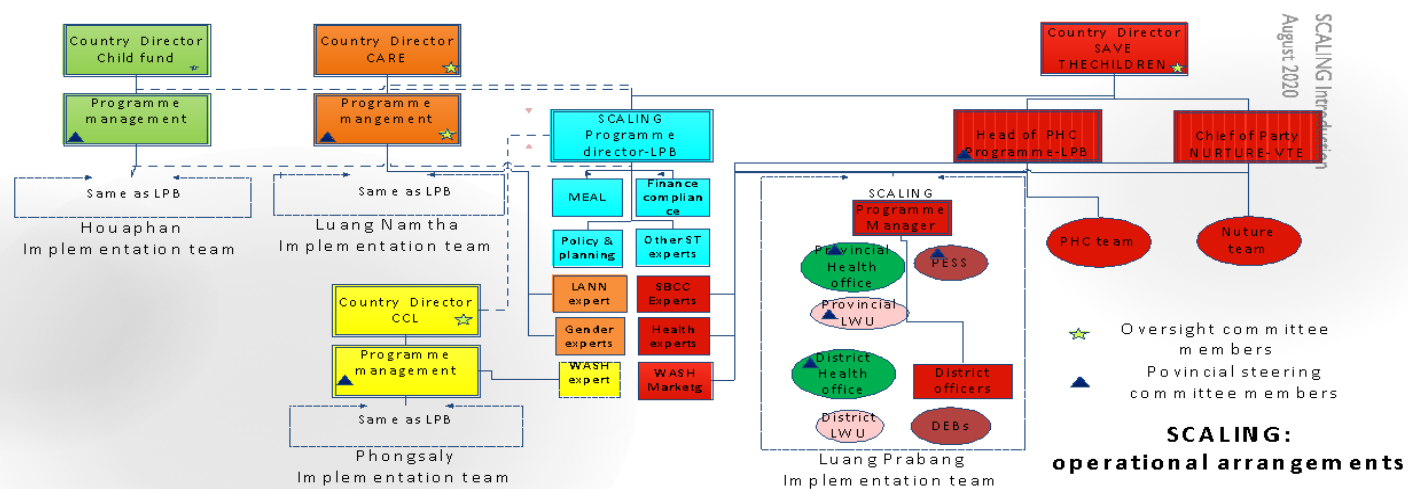


Figure 8 SCALING organisational structure.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

The majority of SCALING staff joined the project within the project cycle. The average time with SCALING was just over two years (25.19 months). The average tenure of Technical Advisors was 21 months; and provincial -level technical staff had been with the project the longest, on average 42 months. Interviews would suggest that few transferred into the project from within their organisation, so brought little in the way of institutional memory. Many contributed history and expertise from other agencies, sometimes in other parts of Laos or from other countries.

In interviews, GoL partners at provincial and district levels appreciated the diversity of expertise under one project umbrella. However, one observer noted that at the same time that funders are encouraging organizational consortia to promote sectoral convergence, GoL seems to be pulling in the opposite direction preferring to work with agencies individually. For example, rather than signing an MoU with the consortium, each partner was required to sign an MoU with the province in which they were working. Signing delays for some partners consumed more than the first year of the project.

#### 4.3 Effectiveness

##### 6.6 To what extent were the originally defined objectives realistic?

Project objectives were designed to contribute to the Strategic Objectives in the NNS (see Table 39), and align with the pillars in the PIN. A multi-sectoral approach was adopted which meant SCALING was rolling out multiple initiatives in multiple sites concurrently, all designed to intersect and synergize. Achievement of the objectives required similar capacities in the four participating organisations, as the design also included capacity building for agencies and committees at two tiers of government and community level. All of this took place in what was essentially a three-year period of time with slowdowns in the last year and a half due to COVID-19. A review of the log frame achievements against the targets for select activities and results of the endline survey would suggest most targets were realistic and coverage high (*Table 41*)

Table 44 - Achievement of main activities based on select indicators

Activity Output <sup>1*</sup>	Target	Achieved	%
<b>Village SBCC</b>			
Villages reached with SBCC messaging	420	401	95%
SBCC volunteers trained and mobilized	820	1159	141%
Household visited by SBCC volunteers	40,000	11536	29%
Village peer groups	840	1361	162%
<b>LSS SBCC</b>			
Trained LSS facilitators	948 (50%f)	980 (50%f)	103%
Adolescent participants	8532 (50%f)	8337 (50%f)	98%
<b>HC strengthening</b>			
Staff trained on IYCF	196	227	116%
Health equipment supplied to HC	56	90	161%
HCs engaged in community accountability	28	28	100%
<b>Gender initiatives</b>			
Village Savings and Loan Groups	195	203	104%
Couples reached by WWR/GER training	4,100	4,966	121%
WWR participants (female)	8,200	13,126	160%

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

<b>WASH</b>			
Private vendors trained in WASH marketing	43	20	47%
Water systems strengthened/built (with WASH committees)	52	74	142%
<b>Governance</b>			
DNC meetings	168	62	37%
Nutrition data dashboards for DNC	168	55	33%
<b>Stakeholders reached (direct &amp; indirect)</b>			
Children (0-18 years)	143,958	155,520	108%
Adults (19+ years)		176,806	
<b>*Activity achievement as measured by project indicator</b>			
<b>Source: IPPT PY4Q2 (2)</b>			

Endline results suggest that objectives related to improvements in nutritional status (iOc1) were realistic. Objectives related to enabling factors such as gender and WASH (iOc2) were well grounded in prior experience and similarly show good outcomes based on the available data. While targets related to iOc3, nutrition governance, may have fallen short in terms of targets and prospects for sustainability, the hands-on partnership approach was broadly appreciated despite the fact that assumptions about the enabling environment may have been overly optimistic. These findings are explored further in the following sections.

#### Challenges

Findings related to specific initiatives and synergies amongst them are presented in Sections 6.12-6.14. Several of the assumptions underpinning objectives and approaches that turned out to be unrealistic are considered here.

- **Village Nutrition Plans (VNPs).** VNPs are a requirement under the NNS, and it is the responsibility of the DNC to ensure each village has a VNP. In general, VNPs are not prepared in a participatory way and tend to reflect what government thinks is best for a community rather than the felt needs of the community. Notes one DNC member from PSL:

*Regarding the preparation and implementation of the village development plan, the village authority should be guided/led by DNC because they are not literate – they have the plan but could not understand how to implement it, and the DNC has budget constraints (and cannot) work closely with villages.*

This sentiment runs counter to community ownership which SCALING sought to engender and misses an opportunity for village wide consultation on an issue many are contributing time to achieve. To get the job done, SCALING and government staff ended up drafting VNPs for many villages. Interviews with village leaders suggest that while they are able to enumerate project activities in detail, the VNP is not well understood, and not used. Notes a member of the DNC in HUA:

*Implementing village nutrition plans is a challenge because some villages do not follow up or review the plans, when the DNC goes to work in the village, they do not know what activities the village needs to focus on to achieve its goals. The solution is that when the DNC is going to implement activities, they have to hold a meeting with the village team every time to discuss the village development plan, to find out what activities the village has not yet implemented or what activities the village has not been able to implement well, then the district team will motivate them to try harder.*

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

This telling rather than listening approach characterizes government's normative disposition towards citizens, and suggests the concept of a community-conceived VNP may be premature or even counterproductive if it raises expectations unduly. See Section 6.12 for more about this.

- **Community-based nutrition peer groups.** SBCC volunteer activities were widely seen as a major benefit to individual households and the public health of villages as a whole, 1000-day HH volunteers' ability to convene peer groups amongst their "clients" turned out to be too ambitious in terms of volunteers' time and authority, as described in Section 6.12.
- **Cooking demonstrations** were a valued and often-mentioned element of the SCALING approach. However, a diverse diet depends on access to diverse ingredients, and the resources to grow or pay for them. Several observers note that the ingredients used in cooking demonstrations were sometimes beyond the reach of poorer households—and a larger number of families during the pandemic. NUSAP interventions that supported kitchen gardens and livestock rearing were designed to address availability and diversity of food available to more resource scarce households. The late implementation of that project is regrettable in this regard.
- **Latrines.** In a similar vein, achievement of government ODF targets through WASH marketing strategies alone may have been unrealistic. While engagement with the private sector has the merits of efficiency and sustainability, it inevitably excludes the poorest and sidesteps government responsibility for delivering public services like basic sanitation. A member of the HUA DNC observes:

*The village has problems building latrines because the district health department can only educate and encourage people. They don't have budgets for people to build latrines, and people also don't have money to buy toilet equipment. Currently, only 50 percent of Xam Neua's population has a toilet.*

- **Water systems** were in high demand across the project sites, and budget estimates turned out to be too optimistic to meet the original targets of 10 rehabilitated or new water systems per district. The project reduced its target, and then exceeded the new target. As noted above, the survey shows overall improvements in access to household water supply over the life of the project.

#### 6.7 To what extent did the project achieve its purpose?

As noted above, the project sought to achieve three outcomes related to 1) positive behaviour change and access to information and services; 2) improved environmental conditions; 3) improved nutrition governance. . Each of these outcomes has been addressed and significant progress made in the intervention districts and villages.

Most of the assumptions in the project's Theory of Change about factors that would contribute to a reduction in stunting also appear to have held up in practice. Specifically, the endline survey suggests that this:

- Increased distance from a HC increases the risk of stunting
- Higher levels of mother's education decreases the risk of stunting
- Not having enough rice is a risk for stunting.
- Using soap is a nearly significant protective factor
- Participation in a VSLA is associated with a lower risk of child stunting

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

On the other hand, improvements in safe water appear to contribute to higher risk of stunting. This finding may simply reflect the reality that improved water and hygiene systems were introduced during the life of the project, and that the impact on stunting outcomes is not apparent in the population yet.

#### 6.8 To what extent was the project successful in including vulnerable households?

Vulnerability in Laos is linked to ethnicity, poverty, proximity to market and services, and other social factors. Women, in particular from more conservative ethnic minority groups, face exclusion because of lack of access to education, poor literacy and restrictive cultural norms. Many respondents in the evaluation said SCALING benefits were available to all households, irrespective of social or economic status. Survey data suggests that coverage was robust, so it is possible to infer that poorer or more marginalized households participated in at least some project initiatives.

Table 45 - Women's participation in SCALING activities

Scaling Activity	Total	Education of mother			Wealth strata		
		No educ	Primary	Secondary +	Poor	Average	Above Average
WASH marketing (latrine)	44%	46%	42%	42%	40%	45%	47%
Water & sanitation committee	47%	45%	49%	49%	51%	49%	42%
VSLA group	47%	41%	49%	58%	43%	49%	50%
Leadership training	60%	57%	64%	59%	59%	61%	60%
Purchased or installed a latrine for your household	66%	59%	68%	78%	63%	67%	70%
WWR/GER	76%	75%	79%	73%	72%	76%	79%
Advice about feeding your baby from a volunteer who came to your house	85%	85%	85%	84%	84%	85%	85%
Informational event about healthy eating in your village	91%	92%	90%	90%	90%	92%	91%
Mobile clinic visit at your village	95%	94%	96%	93%	93%	95%	96%

The questionnaire included 10 questions about participation in various elements of the project. There was a wide range in self-reported participation: less than 50% of women recalled participating in WASH marketing programs but over 90% of women recalled attending a nutritional event or visiting a mobile clinic.

Figures 9 and 10 present participation by mother's education and wealth status.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

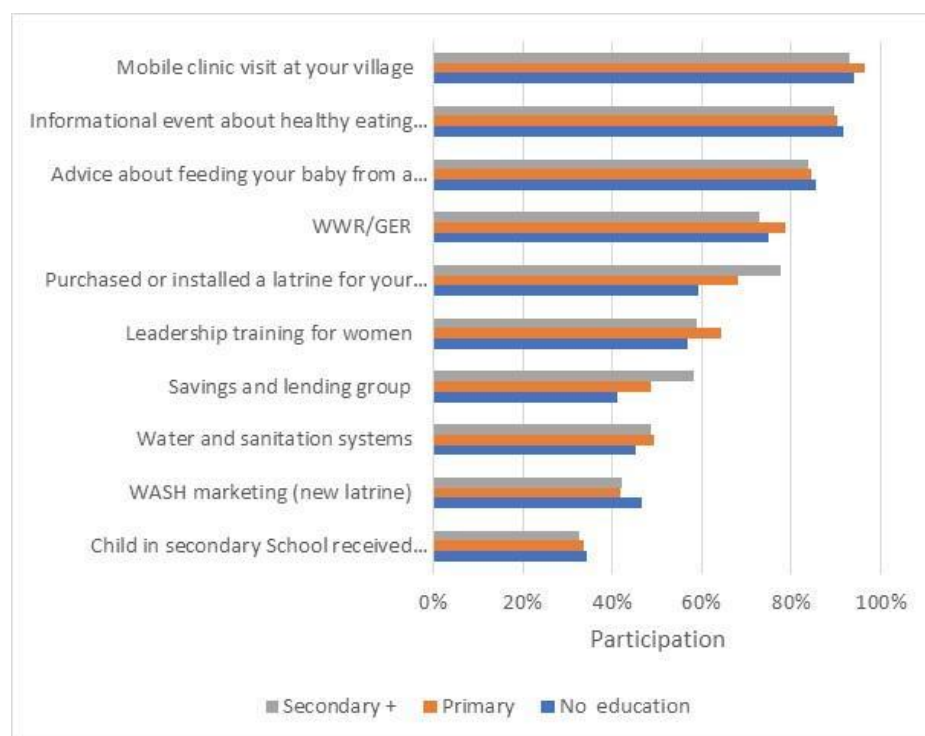


Figure 9 Participation by mother's education

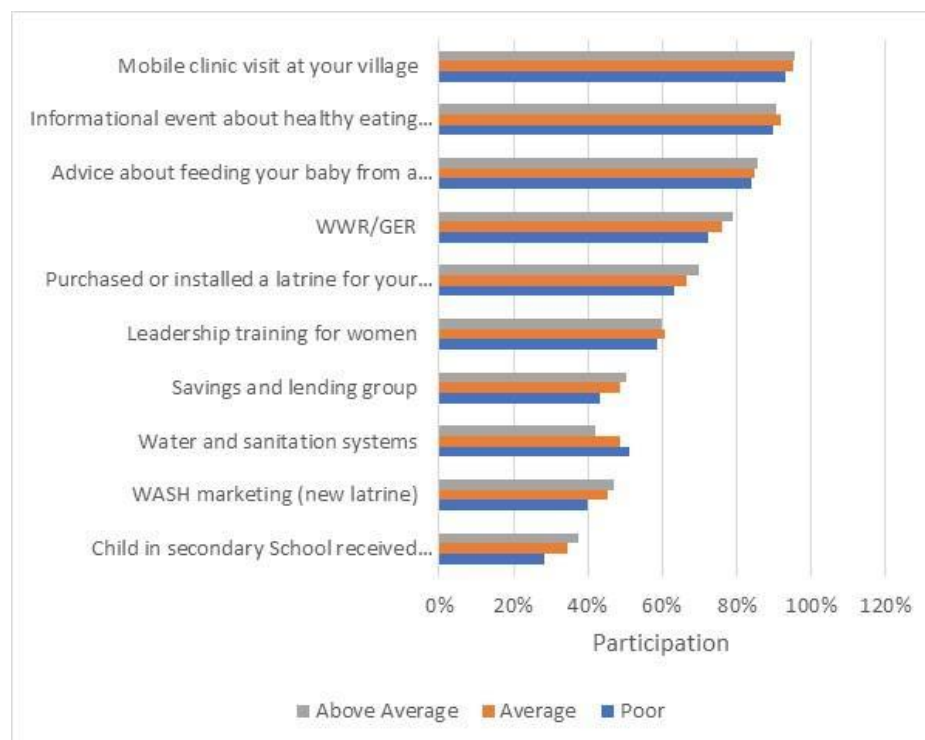


Figure 10 Participation by wealth group

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Based on this data, it appears that the program had broad reach across the community with little differences in participation by education or wealth group. The only exceptions were that better educated women and wealthier women were more likely to be involved in training or meetings concerned with establishing a VSLA, the water and sanitation committee, and purchasing a latrine. The survey finding that women from the poorest households were more likely to be involved in meetings related to obtaining water and/or latrines is at odds with observations from key informants that poorer households may have experienced exclusion from WASH initiatives because of resource requirements. It may instead reflect an (unmet) demand.

Access to mobile health services is particularly impressive, reflecting the strengthened community-HC linkages for MNCH. The percent of respondents saying they participated in a WWR workshop is surprising, given the number of evaluation respondents who said that access to this activity was too limited. The number of respondents saying they participated in leadership training is similarly difficult to understand, since only two women were trained per village. It is possible that the WWR figure includes participation in village *briefings* about WWR (mentioned by a number of informants) rather than the workshop intensives, and that leadership training for women is similarly mistaken for any of the range initiatives in which women participated.

At the same time, interviews with community members suggest that women from poorer households struggled to participate in project activities because of limitations on their time and resources. Other constraining factors like low literacy, husband's resistance, and linguistic barriers were also mentioned, and may also be associated with vulnerability.<sup>38</sup> Vulnerability is also related to distance from commercial centres, which in turn is often dependent on quality of roads and availability of public transportation. The introduction of normative changes was easier in communities closer to towns and peri urban areas where citizens are more exposed to public health information and media that reinforce project messaging, as well as services.

VSLA groups appear to include a cross section of women with varying education, ethnicity, age and livelihood profiles (38) (48). However, poverty also appears to be a barrier to participation in VSLA groups. Poorer women say they have nothing to save, and express concerns about risk. They may also experience exclusion from VSLA members who perceive them as higher risk.

WASH marketing focused largely on harder to reach communities since proximity to commercial hubs offer consumers a diversity of options for procuring materials and supplies for latrine construction and clean water. In remote villages, vendors and DNC observers report that resource-scarce households were unable to purchase latrine materials, even if they had cleared the area for a toilet. Because of recurrent cost requirements, poorer households also had a hard time participating in metered water systems that were piloted in the project. Although government policies anticipate subsidies in such cases, cash strapped departments have not been able to address this gap. In one village, the WASH committee waived water fees for poorer households, but this does not appear to be the norm.

SBCC volunteers and other observers note that poverty was also a constraint to accessing health and nutrition information as poorer women were more likely to be away from their homes especially during agricultural

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<sup>38</sup> SCALING does not have a formal definition of vulnerability, but posited the following factors as contributing to individual and household vulnerability: gender, age, disability, ethnicity, language, poverty, sexual orientation.

More economically secure women are also reportedly less likely to be interested in this type of scheme.



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

seasons. The MTR similarly noted that inclusion of vulnerable households has been more problematic because participation in training competes with farm work, but also found that some households may not be aware that project activities were taking place (46). There is also the opportunity cost of time which may preclude poorer women, or poorer households, from being in a position to volunteer or come to scheduled trainings, thus facing exclusion from project activities. Nonetheless, the significant drop in stunting amongst poorer households suggests an impact of the SBCC component which most directly reached these households.

#### 6.9 What factors were crucial for the achievement or failure to achieve project objectives?

A number of factors enabled and challenged project implementation and successful achievement of objectives. Many are explored elsewhere in this report and are summarized here.

##### Contributors to success

1. Alignment of project objectives and initiatives with a national framework (Section 6.3)
2. Historical and sustained relationships with key government partners and knowledge of local realities within the consortium
3. Diversity of expertise within the consortium
4. Proven strategies adopted in the project design
5. Flexibility of SCALING and the EU to refine and adapt strategies and targets based on context and emerging evidence
6. An emphasis on data and learning loops (6.18)
7. Strong internal management systems (Section 6.18)
8. Extensive on the ground presence in implementation sites (Section 6.1)
9. Shared vision and targets and amongst staff (6.18)
10. Proactive engagement of women and attention to gender issues at every level of program planning and implementation (Section 6.2; 6.14)

##### Challenges to success

1. Delays in project launch
2. COVID-19, which limited implementation of activities, shifted the public health focus of partners, and negatively impacted household livelihood and diet starting in March, 2020.
3. Inherent fragility of multi-agency governance structure, PNC's and DNCs (Section 6.3)
4. SCALING staff turnover (6.5; 6.18)
5. Linguistic challenges in communicating with non-Lao speaking women in ethnically diverse communities (Section 6.13)
6. Resistance to addressing gender norms amongst local leaders—uneven (Section 6.14)
7. Overly ambitious assumptions about SBCC volunteer capacity (1000 day and LSS peer facilitators)



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

(6.12; 6.13)

#### 4.4 Efficiency

##### 6.10 Were the financial resources and other inputs efficiently used to achieve results?

Given the size of the budget, the consortium structure, and the scope, reach and achievements of the project, SCALING appears to have managed its resources quite efficiently.

Figure 11 shows the proportional breakdown by consortium partner. Budget allocations largely mirror the distribution of the number of villages each partner was responsible for, with an additional 5% for SCI associated with consortium management costs.

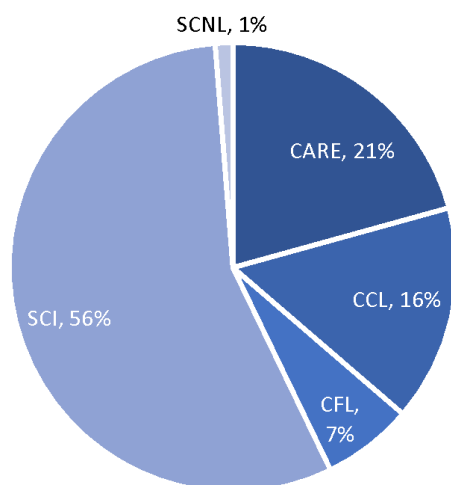


Figure 11 Budget breakdown, by consortium partner (49)

Projected burn rates through the end of PY4 suggest that each of the partners has come close to anticipated budget expenditure targets, with about \$500k left to cover a no cost extension for CCL and SCI.

Coming into the project, each consortium partner had its own financing system. To comply with EU requirements and policies, some adjustments by partners were required. CFL had not worked with the EU in the past. While there were some challenges in the early years of the project, this seems to have been smoothed out. Reconciling inputs from four different systems into a cohesive report for the funder required some extra work for SCI.

Two of the partners—CARE and CCL—managed activity resources directly. In LPB, project resources for all activities were managed by the provincial health department based on budget advances from SCI. This arrangement was based on an agreement between SCI and LPB PHO that predated SCALING. It was designed to build capacity and ownership with this key government partner. The arrangement required rigorous forward planning, considerable paperwork, and significant time investment from government and project staff. There were reportedly frustrations on both sides of the partnership<sup>39</sup> as SCI accountability demands stretched the GoL systems. The process also led to some delays in implementation. Nonetheless, a senior PHO representative

<sup>39</sup> The PHO in LPB had recently retired. The representative of the PHO who was interviewed in LPB was more familiar with the implementation elements of the program.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

reports that the arrangement promoted ownership and quality.

CFL took a slightly different approach. With only three project staff in HUA<sup>40</sup> and 30 villages to cover, they engaged closely with government, forming teams comprised of a CFL staff member and government partners—typically, the PHO, LWU, DESS and PAFO or DAFO, and often including Lao Youth Union members. Each team was responsible for implementation of different parts of the program. In forming the teams, CFL was careful to train as many people from each department as possible, as they cascaded training they received from other consortium partners, so that there was always someone available to deliver training or participate in a supervision visit. Budget advances were provided to each team, which was responsible for acquitting. CFL and local authorities appreciated this approach and in principle it appears to have built government partner capacity through a highly hands on approach. Nonetheless, there were concerns about whether resources were always used for the designated activities.

#### 6.11 Was there good value for money for the activities undertaken?

This section looks at value for money (VfM) for the project as a whole and considers VfM for select SCALING strategies. A rigorous value for money analysis is out of the scope of this evaluation. VfM needs to be viewed in temporal terms. Whether gains achieved under the project will continue or can be replicated is unknown. Nonetheless, a look at budget allocations and expenditures on specific activities may provide useful insights.<sup>41</sup>

**The Project.** The overall budget for SCALING was €11,111,111, including a 10% cost share from consortium partners, for the four-year period. The project undertook a range of activities which required a diversity of technical skills and coordination with and amongst a number of government and other organizations. It worked at provincial, district and village levels with partners of different capacities and levels of engagement. It reached an estimated 332,726 people (half female) and about 155,520 children aged 0-18 across 401 villages, some of them quite remote and the majority of them nutritionally vulnerable (2). Although it is impossible to attribute endline outcomes entirely to SCALING, the contribution of the project to improved nutritional outcomes in these villages is certain. The project also contributed to a number of important, intermediate determinants of nutritional status such as women's empowerment and access to capital, access to clean water and hygiene, and improved, more accessible maternal and child health services. It contributed to national efforts to achieve a multi-sectoral approach to nutrition improvement through support to interagency government structures (PNC, DNC and VNC/VDC), and built capacity of departments, institutions, HCs and individual health care providers, enhancing the ability to address nutrition priorities. Importantly, SCALING modelled a field-based multi-sectoral approach, documenting many elements. For all of these reasons, the project represents excellent value for money.

Staff and activities consumed 87% of the project budget, as shown in Figure 12, with about equal expenditures on each. The sizable expenditure on staff is consistent with most field projects and contributed to the success of this project. Project activities depended on training and supervision in many sites, and the presence of SCALING staff at district and provincial meetings and in villages helped maintain momentum and morale.

<sup>40</sup> During the project, CFL got agreement to add two additional staff—a Hmong interpreter and an intern.

<sup>41</sup> With the exception of components designed to support nutrition governance, project activities are discussed in more detail under evaluation questions related to Impact in sections following this VfM analysis.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

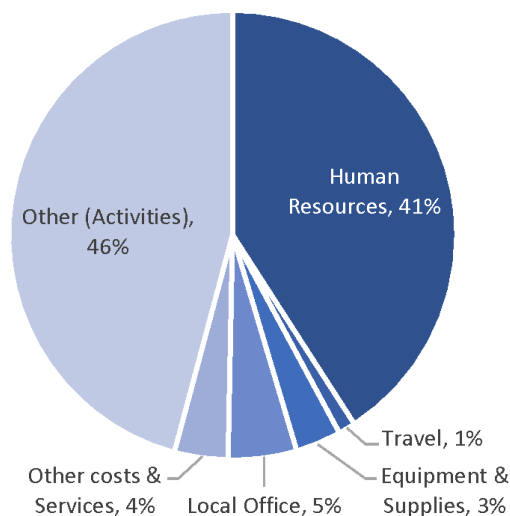


Figure 12 Project expenditures, projected through end of project

Source: (47)

The EU allowed a good deal of flexibility in budgeting—25% variation in specific line items— and most activity-specific expenditures ended up in an “Other” category, per the standard EU budget format. Figure 13 shows the budget breakdown for the Other component for major project activity clusters. These costings represent actual expenditures, and do not include staff time, which is difficult to disaggregate by activity.

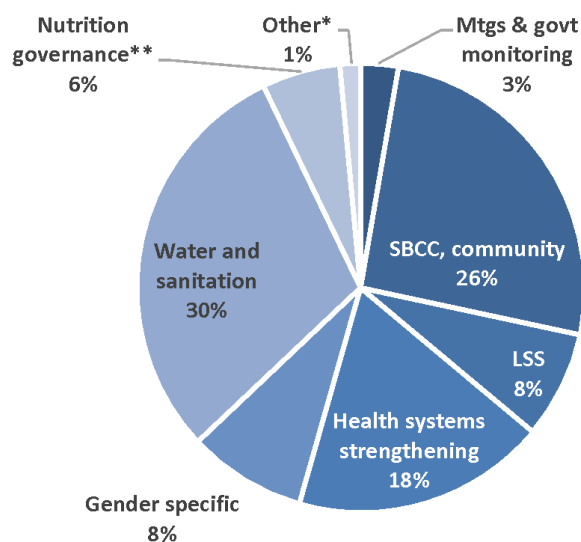


Figure 13 Expenditure by activity cluster

Source: (55) (45)

\*local interpreters, BMS monitoring, value chain analysis

\*\*includes government monitoring

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

The following assessment of VfM for select SCALING strategies is based on i) project cycle uptake/targets achieved; and ii) stakeholder perspectives from the evaluation<sup>42</sup> (2) (56).

- **SBCC.** Volunteer contributions were integral to meeting project objectives. 1000 day household volunteers spread nutrition messaging, and modelled behaviour change. Setting aside start-up costs associated with preparing training materials, each household that received volunteer outreach support cost €36 (excluding SCALING staff costs). Costs include government and HC supervision visits which are essential but may also include other project activities. Also, project design assumptions about government absorbing supervision costs after the first year did not eventuate. On-going training and support costs will always be required, as volunteer turnover is inevitable (See Section 6.12). A closer look at costs associated with this component and a comparison of the viability of alternative approaches to reaching this hard-to-access population are needed to confirm the optimal approach in terms of VfM, but the value of the 1000-day household volunteer approach is clear.
- **LSS.** Observers agree that the LSS approach represents significant VfM as it can be effectively mainstreamed into the education system. As curriculum and materials are in place. LSS offers both behaviour change and potential student leadership benefits, and is an investment in the nutrition and health of future generations. Within the SCALING life cycle, the program was implemented in 79 schools, reaching 8337 students. This comes to an estimated cost of €2647/school, or €25/student. Students—whether facilitators or participants—may only participate briefly in the program, but the impacts may be lifelong. There is some evidence that participants share what they learn with family and friends, thus multiplying the value. Investment in teachers and principals is likely to be more durable, as they are already supporting multiple generations of the program. Nonetheless, the cost per participant is high and efforts to mainstream the LSS would offer better VfM.
- **HSS.** It is difficult to measure VfM of health systems strengthening because the number of clients is unknown. €470,000 went to training and mentoring for 687 service providers<sup>43</sup> (or €684 per person/training). Investments in staff skills and clinic operations are likely to last significantly beyond the project cycle (and reach beyond the target population). Technical and management capacity building of government partners offers good value for money in governance and health systems strengthening. While staff turnover may appear to reduce VfM and may have impacted on project outcomes, it is possible that individual clinicians may carry the information, skills and approaches they have been exposed to with them to other clinical settings.
- **Equipment to HCs.** The project spent an average of €2,000 per HC in RNMCH equipment for 90 HCs, some of it reallocated from other line items given the demand and perceived value. In-kind grants of equipment represented significant budgetary investment, but also significant VfM in terms of reported

<sup>42</sup> Costing calculations in this section are based on the activity expenditures. Actual implementation costs are higher, but could not be calculated because staff worked across multiple strategies

<sup>43</sup> Training was offered in a range of topics, and it's likely that many of the same people participated in more than one training.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

RHNMCH service delivery outcomes and improvements in staff morale and motivation.

- **Water systems.** The biggest ticket item—inputs into rehabilitating or setting up new water supply systems—also responds to one of the community’s biggest development priorities. 26% of the activity budget went to 17% of participating villages (73) with an average cost of €10,423.<sup>44</sup> While new water systems are expensive, they responded to a priority-felt need and offered a perceived contribution to community quality of life. The project was strategic in linking water issues with broader gender issues, and investments in tangible improvements in water supply may have enabled the project to tackle more sensitive issues related to women’s workload, gender and food habits. Investments in local WASH management structures, metering systems, and technical capacity contribute to sustainability of water supply systems (and thus value for money) based on i) the durability of new or refurbished systems; ii) options to reduce dependency on government maintenance; and ii) defray maintenance costs through user payments. A cost-benefit analysis considering investment in various systems options elements would be valuable.
- **VSLA.** Investment in VSLA start up offers good VfM in terms of positive contributions to the household economy, women’s financial literacy, and gender norms. VSLA groups saved an average of \$84 (€72) per participant overall<sup>45</sup>—a significant sum when considering the average monthly per capita income is an estimated \$219 (€188)/month. VSLAs were also a good source of credit for women who may not have had other reliable and cost-effective options. On average, the cost of forming and facilitating a VSLA comes to €65 per group,<sup>46</sup> or €2.2/participant, good value for money even in the short term (47) (39). The VSLA is designed to function independently once start-up assistance from the LWU to establish a governance structure and provision of basic equipment is in place. In fact, on-going support was needed, as described in Section 6.14, so recurrent costs for LWU support are likely to continue in many sites. Investments in LWU capacity for this purpose offer good VfM. For more details on the VSLA, please see Section 6.13.
- **WWR/GER.** More than 13,000 women attended training on women’s workload reduction, some with, some without their husbands at a cost of €13/female participant. While this is not the only activity targeting transformations in gender norms, it complemented other efforts, and appears to have been well received. The cost point may not be replicable by government, but further investigation into mainstreaming elements of the program into LWU initiatives is encouraged by the LWU and would offer VfM (2) (47).

It is also important to look at the extent to which the project stimulated additional investment— from communities, government, and consortium partners, and also whether it contributed to aid dependencies. Community input is a powerful measure of VfM and to that extent most SCALING activities enjoyed input in the form of volunteers’ time, or cash<sup>47</sup>, or both. Government contributions are more difficult to discern. An

<sup>44</sup> This does not include staff costs, training of Nam Saat staff, or investments in creation of WASH management systems, which add an estimated average €3889 to each project (47).

<sup>45</sup> Savings varied a lot across VLSA groups.

<sup>46</sup> This does not include Euro13k for a consultant on VSLA and gender, which presumably was a one-off expense.

<sup>47</sup> SCALING reports that villages in PSL and LNT contributed to the water supply construction in cash, up to LAK 1 mln/HH.

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

assessment of whether the project offset or stimulated government co-financing would be necessary. Consortium members contributed 10% of the project budget.

SCALING's value is also in its testing and documentation of lessons learned, particularly related to the NNSAP's emphasis on multi-sectoral programming. In this regard, the project has done a good job on documentation, and has a plan for dissemination. It is less clear to what extent the project had the platform to influence the national conversation except on specific issues (eg BMS code monitoring). See Section 6.3 for more on this.

### 4.5 Impact

#### 6.12 What has happened in the communities reached as a result of the project?

This section considers a number of SCALING initiatives that had community-wide impacts in terms of improvement in water supply, hygiene, and health services. The results of project support to building structures at village level to address nutrition is considered.

**Health Systems Strengthening** was widely recognized as a beneficial element of the program, with implications for family and community nutrition as well as maternal, new-born and child health, and public health more broadly. This element of the project reached beyond the population covered by SCALING, because Health Centres often serve more villages than those participating in SCALING.<sup>48</sup>

HCs suffer from staff shortages and frequent turnover; uneven supervision and in-service training; insufficient equipment and supplies; and very limited capacity to plan based on data or client feedback. Water systems and basic hygiene at HCs are uneven and given as a reason clients use hospitals when they have that option. Clients in remote areas face an extra burden of traveling on poor roads to reach care, and are often less informed about basic health information. The project addressed a number of these constraints. IPTT data suggests that in promoting access to RNMCH prevention and care, SCALING exceeded its training and Health Centre equipment targets.

**Mobile clinics.** The combination of equipment, supplies, training, mentoring and supervision appears to have been effective in raising the quality and extending the reach of services. Mobile clinics are already a responsibility of HCs and DHO, and are typically held in more remote, less accessible villages. Some SCALING villages did not fall into that category. Mobile clinics offered vaccinations, growth monitoring, ANC and family planning. The project provided equipment, training and per diems for health workers, to supplement government budget shortfalls. As noted in Table 46, this was the project activity which reached the most members of the projects' target population.

**Mentoring.** The project strengthened the link between provincial hospitals and district HCs through a mentorship program focused on building Early and Essential New-born Care (EENC) skills through coaching rather than training. SCALING provided training for mentors, and resources for mentors and mentees to meet (sometimes in groups, sometimes at the HC in conjunction with supervision visits, and in one case in an 18-province meeting convened in LPB). SCALING also provided birthing kits and other equipment. Progress was measured with

<sup>48</sup> At the same time, there are also a number of other external agencies funding the health system, some contributing inputs to the same Health Centres as SC.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

reference to the OSCE (Objective Structured Clinical Examination) instrument. This component of the project was popular with HC staff and built technical and learning capacities amongst mentors and mentees alike. Follow up was key and staff turnover challenged continuity in some cases. One SCALING staff commented it had the added advantage of giving provincial staff the opportunity to gain an insight into what HC workers deal with on a day to day basis. The extent to which it will continue is uncertain.

#### Data management.

SCALING provided IT equipment and training to enable HC staff to enter data into the national DHIS2 system. As noted elsewhere, HCs relied on SBCC volunteers to provide community-based data which was also inputted. Staff appreciated and seemed confident in their data entry skills though there is not enough information to confirm quality and accuracy. It is also unclear to what extent this element resulted in greater evidence-based decision making at the HC level. For now, it appears this effort is unidirectional, and the purpose is to feed the national database. DHOs are supposed to be the avenue for discussing HC performance based on data, although visits of DHOs to HCs were infrequent.

**HSS governance.** Anticipated governance elements of this aspect of the program fell considerably short of targets with only 17 provincial and 50 district-level health management meetings held (targets: 50 and 168 respectively) (2). Nonetheless, SCALING staff consider improved coordination amongst provincial and district administrations and between provincial hospitals and HCs as major achievements of the program. PHOs and DHOs were typically the most active members of PNCs and DNCs and key partners in SCALING overall. As with other aspects of the project, the structure of HSS activities served to forge technical and supervision linkages between 1) provincial and district-level facilities—for instance through mentoring of HC-based staff by provincial hospital midwives, and boosted DHO supervisory visits to HCs, which staff said was had not been regular; and 2) between HCs and communities—for instance through SBCC volunteer training, support, and reporting linkages between HCs and Community Facilitators.



### Story of Change: Sean Kha Lok Health Centre offers quality services and outreach

A lot has changed at Sean Kha Lok Health Centre in Luang Prabang Province in Northern Laos. Four years ago, the government of Laos made maternal and child health services free. In 2016 and 2019 the Health Centre added two staff—making it possible to offer specialized maternity services. In 2018 the Health Centre started receiving assistance under the SCALING project.

The Health Centre is clean, bustling, and seems like an efficient operation. There are informational posters on the walls and staff can be seen greeting clients as they arrive. SCALING provided a range of equipment, training and mentoring that has made it easier for the clinic to offer good services to pregnant women, infants and young children. Clinic staff report that they have had no maternal fatalities in recent years, unlike in years past. Training from SCALING and PHO have helped clinic staff offer vital information to pregnant women—about what to eat, observing their bodies for danger signs in pregnancy, breastfeeding, high quality weaning foods etc. Client follow up has also improved. In the past if a woman didn't come for her appointment, the Health Centre didn't follow up. Now, all clients' names, phone numbers and appointment dates are written on a white board. SCALING has provided phone credit so HC staff can call with reminders. Importantly, even if the HC refers a high-risk pregnant woman to the hospital, the clinic can track her progress and follow up when she returns home.

SCALING has also strengthened the clinic's outreach to surrounding communities. Community-based 1000-day household volunteers offer a vital link with the clinic. Staff credit volunteers with identifying high risk pregnancies, making sure women come for their prenatal checks, and to get their babies vaccinated. Volunteers also help Sean Kha lok HC organize mobile clinics. Being in the village gives the HC an opportunity to observe volunteers and provide feedback. SCALING has helped equip these mobile clinics and defray some of the travel costs.

Clinic staff are proud of their services and eagerly participate in the district-wide client satisfaction competition, which they won two years running—in 2019 and 2020. There is a reward at the end.

**Accountability to clients.** In November 2020, SCALING began a pilot of an approach designed to generate greater client-clinic engagement. Two health centres in each of the 14 participating districts were selected. Using a combination of a community scorecard and a HC self-assessment tool, representatives of HCs and the community jointly agreed on an action plan with targets and responsibilities for HC improvements (49). Staff from participating HCs report that community requests were practical and doable, including things like

- Having a provider available for emergencies 24/7 (mentioned by multiple HCs)
- Chairs for the waiting room
- General HC hygiene, including separate toilets for women and men
- Reliable water supply
- Replacement equipment
- Fencing around the Health Centre to keep animals out

Some of these requests will require external resourcing, but some could be provided by the community or the HC.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

The community accountability pilot was being evaluated at the time the evaluation was wrapping up, so findings are unknown. Feedback from HC staff and community stakeholders suggest that the exercise was appreciated by participating community and HC participants. One SCALING staff suggested that it also gave the HC staff the “courage” to advocate to a higher level for improvements in their facility.

**Summary on HSS.** HC staff seem more empowered because of inputs from the project. In the course of interviews at Health Centres, staff from at least two HCs attributed each of the following positive changes to SCALING support:

- Increase in the number of clients, based on improved ante and post-natal services because of staff training and new equipment, and follow up by the community-based network of volunteers
- More deliveries in the HC, and fewer or no maternal deaths because of staff training and needed equipment and supplies
- More streamlined client processing because of mentoring/advice, and client feedback
- Fewer malnourished children, and significant shifts in weaning practices, because of better information, trained staff and volunteers
- Ability to enter data in DHIS2 directly, because of new HC-based computers and training.

While inputs to the health system improved quality and reach of services, sustainability at current levels will depend on reliable budget support, continuity of trained staff, and continued engagement of community-based volunteers.

**WASH Marketing** engaged with the private sector (retail vendors) to get more latrines and water filters into SCALING villages. Over the life of the project, 20 trained private vendors sold equipment and materials to 7,905 households to construct new latrines and 187 villages were declared Open Defecation Free (ODF) (target: 210<sup>49</sup>). The vendors also sold 986 water filters to individual households. Three vendors—in Nambak District, LPB; Boun Tai District, PSL, and Xam Neua District, HUA—were interviewed for the evaluation.

The project played an important role in working with local leaders to identify households that didn’t yet have a toilet. Village Sales Agents (VSAs) —often the village chief or leader—promoted the products and provided installation and maintenance advice for toilets and water filters. VSAs received a commission of between 10-50,000/kip (€1-4) for every sale. Twenty project-selected vendors, 70 DHO staff and 377 VSAs were trained in the model. The vendor in Phongsaly Province had done toilet construction work with a WHO-funded project and helped to train other vendors and VSAs. Vendors and VSAs help site the toilet, transport materials and show villagers how to install.

The approach is reportedly consistent with a recent GoL decree prohibiting projects from paying for latrine building under its Community Led Total Sanitation (CLTS) program. The benefits of this approach are appreciated by the DHO, which lacks staff and capacity to provide the technical and logistical support necessary to meet the country’s Open Defecation Free targets. DHOs are sometimes involved in identifying households needing latrines, but vendors

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<sup>49</sup> The ODF target was not a logframe indicator.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

report that they have little contact with government after that.<sup>50</sup>

The service is appreciated by villagers—particularly in more remote areas—who cannot easily access toilet pans and other items to build latrines. Demand seemed higher in remote areas, as observers note that people living closer to urban areas have multiple options for materials and equipment (and drinking water). But poor road access is also an impediment to delivery and adds to the cost. A number of vendors talked about households that could not afford the materials. A village leader commented that the very poor have not participated as their annual earnings may total the cost of the materials for one latrine. Some vendors also say that some households have been slow to pay. One vendor said he had reduced his price for these households, and another installed some of the latrines for free, noting also that this maintained his role in the project.

Participating vendors have benefited from these efforts. Two reported that sales have doubled since they began working with SCALING. Observers note that many organisations are promoting WASH Marketing so there is growing competition for a limited number of buyers, particularly in peri-urban and urban areas, so vendors will need to continue to work to maintain their market niche. Also, VSA turnover in the project was not insignificant.

**WASH Systems.** Access to clean water is a high priority for communities in northern Laos and integral to a viable nutrition response because of the benefits to health, hygiene and women's labour. Many villages experience drought in certain seasons and breakdowns in previously installed systems are common.<sup>51</sup> There was a high demand for new or upgraded water systems across implementation sites. SCALING constructed or rehabilitated 73 water systems—70% more than the target. SCALING experts worked with the DHO's *Nam Saat* (water) department to carry out design and community sensitization. SCALING contributed the cost of major material inputs, (€760,000, representing 21% of the project activities budget). Communities provided labour. A manual documenting the major design and maintenance steps is being prepared to hand over to government (46).

In some villages, the new system included multiple shared water taps; in some metered outlets were installed in people's homes. Village-based WASH management committees were formed and members trained to be able to carry out simple maintenance. A person was also designated to be responsible for fee collection. Flat monthly fees are collected for villages with shared water taps, and metered household paid based on consumption. Both types of payment are set by VDCs. A number of WASH committees reported a significant sum still in reserve for maintenance—a signal of village ownership. Still, WASH and VDC committee members acknowledge that major repair issues will continue to rely on the DHO/*Nam Saat*. Technical capacity and resourcing of these government entities remain uneven across Districts.

While the demand remains high, SCALING has contributed to assuring clean water in 17% of participating villages with observed benefits to women workload and women's and children's health. Observers also remarked that clean water supply was often a precursor to latrine installation, as dry latrines are not well accepted. This added to the community's ability to be confirmed by GoL as Open Defecation Free. One expert also noted that adequate household water is also used for fish ponds and vegetable gardens—all contributors to family health.

The construction of new or upgraded water systems drew on expertise from within the consortium (CCL),

<sup>50</sup> One SCALING Project Manager suggested that the DHO had helped one vendor access a bank loan.

<sup>51</sup> Village Development Committees mentioned previous or current water systems support from other agencies and projects (e.g. SUPA, World Vision, ADB, ACF).

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

partnership with the DHO (division of *Nam Saat*) and cooperation with communities. As noted in Section 6.11, durability of these investments will rely on maintenance and management structures which the project helped to establish, as well as government responsiveness and importantly, environmental factors.

**Village Nutrition Committees and Plans.** The Village Authority (VA) is the key decision-making structure at the village level. Though they are unpaid, they are the key point of contact for district government technical bodies, and development programs. VAs also wield considerable authority, and many stakeholders reported taking up responsibilities at instruction from the VA. VAs are responsible for developing five year village development plans (most recently for 2020-2024). A Village Nutrition Committee is also supposed to be established, and under the NNS, a Village Nutrition Plan (VNP)—a component of the Village Development Plan<sup>52</sup>. Three of the 10 sites visited had established Village Nutrition Committees. Eight sites thought they had a plan (while two were certain they didn't have one). In most of the sites the village leaders were knowledgeable about the nutrition-related activities underway in their community, including what had been done, what remained to be done, what was reported on, and what was expected from various government offices and development projects.

As mentioned in Section 6.6, in most villages the VNPs were drafted by district technical offices, with inputs from SCALING staff. In a few cases, district authorities said meetings had been held to discuss the plans with village leaders; in others they were simply presented for review and signature. A number of PNC members observed that expectations on village structures to conceive and document plans may exceed capacity, noting that most VDC members are farmers and day laborers, and may not have the time, education or incentive to prepare plans, particularly on specialized topics like nutrition. The MTR characterizes this in terms of “absorption limit” (46).

Responsibility for producing VNPs ultimately lies with DNCs, who have to submit them to PNCs. Interviews with DNC members suggest that considerable inter-departmental collaboration was invested in developing these plans, offering opportunities to consider community-level convergence. While this in itself may be an important outcome of the planning process, it is also possible that budget constraints may preclude government follow up through to commitments in the plan. Many district officials remain concerned that resourcing VNPs will rely on external support which may or may not be forthcoming. One SCALING staff thinks that local government may perceive village plans more in terms of villagers figuring out how they could address their own issues. DNC members seem to agree with PNC views that many village committees lack the interest or capacity to deliver on them. Notes one DNC member: *The challenge of village development plan implementation, is that the village authority doesn't understand the plan and doesn't know how to implement.*

Ambiguities about responsibility for nutrition planning, governance and resourcing are mirrored at village level and merit more attention. Unless communities have a clear signal that government departments can contribute to meeting priority initiatives, there is understandably few incentives for them to participate in a planning process that has little perceived hope of being realized in practice.

<sup>52</sup> The VDP remains a formality with few villages actually having a plan (one observer estimates only around 20%). As such, the preparation of a VNP in 80% of the visited communities is noteworthy, although the process and ultimate impact of having such a plan remains an open question.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### 6.13 How did the project change the life of people in the community and several levels of beneficiaries: community volunteers, groups (peer groups, water management committee members, VSLA), direct beneficiaries (first-1000-day HHs, students in LSS) and indirect beneficiaries?

This section presents findings about two SCALING initiatives that aimed to change awareness and behaviours at the individual level in order to improve nutrition outcomes. WASH groups were discussed in Section 6.12 and VSLA groups are discussed in the next section (6.13) on gender strategies.

**Community nutrition SBCC volunteers** (Community Facilitators). The project recognized the importance of behaviour change in addressing nutritional issues, and qualitative data suggests that SBCC initiatives contributed to the positive nutritional outcomes amongst CU5 in poorer and middle-income households seen in survey results. SCALING included two types of community-based nutrition volunteers who were responsible for sharing information and motivating behaviour change:

1) a cadre of volunteers trained to visit women starting from pregnancy through the second year of their child's life (first 1000 days), when nutritional intake for both mother and child is most critical. These volunteers were almost all women (97%); and the majority were from ethnic groups other than Lao/Tai (80%). The project trained 1,159 1000-day HH volunteers, 38% more than the target of 2 per village (or 840), largely because of attrition. Volunteers reached over 11,000 households over the life of the project<sup>53</sup>, an average of 10 households per volunteer (2).

2) a smaller cadre of nutrition event volunteers was responsible to set up community events which tended to focus on village clean up and also included promotion of kitchen gardens, and cooking demonstrations (which 1000-day volunteers also conducted on a smaller scale during household visits, and which NUSAP volunteers also managed). Nutrition event volunteers were typically village leaders and reportedly mostly male. They were also typically designated volunteer leaders, and thus responsible for management, reporting, and liaison with the project. An unknown number of nutrition events were held across the 422 villages over the life of the project, with a surprising number being held during the pandemic period (2).

Thirty eight (38) volunteers in 10 villages were interviewed for this evaluation. The 1000-day HH volunteers ranged in age from 16-47 years old, and what many had in common was that they had started having children in their teens. Although many who came to talk to the evaluation team had at least a primary education, they spoke about other volunteers who struggled to do the volunteer work because they could not read, or speak Lao. This was also given as one reason that most of the nutrition event volunteers and SBCC team leaders were men. Most of the women decided to volunteer as 1000-day volunteers because they wanted to 1) learn something new; 2) help others in their community. Some were selected by village authorities. Most of the volunteers who were interviewed had been volunteering for at least two years and are responsible for between 5-10 households at a time. In some villages, household visits have been curtailed because of COVID-19.

Volunteers were mostly trained at the nearby Health Centre, and about half had received refresher training. Replacement volunteers reportedly didn't receive any formal training. Instead, HC, DHO and SCALING staff provided "in service" support during supervision visits and mobile clinics. Volunteers receive a record book,

<sup>53</sup> The target was 40,700. It is possible that the number of households reached was higher than recorded as paperwork was reportedly problematic due to literacy and time constraints.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

posters and forms for reporting as well as branded hats, a bag and t-shirts, which helped others recognize their role and incentivized their work. A few volunteers mentioned the written materials, games and songs that helped make the information fun to share. In the early days, volunteers also gave away bowls and a spoon for child feeding. This came up repeatedly as something they missed when supplies ran out.

Overall, volunteers seemed well informed and confident about the information they were responsible for sharing. During the interviews they were able to describe the types of advice they provided about breastfeeding; unhelpful food taboos; high value nutritious foods, including weaning foods; vaccinations; home hygiene practices; and the importance of prenatal and postnatal checks and delivery at the Health Centre. Volunteers seem empowered by the recognition they have received because of their role, though juggling the demands of volunteering with their own family responsibilities was also a theme. Village leaders also remarked on changes in the health and nutrition of women and young children because of the Community Facilitators, and many SCALING staff and DNC members consider this one of the most successful parts of the project.

The project design anticipates that 1000-day Volunteers would form peer support groups to boost adherence to new nutrition and health seeking behaviours. Some 1,361 groups were reportedly formed over the course of the project (more or less one group per volunteer and 62% higher than the target). While many volunteers mentioned this component, it doesn't appear to have been a regular feature of their work, and respondents may have confused the groups with nutrition events and mobile clinics. Like the pregnant women and new mothers they support, volunteers face many demands on their time, and meeting as a group ended up being too much of a stretch for most. Many also said they didn't have the authority to convene groups, and only village authorities could require women to stay away from their farms to attend. The VSLA may have offered a more natural peer group convening for busy women, as participants had an economic incentive to come together (though VSLA and 1000 day HH participants are not always the same).

#### ***What 1000-day HH volunteers said***

##### **Things that motivate volunteers:**

- Learning new information they could use in their own lives
- Seeing changes in the health of new mothers and babies they have advised
- The opportunity to meet new people and go to new places (e.g. for trainings)
- Being appreciated and recognized by others in the community
- Being recognized by HC/DHO/SCALING staff
- “Bravery to speak up”,

##### **Challenges volunteers face:**

- Resistance from 1000 day households either because mothers are busy, didn't believe volunteers were credible, or had unrealistic expectations of project donations
- Difficulties talking with husbands at 1000-day households
- Time demands, especially when mothers were in fields, and the volunteers had to make repeated visits



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

- Competing demands on time (many volunteers are also mothers and earners)
- No cash remuneration: opportunity cost of time devoted to volunteering
- Self-doubt, shyness, especially in the beginning
- Remembering all of the information and completing the reports (especially for low literate and non Lao speaking volunteers)

Volunteers across sites stressed the importance of continued involvement of the HC and DHO to encourage and update them. HC staff train, supervise and support volunteers, in person and by phone. Volunteers repeatedly returned to the fact that the link with the HC and DHO added to their motivation, and credibility with “clients”. The benefits are reciprocal. Volunteers played a vital role in promoting mobile clinics, monitoring pregnant women and new mothers, and malnourished children, and reporting.

*No one wanted to attend the mobile clinic outreach team visits before 2021. Now, the villagers have better understanding and bring their children for vaccination as well as participating in family planning.* HC staff, Nyot Ou District, Phongsaly

Health Centre staff acknowledge that behaviour change does not happen overnight, and some warn that the fact that volunteers are local may make them less credible when it comes to breaking deeply held, unhelpful beliefs about food. *People tend to think that these volunteers are just normal people and even if they are educated, they don't believe in their suggestions. Even HC staff who are educated on health care for many years, they don't want to believe them. Some volunteers are also busy with their own work. They often do not have time to visit the households.* HC staff in LPB district

Volunteers sometimes complained that their volunteer responsibility comes with a lot of paperwork, which can feel onerous, particularly as they are not remunerated, busy with livelihood and household demands, and some are not literate. At the same time, reporting from 1000-day household volunteers was mentioned by several HC staff as an important source of information to input into the DHIS2 system, as noted in Section 6.12. Many of the volunteers said HC staff helped them complete their reports, and village leaders suggest that the Nutrition Team Leader also consolidates information.

District officials seem optimistic that the SBCC initiatives started under SCALING will continue. They expect DHO support and HC outreach will continue, and will bolster SBCC initiatives. They are also realistic that budget shortfalls may limit what can be done and that sustainability may be particularly challenging in remote villages where the need is most acute. Many of the 1000-day volunteers were frank that they wouldn't continue to volunteer after the project finishes because of competing livelihood demands, and the opportunity cost to their time. Others said they would continue to share what they had learned with others, including handing over to another generation of volunteers. *We would like to set up the new volunteers in the future and we will ask village chief if he has a budget to support this activity or how the village chief can encourage other people to apply for being volunteers.* Volunteers in Nambak District, LPB. Some volunteers suggested that if pregnant and new mothers came together, it would be easier for them to share information. However, they are not able to organize these groups, as discussed above.

In several villages, volunteers predicted that nutrition event volunteers would continue to organize village cleaning initiatives after the project because they had the authority to mobilize villagers, and because of the recognized value to the community.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

**LSS nutrition and reproductive health education.** A 2019 pre-assessment commissioned by SCALING in a sample of 79 selected secondary and lower secondary schools pointed to moderate to low levels of awareness, including inaccurate and gender biased views amongst adolescents about nutrition and reproductive health (3). To reach this important population, the project drew on available educational materials in Lao to create a seven module<sup>54</sup>, interactive package designed for 11-14 year old's in Grades 1-3. Training of government trainers (ToTs) from provincial and district education departments (PESS and DESS), DHO, and LWU launched the program in November 2019-January 2020. TOTs trained Adolescent Facilitators (AFs) over a four-day period. Each pair of AFs (one boy, one girl) was then assigned a group of 12-15 students from their own class and tasked with facilitating seven 1-3 hour sessions (depending on the topic). Sessions were held every week or every fortnight, depending on the school (51). Two or three teachers<sup>55</sup> in each participating school were also trained to supervise. In addition to training and written materials, the project provided audio-visual equipment and computers (as needed) so the participating students could view informational videos and play educational games--both particularly popular elements of the program. SCALING also provides writing materials, t-shirts, bags, hats for facilitators, and materials for activities. In 16 schools in PSL, for instance, the project built latrines and hand washing stations so that students could practice the hygiene principles they were taught. In one LSS, the students planted a garden to grow vegetables and thus improve their nutrition especially for those staying in dormitory (Ban Kiew village).

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<sup>54</sup> The six modules included: 1 on relationship and friendship building; 3 on nutrition, 1 on hygiene; 1 on sexual and reproductive health.

<sup>55</sup> Initially two teachers were trained in each school. After a review of the first round of groups, it was decided to select and train an additional teacher to support the AFs, particularly the younger ones.

### Story of Change: Adolescents have fun learning vital information about their bodies

Phoufa High School in Phongsaly Province in Northern Laos was one of 79 schools that participated in a peer-led interactive learning experiment introduced by the SCALING project. Student leaders from Grades 1-3 (age 11-14) facilitated their classmates through six 1-2 hour sessions about healthy nutrition, food options, sexual and reproductive health. Usually, sessions were held after school. At Phoufa HS, more than 100 students have participated since the activity launched in 2019. Students are excited to be involved. They like to learn about the changes in their bodies, and exchange ideas about how they can make healthy choices. Many admitted they knew nothing about good nutrition before, and ate snack foods without understanding that vegetables, beans and peanuts were better. Students are particularly enthusiastic about the hands-on games, the engaging videos, and taking the informational handouts home to their friends and family. Pre-post tests indicate participating students doubled their correct answers on factual information about nutrition and SRH.

As part of the project, one teacher was trained for each grade to help the peer educators. In Phoufa High School their help has been important in the success of the initiative so far. Students are not always able to manage to keep order, even with only a dozen students in each session. Young people can become unruly and noisy. Students say this is because the participants are their peers. They don't command the same respect that teachers do. In Phoufa HS the teachers attended every session (sometimes delivering some of the content) and this helped maintain a focus on the modules.

Active teacher engagement may also account for the school's commitment to keep the program going. The principal, who has also been trained, is encouraging the other trained teachers to get their colleagues involved, in order to ensure continuity of the activity. She is also planning to allocate a portion of the government budget (30,000LAK/student/year; \$3.00/student) for this program.

A side benefit of this initiative is that student peer educators get the opportunity to take on a leadership role amongst their peers and expand their networks and exposure. The peer educators from Phoufa HS were trained by experts from DE&S, DHO, LWU and SCALING along with students and teachers from six other schools—cementing new friendships. Peer educators were given notebooks and t-shirts and a manual with the modules.

Like peer educators in other SCALING schools, Phoufa peer educators struggled most with talking about sex with their peers. Some teachers feel they are too young to talk about this subject and worry that raising such issues may encourage early sexual activity. But the alarming rates of adolescent pregnancy in Laos suggests that this is an urgent topic for discussion. And the friendly atmosphere created in the SCALING program was conducive to provide information and guidance.

By the end of August 2021, 8337 students had participated in the program across the 79 schools, and 980 student facilitators had been trained (50% female). An estimated 63% of student participants were from ethnic groups. The interest from other students to participate is high (51). Participating schools were selected by Provincial DESS, and include students from villages targeted by SCALING as well as others not included in SCALING because typically multiple communities feed into a given LSS. For this reason, the LSS strategy was somewhat separate from other activities, though it certainly offers clear points of intersection in a multi-sectoral approach.

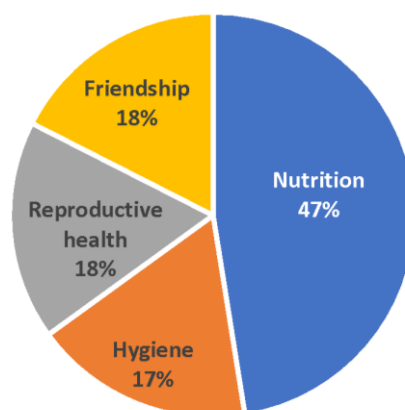
## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Teachers select and train new peer facilitators. In some schools they observe and provide input when facilitators are stuck. They also help manage classroom dynamics which can reportedly get rowdy with a peer in control. Some facilitators stay for more than one cycle, and a tenure of two cycles was started with the second group in three provinces (except LNT where new AFs were trained). Many observe that participation from female students is higher than male students and this was also observed in focus groups with both peer facilitators and past participants in the evaluation.

Students particularly enjoyed the interactive elements of the modules and talked about the chance to talk with their peers in pairs, hands on games, and videos. When asked about what module was of most interest<sup>56</sup>, each of the modules appear to be equally popular<sup>57</sup> (there were three modules on nutrition). The majority of students were able to remember key messages about nutrition and health, the 5 food groups, understanding the physical changes in their bodies, safe sex, and hygiene, and said many of these subjects were new to them.

Student's favorite topics



A number of participating teachers observe that students are more confident, better informed, and also sharing information with family and friends. Nonetheless, quite a number of students were too shy to speak to field team members (and some said they couldn't remember what they had learned). Says one DNC member from Long District: *Students are shy, do not dare to speak, they are from ethnic groups... the peer facilitator did not know well about the lessons, just relied on the videos.* This observer felt peer to peer was not working and that the teacher should deliver the lesson.

Interviews and focus groups with 49 student participants, 25 peer educators and 21 participating teachers and

<sup>56</sup> This was done through a sentence completion exercise in which students were asked to finish the sentence "The most interesting topics were..."

<sup>57</sup> A module about gender, equity and adolescents as change agents was inadvertently omitted from the question posed to students who participated in the evaluation, and so is not included in this graphic. Students did mention this module as of interest in the interviews.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

SCALING staff suggest the following strengths and challenges for consideration of this component.

Table 46 - Strengths and challenges of the LSS strategy

Strengths	Challenges
Pretested materials available from partners and other sources, in Lao	Linguistic constraints for non-Lao speaking children (though many teachers speak local languages)
Sessions added in to an already designated after-school time slot	Students unable to stay at school late because they live far away or because of household livelihood demands.
Games and video presentations generate greatest interest, fun	Some presentations are technology dependent
Children excited to learn about their changing bodies, especially food options and SRH, and personal hygiene	Peer facilitators experience embarrassment talking about sex with peers Teachers and some students feel Grade 1 is too young to talk about sex <sup>58</sup> Boys may turn their embarrassment on girls (teasing/bullying) <sup>59</sup>
Provincial and District education officials, LWU capacitated to train and supervise	Turnover of trainers and diminishing retention of information amongst remaining trainers lowers available capacity as time passes
Students say they share information with friends and family.	With a short period to present a lot of information, student participants may not retain all information accurately.
Peer educators have leadership opportunities	Peer facilitators are challenged to manage unruly classmates Training/refresher insufficient on content and group process skills
Peer educators have exposure to broader networks	Lack of platform for sharing lessons and strategies
Small groups enable good interaction	Students want more friends to join

Overall, the LSS component appears to be a promising strategy, with immediate and long-term nutrition and reproductive-health benefits to next generation mothers, decision-makers, consumers and leaders. There is clearly a great deal of enthusiasm for this approach from students, teachers as well as district and provincial level policymakers, with significant scope for replication and scale through mainstreaming into the education system. Provincial leaders, for instance in LNT, have expressed an immediate desire to see this happen. Principals and teachers in participating schools that were interviewed for this evaluation say they are considering combining the

<sup>58</sup> While the module on sexual and reproductive health appears to be most challenging for facilitators to deliver, it is of interest to students. Teachers suggest that Grade 1 may be exempted because of their maturity level. At one school, teachers suggested that separating the students was unnecessary, and that a mixed class would promote greater understanding.

<sup>59</sup> In most schools students were split up during the session on sexual and reproductive health.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

content into the school curriculum, in part because they have seen positive results, and in part because they recognize that they may not be able to sustain the whole initiative as an afterschool activity without external resources. Other observers suggest having older students facilitate because they could a) control the class more effectively; b) are students, so still close in age and experience to younger peers—and may be known to them; c) are more likely to speak Lao and local languages.

School closures under COVID-19 constrained completion of activities for this activity in all schools.

#### 6.14 Did the project contribute to gender transformative changes?

Output 2.1 in the original proposal anticipates that *Gender norms enable improved care and feeding practices, women's decision-making, reduced workload, and control over resources and health* (40). The project adopted a number of initiatives to address this output. The Women's Workload Reduction/Gender Equality in Relationship (WWR/GER) focused on women's disproportionate responsibility for household maintenance work—with impacts on pregnancy and post-pregnancy outcomes. Village Savings and Loan Associations (VSLA) promoted women's control over resources, and by extension consumption and dietary choices. Women's leadership training aimed to bolster women's voice in the public sphere. Adolescents were also exposed to gender issues in the school-based peer education component (LSS) discussed in Section 6.13. The LSS and SBCC 1000-day household components described in Section 6.13 also promoted girls' and women's leadership in communities, including linking them with formal education and health systems respectively. A DNC member from Long District about the Community Facilitators observes: *They wanted to be a volunteer because they would have a good reputation and recognition in society*. Volunteering can be a leadership steppingstone to greater voice or additional life choices, and it appears that in some communities, volunteers were consulted on nutrition and project-related matters.

Project design, resourcing and partnerships enabled synergies amongst individual gender initiatives that shifted gender norms inside of individual households, communities, and amongst district decisionmakers. Part way through the project an analysis of gender and power in Luang Namtha Province (55) validated the assumptions underpinning these strategies and suggested a range of gender and inclusion (GESI) revisions to other project strategies, though documentation on follow up was not available. (61)

**Women's Workload Reduction (WWR)/Gender Equality in Relationship (GER).** One of the most innovative elements of the program was the suite of workshops for women and couples aimed at rebalancing the burden of household work, and promoting women's participation in household decision-making. Like other elements of the program, the approach had antecedents in other countries and has been implemented in Laos, in LNT by CARE. CARE took the lead on gender in the consortium and further refined the approach as it scaled across the diversity of ethnic communities in the other three project provinces. The LWU was the key implementer throughout and has demonstrated commitment and leadership.

In the first two years of the project, participating women talked in groups of about 30 women, convened by the LWU about household responsibilities and planning on how they could have a more balanced sharing in their household (the WWR). They identified areas where their husbands could help, and planned negotiation strategies. But Akha women and women from other ethnic groups began reporting push back (which may have also included abuse although this is quite taboo and was not reported) when they tried to assert what they had learned in the sessions. A decision was taken to bring men into the conversation. In PY3 the Gender Equality in Relationship (GER) approach was rolled out in three provinces (LBP, LNT and PSL).

Based on interviews with LWU, it seems that different configurations of the WWR/GER were implemented over



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

the course of SCALING in different provinces. According to one LWU trainer the three components of the WWR model include 1) women-only session in which women talk about their responsibilities and identify where husbands could help; 2) couples session in which a discussion of current workloads and redistribution of responsibilities is facilitated; 3) informal follow up with families. (Doesn't apply to GER) LWU note that the third component was often folded into visits related to other activities (e.g. VSLA monitoring) because of budget constraints for travel. Several suggested that participation was often constrained by livelihood demands. WWR/GER activities are designed to be accessible even for low literate and non-Lao speaking participants, and translation for facilitators was supported by project interpreters.

The project met or exceeded its targets in this space, reaching 419 of the 422 SCALING villages with WWR and/or GER workshops. Some 13,126 women and 4,996 couples participated (targets: 8,200 and 4,100 respectively).

Interviews in the evaluation with 21 women and 22 men (including 3 couples) from Lao, Hmong, Khmu, Phounoy, Yao, and Akha ethnic groups from 10 villages, as well LWU, PNC and DNC members and SCALING staff suggest the WWR/GER activity has been transformative at household and community levels.<sup>60</sup>

**Selection for participation**, and the number of participants varied across villages. In some cases, participants self-selected, whereas in others they were nominated by the village authorities or the DNC and LWU (which also carried out the training). Attendance tended to be higher in more remote villages than peri-urban centres where participants had less time (and in any case more exposure to gender messaging). Livelihood demands were also given as a reason that men in particular could not attend sessions; this also restricted women from attending. Village leaders in Pak Xeng District for instance, observed that men resisted participation, perceiving WWR and GER training as women's domain. In a number of sites, the WWR was open to all women in the village, after which 13 couples were selected for the GER. Many respondents mentioned that there was greater interest in attending, and talked about the advantages to having sessions more widely accessible.

**Early outcomes.** Even with a short exposure, component 2 respondents across the evaluation villages noted changes in workload sharing, particularly with household chores. They credited the awareness they gained in the sessions, some also noting livelihood and domestic harmony benefits as a result of shared household activities.

*This was a first time for me to participate in the meeting that had only women sharing experiences about their tasks. For me it was new information and made me want to talk with my husband and make him understand. I was really interested because Hmong ethnic women do all household tasks without assistance from husband. I learned that if I would like my husband to assist my work, I should talk to him with a good mood and use the sweet words. I try to practice at home and it's working for me.* Hmong woman

*Before this project came, man also help his wife to do the family work, but not much. Now men are helping more, that can reduce the argument between husband and wife in family, no complaint from wife makes family happier.* Khmu man

*As before, the Hmong people usually gave men food to eat first, but after the introduction of gender issues, much*

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<sup>60</sup> About half of the focus groups with past WWR/GER participants were abbreviated or small in size because participants had competing demands on their time and gave only brief time to the evaluation team. In a couple of villages, respondents had had little exposure to the activity, having attended only once, or it was long ago and they could not recall much. The findings in this section draw on interviews with SCALING staff, district and provincial stakeholders and documents, but must be taken as indicative, given limited access to participants.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

*has changed, such as eating together. Hmong man*

The authority of outside experts also appears to facilitate behaviour change.

*The DNC told the women to tell their husbands that, "I'm going to feed ducks and chickens, you cook and wash the dishes," and the husbands did what their wives told them Lao woman*

Nearly every project village was reached by this initiative. While the number of participants in these initiatives was relatively small (approximately 10 couples per village), early results related to couple's communications, labor sharing, decision making and reduced levels of gender based violence, appear to be significant. DNC and PNC evaluation respondents in LNT consider changes in gender norms among the most important outcomes of the project, particularly amongst Akha and Lahou groups which are also most vulnerable. Although the CARE study suggests that couples only shared information and experience within the family, a number of evaluation respondents reported talking to relatives and friends about what they had learned (2). Either way, the project appears to have begun a conversation that may be impossible to reverse. Couples who have genuinely made changes appear to be providing role models for others.

*Before, when husband helped the wife's work such as collect firewood, wash clothes, and steam rice, other people in the village would laugh at him and would say he was under his wife. Now no more such laughing. When husband helps to do the housework, he would be praised as a good husband and father. Hmong man*

*I would like to recommend to many families to learn together so that they can change their behaviour. Men who do not help the family are still there, because some are difficult to change. Khmu female*

Evaluation respondents put forward other recommendations about this initiative. Most are generic enough to apply across the diversity of communities:

1. Increase the duration and frequency of the training
2. Implement the activity at night to accommodate farming and office and other livelihood demands, especially for men
3. Always include men
4. Separate groups for men and women to talk about workload and gendered issues, before bringing them together (recommendation from PSL)
5. Create a "model" family that others can consult with
6. Provide advance notice of the training so everyone who wants to attend can do so.

These findings suggest the WWR/GER contributed to the long-term proposition of shifting gender norms, and supported other gender-sensitive elements of the program. More in-depth research would be needed to confirm the extent and exact drivers of that change. The discrepancy between the qualitative and survey results have been discussed under Component 1: survey results which suggest high levels of shared decision-making and workload sharing at the baseline with little change by the endline, may reflect a weakness in the survey instrument.

### Story of Change: Gender synergies

In Cha Nam village in Long District in Luang Namtha Province in Laos Akha women are slowly gaining more economic and decision-making independence. Conversations with three young couples who have participated in a number of SCALING initiatives suggest that the next generation is shifting their views about gender equality in marriage and in the community—something they can see is better for their livelihoods and everyone’s health. Like other minority communities, Akha girls have lower levels of education than boys. All of the husbands (aged 23-35) had completed at least primary school, and one with LSS complete is head of her village unit. Two of the wives (ages 25-27) never attended school. From the 2015 PHC 60.8% of Akha females had never attended school, compared with 40.6% for males.

Akha women become sexually active quite young, and adolescent marriage is common (44). The couples remember that cultural restrictions used to prevent pregnant women from visiting health clinics, and some women who gave birth at home died. Traditional views about eating just rice and salt during early days after giving birth left women weak.

The couples had heard about gender equality from projects in Cha Nam starting in 2015. The ideas SCALING presented in the WWR/GER training were familiar. The workshop exercises encouraged women to speak up and ask for help. SCALING, they said, also encouraged women to participate in project activities. One of the wives is on the management committee for her VSLA. Another is a 100-day volunteer. The third, who is an LSS graduate, is the village LWU representative, and also a member of a VSLA.

Speaking through an interpreter via cell phone after Luang Namtha was locked down during the pandemic, the wives say they are managing money now that they are saving in a VSLA. “My husband allowed me to keep the key and has to ask me if he needs some cash” reported one. Husbands say they feel ok when their wives ask for help. They are proud to report that they take their wives to the health clinic when they are sick and when they are pregnant. Terrible taboos on twins have been abandoned. “We can ride a motorcycle now”, reported one woman, a sign of her independence. “WWR shows husband and wife how to help each other. We have a happy family, don’t fight. Husbands work harder, drink less alcohol. We set an example for other married couples.

**VSLA.** The Village Savings and Loan Association approach (VSLA) is recognized as one of SCALING’s most successful, cost effective, and sustainable strategies. The approach has deep historical roots globally and a version of the VSLA had been implemented in Laos by CARE, as well as other INGOs in Laos before the project, including in ethnic minority communities. This may be part of the reason the already tested model scaled quickly in project villages, with 203 new groups established across the 14 districts (exceeding the target of 195) — including approximately 6000 women (38) (2). The evaluation teams met with members of seven VSLAs.

**Structure.** A hallmark of the VSLA is that it is designed to function independently from the start. External inputs are largely related to guidelines for governance and administration. SCALING also provided some basic materials (pen, paper, locking box) and training for the District LWU who took the lead in helping to form VSLA groups and followed up with advice, particularly in the startup phase. Over time the governance structure enabled VSLAs to work autonomously, collecting savings and disbursing loans to members.

**Membership.** While many of the groups interviewed had started only in 2020, a number of the seven groups

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

interviewed in the evaluation noted an interest in growing the size of the VSLA and the amount of individual monthly savings, suggesting any initial risk aversion had waned as the group gained confidence in the system, and each other. The longest established group (in Long District) started in 2019 with 30 members and is now up to 50 members, all from the Khmu ethnic group.<sup>61</sup> A 2021 study of 34 of the 203 VSLA groups conducted by CARE suggests that membership in VSLA groups can be quite diverse in terms of age and ethnicity—and even that ethnically diverse VSLA do better. Younger, more educated members are valued because they offer literacy support for record keeping (38). The evaluation interviews suggest that Community Facilitators are also frequent participants in a VSLA. Multiple observers confirm that membership in the VSLA is necessarily confined to those with sufficient resources to save, and therefore excludes more economically stressed households. Survey data confirms that VSLA participants tended to be from wealthier households—50% of participants from the highest wealth quintile.

**Savings and lending.** Amongst the VSLAs interviewed in the evaluation, individual monthly savings ranged from 10,000 - 100,000 kip (€0.85-8.50)/month, with the highest reported holding savings of up to 16,000,000kip (€1354) and 1,700,000kip (€148 ) outstanding in loans. Reported interest rates are set by the group, and vary from 2%-4%/month depending on the group on loans extended for a 3-month period. Emergency loans were available in almost all of the groups. Decisions about loans, emergency loans, and cases where a member cannot repay immediately are made by the elected committee, and some VSLAs consult with the LWU. However, in Pak Xeng District seven groups decided not to lend at all because of experience with default amongst VSLA type groups before the project. This preference was respected by the LWU.

**Benefits.** The 2021 CARE study finds that participating women benefited in a number of ways ranging from reported increases in personal savings, control over household resources, safety net support in emergency situations, and social support from other women. Savings and loans are used for paying school fees, items for the household, and medical expenses.

Access to credit through the VSLA was a major benefit to members, with many women reportedly investing in small businesses (HUA, LPB, PSL) and agriculture (LNT)—a finding that was also linked to the relative proximity to peri-urban markets (39). This resonates with findings from the evaluation. VSLAs appear to thrive best when members are in buy/sell businesses, as they give members access to credit and protection and interest on their revenues.

The women-only profile of VSLAs was also valued by members. When members were asked to reflect on the value of the VSLA in their lives, a number of themes emerged:

- Solidarity amongst women
- Access to money in an emergency
- Protect and grow her own money
- More independence in financial decision making (respect from husband as they can handle money responsibly)

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<sup>61</sup> One LWU trainer in LPB reports a VSLA with 70-90 members, though others say 40 is a maximum after which the group would be split.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

**Challenges.** LWU respondents reported early scepticism in some villages based on bad experience with similar lending schemes, or rumours about failed schemes in some villages. Resistance from village leaders or husbands also impeded some initial efforts. Inevitably, some defaults were reported.<sup>62</sup> It is also important to consider the gendered implications of women's participation in VSLA in terms of the household power shifts in terms of financial decision-making and added burden of debt repayment. It is not clear whether the potential for an increase in domestic abuse was investigated or vetted with participants. COVID-19 has taken a toll on some of the VSLAs. With diminished incomes from things like handicraft production and access to markets, members struggled to save. One longstanding VSLA in LPB district dropped from 40 to 9 members during the pandemic.

**LWU.** The role of the District LWU was key to the success of community-based VSLA. LWU representatives not only provided basic calculation assistance to some groups, but appear to have served as an informal, external arbitrator and provider of neutral oversight—adding weight to the governance structure and an additional level of accountability. Even with SCALING support, LWU respondents were not always able to make monthly visits to participating villages, because of road inaccessibility especially during the rainy season. Several also note that even when they visited, they were not able to meet all of the members, particularly in the productive season when farming responsibilities took members outside of the village.

**Sustainability.** The 2021 study of VSLAs suggest that the sustainability horizon for these groups is positive in LBP, HUA and LNT where members expressed enthusiasm about expanding membership and savings (in PSL many groups have already folded and those still running expressed lower motivation about continuing) (47). The VSLA is an ideal entry point for nutrition and health information and SBCC messaging. This was not part of the SCALING approach, but is reportedly being considered for the next generation project.

#### 4.5.1 Women's leadership training

The project aimed to train two women in each of the 420 villages in leadership skills, or 840 in total—aiming for the head and deputy head of the VSLA. The project trained nearly that many 773 (92%) with 83% from non-Lao/tai ethnic groups (2). Many of the trainees were also village-level LWU representatives and some were already serving on village level committees. Training varied from 1-3 sessions. In some villages, LWU observers note that because of the training women are more forthright in community meetings. Others say they are more confident to stand up to their husbands. In one village in Pak Xeng district the women's leadership trainee is now the deputy chief. The LWU acknowledges that building women's leadership is a long term process, and that low education and living in remote areas often determine the pace of change. And despite project encouragement for gender balance on village-level committees, men still predominate (30). LWU regards leadership training as part of their mandate and would like to reach more women with it.

Women's participation in project activities all took time, courage, and agreement from spouses. Survey data suggests that of women in the VSLA, they were more likely to be in HHs that had higher wealth, and less likely to have children that were stunted. These findings are not surprising and, given the high proportion of women from the community participating in all of the activities mentioned above, should not necessarily be seen as a sign of exclusion. Rather, as the Hmong informant noted above, role models are emerging, a signal that gender norms are shifting.

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<sup>62</sup> Notably the only reports about defaults came from LWU respondents.



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Similarly, 18 of the 20 vendors trained in WASH marketing, and 97% of Village Sales Agents were male, reportedly because they had to travel and women were forbidden by their husbands from doing so (2).

SCALING has contributed to changes in gender norms at the household level not just through the gender-specific initiatives, but also by promoting i) girls' leadership amongst LSS and SBCC 1000 day household volunteers; 2) women's control over resources through participation in VSLAs; and 3) women's health through access to information and services through the SBCC 1000 day HH volunteer and strengthening health services for MNCH, and improved WASH. The enabling environment is unlikely to change as a result of these efforts, however, and extent to which these normative changes at household and community level will take hold in project communities, and whether and how the project was able to affect societal and systemic transformations remains an open question.

#### 6.15 Were there any unexpected, negative effects on the communities because of the activities implemented?

**Diversified diet: what's possible?** The project went to some lengths to adopt food messaging that is consistent with what is accessible and culturally familiar. But, as noted in Section 6.6 the diversity and quantity of food being recommended may be out of reach for more economically stressed households. The MTR notes that remoteness and time demands—particularly during major agricultural seasons, may also make it difficult for women to access and prepare foods as recommended. All of these factors may have been aggravated by COVID-19. These factors, independently or together, may have served to marginalize segments of the population that were high priority.

**Women's workload.** SCALING positively impacted on women's access to health services, nutrition information, and control over resources and other types of household decision making. It also added to some women's (unpaid) workload, and may have reinforced patriarchal norms in the many villages where authorities deputed certain women into volunteer positions (18).<sup>63</sup> As noted in Section 6.14, paid positions—NUSAP volunteers, Village Sales Agents (VSAs) for WASH marketing were most likely to be given to men.

**Child safeguarding.** One notable tragedy unrelated to the project occurred in a village in PSL in which two children fell into a pit being dug for a latrine and died. This shook the community and the project. SCALING followed up, reinforcing child safeguarding awareness at all levels.

**COVID-19** has certainly transformed many elements of the implementation context. It impacted on household livelihoods as well as consumption and mobility patterns (refer section COVID-19). School closures may have long term developmental and academic impacts on children. SCALING activities slowed somewhat and had to be curtailed when lockdowns were imposed towards the end of the project. In consultation with the EU, SCALING contributed PPE to cooperating health agencies, set up hand washing stations and contributed computers in some districts, and distributed masks during Wave One (2020). The project supported the vaccination campaign with messaging through mass media in some provinces in Wave Two (2021) (46). SCALING staff were also briefed to ensure they were protecting themselves and communicating accurate information in their work. In addition to data collected in the end line, SCALING was carrying out surveys in two provinces related to the impact of COVID-19 on livelihoods at the time of the evaluation.

**Aid dependencies.** The project filled many gaps in support normally provided by governments, and generated new activities that will require resourcing to be able to continue. Community engagement undoubtedly generated

<sup>63</sup> The MTR's reliance on village leaders to draw conclusions may have masked this pattern.



### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

ownership and momentum. But sometimes expectations of villagers were inconsistent with local realities. Inevitably, by the end of the project volunteers had come to expect even the token rewards and recognition they received from their efforts. Village authorities had come to expect district and project help with conceptualizing planning documents that were presented as prerequisite for assistance. Training and supervision—even though it was delivered through existing government and LWU structures—generated an appetite for more. This is not unique to SCALING and for most of these examples expectations are entirely appropriate. Nonetheless, structural realities and the political economy of Laos and the wider aid sector mean that most of these inputs will diminish or disappear at the end of the project cycle. In the current context, an exit strategy which shifts responsibility to already vulnerable communities or to local governments which are themselves resource scarce is likely to contribute to aid dependencies, citizen cynicism, and lowered credibility of government.<sup>64</sup> SCALING's efforts to hold exit strategy dialogues with government counterparts is laudable, but perhaps too late. Anticipating handover commitments in the design or launch phases of a project, and discussions with the EU and national partners might contribute to ownership and sustainability outcomes in a future project. This approach would allow the project and especially government partners to be transparent with community stakeholders about what to expect.

#### 4.6 Sustainability

##### 6.16 To what extent did the intervention reflect and consider factors which have a major influence on sustainability, i.e. economic, ecological, social and cultural aspects?

The design of SCALING integrated evidenced strategies, on-the-ground technical and cultural knowledge, and existing partnerships. As such the design of SCALING represented something of a sustainability outcome of precursor programming and will likewise depend on next generation funding—from government or development partners—to continue. SCALING staff seem optimistic about the sustainability of most project activities, as shown in Figure 14 and discussed elsewhere.

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<sup>64</sup> Some villages (in Phongsaly and Nyot Ou, PSL) were reportedly not interested by the project, expressing low expectations towards aid partners and the GoL.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

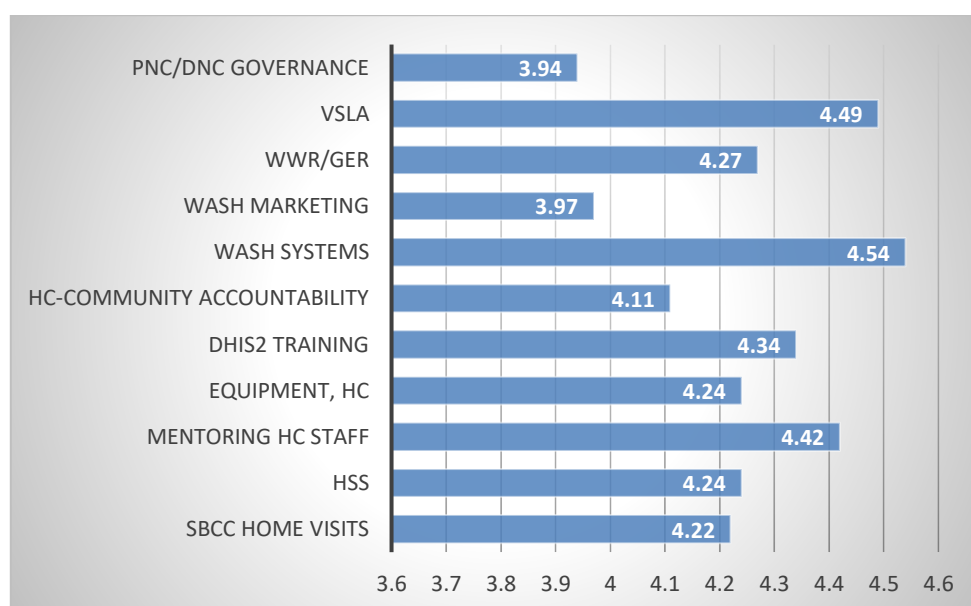


Figure 14 SCALING staff predictions about sustainability on a scale of 1-5 where 5 is most likely to endure

As the Figure shows, staff are least optimistic about sustainability of governance inputs, as discussed in Sections 6.2 and 6.3. SCALING maintained a consistent focus on government partnership, but structural and financial issues beyond the project's control inform these predictions of limited sustainability.

It is also worth considering the extent to which broader lessons learned in SCALING have and can contribute to national nutrition programming. The activities in the project design under OP 3.1 (*National policies and strategies informed by global evidence and local experience*) focused largely on advocacy to local governments; advancing national advocacy based on local experience, and participation of local government at national fora (which SCALING also attended). SCI made a significant contribution to the development of national guidelines for Breastmilk Substitute Code monitoring. A strong emphasis on documentation and learning—led by the two larger partners (SCI and CARE) offer evidence of what works in a number of key sectors in various contexts in Laos. But the space and national level appetite for bottom-up learning more generally is circumscribed in Laos, particularly from civil society. SCALING's engagement with local government and efforts to elevate learning through government partnerships, in addition to active engagement with SUN CSA may have been the most pragmatic hope for spotlighting lessons learned. The EU included SCALING in its quarterly Food and Nutrition Security Working Group of development partners, and helped SCALING to attend a nutrition partner meeting in March 2019 which included GoL representation. Given the EU's profile in the nutrition landscape, it is curious that the EU was not more proactive in ensuring learning from the field reached government decisionmakers in Vientiane. This is both a design and implementation issue.

#### 6.17 To what extent has the project been able to hand-over the follow-up of key activities to the government counterparts and target communities?

Although SCALING has worked closely with government and community stakeholders to build capacity and ownership, systemic and resource limitations make it difficult to predict with certainty the extent to which specific components will continue, as discussed throughout this report. When asked about sustainability of SCALING

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

interventions, PNC members from three provinces (PSL, LPB, LNT) predicted that the LSS initiative would be most likely to continue and could be expanded because it is already integrated into the curriculum, materials are already available, and trainers trained. PNC respondents in HUA and LBP predict VSLA and SBCC initiatives will be sustainable since they are now embedded in the community and in their view will require minimal external resourcing to continue. The PNC in LNT anticipated that positive gender outcomes in participating villages would endure because behaviour change amongst participating couples had taken hold. PNC's universally look to a future with additional external support to continue these and other activities however, and each expressed the desire to extend the project's activities to additional districts in their Province.

SCALING has been quite deliberate in anticipating close out and handover as the project winds down. As of this writing, SCALING partners have begun a series of exit consultations with district government representatives and community leaders. In some cases this includes formal handover of documentation—to provide stakeholders technical support in taking specific activities forward. For instance, CCL has prepared a manual on sustainable water supply; CFL is providing hard and soft copy materials to participating LSS in HUA (52).

Some partners have been able to garner funding to continue activities, though not always all of the activities and not always in all of the same sites (52). The opportunity to continue programming through the EU nutrition budget support provided to GoL is also there. Districts and particularly villages may find they remain at the narrow end of this funding, however, and may have to continue to rely on project funding to continue SCALING activities (or at least to help enable access to the budget support). The EU is also considering a greater role for the private sector under the PIN, though it is unclear whether that includes civil society, and what that engagement would look like.

At community level it is likely those activities that villagers value most that will be sustained. Water systems and VSLA groups are most likely to continue, as they are self-financing and least dependent on external resources (though major maintenance of water systems could require *Nam Saat* expertise). Gender and SBCC initiatives may continue to demonstrate impacts in terms of normative shifts, particularly amongst community thought leaders and younger people, though it is unclear whether government agencies will continue to support training and incentivizing of volunteers independent of external support.

#### 4.6.1 Learning questions

##### 6.18 Working in a consortium:

- Did the consortium approach improve the quality and effectiveness of project implementation without affecting the efficiency?
- What evidence is available on cross-learning and capacity strengthening among the Consortium Partners?
- How did the consortium approach keep SCALING engaged in lobbying and advocacy on Nutrition at the National level?

The consortium included two large INGOs, and two smaller NGOs. Each consortium partner had a presence in their respective province, although CFL had not worked in nutrition and health before, so did not have relationships with key sectoral government partners. The consortium required an alignment of systems and working modalities so that the project could deliver a coherent approach with a single reporting framework. Some partners found this easier than others and the smaller agencies struggled at the outset with reporting systems.

Overall, the concept of sharing expertise under a common framework appears to have worked well. Each

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

organisation was seen to bring technical and geographic expertise to the consortium, which contributed to a culture of collegial respect. Consortium partners appreciated one another's expertise and the opportunity to learn new tools. The consortium was well managed, with clear lines of authority, roles and communications channels, and strong work planning and monitoring mechanisms in place.

As shown in the organogram (Section 6.5), in principle each province had access to the same type of technical and management capacity to enable each consortium partner to deliver the same interventions, although space was also given for adaptation based on local context. In practice, technical advisors were in high demand and stretched. They offered an important technical glue to the program as a whole, cross pollinating skills and new ideas amongst implementation sites. Also, as noted in Section 6.5, many positions—technical and management—experienced at least one staff turnover over the life of the project, which somewhat disrupted partner cooperation and implementation continuities. Regular meetings, interim chat opportunities, and staff development opportunities through cross training promoted cohesion, motivation and trust—factors also noted in the MTR (46).

The multiple threads of this project required specialization as shown in the organogram. Project Managers were often unaware of who was responsible for a particular cross cutting activity, and in general many project managers seemed quite siloed in terms of their focus on their own workplans. Technical advisors had a broader view having worked across the project.

Table 47 - SCALING Staff reflections on the consortium

What contributed to success?	What were the challenges?
Common purpose, goals	Staff turnover, contributing to delays and stakeholder confusion
Clear targets, linked to government strategies	Participants often unavailable in planting season
Diversity of expertise, tools, strategies shared across consortium	Different organizational HR and travel policies and systems
Strong coordination from senior management, joint work planning	Technical Advisors too stretched
Regular information, lessons learned sharing, meetings	Ensuring quality and content consistency across the consortium
Sufficient budget	Delays in tool release because of need for consortium-wide approval
Staff development from exposure to different organizational expertise, approaches	Multiple consecutive activities contribute to management challenges.

Source: Staff survey

**Monitoring and evaluation.** The project worked to a robust set of outcome and output indicators and established a consortium wide platform on basecamp to collect data. These are consolidated in the Indicator Performance Tracking Table (IPTT) which provides useful snapshot of achievements against targets by partner and quarter. Targets and indicators were tweaked over the project's life. Technical advisors also worked to a series of quality benchmarks, which include activity-related indicators related to preparation; implementation and; evaluation. Reports are submitted quarterly. The MEAL system promoted a culture of accountability and learning based on a

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

common set of targets and standards.

#### 6.19. Community volunteers:

- What are current models for community volunteers to stay engaged and motivated throughout the project cycle?
- What are the enabling factors and barriers for sustained engagement and motivation of community volunteers?

The project relied on volunteers in a range of areas to implement project activities. Volunteers delivered SBCC initiatives, LSS initiatives, nutrition village events, and participated in a variety of village-based oversight committees.<sup>65</sup> As noted in Sections 6.13 and 6.14 volunteers were motivated by i) access to new information; ii) recognition and appreciation from the community; iii) affiliation with public services (HCs) and government (DNC, PNC, LWU); and iv) broadened networks with other volunteers and trainers. Access to training and on-going supervision were widely recognized motivators. Although both were provided by local government and LWU, they depended on SCALING resources and tools. In-kind incentives like hats and t-shirts; give-aways like spoons and bowls; and posters, handouts, notebooks, computers etc. empowered the volunteers in a resource scarce environment.

Some of these incentives will fall away at the end of the project cycle. Many SBCC Community Facilitators told the evaluation team that they would not continue. Whether they will be able to convince another cohort of women to step into their shoes without many of the incentives they enjoyed remains to be seen. In NUSAP villages, precedents set for paid volunteers may further discourage the 1000 day HH cadre<sup>66</sup>. Without project funding, district government resource constraints are likely to delimit supervision visits, particularly to the most remote villages, thus disconnecting volunteers from an important source of motivation and information. HC outreach through mobile clinics is a particularly important contribution to volunteer continuation in this regard. Another unknown is the motivation or authority of local leaders to compel continued volunteerism. Some observers anticipated that village cleaning efforts will continue.

Mainstreaming Community Facilitators into the health delivery system would go a long way to addressing these challenges, and would be a boon for nutrition programming as discussed elsewhere. If volunteers see their work as a stepping stone to other opportunities, and if they feel recognized and appropriately remunerated or incentivized, they may be more likely to continue to make the important contribution they made during the project cycle.

#### 6.20 How has the collaboration with the NUSAP project worked so far (particularly in the first four districts of joint operation in LPB)? (additional question)

- What are the main challenges?
- What is the added value of the collaboration?
- What are the lessons learned?

SCALING and NUSAP were designed to launch more or less concomitantly, and to provide synergistic contributions to nutrition outcomes in target sites (which were mostly the same), as described in Section 6.4. The project design anticipated that SCALING would attend to boosting some of the fundamental behavioural and social precursors for healthy nutritional choices (the demand side), while NUSAP would address agricultural production to offer

<sup>65</sup> VSAs are not included here as they were remunerated.

<sup>66</sup> As noted elsewhere, since 2020, NUSAP has recruited volunteers from amongst the cadre already trained by SCALING.

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

communities sufficient and diverse food options (the supply side). A joint baseline was carried out.

NUSAP was much slower to launch. It experienced delays in MoU signing and then ran into internal management problems which, along with COVID-related delays slowed implementation considerably. It appears that the planned management interface occurred more at the beginning the project through the end of 2020 (40).

NUSAP provides generous household grants for gardens and livestock raising which many village respondents talked about. Some respondents were confused about which project provided the grants (only important in an evaluation).

The MTR notes that divergence of operational approaches, different government counterparts and differentials in incentivizing “volunteers” impeded a smooth, early collaboration (46). NUSAP’s decision to remunerate village-level workers was defended because the project lacked sufficient on the ground staff to manage community-based initiatives in dispersed and difficult to reach districts and villages. Differential incentives for volunteers plagued cooperation between the two projects throughout (46). Over the first few years of the project, SCALING incentivized its 1000-day HH volunteers, nutrition event volunteers, and others who gave time to project activities through motivation and small in-kind incentives, as described in Section 6.19. NUSAP offered attractive honoraria to volunteers, who also had significant financial responsibilities, managing village funds that NUSAP disbursed. SCALING volunteers were understandably aware and unhappy about the discrepancies, and after several years of debate, SCALING introduced a modest per-visit remuneration scheme for 1000-day HH volunteers on the occasions when special activities were held. Now in many places NUSAP volunteers and community event volunteers are the same person, which has resolved the discrepancy amongst one type of volunteer, but opened other issues for the other (See Section 6.15). Since community event volunteers are often also village authorities and male, this “resolution” may carry with it some unfortunate gender bias in terms of perceptions of the respective value of the two positions.

**Collaboration.** NUSAP’s key partner—the DAFO—participated in DNCs and PAFOs in PNCs. The PNC in LNT attributed positive gender contributions from NUSAP initiatives in the province based on project requirements for gender inclusion. It is not known to what extent NUSAP interfaced with other nutrition governance committees.

Both projects offered ideas and new practices as well as inputs, though NUSAP was perceived as delivering more tangible benefits because of the household grants. Joint activities such as cooking demonstrations brought the projects together at the village level, and semi-annual meetings in some provinces promoted collaboration and information sharing when they happened. Project officers in HUA note village-level resources provided through NUSAP strengthens SCALING’s ability to realize advice provided on nutrition. Staff and community respondents note that that collaboration is occurring organically in some villages and in some households. Notes one project manager: *“Theory combined with actual practice will make the community more interested”*. Nonetheless, 87% of project staff overall rated the collaboration between the two projects as minimal, and 62% doubted that synergies between the projects had occurred.

**Lessons.** The concept of collaboration between the two projects was sound. Unaligned systems, operational approaches, and timelines stood in the way of viable cooperation. A future project in which food production interventions were included under the consortium—in terms of remit and expertise—is worth considering. Some of the relevant expertise was already available within the SCALING consortium (in CCL and CARE).



## 5 CONCLUSIONS

SCALING brought together evidence-based strategies to address normative, service delivery and governance challenges to improving child nutrition in some of the most remote and ethnically diverse parts of Laos. It achieved a lot in an abbreviated timeframe with positive outcomes addressing each of the objectives. It is recognized by the EU as one of the strongest projects under the PIN. The consortium was well managed. It worked effectively because the members each had a geographic presence in the project's provinces, and because each added technical expertise to the effort.

SCALING was largely successful in increasing the capacity of individual PNC and particularly DNC members, and promoting inter department cooperation for nutrition goals, at least over the life of the project. These multi-agency committees were struggling or non-existent before SCALING; the project provided resources and a technical focus. DNC members (and some PNC members) were exposed to a range of best practice strategies related to WASH, gender, SBCC, nutrition, maternal, new-born and child health—stretching their insights beyond areas of their direct responsibility. Many were equipped with training as trainers, offering skills and hands on practice. Vertical linkages between PNCs and DNCs were strengthened through field visits and joint meetings, some of them national. Nonetheless, functioning PNC and particularly DNCs relied on SCALING financial and technical support, and the project may have created an over reliance on these external inputs. Sustainability is hard to envision without another project or a new level of national government support going forward.

A multi-faceted gender strategy generated a powerful momentum in project communities and awareness amongst decision-makers contributing to convergence on gender equality. Maintaining a focus on gender from the outset, and continuing to refine direct intervention approaches, strengthen partnerships, and address patriarchal norms barring health and nutrition improvements in diverse cultural contexts paid off. Gender is an important element of the SCALING legacy which bears examination in terms of linkages to needed systemic changes.

SCALING SBCC initiatives tackled some deep-seated traditions and behaviours and reached key target groups—women from more conservative ethnic communities, and school-going adolescents. The peer approach was appreciated by participants, village leaders, school staff and District officials.

In many of the strategies adopted in this project, progress was made on the shoulders of precursor projects. SCALING contributed to the refinement of approaches, and for this the project allowed for adaptation by participating consortium members while still adhering to established targets. Technical and financial flexibility from the EU contributed as well.

Although the project was part of a larger effort to boost nutrition convergence in Laos, its impact on translating multi-sectoral lessons from the field into scalable or policy solutions was impeded by contextual barriers. Limitations in the design itself may have also contributed—there are no explicit activities or targets that anticipated sharing of local lessons to inform the national dialogue, for instance. At the end of the project, SCALING has a range of knowledge products and viable strategies to share, but mechanisms for sharing are few<sup>67</sup>.

As Laos moves towards its aim of graduating from LDC status, external resourcing for community-based programs, as well as nutrition-specific programs such as SCALING may become scarcer. Giving SCALING consortium members a seat at the (national nutrition- relevant) table in future nutrition planning will add value in continuing nutrition, gender, WASH, and health service delivery gains at scale.

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<sup>67</sup> Provincial participation in national fora had some effectiveness but does not link to a wider strategy

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

## 6 LESSONS LEARNED

SCALING provided a rich laboratory for learning that may be relevant for future community-based programs on nutrition and related issues. Some of the key lessons are summarized here.

#### VSLA:

- **Investment in the start-up phase pays off downstream.** As external advisors, LWU and project staff can help enable village authority and encourage husbands' support, in order to break down resistance from these key gatekeepers. Provision of training and supplies and repeated visits (3 visits during the first year appears to be optimal) will serve to ensure that the framework, guidelines, and committee roles are clearly understood by the whole VSLA group. After that, LWU or project staff can troubleshoot by phone with intermittent visits.

#### HSS and WASH:

- Interventions that combine equipment and materials with training and awareness raising are valued and show good results.

#### Community-based volunteering:

- Volunteers are motivated by a combination of factors including recognition, opportunities to learn new information, and remuneration.
- Inconsistencies in remuneration amongst volunteers may demotivate volunteers.
- Household visits are time consuming for volunteers when "clients" are frequently absent.

#### WWR/GER

- Male engagement is essential for gender norms to shift.
- Role models matter.

#### Nutrition governance

- Joint supervision visits and ToT responsibilities provide invaluable exposure for government decisionmakers to community realities that may also contribute to better understanding of the values of interdepartmental collaboration

#### Consortia

- Discrete geographic and technical responsibilities but a shared approach and targets maximizes performance within a consortium of diverse agencies.

## 7 RECOMMENDATIONS

Based on the findings presented in this report, this section considers individual components of the project and then multi-sectoral convergence. Because this is an end of project evaluation, many of the recommendations arising are as relevant for government and future funders—in terms of sustainability and scale—as they are for consortium partners who may be best placed to integrate recommendations into on-going or next generation programming. The intended audience or audiences for each recommendation is noted alongside the recommendations presented here.

### 7.1 Recommendations about specific programmatic elements.

#### SBCC Community Facilitators

1. **Advocate for mainstreaming community-based volunteers** into the health delivery system. Integration of nutrition elements with other health information would be most cost effective. Consider specific lessons from SCALING about community-based volunteers in ethnic communities. (GOL, EU, SCALING)
2. **As SBCC becomes a mainstay of the NNSAP, advocate for remuneration to SBCC volunteers.** The gendered implications of relying on women's (unpaid) labour to shoulder this strategic part of the national program needs careful consideration going forward. Volunteers are a vital link between the client population and the health delivery system, and deserve to be paid. Remuneration may also attract more new graduates and help provide a steppingstone to other employment options.
3. **Include family planning advice** in training, information and referral linkages. This is a positive element of the national Village Health Volunteer initiative which should be encouraged. Consider adding contraception (including social marketing) to the volunteer's offerings. (GOL, EU, SCALING)
4. **Include refresher training and supervision for volunteers from HC and DHO staff** as a cornerstone of any community-based nutrition or health volunteer program going forward. (GOL)
5. **Consider revising reporting forms** with an eye to the time availability and literacy of volunteers. (SCALING)
6. **Consider the range of ingredients used in cooking demonstrations** with resource scarce households in mind. (SCALING, NUSAP)

#### LSS nutrition and SRH peer education

7. **Promote mainstreaming of key messages into the LSS curriculum.** (GOL)
8. **Revisit module content and materials** based on lessons learned. This might include consideration of linguistic diversity, maturity levels of students (particularly relevant to SRH topics for Grade 1 students), maximizing interactive formats. (GOL, SCALING)
9. **Repackage LSS peer educator training and materials to enable government approvals for mainstreaming.** (SCALING, GOL)
10. **Refresher training for teachers and student facilitators** is essential so that factual information continues to be communicated. Refresher training is also an opportunity to build facilitation skills. (GOL,

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

SCALING)

11. **Trial inclusion of older students as facilitators.** Students from higher grades may be able to more effectually manage classroom dynamics, and deliver sensitive information while retaining the effectiveness of peer education. (SCALING)

12. **Promote peer networking** amongst peer facilitators in safe chat rooms and through scheduled web meetings to help facilitators coach and encourage one another, as they likely face similar issues. (SCALING)

#### Health Systems Strengthening

13. **Advocate for sufficient resourcing for mobile clinic outreach for remote villages.** (GOL, EU, SCALING)

14. **Include support to village volunteers** in job descriptions and performance metrics for HC staff. (GOL)

15. **Advocate for more prominent integration of family planning services** in RHMCH. Teen pregnancies impact on maternal and child nutrition and close off education and livelihood options for women. (GOL, SCALING)

16. **Aggregate findings from community accountability pilots** for presentation to MoH to highlight client priorities and strategies for quality service delivery and advocate for accountability standards. (SCALING)

#### VSLA

17. The introduction of nutrition, gender, and financial literacy information through the VSLA would offer a cost-effective conduit. (SCALING)

18. Continued support to LWU to backstop VSLA offers good value for money. (SCALING)

19. **Support well established VSLA to share advice with new or recently formed VSLA.** Functioning VSLA can help orient new groups. This would elevate the modelling element of the activity and be particularly helpful when language is an issue. This would also contribute to cost efficiencies. (SCALING)

20. **Explore whether and how the VSLA can provide a steppingstone to the formal banking sector for members.** (SCALING)

#### WWR/GER

21. **Develop materials to enable LWU to mainstream this WWR/GER** at a practical cost point (SCALING)

22. **Bring media attention to gains made in gender equality**, including impacts on health and nutrition, through profiles of individual couples. (SCALING)

#### WASH Systems

23. **Consider quality branding for private sector WASH engineering maintenance support.** There is an unmet demand for water systems and water systems maintenance. Results from SCALING demonstrate a willingness to pay for reliable water supply maintenance. *Nam Saat under the National Centre for Environmental Health* appears to be under resourced and overly bureaucratic. In order to maintain quality and fair pricing, a future project could vet and certify service suppliers. Suppliers could sign contracts with WASH committees which detail the types, timing and costs of services. Payment of a retainer fee may incentivize prompt supplier response. (EU, SCALING)

## Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

24. **Help the *Nam Saat* department develop a digital support function** to provide remote WASH maintenance troubleshooting. This would work best in communities where a “barefoot engineer” had already been trained as part of water systems construction, and where connectivity is not an issue. (GOL, EU)

### 8.2 Recommendations about mainstreaming multi-sectoral integration/coherence

#### Nutrition governance.

25. **Share lessons learned with national decisionmakers about nutrition governance and multi-sectoral approaches at subnational level**, based on the SCALING experience. Ideally this would be presented in concert with provincial and district partners as knowledgeable “insider” advocates. Planned. (SCALING, EU, GOL)

26. **Develop standards and guidelines for PNCs and DNCs** that include expectations related to inter-departmental programming, resourcing options, and performance criteria that extend beyond simply convening. (EOL, EU)

27. **Promote cross visits** and sharing amongst committees to encourage learning and networking. This could also be done virtually to reduce costs and expand participation. (GOL, EU)

28. **Anticipate exit in design.** Future projects with provincial and district government (and LWU) partners could be designed with incremental handover in technical and management leadership over the project cycle. INGO partners would finish in a technical support role by the end of the project.<sup>68</sup> This approach could be piloted under the EU budget support mechanism. This would work best in districts and provinces that have already demonstrated an understanding of and interest in convergence, and where SCALING consortium partners already have an established, trusted relationship with key government offices. Agreed performance and accountability milestones would be essential. (EU, SCALING)

29. **Conduct a costing analysis** during close out for each component. This would help to inform planning at scale. Costing analysis would require clear guidance about required human resource capacity and associated costs in addition to activity-based expenses. (SCALING)

<sup>68</sup> SCI and CFL took some steps in this direction in terms of budget support and reporting. More robust commitments to co-financing and joint agenda setting at the design stage is being suggested here.

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

## ANNEX 1- SURVEY DESIGN

### Baseline Survey Design

The baseline survey was a two-stage, stratified clustered sampling design. The overall number of households to be interviewed was determined using standard sampling size calculators.

#### Sampling Unit/Cluster

A cluster is a group of population living in the same area and this was typically a village or a segment of a village. Cluster size was set at 13 households per village.

#### Strata

The Baseline Survey was stratified by district largely for operation reasons, most government health services and project operations were largely conducted on a district by district basis. Fifteen clusters per district were selected regardless of the district population.

#### Cluster Selection.

The fifteen clusters per district were selected from the target villages in each district (30-35 villages) using systematic random sampling and population proportional to size (PPS) methods, with the number of CU5 years of age as the size metric. This method ensures each child in the target population within a district has an equal chance of selection.

### Sample Size

The sample size was determined using the standard sampling equation:

$$n, baseline = \frac{(Z_{\alpha/2} + Z_{\beta})^2 (p_1(1 - p_1) + p_2(1 - p_2))}{(p_1 - p_2)^2 * (1 - NRR)} * Deff$$

Where:  $Z_{\alpha/2}$  = value for confidence level of  $(1-\alpha)\% = 1.96$  for 95% CI;  $Z_{\beta}$  = value for power of 80%, = 0.84;  $p_1$  = baseline value;  $p_2$  = final value expected; NRR= no response rate; Deff = design effect to account for heterogeneity between clusters.

The initial prevalence ( $p_1$ ) of stunting was assumed to be 45% stunting ( $p_1=0.45$ ) based on the rate reported in the four intervention provinces (2). An endline value of 38% stunting ( $p_2 = 0.38$ ) was chosen, which reflects a 7percentage point decrease in stunting as a compromise between SCALING goal of observing a 5% change stunting and limitations on sample size imposed by survey access, seasonality, and budget. A design effect of 2 was assumed based on number of clusters desired (15 across 9 districts in intervention areas) and a no response rate of 10% was assumed.

The minimum sample size was estimated to be 1706 and the final design had a target of 1755 records.



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

*Table 48 - Baseline sampling design for detecting a 7-percentage point reduction in stunting*

Unit	No.
Districts	9
Clusters/District	15
Samples/Cluster	13
<b>TOTAL</b>	<b>1755</b>

#### Post Estimation

Analysis of the baseline data showed that the overall prevalence of stunting was 44.3% almost exactly the value assumed in the sampling calculations. The Design Effect for stunting was about 2.86, somewhat higher than the assumed value

#### Endline Survey Design

The endline survey was undertaken as a resurvey of the original villages using the same survey design. Reselection of villages was not undertaken because inter-village differences for key indicators in the baseline survey were relatively large so that reflecting a new set of villages with different characteristics had the potential for biasing the analysis.

## SCALING

Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

### ANNEX 2 – INDICATOR TABLES

#### I-1.1 - Stunting in Children Under 60 Months of Age (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1665	44.3	1792	31.5	0	-12.8
<b>Gender</b>						
<b>Male</b>	847	45.3	944	34.3	<b>0</b>	-11.0
<b>Female</b>	818	43.4	848	28.5	<b>0</b>	-14.9
<b>p value</b>		0.5		<b>0.0</b>		-0.5
<b>Province</b>						
<b>Phongsaly</b>	380	47.8	414	32.4	<b>0</b>	-15.3
<b>Luang Namtha</b>	567	48.3	596	32.1	<b>0</b>	-16.2
<b>Luang Prabang</b>	534	35.6	589	25.3	<b>0.001</b>	-10.4
<b>Huaphanh</b>	184	58.70	193	49.2	<b>0.034</b>	-9.5
<b>p value</b>		<b>0.0</b>		<b>0.0</b>		0.0
<b>District</b>						
<b>Phongsaly</b>	189	45.0	211	33.7	0.095	-11.3
<b>Boun Neua</b>	191	49.7	203	31.5	<b>0.001</b>	-18.2
<b>Namtha</b>	181	47.0	197	33.0	<b>0.021</b>	-14.0
<b>Sing</b>	193	41.5	202	31.7	0.053	-9.8
<b>Long</b>	193	54.4	197	31.5	<b>0.005</b>	-22.9
<b>Luang Prabang</b>	191	33.5	197	19.8	<b>0.005</b>	-13.7
<b>Xieng Ngeun</b>	154	35.1	194	27.3	0.202	-7.8
<b>Pak Xeng</b>	189	40.2	198	32.3	0.166	-7.9
<b>Xam Neua</b>	184	58.7	193	49.2	0.034	-9.5
<b>p value</b>		<b>0.0</b>		<b>0.0</b>		0.0
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	126	29.3	127	20.1	0.169	-9.2
<b>Hmong</b>	284	57.1	303	40.7	<b>0</b>	-16.3
<b>Khmu</b>	431	37.4	477	28.1	<b>0.011</b>	-9.3
<b>Akha</b>	545	46.8	574	30.9	<b>0</b>	-15.9
<b>Other Minorities</b>	279	46.7	311	34.1	?	-12.6
<b>p value</b>		<b>0.0</b>		<b>0.0</b>		0.0
<b>Wealth Group</b>						
<b>Poor</b>	549	52.3	592	37.7	<b>0</b>	-14.5
<b>Average</b>	552	43.7	606	27.9	<b>0</b>	-15.8
<b>Above Average</b>	562	36.9	593	28.8	<b>0.005</b>	-8.1
<b>p value</b>		<b>0.0</b>		<b>0.0</b>		0.0

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-1.2 - Stunting Children Under 24 months

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	717	34.2	1148	24.7	0	-9.41
<b>Gender</b>						
<b>Male</b>	374	33.8	593	29.0	0.126	-4.82
<b>Female</b>	343	34.5	555	20.2	0	-14.35
<b>p value</b>		0.870		0.000		
<b>Province</b>						
<b>Phongsaly</b>	161	34.7	246	25.3	0.072	-9.41
<b>Luang Namtha</b>	238	40.3	398	24.6	0.001	-15.64
<b>Luang Prabang</b>	256	28.9	399	20.8	0.018	-8.11
<b>Huaphanh</b>	62	41.9	105	40.0	0.753	-1.94
<b>p value</b>		0.060		0.020		
<b>District</b>						
<b>Phongsaly</b>	61	36.1	111	24.3	0.086	-11.74
<b>Boun Neua</b>	100	34.0	135	25.9	0.262	-8.07
<b>Namtha</b>	73	32.9	141	24.1	0.237	-8.76
<b>Sing</b>	89	34.8	125	24.8	0.143	-10.03
<b>Long</b>	76	51.3	132	25.0	0.011	-26.32
<b>Luang Prabang</b>	107	29.0	134	17.2	0.012	-11.81
<b>Xieng Ngeun</b>	77	26.0	137	22.6	0.626	-3.35
<b>Pak Xeng</b>	72	33.3	128	25.0	0.328	-8.33
<b>Xam Neua</b>	62	41.9	105	40.0	0.753	-1.94
<b>p value</b>		0.270		0.090		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	48	26.6	69	21.2	?	-5.45
<b>Hmong</b>	132	40.4	217	31.0	0.063	-9.36
<b>Khmu</b>	186	27.6	324	20.8	0.105	-6.86
<b>Akha</b>	233	36.1	374	25.1	0.013	-11
<b>Other Minorities</b>	118	39.0	164	25.0	?	-13.94
<b>p value</b>		0.070		0.250		
<b>Wealth Group</b>						
<b>Poor</b>	245	42.0	372	29.9	0.003	-12.06
<b>Average</b>	238	30.4	400	21.0	0.008	-9.44
<b>Above Average</b>	234	29.7	376	23.6	0.067	-6.13
<b>p value</b>		0.000		0.020		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-2.1 - Underweight – Children Under 60 Months of Age (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1665	21.9	1760	15.3	0	-6.62
<b>Gender</b>						
<b>Male</b>	851	22.3	927	17.2	0.017	-5.03
<b>Female</b>	814	21.5	833	13.1	0	-8.41
<b>p value</b>		0.740		0.020		
<b>Province</b>						
<b>Phongsaly</b>	361	26.6	375	17.9	0.004	-8.71
<b>Luang Namtha</b>	579	20.1	599	13.7	0.03	-6.41
<b>Luang Prabang</b>	540	19.1	590	11.8	0.004	-7.32
<b>Huaphanh</b>	185	27.57	196	26.0	0.662	-1.55
<b>p value</b>		0.070		0.000		
<b>District</b>						
<b>Phongsaly</b>	168	26.2	184	14.7	0.067	-11.52
<b>Boun Neua</b>	193	26.9	191	20.4	0.014	-6.52
<b>Namtha</b>	191	18.9	197	15.7	0.502	-3.11
<b>Sing</b>	193	18.1	204	13.2	0.115	-4.9
<b>Long</b>	195	22.6	198	12.1	0.102	-10.44
<b>Luang Prabang</b>	192	17.2	197	10.2	0.058	-7.04
<b>Xieng Ngeun</b>	159	20.8	195	11.8	0.082	-8.96
<b>Pak Xeng</b>	189	20.6	198	14.7	0.194	-5.99
<b>Xam Neua</b>	185	27.6	196	26.0	0.662	-1.55
<b>p value</b>		0.310		0.000		
<b>Main Ethnic Group</b>						
<b>Lao Tai</b>	129	17.5	127	13.1	0.286	-4.38
<b>Hmong</b>	288	22.9	307	17.3	0.096	-5.55
<b>Khmu</b>	436	20.7	478	13.9	0.015	-6.78
<b>Akha</b>	530	23.3	536	15.0	0	-8.29
<b>Other Minorities</b>	282	23.6	312	16.8		-6.74
<b>p value</b>		0.550		0.750		
<b>Wealth Group</b>						
<b>Poor</b>	546	23.9	583	18.3	0.042	-5.62
<b>Average</b>	557	21.7	590	13.6	0	-8.07
<b>Above Average</b>	560	19.9	586	13.7	0.002	-6.15
<b>p value</b>		0.270		0.030		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-2.2 Underweight – Children Under 24 Months of Age

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	738	17.1	1156	11.2	0.001	-5.91
<b>Gender</b>						
<b>Male</b>	386	17.8	599	14.6	0.204	-3.18
<b>Female</b>	352	16.4	557	7.5	0.001	-8.84
<b>p value</b>		0.630		0.000		
<b>Province</b>						
<b>Phongsaly</b>	163	15.0	248	12.0	0.421	-2.98
<b>Luang Namtha</b>	249	17.6	400	11.2	0.096	-6.35
<b>Luang Prabang</b>	263	15.5	400	8.1	0.003	-7.47
<b>Huaphanh</b>	63	27.0	108	22.2	0.506	-4.76
<b>p value</b>		0.240		0.010		
<b>District</b>						
<b>Phongsaly</b>	62	11.3	112	8.9	0.615	-2.36
<b>Boun Neua</b>	101	16.8	136	14.0	0.558	-2.86
<b>Namtha</b>	82	17.1	142	13.4	0.463	-3.69
<b>Sing</b>	89	14.6	125	8.0	0.141	-6.61
<b>Long</b>	78	20.5	133	11.3	0.292	-9.23
<b>Luang Prabang</b>	108	18.5	134	7.5	0.002	-11.06
<b>Xieng Ngeun</b>	83	13.3	138	8.0	0.261	-5.28
<b>Pak Xeng</b>	72	11.1	128	9.4	0.723	-1.74
<b>Xam Neua</b>	63	27.0	108	22.2	0.506	-4.76
<b>p value</b>		0.330		0.080		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	50	17.7	69	9.8		-7.92
<b>Hmong</b>	136	19.8	220	12.7	0.065	-7.05
<b>Khmu</b>	192	15.2	326	9.8	0.077	-5.35
<b>Akha</b>	239	15.5	374	11.9	0.207	-3.61
<b>Other Minorities</b>	121	19.1	167	11.4		-7.75
<b>p value</b>		0.840		0.860		
<b>Wealth Group</b>						
<b>Poor</b>	254	18.4	378	14.0	0.192	-4.35
<b>Average</b>	247	16.3	401	10.1	0.014	-6.24
<b>Above Average</b>	237	16.5	377	9.4	0.006	-7.08
<b>p value</b>		0.8		0.1		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-3.1 - Wasting Children Under 60 Months of Age (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1690	3.3	1758	2.8	0.475	-0.5
<b>Male</b>	854	3.5	921	3.7	0.865	0.2
<b>Female</b>	836	3.0	837	1.8	0.077	-1.2
<b>p value</b>		0.510		0.040		
<b>Province</b>						
<b>Phongsaly</b>	359	4.4	373	2.0	0.031	-2.4
<b>Luang Namtha</b>	568	0.7	598	2.3	0.044	1.7
<b>Luang Prabang</b>	581	4.3	591	3.1	0.376	-1.2
<b>Huaphanh</b>	182	3.3	196	3.6	0.822	0.3
<b>p value</b>		0.000		0.660		
<b>District</b>						
<b>Phongsaly</b>	166	4.8	184	0.5	0.011	-4.3
<b>Boun Neua</b>	193	4.2	189	3.2	0.528	-1.0
<b>Namtha</b>	182	0.6	197	2.0	0.286	1.5
<b>Sing</b>	192	1.0	203	2.5	0.352	1.4
<b>Long</b>	194	0.5	198	2.5	0.163	2.0
<b>Luang Prabang</b>	193	4.2	198	3.0	0.59	-1.1
<b>Xieng Ngeun</b>	194	5.7	195	2.6	0.27	-3.1
<b>Pak Xeng</b>	194	2.6	198	4.0	0.406	1.5
<b>Xam Neua</b>	182	3.3	196	3.6	0.822	0.3
<b>p value</b>		0.000		0.380		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	127	5.9	127	4.6	0.661	-1.2
<b>Hmong</b>	309	3.2	308	2.5	0.561	-0.7
<b>Khmu</b>	451	3.7	477	2.6	0.4	-1.1
<b>Akha</b>	525	2.0	534	2.2	0.803	0.2
<b>Other Minorities</b>	278	2.8	312	3.5		0.7
<b>p value</b>		0.360		0.560		
<b>Wealth Group</b>						
<b>Poor</b>	559	3.0	581	2.6	0.682	-0.4
<b>Average</b>	560	3.2	589	3.7	0.747	0.4
<b>Above Average</b>	569	3.6	587	2.0	0.122	-1.5
<b>p value</b>		0.900		0.220		



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-3.2 Wasting CU2 Children Under 24 Months of Age (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	768	3.4	1154	3.0	0.646	-0.5
<b>Gender</b>						
Male	393	3.6	593	4.2	0.697	0.6
Female	375	3.2	561	1.6	0.143	-1.6
p value		0.800		0.040		
<b>Province</b>						
Phongsaly	164	3.0	246	1.3	0.346	-1.7
Luang Namtha	239	1.6	399	2.7	0.381	1.1
Luang Prabang	304	4.4	401	3.6	0.634	-0.9
Huaphanh	61	3.3	108	3.7	0.85	0.4
p value		0.340		0.290		
<b>District</b>						
Phongsaly	63	3.2	112	0.0	0.174	-3.2
Boun Neua	101	3.0	134	2.2	0.768	-0.7
Namtha	74	1.4	142	2.1	0.727	0.8
Sing	88	2.3	124	3.2	0.703	1.0
Long	77	1.3	133	3.0	0.409	1.7
Luang Prabang	109	4.6	135	3.7	0.742	-0.9
Xieng Ngeun	118	5.1	138	3.6	0.691	-1.5
Pak Xeng	77	2.6	128	3.1	0.859	0.5
Xam Neua	61	3.3	108	3.7	0.85	0.4
p value		0.840		0.100		
<b>Main Ethnic Group</b>						
Lao/Tai	49	6.5	69	6.7		0.1
Hmong	157	3.3	221	3.0	0.874	-0.3
Khmu	208	4.5	325	2.2	0.292	-2.2
Akha	235	1.6	372	2.9	0.297	1.3
Other Minorities	119	2.6	167	2.5		-0.1
p value		0.350		0.680		
<b>Wealth Group</b>						
Poor	267	3.2	376	2.8	0.756	-0.4
Average	254	3.5	400	3.4	0.994	0.0
Above Average	247	3.7	378	2.6	0.478	-1.0
p value		0.960		0.840		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-4 - Low Birth Weight - Recorded for children under 60 months (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	867	7.1	1183	7.0	0.979	0.0
<b>Gender</b>						
Male	445	6.1	627	7.0	0.582	0.9
Female	422	8.1	556	7.1	0.529	-1.0
p value		0.270		0.970		
<b>Province</b>						
Phongsaly	133	3.0	157	5.8	0.263	2.9
Luang Namtha	225	8.2	415	8.7	0.859	0.5
Luang Prabang	405	7.2	484	7.0	0.895	-0.2
Huaphanh	104	8.7	127	4.7	0.26	-3.9
p value		0.070		0.390		
<b>District</b>						
Phongsaly	53	3.8	64	4.7	0.773	0.9
Boun Neua	80	2.5	93	6.5	0.278	4.0
Namtha	98	13.3	146	13.7	0.941	0.4
Sing	58	1.7	141	6.4	0.078	4.7
Long	69	5.8	128	5.5	0.928	-0.3
Luang Prabang	179	6.2	186	5.9	0.895	-0.2
Xieng Ngeun	121	8.3	145	6.2	0.405	-2.1
Pak Xeng	105	8.6	153	10.5	0.673	1.9
Xam Neua	104	8.7	127	4.7	0.26	-3.9
p value		0.210		0.080		
<b>Main Ethnic Group</b>						
Lao/Tai	118	7.9	121	7.5	0.9	-0.4
Hmong	168	7.8	201	4.1	0.095	-3.7
Khmu	309	8.2	400	8.8	0.755	0.7
Akha	150	2.8	298	6.3	0.098	3.6
Other Minorities	122	5.3	163	7.0		1.7
p value		0.050		0.220		
<b>Wealth Group</b>						
Poor	249	6.7	341	8.0	0.549	1.4
Average	295	8.1	403	7.6	0.811	-0.4
Above Average	322	6.5	438	5.7	0.631	-0.8
p value		0.730		0.350		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-5 - Exclusive Breastfeeding 0-5 months (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	199	65.1	288	85.2	0	20.1
<b>Gender</b>						
Male	97	69.7	143	79.0	0.082	9.3
Female	102	60.8	145	91.1	0	30.2
p value		0.230		0.010		
<b>Province</b>						
Phongsaly	24	79.0	69	80.8	0.847	1.9
Luang Namtha	58	79.9	107	82.8	0.682	2.9
Luang Prabang	106	55.6	90	86.7	0	31.1
Huaphanh	11	90.9	22	95.5	0.687	4.6
p value		0.000		0.100		
<b>District</b>						
Phongsaly	11	81.8	32	84.4	0.854	2.6
Boun Neua	13	76.9	37	78.4	0.916	1.5
Namtha	20	80.0	43	81.4	0.918	1.4
Sing	22	90.9	33	87.9	0.723	-3.0
Long	16	68.8	31	80.7	0.35	11.9
Luang Prabang	24	83.3	29	86.2	0.708	2.9
Xieng Ngeun	58	32.8	25	88.0	0.003	55.2
Pak Xeng	24	83.3	36	86.1	0.724	2.8
Xam Neua	11	90.9	22	95.5	0.687	4.6
p value		0.000		0.580		
<b>Ethnic Group</b>						
Lao/Tai	12	66.7	14	84.7	0.37	18.1
Hmong	44	44.4	63	83.8	0.002	39.4
Khmu	71	65.5	68	88.0	0.01	22.5
Akha	53	88.1	98	81.9	0.303	-6.2
Other Minorities	19	74.1	45	89.8	0.173	15.7
p value		0.000		0.750		
<b>Wealth groups</b>						
Poor	73	58.7	104	90.8	0	32.1
Average	62	65.7	105	86.4	0.007	20.7
Above Average	64	72.2	79	76.3	0.499	4.1
p value		0.230		0.080		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-6- Appropriate Breastfeeding 6- 23 months (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	591	74.5	876	71.3	0.219	-3.2
<b>Gender</b>						
Male	311	73.6	457	71.2	0.463	-2.5
Female	280	75.6	419	71.5	0.252	-4.1
p value		0.540		0.940		
<b>Province</b>						
Phongsaly	140	70.0	180	76.0	0.23	6.0
Luang Namtha	195	78.9	298	78.1	0.813	-0.8
Luang Prabang	199	77.3	311	68.3	0.041	-9.0
Huaphanh	57	63.2	87	60.9	0.844	-2.2
p value		0.160		0.040		
<b>District</b>						
Phongsaly	52	57.7	81	64.2	0.43	6.5
Boun Neua	88	76.1	99	83.8	0.174	7.7
Namtha	65	67.7	101	73.3	0.426	5.6
Sing	68	83.8	93	80.7	0.498	-3.2
Long	62	85.5	104	80.8	0.342	-4.7
Luang Prabang	85	75.3	106	64.2	0.077	-11.1
Xieng Ngeun	61	77.1	113	71.7	0.545	-5.4
Pak Xeng	53	83.0	92	70.7	0.21	-12.4
Xam Neua	57	63.2	87	60.9	0.844	-2.2
p value		0.040		0.050		
<b>Ethnic Group</b>						
Lao/Tai	40	66.9	55	60.4		-6.5
Hmong	118	71.9	160	76.9	0.407	5.0
Khmu	143	74.5	259	62.4	0.03	-12.0
Akha	188	86.9	279	86.1	0.774	-0.7
Other Minorities	102	62.7	123	61.8		-0.9
p value		0.000		0.000		
<b>Province</b>						
Poor	204	75.2	277	73.5	0.72	-1.7
Average	201	76.9	299	70.0	0.088	-7.0
Above Average	186	71.1	300	70.5	0.874	-0.6
p value		0.360		0.640		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-7 - Women's Minimum Dietary Diversity Score (%)

	Nb	Baseline	Ne	Endline	P value	Difference
<b>TOTAL</b>	1730	22.2	1772	61.8	0	39.6
<b>Gender</b>						
Male	880	22.5	931	61.2	0	38.8
Female	850	21.9	841	62.4	0	40.5
p value		0.810		0.600		
<b>Province</b>						
Phongsaly	365	15.8	377	66.5	0	50.8
Luang Namtha	585	26.1	606	62.0	0	35.9
Luang Prabang	585	20.1	591	58.4	0	38.3
Huaphanh	195	29.7	198	66.2	0	36.4
p value		0.000		0.260		
<b>District</b>						
Phongsaly	170	17.7	186	72.6	0	54.9
Boun Neua	195	14.4	191	61.8	0	47.4
Namtha	195	2.1	200	51.0	0	49.0
Sing	194	82.0	206	68.0	0.027	-14.0
Long	196	7.1	200	67.5	0	60.4
Luang Prabang	194	40.7	198	60.6	0.022	19.9
Xieng Ngeun	196	2.6	195	64.6	0	62.1
Pak Xeng	195	7.7	198	45.5	0	37.8
Xam Neua	195	29.7	198	66.2	0	36.4
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	40.6	127	85.9	0	45.3
Hmong	319	17.6	310	44.2	0	26.6
Khmu	461	14.3	480	59.5	0	45.2
Akha	533	33.3	540	65.8	0	32.5
Other Minorities	285	13.0	315	70.1		57.1
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	13.4	588	54.5	0	41.1
Average	578	22.8	594	61.3	0	38.5
Above Average	576	30.8	589	70.1	0	39.3
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-8 - Low Maternal BMI – women aged greater than 19 years (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	8.0	1772	6.2	0.055	-1.8
<b>Gender</b>						
Male	880	8.0	931	6.7	0.311	-1.3
Female	850	7.9	841	5.7	0.079	-2.2
p value		0.950		0.370		
<b>Province</b>						
Phongsaly	365	11.9	377	8.8	0.124	-3.2
Luang Namtha	585	11.1	606	8.0	0.158	-3.2
Luang Prabang	585	5.2	591	5.2	0.991	0.0
Huaphanh	195	5.6	198	3.0	0.263	-2.6
p value		0.000		0.010		
<b>District</b>						
Phongsaly	170	10.0	186	8.6	0.633	-1.4
Boun Neua	195	13.3	191	8.9	0.128	-4.4
Namtha	195	8.2	200	6.5	0.58	-1.7
Sing	194	16.0	206	14.6	0.627	-1.4
Long	196	10.2	200	4.5	0.244	-5.7
Luang Prabang	194	4.1	198	3.5	0.765	-0.6
Xieng Ngeun	196	7.7	195	7.7	0.986	0.0
Pak Xeng	195	3.6	198	4.6	0.67	1.0
Xam Neua	195	5.6	198	3.0	0.263	-2.6
p value		0.000		0.010		
<b>Main Ethnic Group</b>						
Lao/Tai	132	5.0	127	0.7	0.054	-4.3
Hmong	319	7.4	310	5.1	0.241	-2.3
Khmu	461	4.5	480	6.2	0.248	1.7
Akha	533	11.4	540	8.8	0.064	-2.7
Other Minorities	285	12.6	315	7.7		-5.0
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	8.3	588	6.8	0.434	-1.5
Average	578	7.7	594	5.8	0.15	-1.9
Above Average	576	7.9	589	6.0	0.219	-1.9
p value		0.950		0.730		



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-9 – Appropriate Diarrhoea Treatment of Children under 60 months (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	468	79.1	379	81.0	0.525	1.9
<b>Gender</b>						
<b>Male</b>	269	78.3	206	80.2	0.683	1.8
<b>Female</b>	199	80.1	173	82.1	0.628	2.0
<b>p value</b>		0.650		0.640		-0.01
<b>Province</b>						
<b>Phongsaly</b>	134	74.9	89	79.9	0.45	4.9
<b>Luang Namtha</b>	160	76.8	128	85.4	0.024	8.6
<b>Luang Prabang</b>	147	83.5	112	80.8	0.595	-2.7
<b>Huaphanh</b>	27	77.8	50	76.0	0.881	-1.8
<b>p value</b>		0.400		0.550		0.15
<b>District</b>						
<b>Phongsaly</b>	47	83.0	48	79.2	0.49	-3.8
<b>Boun Neua</b>	87	71.3	41	80.5	0.358	9.2
<b>Namtha</b>	52	84.6	46	93.5	0.049	8.9
<b>Sing</b>	48	66.7	53	81.1	0.101	14.5
<b>Long</b>	60	76.7	29	79.3	0.72	2.6
<b>Luang Prabang</b>	30	86.7	29	75.9	0.261	-10.8
<b>Xieng Ngeun</b>	77	83.1	48	79.2	0.605	-4.0
<b>Pak Xeng</b>	40	80.0	35	91.4	0.234	11.4
<b>Xam Neua</b>	27	77.8	50	76.0	0.881	-1.8
<b>p value</b>		0.310		0.030		-0.28
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	17	94.7	10	69.0		-25.7
<b>Hmong</b>	83	74.1	95	75.0	0.914	0.9
<b>Khmu</b>	121	86.0	93	89.3	0.449	3.2
<b>Akha</b>	180	70.2	119	79.7	0.098	9.5
<b>Other Minorities</b>	67	88.2	62	83.0		-5.2
<b>p value</b>		0.000		0.160		0.16
<b>Wealth Group</b>						
<b>Poor</b>	144	75.3	139	77.1	0.749	1.8
<b>Average</b>	158	76.5	123	82.8	0.211	6.3
<b>Above Average</b>	165	85.1	117	84.2	0.851	-0.9
<b>p value</b>		0.040		0.370		0.33

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-10 - Immediate Breast Feeding (< 1 hour)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>Total</b>	1730	77.2	1772	81.0	0.048	3.8
<b>Gender</b>						
<b>Male</b>	880	76.8	931	80.8	0.085	4.0
<b>Female</b>	850	77.6	841	81.2	0.106	3.7
<b>p value</b>		0.660		0.830		
<b>Province</b>						
<b>Phongsaly</b>	365	51.4	377	88.0	0	36.6
<b>Luangnamtha</b>	585	81.0	606	75.8	0.036	-5.2
<b>Luangprabang</b>	585	82.6	591	81.2	0.72	-1.3
<b>Huaphanh</b>	195	86.7	198	81.3	0.233	-5.4
<b>p value</b>		0.000		0.000		
<b>District</b>						
<b>Phongsaly</b>	170	70.6	186	83.3	0.065	12.8
<b>Boun Neua</b>	195	37.4	191	91.6	0	54.2
<b>Namtha</b>	195	62.1	200	61.5	0.923	-0.6
<b>Sing</b>	194	92.8	206	82.0	0.033	-10.7
<b>Long</b>	196	89.3	200	84.0	0.047	-5.3
<b>Luangprabang</b>	194	94.9	198	83.8	0.066	-11.0
<b>Xieng Ngeun</b>	196	69.4	195	75.4	0.473	6.0
<b>Pak Xeng</b>	195	79.0	198	84.9	0.073	5.9
<b>Xamneua</b>	195	86.7	198	81.3	0.233	-5.4
<b>p value</b>		0.000		0.000		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	132	92.6	127	81.5	0.056	-11.1
<b>Hmong</b>	319	77.9	310	79.8	0.691	1.9
<b>Khmu</b>	461	80.7	480	78.7	0.503	-2.0
<b>Akha</b>	533	69.9	540	88.2	0	18.3
<b>Other Minorities</b>	285	69.7	315	75.7		6.0
<b>p value</b>		0.000		0.000		
<b>Wealth Group</b>						
<b>Poor</b>	574	81.3	588	81.2	0.973	-0.1
<b>Average</b>	578	76.1	594	82.2	0.021	6.1
<b>Above Average</b>	576	74.0	589	79.5	0.076	5.5
<b>p value</b>		0.010		0.520		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-11.1 – Child Minimum Acceptable Diet (% Children 6-23 months )

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>Total</b>				23.0		
<b>Male</b>				23.6		
<b>Female</b>				22.4		
<b>p value</b>				0.603		
<b>Province</b>						
<b>Phongsaly</b>				24.2		
<b>Luang Namtha</b>				24.5		
<b>Luang Prabang</b>				22.4		
<b>Huaphanh</b>				21.6		
<b>p value</b>				0.853		
<b>District</b>						
<b>Phongsaly</b>				28.3		
<b>Boun Neua</b>				17.8		
<b>Namtha</b>				17.3		
<b>Sing</b>				22.4		
<b>Long</b>				32.3		
<b>Luang Prabang</b>				18.2		
<b>Xieng Ngeun</b>				27.6		
<b>Pak Xeng</b>				23.3		
<b>Xam Neua</b>				24.2		
<b>p value</b>				0.042		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>				22.8		
<b>Hmong</b>				12.9		
<b>Khmu</b>				29.1		
<b>Akha</b>				23.1		
<b>Other Minorities</b>				26.7		
<b>p value</b>				0.000		
<b>Wealth Group</b>						
<b>Poor</b>				20.9		
<b>Average</b>				23.7		
<b>Above Average</b>				24.4		
<b>p value</b>				0.459		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-11.2 - Child Minimum Dietary Diversity Score (% Children 6-23 months)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>Total</b>	591	12.2	876	46.1	0.000	33.9
<b>Male</b>	311	11.1	457	44.6	0.000	33.5
<b>Female</b>	280	13.5	419	47.8	0.000	34.3
<b>p value</b>		0.600		0.400		
<b>Province</b>						
<b>Phongsaly</b>	140	3.0	180	40.9	0.000	37.9
<b>Luang Namtha</b>	195	13.9	298	44.8	0.000	30.9
<b>Luang Prabang</b>	199	14.5	311	49.4	0.000	34.9
<b>Huaphanh</b>	57	15.8	87	43.7	0.006	27.9
<b>p value</b>		0.000		0.400		
<b>District</b>						
<b>Phongsaly</b>	52	0.0	81	49.4	0.001	49.4
<b>Boun Neua</b>	88	4.5	99	35.4	0.000	30.8
<b>Namtha</b>	65	4.6	101	33.7	0.000	29.1
<b>Sing</b>	68	38.2	93	47.3	0.333	9.1
<b>Long</b>	62	3.2	104	52.9	0.000	49.7
<b>Luang Prabang</b>	85	24.7	106	41.5	0.075	16.8
<b>Xieng Ngeun</b>	61	4.9	113	61.9	0.000	57.0
<b>Pak Xeng</b>	53	0.0	92	43.5	0.001	43.5
<b>Xam Neua</b>	57	15.8	87	43.7	0.006	27.9
<b>p value</b>		0.000		0.000		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	40	14.2	55	54.7		40.5
<b>Hmong</b>	118	16.7	160	27.4	0.020	10.8
<b>Khmu</b>	143	11.0	259	57.1	0.000	46.2
<b>Akha</b>	188	13.6	279	41.6	0.000	28.0
<b>Other Minorities</b>	102	3.0	123	53.8		50.8
<b>p value</b>		0.000		0.000		
<b>Wealth Group</b>						
<b>Poor</b>	204	7.2	277	39.7	0	32.5
<b>Average</b>	201	13.8	299	48.9	0	35.2
<b>Above Average</b>	186	16.0	300	49.4	0	33.4
<b>p value</b>		0.000		0.100		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-12 - Open Defecation (% households)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	43.9	1772	23.9	0	-20.1
<b>Province</b>						
Phongsaly	365	64.9	377	48.4	0.002	-16.5
Luang Namtha	585	54.5	606	22.3	0	-32.2
Luang Prabang	585	29.4	591	14.1	0	-15.4
Huaphanh	195	39.5	198	24.2	0.024	-15.2
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	50.0	186	44.1	0.419	-5.9
Boun Neua	195	75.9	191	51.8	0.003	-24.1
Namtha	195	39.5	200	17.5	0.007	-22.0
Sing	194	46.9	206	13.6	0.002	-33.3
Long	196	73.5	200	33.0	0.003	-40.5
Luang Prabang	194	15.5	198	9.6	0.126	-5.9
Xieng Ngeun	196	36.2	195	14.9	0.011	-21.4
Pak Xeng	195	43.1	198	20.2	0	-22.9
Xam Neua	195	39.5	198	24.2	0.024	-15.2
p value		0.000		0.010		
<b>Ethnic Group</b>						
Lao/Tai	132	6.3	127	3.7	0.245	-2.6
Hmong	319	42.6	310	25.7	0.004	-16.9
Khmu	461	31.8	480	15.4	0	-16.4
Akha	533	73.1	540	35.6	0	-37.6
Other Minorities	285	46.8	315	32.1		-14.7
p value		0.000		0.000		
<b>Province</b>						
Poor	574	53.54	588	30.72	0	-22.8
Average	578	43.08	594	21.94	0	-21.1
Above Average	576	34.58	589	18.36	0	-16.2
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-13 - Mothers Receiving Advice About Nutrition (%)\*

	Nb	Baseline	Ne	Endline	pvalue	Difference
<b>TOTAL</b>			1740	84.4		
<b>Male</b>			919	84.940		
<b>Female</b>			821	83.790		
<b>p value</b>				0.490		
<b>Province</b>						
<b>Phongsaly</b>			371	82.8		
<b>Luang Namtha</b>			591	84.5		
<b>Luang Prabang</b>			581	83.7		
<b>Huaphanh</b>			197	88.3		
<b>p value</b>				0.610		
<b>District</b>						
<b>Phongsaly</b>			184	87.5		
<b>Boun Neua</b>			187	79.1		
<b>Namtha</b>			199	76.9		
<b>Sing</b>			202	90.1		
<b>Long</b>			190	87.4		
<b>Luang Prabang</b>			191	77.0		
<b>Xieng Ngeun</b>			193	90.7		
<b>Pak Xeng</b>			197	85.8		
<b>Xam Neua</b>			197	88.3		
<b>p value</b>				0.010		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>			125	82.5		
<b>Hmong</b>			303	78.3		
<b>Khmu</b>			476	86.8		
<b>Akha</b>			524	86.8		
<b>Other Minorities</b>			312	85.8		
<b>p value</b>				0.06		
<b>Wealth Group</b>						
<b>Poor</b>			579	84.5		
<b>Average</b>			581	84.1		
<b>Above Average</b>			579	84.6		
<b>p value</b>				0.980		

\* Not collected in baseline



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-14 - Handwashing with Soap (% mothers)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>Total</b>	1730	71.9	1772	84.0	0	12.1
<b>Province</b>						
Phongsaly	365	83.8	377	89.3	0.148	5.5
Luang Namtha	585	54.0	606	77.1	0	23.1
Luang Prabang	585	79.7	591	90.5	0	10.8
Huaphanh	195	65.6	198	70.2	0.335	4.6
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	80.6	186	87.6	0.355	7.1
Boun Neua	195	86.2	191	90.6	0.192	4.4
Namtha	195	53.9	200	80.0	0.000	26.2
Sing	194	46.9	206	79.1	0.000	32.2
Long	196	59.2	200	73.0	0.037	13.8
Luang Prabang	194	89.2	198	91.9	0.370	2.7
Xieng Ngeun	196	80.6	195	92.3	0.050	11.7
Pak Xeng	195	63.1	198	85.9	0.001	22.8
Xam Neua	195	65.6	198	70.2	0.335	4.6
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	93.7	127	92.7	0.721	-1.0
Hmong	319	66.2	310	71.1	0.249	4.9
Khmu	461	73.7	480	92.1	0.000	18.4
Akha	533	61.6	540	82.6	0.000	20.9
Other Minorities	285	78.9	315	82.6		3.7
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	64.6	588	77.0	0.000	12.4
Average	578	71.4	594	85.9	0.000	14.5
Above Average	576	79.9	589	89.7	0.000	9.8
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-15 - Use of an Improved Water Source (% households)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	86.9	1772	91.9	0.017	5.0
<b>Province</b>						
Phongsaly	365	88.0	377	80.9	0.177	-7.1
Luangnamtha	585	90.7	606	96.6	0.038	5.8
Luangprabang	585	83.0	591	91.2	0.047	8.2
Huaphanh	195	89.7	198	99.5	0.000	9.8
p value		0.170		0.000		
<b>District</b>						
Phongsaly	170	87.1	186	78.0	0.293	-9.1
Boun Neua	195	88.7	191	83.3	0.402	-5.5
Namtha	195	87.2	200	94.0	0.200	6.8
Sing	194	86.6	206	95.6	0.232	9.0
Long	196	96.9	200	99.5	0.088	2.6
Luangprabang	194	83.0	198	99.0	0.005	16.0
XiengNgeun	196	82.1	195	81.0	0.903	-1.1
PakXeng	195	84.1	198	91.9	0.323	7.8
Xamneua	195	89.7	198	99.5	0.000	9.8
p value		0.000		0.000		
<b>Ethnic Group</b>						
LaoTai	132	87.2	127	99.5	0.000	12.3
Hmong	319	82.7	310	90.9	0.157	8.2
Khmu	461	86.7	480	93.1	0.040	6.4
Akha	533	87.4	540	88.5	0.814	1.1
Other Minorities	285	92.2	315	91.2		-1.0
p value		0.360		0.000		
<b>Wealth Group</b>						
Poor	574	86.56	588	92.06	0.055	5.5
Average	578	86.68	594	90.21	0.166	3.5
Above Average	576	87.5	589	93.4	0.011	5.9
p value		0.900		0.220		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-16 - Treatment of Water in the Home (% households)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	72.9	1772	62.3	0	-10.7
<b>Province</b>						
Phongsaly	365	95.4	377	76.3	0	-19.1
Luang Namtha	585	46.6	606	54.2	0.037	7.5
Luang Prabang	585	71.9	591	55.8	0	-16.0
Huaphanh	195	95.4	198	78.8	0.002	-16.6
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	94.7	186	65.6	0.001	-29.1
Boun Neua	195	95.9	191	84.8	0.045	-11.1
Namtha	195	58.0	200	68.0	0.104	10.1
Sing	194	40.7	206	35.9	0.396	-4.8
Long	196	40.8	200	55.0	0.045	14.2
Luang Prabang	194	59.3	198	25.3	0.001	-34.0
Xieng Ngeun	196	74.5	195	71.8	0.619	-2.7
Pak Xeng	195	88.7	198	84.3	0.471	-4.4
Xam Neua	195	95.4	198	78.8	0.002	-16.6
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	70.7	127	43.6	0	-27.0
Hmong	319	79.6	310	65.4	0.026	-14.1
Khmu	461	76.0	480	66.4	0.006	-9.5
Akha	533	60.3	540	56.4	0.233	-3.8
Other Minorities	285	80.1	315	70.3		-9.8
p value		0.010		0.040		
<b>Province</b>						
Poor	574	76.55	588	74.36	0.468	-2.2
Average	578	71.46	594	58.74	0.001	-12.7
Above Average	576	70.68	589	52.89	0	-17.8
p value		0.090		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-17 - Correct Disposal of child Faeces

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	42.3	1772	58.5	0	16.3
<b>Gender</b>						
Male	880	40.7	931	58.8	0	18.1
Female	850	43.9	841	58.3	0	14.4
p value		0.180		0.860		
<b>Province</b>						
Phongsaly	365	27.7	377	31.1	0.498	3.5
Luang Namtha	585	27.0	606	57.7	0	30.7
Luang Prabang	585	57.5	591	75.0	0	17.5
Huaphanh	195	44.6	198	46.0	0.753	1.3
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	35.9	186	30.1	0.47	-5.8
Boun Neua	195	21.5	191	31.9	0.136	10.4
Namtha	195	33.9	200	58.0	0.001	24.2
Sing	194	36.1	206	61.7	0.001	25.6
Long	196	14.3	200	54.5	0.001	40.2
Luang Prabang	194	76.3	198	85.9	0.103	9.6
Xieng Ngeun	196	52.6	195	68.7	0.016	16.2
Pak Xeng	195	33.9	198	65.7	0	31.8
Xam Neua	195	44.6	198	46.0	0.753	1.3
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	81.6	127	88.8	0.151	7.2
Hmong	319	42.7	310	53.4	0.017	10.7
Khmu	461	50.7	480	69.7	0	19.1
Akha	533	18.2	540	43.4	0	25.2
Other Minorities	285	38.3	315	48.5		10.1
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	32.1	588	46.0	0	13.8
Average	578	41.8	594	62.3	0	20.6
Above Average	576	53.5	589	68.1	0	14.6
p value		0.000		0.000		#NAME?

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-18- Improved Sanitation (% households)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	56.1	1772	78.9	0	22.8
<b>Province</b>						
Phongsaly	365	35.1	377	51.9	0.002	16.7
Luang Namtha	585	45.5	606	80.5	0	35.0
Luang Prabang	585	70.7	591	89.7	0	19.0
Huaphanh	195	60.5	198	78.8	0.01	18.3
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	50.0	186	55.9	0.419	5.9
Boun Neua	195	24.1	191	48.7	0.002	24.6
Namtha	195	60.5	200	86.0	0.002	25.5
Sing	194	53.1	206	87.4	0.002	34.3
Long	196	26.5	200	70.5	0.002	44.0
Luang Prabang	194	84.5	198	94.4	0.013	9.9
Xieng Ngeun	196	63.8	195	88.7	0.006	24.9
Pak Xeng	195	57.4	198	83.3	0	25.9
Xam Neua	195	60.5	198	78.8	0.01	18.3
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	93.7	127	97.7	0.1	4.0
Hmong	319	57.4	310	77.7	0.001	20.3
Khmu	461	68.4	480	89.1	0	20.8
Akha	533	26.9	540	66.2	0	39.3
Other Minorities	285	53.3	315	68.7		15.5
p value		0.000		0.000		
<b>Province</b>						
Poor	574	46.62	588	72.74	0	26.1
Average	578	56.92	594	80.13	0	23.2
Above Average	576	65.42	589	84.44	0	19.0
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-19 Women in Decision Making (% women with significant input)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	87.8	1772	87.9	0.922	0.1
<b>Province</b>						
Phongsaly	365	78.6	377	85.6	0.051	7.0
Luang Namtha	585	83.7	606	83.4	0.924	-0.3
Luang Prabang	585	91.5	591	91.4	0.961	-0.1
Huaphanh	195	96.9	198	88.9	0.003	-8.0
p value		0.000		0.010		
<b>District</b>						
Phongsaly	170	91.2	186	89.8	0.757	-1.4
Boun Neua	195	69.2	191	82.2	0.023	13.0
Namtha	195	78.0	200	80.0	0.646	2.1
Sing	194	96.4	206	79.1	0	-17.3
Long	196	79.6	200	89.5	0.154	9.9
Luang Prabang	194	92.3	198	95.5	0.172	3.2
Xieng Ngeun	196	95.4	195	87.2	0.01	-8.2
Pak Xeng	195	85.1	198	90.4	0.129	5.3
Xam Neua	195	96.9	198	88.9	0.003	-8.0
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	97.5	127	93.7	0.096	-3.8
Hmong	319	87.5	310	88.8	0.611	1.3
Khmu	461	92.1	480	89.3	0.173	-2.8
Akha	533	76.3	540	80.9	0.164	4.6
Other	285	92.3	315	91.4		-0.9
p value		0.000		0.000		
<b>Wealth</b>						
Poor	574	87.7	588	88.98	0.586	1.3
Average	578	86.57	594	86.12	0.834	-0.5
Above Average	576	89.23	589	88.6	0.751	-0.6
p value		0.430		0.360		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-20 Men's Household Workload Sharing (% households men provide acceptable contribution)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	49.4	1772	46.6	0.167	-2.9
<b>Province</b>						
Phongsaly	365	34.9	377	45.1	0.003	10.2
Luang Namtha	585	38.1	606	48.3	0.001	10.2
Luang Prabang	585	56.0	591	45.9	0.018	-10.1
Huaphanh	195	70.8	198	47.0	0	-23.8
p value		0.000		0.870		
<b>District</b>						
Phongsaly	170	45.3	186	47.9	0.646	2.6
Boun Neua	195	27.2	191	42.9	0.001	15.8
Namtha	195	42.1	200	52.0	0.069	10.0
Sing	194	52.6	206	44.2	0.191	-8.4
Long	196	24.0	200	48.0	0	24.0
Luang Prabang	194	57.7	198	37.9	0.025	-19.9
Xieng Ngeun	196	60.2	195	57.4	0.654	-2.8
Pak Xeng	195	47.7	198	43.9	0.583	-3.8
Xam Neua	195	70.8	198	47.0	0	-23.8
p value		0.000		0.370		
<b>Ethnic Group</b>						
Lao/Tai	132	60.7	127	39.0	0.01	-21.7
Hmong	319	57.2	310	45.9	0.012	-11.3
Khmu	461	55.6	480	50.2	0.181	-5.4
Akha	533	33.3	540	41.3	0.007	8.0
Other Minorities	285	44.7	315	53.0		8.4
p value		0.000		0.020		
<b>Province</b>						
Poor	574	45.02	588	47.52	0.461	2.5
Average	578	50.02	594	45.38	0.125	-4.6
Above Average	576	53.34	589	46.64	0.068	-6.7
p value		0.040		0.760		



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-21 - Access to WASH products (% households)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	82.2	1772	91.5	0	9.4
<b>Province</b>						
Phongsaly	365	55.1	377	86.6	0	31.5
Luang Namtha	585	88.1	606	89.3	0.666	1.1
Luang Prabang	585	85.4	591	93.7	0.002	8.3
Huaphanh	195	98.5	198	96.0	0.378	-2.5
p value		0.000		0.030		
<b>District</b>						
Phongsaly	170	38.8	186	82.3	0	43.4
Boun Neua	195	67.2	191	90.1	0.004	22.9
Namtha	195	94.9	200	92.0	0.372	-2.9
Sing	194	94.3	206	86.9	0.021	-7.4
Long	196	77.6	200	88.5	0.09	11.0
Luang Prabang	194	97.4	198	97.0	0.801	-0.5
Xieng Ngeun	196	86.7	195	89.7	0.628	3.0
Pak Xeng	195	64.1	198	93.4	0	29.3
Xam Neua	195	98.5	198	96.0	0.378	-2.5
p value		0.000		0.080		
<b>Ethnic Group</b>						
Lao/Tai	132	97.7	127	93.9	0.05	-3.8
Hmong	319	92.2	310	93.4	0.701	1.2
Khmu	461	84.1	480	94.4	0	10.3
Akha	533	72.2	540	87.0	0	14.9
Other Minorities	285	69.5	315	89.0		19.5
p value		0.000		0.050		
<b>Wealth Group</b>						
Poor	574	80.64	588	89.19	0.003	8.6
Average	578	81.88	594	91.66	0	9.8
Above Average	576	84.38	589	93.93	0	9.6
p value		0.420		0.030		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-22 Four ANC Visits or more (%)

ANC 4	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	48.0	1772	64.4	0.000	16.4
<b>Province</b>						
Phongsaly	365	22.9	377	40.6	0.000	17.7
Luangnamtha	585	36.3	606	62.5	0.000	26.2
Luangprabang	585	66.9	591	78.8	0.000	11.9
Huaphanh	195	46.7	198	55.6	0.027	8.9
p value		0.0		0.0		
<b>District</b>						
Phonsaly	170	25.3	186	43.6	0.022	18.3
Boon Neua	195	21.0	191	38.2	0.003	17.2
Namtha	195	38.0	200	59.0	0.003	21.1
Sing	194	36.6	206	68.9	0.000	32.3
Long	196	34.7	200	61.0	0.001	26.3
Luangprabang	194	73.2	198	85.9	0.027	12.7
XiengNgeun	196	60.2	195	66.2	0.267	6.0
PakXeng	195	65.6	198	83.8	0.007	18.2
Xamneua	195	46.7	198	55.6	0.027	8.9
p value		0.000		0.000		
<b>Ethnic Group</b>						
LaoTai	132	85.2	127	92.9	0.040	7.7
Hmong	319	34.6	310	46.6	0.003	12.0
Khmu	461	69.7	480	82.5	0.001	12.8
Akha	533	25.1	540	48.6	0.000	23.5
Other Minorities	285	37.3	315	60.4		23.1
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	41.1	588	53.7	0.000	12.6
Average	578	47.1	594	66.1	0.000	18.9
Above Average	576	56.0	589	74.2	0.000	18.1
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-23.1 – Consumption of Animal Protein Within Last 24 hours (% women)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	68.1	1772	79.9	0	11.8
<b>Province</b>						
Phongsaly	365	57.1	377	71.3	0.001	14.2
Luang Namtha	585	63.5	606	78.2	0	14.7
Luang Prabang	585	74.1	591	86.3	0	12.1
Huaphanh	195	73.9	198	75.3	0.828	1.4
p value		0.000		0.000		0.000
<b>District</b>						
Phongsaly	170	59.4	186	71.5	0.064	12.1
Boun Neua	195	55.4	191	71.2	0.007	15.8
Namtha	195	52.3	200	71.0	0.004	18.7
Sing	194	91.8	206	82.5	0.02	-9.2
Long	196	53.1	200	81.5	0.004	28.4
Luang Prabang	194	87.1	198	91.9	0.247	4.8
Xieng Ngeun	196	63.8	195	83.1	0.012	19.3
Pak Xeng	195	66.7	198	81.3	0.015	14.7
Xam Neua	195	73.9	198	75.3	0.828	1.4
p value		0.000		0.000		0.000
<b>Ethnic Group</b>						
Lao/Tai	132	89.2	127	96.7	0.006	7.6
Hmong	319	61.6	310	69.0	0.231	7.4
Khmu	461	73.2	480	86.9	0	13.7
Akha	533	65.6	540	76.2	0.001	10.6
Other Minorities	285	57.4	315	76.8		19.4
p value		0.000		0.000		0.000
<b>Province</b>						
Poor	574	57.73	588	73.95	0	16.2
Average	578	68.03	594	79.81	0	11.8
Above Average	576	79.23	589	86.5	0.001	7.3
p value		0.000		0.000		0.000

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-23.2 – Consumption of Animal Protein Within Last 24 hours (% children)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	591	51.2	1446	73.0	0	21.7
<b>Province</b>						
Phongsaly	140	36.0	308	68.1	0	32.1
Luang Namtha	195	52.6	475	75.4	0.001	22.8
Luang Prabang	199	55.2	491	76.8	0.001	21.6
Huaphanh	57	61.4	172	63.4	0.809	2.0
p value		0.000		0.060		
<b>District</b>						
Phongsaly	52	30.8	158	65.2	0.004	34.4
Boun Neua	88	38.6	150	70.7	0	32.0
Namtha	65	58.5	150	64.0	0.612	5.5
Sing	68	52.9	171	82.5	0.027	29.5
Long	62	46.8	154	79.9	0.013	33.1
Luang Prabang	85	60.0	166	82.5	0.064	22.5
Xieng Ngeun	61	45.9	164	73.8	0	27.9
Pak Xeng	53	56.6	161	71.4	0.083	14.8
Xam Neua	57	61.4	172	63.4	0.809	2.0
p value		0.020		0.000		
<b>Ethnic Group</b>						
Lao/Tai	40	52.2	113	86.8	0.01	34.7
Hmong	118	51.9	235	59.2	0.284	7.3
Khmu	143	65.0	403	76.3	0.026	11.3
Akha	188	44.3	423	79.7	0	35.4
Other Minorities	102	37.0	272	65.1		28.2
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	204	48.47	463	64.12	0.003	15.7
Average	201	54.71	491	73.64	0.001	18.9
Above Average	186	50.39	491	81.34	0	31.0
p value		0.540		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-24 Food Expenditure as Fraction of Total

	Baseline	Se	Endline	Se	Difference	P value
<b>TOTAL</b>	47	1	52	1	5	0.050
<b>Province</b>						
Phongsaly	38	1	53	2	15	0.150
Luang Namtha	52	2	46	1	-6	-0.050
Luang Prabang	47	2	59	1	12	0.110
Huaphanh	46	3	41	2	-5	-0.050
p value	0.000		0.000			
<b>District</b>						
Phongsaly	35	2	60	2	25	0.240
Boun Neua	40	2	48	2	8	0.090
Namtha	47	3	46	2	-1	-0.010
Sing	65	2	51	2	-14	-0.140
Long	46	2	43	2	-3	-0.030
Luang Prabang	59	2	57	2	-2	-0.020
Xieng Ngeun	44	3	60	2	16	0.160
Pak Xeng	33	3	60	3	27	0.270
Xam Neua	46	3	41	2	-5	-0.050
p value	0.110		0.000			
<b>Ethnic Group</b>						
Lao/Tai	52	3	51	2	-1	-0.010
Hmong	49	2	53	2	4	0.050
Khmu	44	1	55	2	11	0.110
Akha	50	1	48	1	-2	-0.010
Other Minorities	40	0	50	0	10	0.100
p value	0.020		0.020			
<b>Wealth Group</b>						
Poor	50	2	51	1	1	0.010
Average	47	1	56	1	9	0.090
Above Average	42	2	49	1	7	0.070
p value	0.010		0.000			

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-25 - Households Grow Vegetables

	Baseline	Se	Endline	Se	Difference	P value
<b>TOTAL</b>	1730	85	1772	84	0	-1.100
<b>Province</b>						
Phongsaly	365	92	377	87	0	-5.040
Luang Namtha	585	92	606	97	0	4.240
Luang Prabang	585	74	591	71	0	-3.140
Huaphanh	195	97	198	98	1	0.540
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	89	186	90	1	1.500
Boun Neua	195	94	191	84	0	-10.080
Namtha	195	93	200	97	0	4.180
Sing	194	90	206	95	0	4.450
Long	196	93	200	98	0	4.130
Luang Prabang	194	63	198	56	0	-6.830
Xieng Ngeun	196	80	195	82	1	1.950
Pak Xeng	195	86	198	82	0	-3.820
Xam Neua	195	97	198	98	1	0.540
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	75	127	64	0	-10.780
Hmong	319	80	310	79	1	-1.070
Khmu	461	84	480	84	1	0.350
Akha	533	93	540	92	1	-0.670
Other Minorities	285	91	315	92		0.780
p value		0.000		0.010		
<b>Province</b>						
Poor	574	90	588	91	1	1.390
Average	578	84	594	82	0	-2.240
Above Average	576	82	589	79	0	-2.970
p value		0.050		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-26 HHs producing small livestock/aquatic animals or insects

	Baseline	Se	Endline	Se	p-value	Difference
<b>TOTAL</b>	1730	87.7	1772	87.5	0.935	-0.1
<b>Province</b>						
Phongsaly	365	94.0	377	84.4	0.001	-9.6
Luang Namtha	585	94.4	606	88.8	0.005	-5.5
Luang Prabang	585	77.9	591	84.9	0.008	7.0
Huaphanh	195	95.9	198	97.5	0.449	1.6
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	93.5	186	87.1	0.072	-6.4
Boun Neua	195	94.4	191	82.2	0.006	-12.2
Namtha	195	93.3	200	91.5	0.401	-1.8
Sing	194	94.9	206	85.9	0.03	-8.9
Long	196	94.9	200	88.5	0.1	-6.4
Luang Prabang	194	67.5	198	75.3	0.09	7.7
Xieng Ngeun	196	82.1	195	90.3	0.108	8.1
Pak Xeng	195	89.2	198	93.4	0.225	4.2
Xam Neua	195	95.9	198	97.5	0.449	1.6
p value		0.010		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	82.6	127	76.2	0.202	-6.4
Hmong	319	83.6	310	92.7	0.001	9.1
Khmu	461	83.1	480	88.9	0.045	5.8
Akha	533	94.7	540	86.2	0	-8.5
Other Minorities	285	94.6	315	86.9		-7.7
p value		0.000		0.020		
<b>Wealth</b>						
Poor	574	90.54	588	91.43	0.647	0.9
Average	578	85.78	594	86.46	0.762	0.7
Above Average	576	86.65	589	84.48	0.261	-2.2
p value		0.050		0.030		



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-27 HHs using processing technology to extend access to nutritious food

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	60.3	1772	65.3	0.019	5.0
<b>Province</b>						
Phongsaly	365	48.3	377	83.5	0	35.3
Luang Namtha	585	56.5	606	73.0	0	16.5
Luang Prabang	585	64.6	591	51.3	0.001	-13.3
Huaphanh	195	70.8	198	69.2	0.748	-1.6
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	51.8	186	92.5	0	40.7
Boun Neua	195	45.6	191	76.4	0.001	30.8
Namtha	195	70.3	200	71.0	0.868	0.7
Sing	194	71.1	206	79.6	0.071	8.5
Long	196	33.7	200	70.0	0	36.3
Luang Prabang	194	54.6	198	47.5	0.364	-7.2
Xieng Ngeun	196	63.8	195	47.7	0.01	-16.1
Pak Xeng	195	81.5	198	62.1	0.004	-19.4
Xam Neua	195	70.8	198	69.2	0.748	-1.6
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	79.7	127	65.0	0.045	-14.7
Hmong	319	42.4	310	39.1	0.523	-3.3
Khmu	461	76.5	480	65.4	0.001	-11.1
Akha	533	51.9	540	77.5	0	25.6
Minorities	285	55.3	315	82.3		27.1
p value		0.000		0.000		
<b>Wealth</b>						
Poor	574	55.72	588	60.66	0.092	4.9
Average	578	59.74	594	62.74	0.306	3.0
Above Average	576	65.43	589	72.84	0.048	7.4
p value		0.010		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### I-28 Households collecting or growing NTFPs

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	75.4	1772	81.6	0.001	6.2
<b>Province</b>						
Phongsaly	365	68.8	377	89.5	0	20.8
Luang Namtha	585	91.4	606	94.6	0.131	3.2
Luang Prabang	585	63.5	591	66.5	0.396	3.0
Huaphanh	195	90.8	198	92.9	0.599	2.2
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	72.9	186	96.8	0	23.8
Boun Neua	195	65.6	191	83.8	0.01	18.1
Namtha	195	95.9	200	91.5	0.184	-4.4
Sing	194	86.6	206	92.2	0.29	5.6
Long	196	90.8	200	99.0	0.013	8.2
Luang Prabang	194	52.6	198	59.6	0.289	7.0
Xieng Ngeun	196	62.2	195	65.1	0.566	2.9
Pak Xeng	195	82.6	198	79.3	0.634	-3.3
Xam Neua	195	90.8	198	92.9	0.599	2.2
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	61.4	127	57.6	0.624	-3.8
Hmong	319	63.0	310	72.0	0.038	9.0
Khmu	461	83.2	480	80.3	0.365	-2.9
Akha	533	82.0	540	90.8	0.003	8.9
Other Minorities	285	77.0	315	97.9		21.0
p value		0.060		0.000		
<b>Wealth</b>						
Poor	574	81.03	588	86.31	0.038	5.3
Average	578	76.03	594	81.45	0.041	5.4
Above Average	576	68.98	589	76.73	0.018	7.8
p value		0.010		0.020		

## SCALING

Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

### ANNEX 3 - ADDITIONAL TABLES

#### Nutritional Status of Children Less than 60 months (%)

Weight-for-age									
Age	N	%<-3SD	95%	C.I.	%<-2SD	95%	C.I.	Mean	SD
(0-60)	1781	2.3	1.6	3	14.8	13.1	16.4	-0.86	1.15
(0-5)	282	0.7	0	1.9	1.8	0.1	3.5	0.26	1.1
(6-11)	329	1.5	0	3	8.2	5.1	11.3	-0.59	1.05
(12-23)	561	1.6	0.5	2.7	16.4	13.2	19.6	-1.08	0.98
(24-35)	299	5	2.4	7.7	20.1	15.4	24.8	-1.24	0.99
(36-47)	216	3.7	1	6.5	29.6	23.3	36	-1.47	0.95
(48-60)	94	2.1	0	5.6	16	8	23.9	-1.31	0.8
Length/height-for-age									
Age	N	%<-3SD	95%	C.I.	%<-2SD	95%	C.I.	Mean	SD
(0-60)	1781	9.7	8.3	11.1	32.1	29.9	34.3	-1.33	1.44
(0-5)	282	0.7	0	1.9	5.7	2.8	8.6	0	1.23
(6-11)	329	4.6	2.2	7	17.9	13.6	22.2	-0.92	1.33
(12-23)	561	10.9	8.2	13.5	38.3	34.2	42.4	-1.6	1.31
(24-35)	299	15.4	11.1	19.6	46.2	40.3	52	-1.89	1.3
(36-47)	216	18.1	12.7	23.4	48.6	41.7	55.5	-1.99	1.16
(48-60)	94	9.6	3.1	16.1	40.4	30	50.9	-1.9	0.97
Weight-for-length/height									
Age	N	%<-3SD	95%	C.I.	%<-2SD	95%	C.I.	Mean	SD
(0-60)	1781	0.6	0.2	1	2.5	1.7	3.2	-0.19	0.99
(0-5)	282	1.1	0	2.4	1.4	0	3	0.38	1.06
(6-11)	329	0.9	0	2.1	2.4	0.6	4.2	-0.03	1.01
(12-23)	561	0.4	0	0.9	3.2	1.7	4.8	-0.4	0.89
(24-35)	299	1	0	2.3	1.7	0.1	3.3	-0.29	0.94
(36-47)	216	0	0	0.2	3.2	0.6	5.8	-0.44	0.84
(48-60)	94	0	0	0.5	2.1	0	5.6	-0.22	0.94
BMI-for-age									
Age	N	%<-3SD	95%	C.I.	%<-2SD	95%	C.I.	Mean	SD
(0-60)	1781	0.6	0.2	0.9	2	1.3	2.6	-0.03	0.98
(0-5)	282	0.4	0	1.2	1.1	0	2.4	0.39	1.03
(6-11)	329	0.6	0	1.6	2.7	0.8	4.7	-0.06	1.01
(12-23)	561	0.7	0	1.5	2.3	1	3.7	-0.13	0.92
(24-35)	299	1	0	2.3	1.7	0.1	3.3	-0.03	1
(36-47)	216	0	0	0.2	1.9	0	3.9	-0.22	0.85
(48-60)	94	0	0	0.5	1.1	0	3.7	-0.09	0.94

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Minimum Meal Frequency – Children 6-23months

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	591		876	74.7		
<b>Gender</b>						
Male	311		457	75.4		
Female	280		419	74.0		
p value				0.600		
<b>Province</b>						
Phongsaly	140		180	83.0		
Luangnamtha	195		298	76.9		
Luangprabang	199		311	69.3		
Huaphanh	57		87	79.3		
p value				0.000		
<b>District</b>						
Phonsaly	52		81	86.4		
Boon Neua	88		99	80.8		
Namtha	65		101	70.3		
Sing	68		93	78.5		
Long	62		104	81.7		
Luangprabang	85		106	67.9		
XiengNgeun	61		113	64.6		
PakXeng	53		92	80.4		
Xamneua	57		87	79.3		
p value				0.000		
<b>Main Ethnic Group</b>						
LaoTai	40		55	65.3		
Hmong	118		160	69.4		
Khmu	143		259	74.0		
Akha	188		279	80.4		
Other Minorities	102		123	82.3		
p value				0.000		
<b>Wealth Group</b>						
Poor	204		277	74.6		
Average	201		299	75.9		
Above Average	186		300	73.5		
p value				0.800		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Birth in Hospital or health Centre (%)

	Nb	Baseline	Ne	Endline	Pvalue	Difference
<b>TOTAL</b>	1730	50.4	1772	64.8	0	14.4
<b>Province</b>						
Phongsaly	365	37.7	377	42.6	0.255	4.9
Luang Namtha	585	34.0	606	62.2	0	28.3
Luang Prabang	585	67.1	591	76.7	0	9.6
Huaphanh	195	48.2	198	62.6	0.011	14.4
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	27.7	186	32.3	0.53	4.6
Boun Neua	195	45.1	191	50.8	0.284	5.7
Namtha	195	40.0	200	67.5	0	27.5
Sing	194	28.4	206	60.2	0	31.8
Long	196	32.7	200	59.0	0	26.4
Luang Prabang	194	87.1	198	90.9	0.112	3.8
Xieng Ngeun	196	54.1	195	64.1	0.078	10.0
Pak Xeng	195	51.8	198	70.2	0.001	18.4
Xam Neua	195	48.2	198	62.6	0.011	14.4
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	82.3	127	90.7	0.033	8.3
Hmong	319	51.9	310	61.3	0.014	9.4
Khmu	461	62.1	480	77.0	0	14.9
Akha	533	29.1	540	51.8	0	22.6
Other Minorities	285	38.6	315	49.8		11.1
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	43.01	588	55.18	0	12.2
Average	578	49.94	594	65.75	0	15.8
Above Average	576	58.68	589	74.24	0	15.6
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Assisted Birth (%)

	Nb	Baseline	Ne	Endline	Pvalue	Difference
<b>TOTAL</b>	1730	54.1	1772	66.3	0	12.2
<b>Province</b>						
Phongsaly	365	41.7	377	43.4	0.68	1.7
Luang Namtha	585	40.8	606	63.5	0	22.7
Luang Prabang	585	69.2	591	78.0	0.001	8.8
Huaphanh	195	50.3	198	66.2	0.01	15.9
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	32.4	186	32.8	0.945	0.4
Boun Neua	195	48.7	191	51.8	0.555	3.1
Namtha	195	40.5	200	67.5	0	27.0
Sing	194	51.0	206	62.6	0.197	11.6
Long	196	33.7	200	60.5	0	26.8
Luang Prabang	194	87.6	198	92.4	0.155	4.8
Xieng Ngeun	196	58.2	195	64.1	0.273	5.9
Pak Xeng	195	53.9	198	72.7	0	18.9
Xam Neua	195	50.3	198	66.2	0.01	15.9
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	84.6	127	92.8	0.038	8.2
Hmong	319	52.9	310	62.6	0.013	9.7
Khmu	461	64.1	480	78.4	0	14.3
Akha	533	37.6	540	52.8	0	15.1
Other Minorities	285	42.7	315	52.2		9.5
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	45.84	588	56.93	0	11.1
Average	578	53.2	594	66.65	0	13.5
Above Average	576	63.72	589	76.08	0	12.4
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Diarrhoea Prevalence (%)

	Nb	Baseline	Ne	Endline	Pvalue	Difference
<b>TOTAL</b>	1727	26.3	1772	20.9	0	-5.4
<b>Gender</b>						
Male	880	29.6	931	22.3	0.002	-7.3
Female	847	22.8	841	19.4	0.09	-3.4
p value		0.0		0.4		
<b>Province</b>						
Phongsaly	363	37.7	377	23.5	0	-14.2
Luang Namtha	585	27.6	606	20.5	0.016	-7.1
Luang Prabang	584	24.7	591	18.8	0.015	-6.0
Huaphanh	195	13.9	198	25.3	0.012	11.4
p value		0.0		0.4		
<b>District</b>						
Phongsaly	169	27.8	186	25.8	0.605	-2.0
Boun Neua	194	44.9	191	21.7	0.001	-23.2
Namtha	195	26.7	200	23.0	0.435	-3.7
Sing	194	24.7	206	25.7	0.814	1.0
Long	196	30.6	200	14.5	0.012	-16.1
Luang Prabang	193	15.5	198	14.7	0.809	-0.9
Xieng Ngeun	196	39.3	195	24.7	0.01	-14.5
Pak Xeng	195	20.5	198	17.8	0.479	-2.8
Xam Neua	195	13.9	198	25.3	0.012	11.4
p value		0.000		0.140		
<b>Main Ethnic Group</b>						
Lao/Tai	132	12.6	127	7.7	0.366	-4.8
Hmong	318	25.3	310	29.9	0.149	4.6
Khmu	461	26.3	480	19.3	0.012	-7.0
Akha	532	35.1	540	21.6	0	-13.5
Other Minorities	284	22.9	315	18.8		-4.1
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	24.7	588	23.7	0.689	-1.1
Average	577	26.8	594	20.4	0.012	-6.4
Above Average	574	27.3	589	18.5	0.003	-8.8
p value		0.650		0.130		



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Fever Prevalence (%)

	Nb	Baseline	Ne	Endline	Pvalue	Difference
<b>TOTAL</b>	1729	42.0	1772	28.2	0.000	-13.8
<b>Gender</b>						
<b>Male</b>	879	42.5	931	29.8	0.000	-12.7
<b>Female</b>	850	41.5	841	26.6	0.000	-15.0
<b>p value</b>		0.7		0.1		-0.6
<b>Province</b>						
<b>Phongsaly</b>	364	51.3	377	35.1	0.001	-16.1
<b>Luang Namtha</b>	585	38.9	606	29.0	0.004	-9.9
<b>Luang Prabang</b>	585	43.6	591	27.2	0	-16.4
<b>Huaphanh</b>	195	30.8	198	21.2	0.203	-9.6
<b>p value</b>		0.0		0.1		0.1
<b>District</b>						
<b>Phongsaly</b>	170	38.2	186	39.3	0.876	1.0
<b>Boun Neua</b>	194	60.8	191	31.9	0.000	-28.9
<b>Namtha</b>	195	44.6	200	35.5	0.091	-9.1
<b>Sing</b>	194	29.9	206	20.4	0.05	-9.5
<b>Long</b>	196	40.3	200	29.5	0.115	-10.8
<b>Luang Prabang</b>	194	30.9	198	21.2	0.038	-9.7
<b>Xieng Ngeun</b>	196	57.7	195	34.9	0.001	-22.8
<b>Pak Xeng</b>	195	46.7	198	27.3	0.014	-19.4
<b>Xam Neua</b>	195	30.8	198	21.2	0.203	-9.6
<b>p value</b>		0.000		0.000		0.0
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	132	32.6	127	10.0	0.000	-22.6
<b>Hmong</b>	319	36.1	310	30.9	0.274	-5.2
<b>Khmu</b>	461	47.1	480	30.8	0.000	-16.3
<b>Akha</b>	533	46.2	540	30.4	0.000	-15.8
<b>Other Minorities</b>	284	40.5	315	27.6		-12.9
<b>p value</b>		0.010		0.000		0.0
<b>Wealth Group</b>						
<b>Poor</b>	574	40.0	588	23.5	0.000	-16.5
<b>Average</b>	578	43.7	594	30.2	0.000	-13.5
<b>Above Average</b>	575	42.2	589	31.1	0.000	-11.1
<b>p value</b>		0.400		0.020		-0.4

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### ARI prevalence (%)

	Nb	Baseline	Ne	Endline	Pvalue	Difference
<b>TOTAL</b>	1730	3.2	1772	2.3	0.159	-0.9
<b>Gender</b>						
Male	880	3.2	931	2.6	0.485	-0.6
Female	850	3.1	841	1.9	0.148	-1.2
p value		0.9		0.3		-0.5
<b>Province</b>						
Phongsaly	365	3.2	377	2.4	0.469	-0.8
Luang Namtha	585	3.6	606	1.8	0.128	-1.9
Luang Prabang	585	3.1	591	2.6	0.686	-0.5
Huaphanh	195	2.6	198	2.0	0.655	-0.5
p value		0.9		0.9		0.0
<b>District</b>						
Phongsaly	170	4.7	186	2.7	0.253	-2.0
Boun Neua	195	2.1	191	2.1	0.978	0.0
Namtha	195	6.7	200	2.0	0.019	-4.7
Sing	194	0.0	206	0.5	0.335	0.5
Long	196	3.6	200	2.5	0.700	-1.1
Luang Prabang	194	1.0	198	1.5	0.603	0.5
Xieng Ngeun	196	5.6	195	2.6	0.292	-3.1
Pak Xeng	195	3.1	198	4.6	0.548	1.5
Xam Neua	195	2.6	198	2.0	0.655	-0.5
p value		0.000		0.260		0.3
<b>Main Ethnic Group</b>						
Lao/Tai	132	1.6	127	1.0	0.672	-0.7
Hmong	319	0.8	310	2.5	0.104	1.7
Khmu	461	4.4	480	2.9	0.320	-1.5
Akha	533	2.8	540	1.8	0.346	-1.0
Other Minorities	285	6.0	315	2.1		-3.9
p value		0.010		0.510		0.5
<b>Wealth Group</b>						
Poor	574	3.6	588	1.9	0.070	-1.8
Average	578	3.1	594	2.8	0.845	-0.2
Above Average	576	2.8	589	2.1	0.493	-0.7
p value		0.720		0.620		-0.1

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Child dewormed in the last 6 months

	Nb	Baseline	Ne	Endline	Pvalue	Difference
<b>TOTAL</b>	1023	86.8	839	75.1	0.000	-11.8
<b>Gender</b>						
Male	508	85.6	453	75.6	0.000	-10.0
Female	515	88.0	386	74.4	0.000	-13.7
p value		0.2		0.7		
<b>Province</b>						
Phongsaly	177	67.4	129	78.1	0.067	10.8
Luang Namtha	375	84.3	325	84.6	0.927	0.3
Luang Prabang	339	93.9	287	70.5	0.000	-23.3
Huaphanh	132	90.9	98	66.3	0.012	-24.6
p value		0.0		0.0		
<b>District</b>						
Phongsaly	91	65.9	69	72.5	0.401	6.5
Boun Neua	86	68.6	60	83.3	0.094	14.7
Namtha	106	60.4	94	84.0	0.005	23.7
Sing	136	99.3	117	82.1	0.001	-17.2
Long	133	90.2	114	86.8	0.509	-3.4
Luang Prabang	110	90.9	84	64.3	0.005	-26.6
Xieng Ngeun	97	95.9	95	76.8	0.000	-19.0
Pak Xeng	132	96.2	108	71.3	0.003	-24.9
Xam Neua	132	90.9	98	66.3	0.012	-24.6
p value		0.000		0.040		
<b>Ethnic Group</b>						
Lao/Tai	94	92.6	70	70.0	0.009	-22.6
Hmong	161	84.7	113	76.5	0.246	-8.2
Khmu	288	91.4	252	69.0	0.000	-22.5
Akha	302	86.2	238	83.0	0.390	-3.3
Other Minorities	178	76.1	166	79.2		3.1
p value		0.000		0.030		
<b>Wealth Group</b>						
Poor	333	86.9	268	75.6	0.006	-11.3
Average	338	89.9	282	72.0	0.000	-17.9
Above Average	351	83.7	288	77.9	0.044	-5.9
p value		0.050		0.220		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Vitamin A in last 6 months (% child 6-59 months)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1531	52.0	1484	66.9	0.000	14.9
<b>Gender</b>						
Male	783	50.5	788	66.1	0.000	15.7
Female	748	53.6	696	67.7	0.000	14.1
p value		0.2		0.5		
<b>Province</b>						
Phongsaly	341	47.9	308	61.3	0.006	13.4
Luang Namtha	527	51.0	499	80.3	0.000	29.3
Luang Prabang	479	52.7	501	65.0	0.004	12.3
Huaphanh	184	57.1	176	55.1	0.724	-2.0
p value		0.6		0.0		
<b>District</b>						
Phongsaly	159	69.8	154	61.7	0.347	-8.1
Boun Neua	182	31.9	154	61.0	0.000	29.2
Namtha	175	28.6	157	75.8	0.000	47.2
Sing	172	83.7	173	80.4	0.383	-3.4
Long	180	47.8	169	84.0	0.000	36.3
Luang Prabang	170	61.8	169	62.1	0.959	0.4
Xieng Ngeun	138	50.7	170	68.8	0.015	18.1
Pak Xeng	171	38.6	162	64.8	0.001	26.2
Xam Neua	184	57.1	176	55.1	0.724	-2.0
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	120	67.5	113	72.0	0.499	4.5
Hmong	275	38.1	247	56.3	0.000	18.2
Khmu	390	54.0	412	64.5	0.041	10.5
Akha	480	49.6	442	69.3	0.000	19.8
Other Minorities	266	61.3	270	79.1		17.8
p value		0.000		0.000		
<b>Province</b>						
Poor	501	47.1	484	62.1	0.000	15.0
Average	516	50.6	489	63.5	0.002	12.9
Above Average	512	58.2	510	75.2	0.000	17.0
p value		0.010		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Child Measles Vaccination (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1414	87.3	1322	86.1	0.428	-1.2
<b>Gender</b>						
Male	723	87.4	704	86.5	0.681	-0.9
Female	691	87.1	618	85.7	0.408	-1.4
p value		0.9		0.7		
<b>Province</b>						
Phongsaly	299	88.8	265	80.8	0.009	-7.9
Luang Namtha	500	89.1	446	92.1	0.302	3.0
Luang Prabang	438	89.1	448	89.0	0.975	-0.1
Huaphanh	177	77.4	163	73.0	0.223	-4.4
p value		0.2		0.0		
<b>District</b>						
Phongsaly	149	87.3	136	80.2	0.114	-7.1
Boun Neua	150	90.0	129	81.4	0.040	-8.6
Namtha	163	77.9	139	89.9	0.116	12.0
Sing	163	94.5	154	90.9	0.432	-3.6
Long	174	94.8	153	94.8	0.985	-0.1
Luang Prabang	156	85.9	149	85.2	0.883	-0.7
Xieng Ngeun	120	90.0	156	89.7	0.950	-0.3
Pak Xeng	162	93.8	143	95.1	0.585	1.3
Xam Neua	177	77.4	163	73.0	0.223	-4.4
p value		0.020		0.000		
<b>Ethnic Group</b>						
Lao/Tai	113	96.3	104	96.8	0.827	0.6
Hmong	257	70.9	221	66.2	0.310	-4.6
Khmu	361	93.7	367	92.6	0.598	-1.1
Akha	431	88.2	381	88.0	0.910	-0.3
Other Minorities	252	90.7	249	89.5		-1.2
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	471	85.2	438	81.6	0.176	-3.5
Average	476	86.7	435	87.5	0.740	0.9
Above Average	465	90.1	448	89.4	0.742	-0.7
p value		0.100		0.020		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Prevalence of Health Visits by Mother &/or Child (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1116	78.3	896	73.2	0.022	-5.1
<b>Gender</b>						
<b>Male</b>	573	77.3	485	70.4	0.026	-6.9
<b>Female</b>	543	79.3	411	76.6	0.362	-2.7
<b>p value</b>		0.3		0.1		
<b>Province</b>						
<b>Phongsaly</b>	264	72.2	213	69.8	0.468	-2.5
<b>Luang Namtha</b>	367	81.9	306	75.8	0.062	-6.1
<b>Luang Prabang</b>	377	75.0	272	75.7	0.873	0.6
<b>Huaphanh</b>	108	92.6	105	66.7	0.003	-25.9
<b>p value</b>		0.0		0.4		
<b>District</b>						
<b>Phongsaly</b>	114	68.4	109	62.4	0.203	-6.0
<b>Boun Neua</b>	150	74.7	104	76.0	0.780	1.3
<b>Namtha</b>	133	76.7	114	78.1	0.788	1.4
<b>Sing</b>	115	88.7	96	75.0	0.033	-13.7
<b>Long</b>	119	82.4	96	74.0	0.164	-8.4
<b>Luang Prabang</b>	90	66.7	70	75.7	0.228	9.1
<b>Xieng Ngeun</b>	162	76.5	114	77.2	0.925	0.7
<b>Pak Xeng</b>	125	83.2	88	72.7	0.097	-10.5
<b>Xam Neua</b>	108	92.6	105	66.7	0.003	-25.9
<b>p value</b>		0.000		0.730		
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	63	73.5	34	79.3		5.8
<b>Hmong</b>	185	76.2	177	59.4	0.004	-16.8
<b>Khmu</b>	328	81.7	250	82.8	0.792	1.1
<b>Akha</b>	359	79.5	278	77.2	0.445	-2.3
<b>Other Minorities</b>	181	73.7	157	66.0		
<b>p value</b>		0.380		0.000		-0.4
<b>Wealth Group</b>						
<b>Poor</b>	360	78.8	278	66.1	0.001	-12.7
<b>Average</b>	372	76.6	302	75.5	0.771	-1.1
<b>Above Average</b>	382	79.6	315	78.0	0.590	-1.7
<b>p value</b>		0.630		0.020		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Fe Folate Supplement –Mother (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1705	71.6	1756	84.5	0.000	12.9
<b>Province</b>						
Phongsaly	348	51.6	375	70.9	0.000	19.3
Luang Namtha	580	67.4	599	86.1	0.000	18.7
Luang Prabang	582	85.5	584	91.6	0.009	6.1
Huaphanh	195	63.1	198	77.8	0.010	14.7
p value		0.000		0.000		
<b>District</b>						
Phongsaly	165	44.9	186	65.6	0.008	20.7
Boun Neua	183	56.8	189	75.1	0.007	18.3
Namtha	192	64.6	200	83.0	0.001	18.4
Sing	194	61.3	203	82.8	0.000	21.4
Long	194	74.2	196	91.3	0.000	17.1
Luang Prabang	192	86.5	195	95.4	0.028	8.9
Xieng Ngeun	195	84.6	193	83.9	0.864	-0.7
Pak Xeng	195	85.1	196	95.4	0.025	10.3
Xam Neua	195	63.1	198	77.8	0.01	14.7
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	130	94.5	126	97.7	0.188	3.2
Hmong	319	57.2	307	74.8	0.000	17.6
Khmu	457	89.3	476	93.2	0.071	3.9
Akha	517	56.1	534	79.0	0.000	22.9
Other Minorities	282	67.2	313	80.9		13.7
p value		0.000		0.000		
<b>Province</b>						
Poor	567	69.36	583	78.38	0.003	9.0
Average	572	71.97	586	85.82	0.000	13.9
Above Average	564	73.53	586	89.57	0.000	16.1
p value		0.410		0.000		



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Deworming – Mother (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1718	4.5	1751	13.2	0.000	8.7
<b>Province</b>						
Phongsaly	359	2.1	375	8.2	0.002	6.2
Luang Namtha	582	2.5	594	25.6	0.000	23.1
Luang Prabang	582	7.7	586	7.0	0.617	-0.7
Huaphanh	195	2.1	196	15.3	0.001	13.3
p value		0.000		0.000		
<b>District</b>						
Phongsaly	166	0.6	186	5.9	0.009	5.3
Boun Neua	193	3.1	189	10.1	0.026	6.9
Namtha	193	3.1	199	27.1	0.000	24.0
Sing	193	3.6	200	28.5	0.000	24.9
Long	196	1.0	195	22.1	0.000	21.0
Luang Prabang	194	5.2	197	6.1	0.585	0.9
Xieng Ngeun	193	1.6	193	6.7	0.027	5.2
Pak Xeng	195	19.5	196	8.7	0.013	-10.8
Xam Neua	195	2.1	196	15.3	0.001	13.3
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	4.4	125	11.2	0.048	6.8
Hmong	317	4.5	309	11.6	0.010	7.2
Khmu	459	8.0	474	11.4	0.134	3.4
Akha	528	2.4	529	19.0	0.000	16.7
Other Minorities	282	1.1	314	10.8		9.7
p value		0.000		0.030		
<b>Wealth Group</b>						
Poor	572	3.19	583	11.38	0.000	8.2
Average	572	4.54	586	12.19	0.000	7.7
Above Average	572	5.84	581	16.13	0.000	10.3
p value		0.140		0.070		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Vitamin A Supplement – Mother (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1694	25.7	1734	42.4	0.000	16.6
<b>Province</b>						
Phongsaly	338	21.9	376	28.0	0.095	6.1
Luang Namtha	583	10.4	586	64.4	0.000	54.0
Luang Prabang	578	37.4	578	38.4	0.746	1.0
Huaphanh	195	24.6	194	32.5	0.221	7.9
p value		0.000		0.000		
<b>District</b>						
Phongsaly	157	26.1	185	24.3	0.794	-1.8
Boun Neua	181	18.8	191	30.9	0.004	12.1
Namtha	194	15.5	198	57.1	0.000	41.6
Sing	193	9.3	198	63.1	0.000	53.8
Long	196	6.6	190	72.1	0.000	65.5
Luang Prabang	192	37.5	192	36.5	0.799	-1.0
Xieng Ngeun	192	29.7	191	36.7	0.126	7.0
Pak Xeng	194	46.9	195	43.6	0.709	-3.3
Xam Neua	195	24.6	194	32.5	0.221	7.9
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	131	43.3	123	49.9	0.370	6.6
Hmong	314	21.0	301	32.8	0.014	11.8
Khmu	459	36.3	474	42.4	0.178	6.1
Akha	512	9.5	526	50.9	0.000	41.5
Other Minorities	278	26.0	310	37.3		11.3
p value		0.000		0.010		
<b>Wealth Group</b>						
Poor	570	21.04	577	35.43	0.000	14.4
Average	565	30.4	579	41.62	0.000	11.2
Above Average	557	25.87	577	50.52	0.000	24.7
p value		0.010		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Vitamin B1 – Mother (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	32.5	1772	62.7	0.000	30.3
<b>Province</b>						
Phongsaly	365	28.8	377	49.4	0.000	20.5
Luang Namtha	585	21.0	606	73.3	0.000	52.3
Luang Prabang	585	51.2	591	74.3	0.000	23.1
Huaphanh	195	1.6	198	25.5	0.000	24.0
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	28.8	186	49.2	0.035	20.4
Boun Neua	195	28.8	191	49.5	0.008	20.7
Namtha	195	20.1	200	68.8	0.000	48.7
Sing	194	14.4	206	71.4	0.000	56.9
Long	196	26.5	200	79.0	0.000	52.4
Luang Prabang	194	32.5	198	74.2	0.001	41.8
Xieng Ngeun	196	59.3	195	65.3	0.218	6.0
Pak Xeng	195	71.1	198	86.2	0.040	15.0
Xam Neua	195	1.6	198	25.5	0.000	24.0
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	32.7	127	67.1	0.000	34.3
Hmong	319	24.5	310	50.5	0.003	26.1
Khmu	461	50.9	480	74.6	0.000	23.7
Akha	533	17.9	540	62.3	0.000	44.3
Other Minorities	285	30.9	315	53.9		23.1
p value		0.000		0.010		
<b>Wealth Group</b>						
Poor	574	30.33	588	52.56	0.000	22.2
Average	578	33.66	594	65.58	0.000	31.9
Above Average	576	33.44	589	70.66	0.000	37.2
p value		0.330		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Household Food Consumption Score

	Mean	Se	Mean	Se	Difference
<b>TOTAL</b>	54.4	0.4	60.5	0.4	6.1
<b>Province</b>					
Huaphanh	56.5	1.5	57.9	1.1	1.4
Luang Namtha	53.3	0.6	56.7	0.6	3.4
Luang Prabang	55.1	0.7	63	0.7	7.9
Phongsaly	53	0.6	62.2	0.8	9.2
<b>District</b>					
Phongsaly	52.9	1	61.4	1.1	8.5
Boun neua	53	0.8	62.9	1.1	9.9
Namtha	50.7	1	54.7	1.1	4
Sing	57.1	0.7	58.8	1.0	1.7
Long	52.8	1.1	56.9	1.0	4.1
Luang Prabang	62.7	1.3	65.9	1.1	3.2
Xieng Ngeun	49.8	1.1	62.4	1.2	12.6
Pak Xeng	49.7	0.9	59.1	1.1	9.4
Xam Neua	56.5	1.5	57.9	1.1	1.4
<b>Ethnic Group</b>					
Lao Tai	68.3	1.6	69.1	1.3	0.8
Hmong	50.1	1	55.4	1.0	5.3
Khmu	53.9	0.7	62.3	0.7	8.4
Akha	54.7	0.5	59.9	0.6	5.2
Other minority	51.6	0.9	59.7	0.9	8.1
<b>Wealth Group</b>					
Poor	48.8	0.6	55	0.6	6.2
Average	55	0.6	60.7	0.6	5.7
Above average	59.7	0.7	66.2	0.6	6.5

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Households With Poor or Marginal Food Security (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	11.2	1772	7.1	0.000	-4.2
<b>Province</b>						
Phongsaly	365	7.5	377	4.7	0.081	-2.7
Luang Namtha	585	10.5	606	8.9	0.364	-1.6
Luang Prabang	585	12.0	591	5.3	0.003	-6.7
Huaphanh	195	15.4	198	12.1	0.371	-3.3
p value		0.150		0.020		
<b>District</b>						
Phongsaly	170	10.6	186	5.4	0.052	-5.2
Boun Neua	195	5.1	191	4.2	0.620	-0.9
Namtha	195	13.9	200	14.0	0.961	0.2
Sing	194	0.5	206	7.3	0.001	6.8
Long	196	14.8	200	5.5	0.022	-9.3
Luang Prabang	194	6.7	198	3.0	0.100	-3.7
Xieng Ngeun	196	18.4	195	5.6	0.037	-12.7
Pak Xeng	195	12.3	198	8.6	0.233	-3.7
Xam Neua	195	15.4	198	12.1	0.371	-3.3
p value		0.000		0.010		
<b>Main Ethnic Group</b>						
Lao/Tai	132	3.0	127	1.9	0.552	-1.1
Hmong	319	22.5	310	14.7	0.046	-7.8
Khmu	461	9.7	480	4.8	0.005	-4.9
Akha	533	5.3	540	5.3	0.982	0.0
Other Minorities	285	13.4	315	7.1		-6.3
p value		0.000		0.000		
<b>Wealth Group</b>						
Poor	574	19.23	588	12.15	0.010	-7.1
Average	578	8.24	594	5.11	0.020	-3.1
Above Average	576	5.94	589	3.69	0.087	-2.3
p value		0.000		0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Household Total Expenditure (LAK/person/month)

	Baseline	Endline	Difference	Diff (%)	p-value
<b>All</b>	151,752	245,242	93,490	62%	0.00
<b>Province</b>					
Phongsaly Prov	228,662	331,042	102,380	45%	0.00
Luangnamtha Prov	147,267	271,034	123,767	84%	0.00
Luangprabang Prov	157,945	260,407	102,462	65%	0.00
Huaphanh Prov	82,454	112,420	29,966	36%	0.032
p-value	0.000	0.000	0.000		
<b>District</b>					
Phongsaly Dist.	208,981	305,590	96,609	46%	0.013
BounNeua Dist	245,242	351,512	106,270	43%	0.001
Namtha Dist	141,492	287,794	146,302	103%	0.000
Sing Dist	331,042	351,512	20,470	6%	0.453
Long Dist	84,120	211,082	126,962	151%	0.000
LuangPrabang Dist	224,134	334,369	110,235	49%	0.000
XiengNgeun Dist	129,314	242,802	113,487	88%	0.000
Pakxeng Dist	117,008	190,995	73,986	63%	0.005
Xamneua Dist	82,454	112,420	29,966	36%	0.032
p-value	0.000	0.000	0.000		
<b>Ethnic Group</b>					
LaoTai	224,134	308,661	84,527	38%	0.016
Hmong	99,708	172,819	73,111	73%	0.000
Khmu	142,914	237,994	95,080	67%	0.000
Akha	194,853	314,897	120,044	62%	0.000
Other Minority	161,135	245,242	84,106	52%	
p-value	0.000	0.000	0.000		
<b>Wealth</b>					
Poor	45,707	93,901	48,195	105%	0.000
Average	166,043	257,816	91,773	55%	0.000
Above Av	484,077	646,934	162,857	34%	0.000
p-value	0.000	0.000	0.000		

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Household Use of Bottled Water (%)

	Nb	Baseline	Ne	Endline	p-value	Difference
<b>TOTAL</b>	1730	8.0	1772	27.8	0.000	19.8
<b>Province</b>						
Phongsaly	365	0.0	377	11.9	0.010	11.9
Luang Namtha	585	0.6	606	14.6	0.001	14.0
Luang Prabang	585	18.9	591	47.9	0.000	29.0
Huaphanh	195	0.0	198	12.6	0.047	12.6
p value		0.000		0.000		
<b>District</b>						
Phongsaly	170	0.0	186	12.4	0.135	12.4
Boun Neua	195	0.0	191	11.5	0.025	11.5
Namtha	195	0.5	200	17.5	0.026	17.0
Sing	194	0.0	206	21.4	0.021	21.4
Long	196	1.0	200	7.0	0.258	6.0
Luang Prabang	194	43.3	198	85.9	0.002	42.6
Xieng Ngeun	196	3.1	195	28.7	0.002	25.7
Pak Xeng	195	0.0	198	11.6	0.059	11.6
Xam Neua	195	0.0	198	12.6	0.047	12.6
p value		0.000		0.000		
<b>Ethnic Group</b>						
Lao/Tai	132	16.7	127	59.6	0.000	42.9
Hmong	319	12.7	310	31.0	0.003	18.4
Khmu	461	11.8	480	34.7	0.000	22.9
Akha	533	0.2	540	10.5	0.001	10.3
Other Minorities	285	0.7	315	17.3		16.6
p value		0.000		0.000		
<b>Province</b>						
Poor	574	3.1	588	13.73	0.000	10.6
Average	578	7.81	594	31.02	0.000	23.2
Above Average	576	13.38	589	39.62	0.000	26.2
p value		0.000		0.000		



## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Coping Strategy Index

	Baseline	Se	Endline	Se	Difference	p-value
<b>All</b>	6.05	0.39	6.07	0.24	0.02	0.967
<b>Province</b>						
<b>Phongsaly</b>	2.29	0.5	3.11	0.42	0.81	0.18
<b>Luang Namtha</b>	7.48	0.56	7.66	0.39	0.18	0.801
<b>Luang Prabang</b>	6.36	1.13	5.76	0.69	-0.59	0.687
<b>Huaphanh</b>	6.74	0.74	6.46	0.43	-0.28	0.743
<b>p value</b>	0.030		0.040			
<b>District</b>						
<b>Phongsaly</b>	1.22	0.13	3.71	0.84	2.49	0.008
<b>Boun Neua</b>	3.09	0.85	2.63	0.35	-0.46	0.574
<b>Namtha</b>	5.41	0.55	9.24	0.71	3.83	0.001
<b>Sing</b>	3.35	0.4	6.73	0.36	3.38	0
<b>Long</b>	12.32	1.25	6.91	0.72	-5.41	0.002
<b>Luang Prabang</b>	1.1	0.53	5.11	0.63	4.01	0.003
<b>Xieng Ngeun</b>	9.74	0.95	7.92	0.77	-1.82	0.131
<b>Pak Xeng</b>	11.92	2.27	6.72	0.72	-5.2	0.066
<b>Xam Neua</b>	6.36	1.13	5.76	0.69	-0.59	0.687
<b>p value</b>	0.16		0.06			
<b>Main Ethnic Group</b>						
<b>Lao/Tai</b>	4.19	0.94	4.95	0.76	0.75	0.584
<b>Hmong</b>	6.49	1.05	5.91	0.56	-0.58	0.612
<b>Khmu</b>	7.44	0.97	7.68	0.51	0.24	0.824
<b>Akha</b>	5.16	0.47	5.08	0.24	-0.08	0.866
<b>Other Minorities</b>	5.39		5.32		-0.08	
<b>p value</b>	0.010		0.020			
<b>Wealth Group</b>						
<b>Poor</b>	8.28	0.59	6.48	0.35	-1.8	0.014
<b>Average</b>	5.74	0.49	6.2	0.35	0.46	0.472
<b>Above Average</b>	4	0.42	5.48	0.41	1.48	0.009
<b>p value</b>	0.03		0.000			

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Covid19

Compared to before the pandemic, is it easier or harder to meet your family's food needs?	
Much easier	0%
Somewhat easier	1%
No change	15%
Somewhat harder	52%
Much harder	32%
Don't know	0%
What is the reason it is harder to meet your food needs during the pandemic?	
Items are more expensive	77%
Markets being closed	22%
Foods not available	14%
HH had lost income from employment	21%
HH lost income from business	6%
HH lost income from farming	21%
Travel restrictions	65%
Others (specify)	2%
Don't know	1%
Did you lose cash income during the pandemic	
No	35%
Yes	64%
Don't know	1%
Refuse/n	0%
If yes, how much did you lose, as a proportion of your cash income?	
A little	37%
Almost half	42%
Half or more	15%
Nearly all	6%
Do you spend less money due to the pandemic?	
No	36%
Yes	63%
Don't know	1%
Refuse/n	0%
If yes, how much did you spend less, as a proportion of your expenditure?	
A little	34%
Almost half	21%
Half or more than half	5%

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

Nearly all	1%
Is it more difficult to access health services now compared to before the pandemic?	
Much easier	0%
Somewhat easier	0%
No change	23%
Somewhat harder	48%
Much harder	27%
Has the amount of debts and loans changed?	
None	65%
Gone up	16%
Gone down	4%
About the same	14%
How have your household's savings changed	
None	42%
Gone up	4%
Gone down	35%
About the same	19%

## SCALING

### Partnership for Improved Nutrition in Lao PDR Pillar 3: Sustainable Change Achieved through Linking Improved Nutrition and Governance

#### Participation (%)

	No School	Primary	Secondary +	Lao Tai	Hmong	Khmu	Akha	Other	Poor	Average	Above Average	Total
A mobile clinic visit (village)	94%	96%	93%	93%	90%	97%	96%	95%	93%	95%	95%	94%
An informational event about healthy eating (village)	92%	90%	88%	87%	83%	94%	93%	91%	90%	92%	90%	90%
Advice about feeding your baby (at house)	85%	85%	84%	83%	78%	87%	87%	86%	84%	84%	85%	84%
A workshop about sharing workloads	73%	78%	71%	71%	56%	84%	78%	73%	71%	75%	77%	74%
Purchased or installed a latrine	60%	71%	80%	83%	69%	81%	58%	53%	65%	70%	73%	69%
A leadership training for women	56%	65%	60%	71%	46%	78%	56%	42%	58%	61%	60%	60%
A committee to manage water & sanitation systems	46%	51%	51%	62%	43%	69%	38%	25%	51%	51%	44%	49%
A VSLA	40%	48%	57%	50%	31%	58%	40%	55%	43%	49%	50%	47%
A new water system in your village	46%	42%	44%	41%	47%	52%	46%	25%	39%	47%	47%	44%
Child in Lower Secondary School received information about nutrition	34%	32%	33%	35%	24%	33%	37%	35%	29%	34%	36%	33%

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## ANNEX 5 QUANTITATIVE SURVEY INSTRUMENT

### Endline Interview Questionnaire – 2021

#### Based on 2018 Baseline Questionnaire

Materials to show interviewer:

Photos of:

- Iron/iron-folic acid tablets
- Vitamin B1 tablet
- Vitamin A tablet
- Deworming tablet
- 1,000 day wall chart

Introductory Statement to the Interview
<p>Good Morning/Good Afternoon.</p> <p>My name is _____ and I am here on behalf of the SAVE Scaling Project. We are conducting a survey on the health and nutritional status of women and children. You have been selected by chance from the list of families with children under the age of five. Is this correct? The purpose of this interview is to obtain information about the health and nutrition status of you and your child. We are interested in interviewing mothers of children aged five or less. Are you the mother of the child? <i>(If no)</i>, Is the mother of the child at home? <i>(If yes, wait until she arrives, and re-explain purpose)</i>. At any time during the survey, you are free to stop the survey, or choose not to answer any question. Do you give your consent to answer questions and for you and your child to be measured?</p>
<p><b>May I start now?</b></p> <p><input type="checkbox"/> Yes, permission is given ⇒ Go to Section 1 to begin the interview.</p> <p><input type="checkbox"/> No, permission is not given ⇒ Tell this result to your supervisor and move to the next household.</p>
<p><b>Enumerators–</b> <i>If the respondent is not willing, do not ask any of the questions and move to the next household. If the household contains children under the age of 5, but the mother is not present, ask when it is a good time to return, and return at a later time. We only want to interview mothers of children under the age of 5.</i></p>

## Section 1 General Information

**Instruction:** please refer to the list of villages and clusters provided by SCI.

General Information				
No.	Item	Name		
1	Enumerator Name			
2	Date of interview		DD	MM
			--	--
3	Province			
4	District			
5	Village			
6 (NEW)	Record your current location (Phone GPS location)			
7 (NEW)	Interviewer's Name/Number	--		
8 (NEW)	Household number	--		

## Section 2 - Household Demographic Characteristics

Household Demographic Information			
First, we would like to ask some questions about yourself and the people who live in this household.			
No.	Question	Response	Notes
9	How old are you?	Age (in completed years): ____	
10	To what ethnic group does the head of this household belong?	1.....Lao Loum 2.....Hmong 3.....Khmu 4.....Akha 5.....Muser 6.....Phong 7.....Goiy 8.....Aa nyi 9.....Pu noy 10.....Hor 11.....Yao 12.....Thai Dam 13.....Thai Deng 14.....Sida 15.....Len ten 16.....Phonkham 17.....Lao Houy 18.....lu Mien 19.....Lue 20.....Lao Bit  98..... Other	
11	If other	Specify _____	
12	What is your marital status?	1.....Married (monogamous) 2.....Married (polygamous) second wife, third wife... 3.....Not married, but living with a man 4.....Single 5.....Divorced or separated 6.....Widowed	
13	What is your relationship to the head of the household (HH)?	1..... Head of household 2..... Wife of the HHH 3..... Daughter of the HHH 4.....Daughter in law of HHH 5.....Granddaughter of HHH 98....Other relation	1 ? 16
14	If Other Relation	Specify _____	
15	Is the head of the household male or female?	0.....Female 1.....Male	

16	Did you ever go to school?	1.....Yes 0.....No	1?17 0?18
17	What is the highest level of school you completed?	0..... No school 1..... Went to primary but did not graduate 2..... Finished primary 3..... Finished lower secondary 4..... Finished upper secondary 5..... Higher	
18	Did the head of the household go to school?	1.....Yes 0.....No 99....Don't know	If 16≠1 1?19 0?20
19	What is the highest level of school completed by the head of the household?	0..... No school 1..... Went to primary but did not graduate 2..... Finished primary 3..... Finished lower secondary 4..... Finished upper secondary 5..... Higher 99....Don't know	If 204≠1
20	How many household members are aged above 15 years? <i>Prompt to include self in this count</i>	_____	
21	How many household members are below 15 years of age?	_____	
22	How many household members are below 5 years of age?	_____	Check: 22 ≤ 21
23	How many girls under 5 years old live in the household		
24	How many female HH members are between 10-14yrs?		
25	How many female HH members are between 15-19yrs?		
26	How old were you when you gave birth for the first time?		

### Section 3 - Environmental Characteristics (Water, Sanitation and Hygiene)

Environmental Characteristics (Water, sanitation, and hygiene)			
Now, we would like to ask some questions about the water and sanitation use of this household.			
No.	Question	Response	Notes
27	<p>What is the <b>main</b> source of drinking water for members of your household throughout the year?</p> <p><i>NOTE: One answer only!</i></p>	<p><b>Enumerators:</b> please circle one answer. If unknown, and the water source is nearby, ask to see it.</p> <p><b>Piped water</b>            1.....Piped into dwelling            2.....Piped into compound, yard or plot            3.....Piped to neighbour            4.....Public tap / standpipe              5.....Tube Well, Borehole</p> <p><b>Dug well</b>            6.....Protected well            7.....Unprotected well</p> <p><b>Water from spring</b>            8.....Protected spring            9.....Unprotected spring            10.....Rainwater collection            11.....Tanker-truck            12.....Cart with small tank / drum            13.....Surface water (river, stream, dam, lake, pond, canal, irrigation channel)            14.....Bottled water            98.....Other (specify)</p>	
28	In the last year (12 months), how many months did you have access to this source?	_____ months	
29	If you cannot access this water source, what is another source of drinking water that you use?	<p><b>Enumerators:</b> please read off choices and select one answer</p> <p><b>Piped water</b>            1.....Piped into dwelling            2.....Piped into compound, yard or plot            3.....Piped to neighbour            4.....Public tap / standpipe              5.....Tube Well, Borehole</p> <p><b>Dug well</b>            6.....Protected well            7.....Unprotected well</p>	If 28 < 12



		<b>Water from spring</b> 8.....Protected spring 9.....Unprotected spring  10.....Rainwater collection 11.....Tanker-truck 12.....Cart with small tank / drum 13.....Surface water (river, stream, dam, lake, pond, canal, irrigation channel) 14.....Bottled water 98.....Other ( <i>specify</i> )	
<b>30</b>	In the last year (12 months), how many months did you have access to this source?	_____ months	
<b>31</b>	How long does it take you to collect water in one trip?  <i>Record total minutes</i>	<b>Enumerators:</b> ( <i>If source is at household, write 0 minutes/If don't know write 99</i> ) ____ _ minutes  99.....Do not know	
<b>32</b>	What do you usually do to make the water safer?  <i>Probe...Anything else?</i>  <i>(Multiple response)</i>	<i>Select all that apply</i>  0.....Do nothing 1.....Boil 2.....Add bleach/Chlorine 3.....Strain through a cloth 4.....Use water filter (ceramic, sand, composite, etc.) 5.....Solar disinfection 6.....Let it stand and settle 7.....Coagulation (Aluminium Sulfate) 98.....Other 99.....Do not know	
<b>33</b>	What do you usually do to make the water safer for your child?  <i>Probe...Anything else?</i>  <i>(Multiple response)</i>	<i>Select all that apply</i>  0.....Do nothing 1.....Boil 2.....Add bleach/Chlorine 3.....Strain through a cloth 4.....Use water filter (ceramic, sand, composite, etc.) 5.....Solar disinfection 6.....Let it stand and settle 7.....Coagulation (Aluminium Sulfate) 98.....Other 99.....Do not know	
<b>34</b>	How do you store safe water for your child?	1.....Cup, covered 2.....Bottle closed 3.....Cooking pot covered 96.....Other	

35	What kind of toilet facility do members of your household usually use?	<p><b>Enumerators:</b> please read off all answers and circle one answer. If unknown, will observe defecation facility later in the survey and can record then.</p> <p>1.....Flush/pour flush  2.....Flush to piped sewer system  3.....VIP  4.....Composting  5.....Pit with slab  6.....Pit without slab  7.....Bucket  8.....No facility, bush field  98.....Other (Specify: _____)</p>	
36	Do you share this facility with others who are not members of your household?	<p>1.....Yes  0.....No</p>	If 35≠7 or 8
37	Can you show me the facility you use for defecation? (towards the end of the survey)	<p>1.....Yes, have and shown  2.....Have but refuse to show  3.....Yes, but not mine  4..... No, and not mine</p>	If 35≠7 or 8
38	Why do you not have/not use a latrine in your compound?	<p>1.....Don't need  2.....Don't like  3.....Cost  4.....Not suitable for kids  5.....Don't know usage  6.....Rent/do not own property  7.....New/incomplete house  8.....Not enough space/land  96.....Other</p>	If 37=3 or 4
39	How do you feel when you go to the bush/field for defecation?	<p>1.....Safe  2.....Unsafe animals  3.....Unsafe other people  99.....Don't Know</p>	If 35=8
38	Why do you not have/not use a latrine in your compound?	<p>1.....Don't need  2.....Don't like  3.....Cost  4.....Not suitable for kids  5.....Don't know usage  6.....Rent/do not own property  7.....New/incomplete house  8.....Not enough space/land  96.....Other</p>	If 37=3 or 4
40	Do you have access to WASH infrastructure products (e.g. latrines or water filters) at community level?	<p>1.....Yes  2.....No</p>	
41	Do you have access to WASH infrastructure products (e.g.	<p>1.....Yes  2.....No</p>	

	latrines, water filters ) at market level?		
<b>42</b>	The last time your youngest child passed stools, what was done to dispose of the stools?	1.....Child used toilet / latrine 2.....Put / Rinsed into toilet or latrine 3.....Put / Rinsed into drain or ditch 4.....Thrown into garbage (solid waste) 5.....Buried 6.....Left in the open 98.....Other 99.....Do not know	
<b>43</b>	If Other	Specify _____	If 42=98
<b>44</b>	What do you usually use for hand washing?  (choose 1)	<b>Enumerators: please circle one answer</b> 1.....Soap and water 2.....Ash and water 3.....Only Water 4.....Other detergents	
<b>45</b>	Do you have any soap or detergent or ash/sand in the house for handwashing?	1.....Yes 0.....No	1→46 2→the next section
<b>46</b>	Can you show it to me?  <b>Observe</b> which is shown.	1.....Soap shown 2.....Ash or other detergents shown 0.....Not shown	If 45=1
<b>47</b>	At what times do you usually wash your hands?	1.....Before eating 2.....After toilet 3.....After cleaning a child who has defecated 4.....Before cooking 5.....During diarrhoea 6.....After working 7.....When hands look dirty 8.....After handling animals 9.....Before feeding child 96.....Other _____	

## Section 4 - Dietary Intake

Dietary Intake			
I would like to ask you about foods that you may have had yesterday during the day or night. I am interested to know whether you had the item even if combined with other foods. Please include foods consumed both inside outside of your home.			
No.	Question	Response	Notes
49	<p>YESTERDAY DURING THE DAY OR NIGHT, DID YOU DRINK/EAT (FOOD GROUP ITEMS)?</p> <p><i>Questions and filters (Circle the corresponding code and you can underline more than one answer)</i></p> <p>Always start with: 'YESTERDAY DID YOU EAT....'</p>		
49a	<p>Any offal items (excluding intestines)?</p> <p><i>Probe: such as liver, brain, lung, heart, gizzard, kidney, of any animal</i></p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	
49b	<p>The intestine of any animal?</p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	
49c	<p>Any kind of meat?</p> <p><i>Probe: such as any meat, such as beef (fresh or dry), buffalo, pork, goat, chicken, goose, duck, sausage, blood sausage, sour sausage</i></p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	
49d	<p>Any kind of eggs?</p> <p><i>Probe: 'such as?' eggs from chicken, duck, turtle or other animals</i></p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	
49e	<p>Any kind of fish or aquatic animals?</p> <p><i>Probe: 'such as?' fresh, fermented or dried fish, swamp eel, squid, shrimp (fresh or dry), crab, granulated ark, clam, snail, frog, water insects</i></p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	
49f	<p>Any kind of wild animals?</p> <p><i>Probe: 'such as?' lizard, rat, rabbit, wild bird, small birds</i></p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	
49g	<p>Any kind of insects or grubs?</p> <p><i>Probe: 'such as?' silk worm pupa, cricket, weaver ant, ant egg, etc.</i></p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	
49h	<p>Any kind of dairy products (not including coffee creamer)?</p> <p><i>Probe: 'such as?' milk, cheese, butter, yogurt, or other milk products</i></p>	<p>1.....Yes</p> <p>0.....No</p> <p>99.....Do not know</p>	

49i	Other foods that came from an animal. Example: pork skin	1.....Yes 0.....No 99.....Do not know	
49j	Sticky rice (refined or unrefined), roasted rice, rice, pre-chewed rice, rice noodles, maize, noodles, thick porridge, or other foods made from grains?	1.....Yes 0.....No 99.....Do not know	
49k	White or purple coloured foods from roots such as white yams, purple yams, yam bean, cassava, white radish, white potato, or any other white or purple colored foods from roots.	1.....Yes 0.....No 99.....Do not know	
49l	Pulses/lentils/tofu/bean curd	1.....Yes 0.....No 99.....Do not know	
49m	Nuts or seeds (e.g. Sesame seeds, mung bean, ground bean, sun flower seed, cashew nuts etc.)	1.....Yes 0.....No 99.....Do not know	
49n	Any dark green leafy vegetables such as pak choi, swamp cabbage, morning glory, sweet potato leaves, Chinese kale	1.....Yes 0.....No 99.....Do not know	
49o	Ripe orange fleshed mangoes, ripe orange fleshed papayas, pumpkin, carrots, sweet potatoes that are yellow or orange inside?	1.....Yes 0.....No 99.....Do not know	
49p	Other vegetables	1.....Yes 0.....No 99.....Do not know	
49q	Other fruit	1.....Yes 0.....No 99.....Do not know	
<p>Now we would like to ask some questions about the diet of one of your children.  <i>Enumerators, if there are more than one child under the age of five, select the youngest child. If the youngest are twins, randomly select one. Ask the name of the child, and use that name for the rest of the interview.</i></p>			
50	What is the age of the child in months?		
51	Has (CHILD'S NAME) ever been breastfed?	1.....Yes 0.....No	If 1 <input type="checkbox"/> 52 If 0 <input type="checkbox"/> 53
52	How many hours after birth did your child first drink breastmilk?  <i>If immediately, record 00. If less than 24 hours, record hours. If over 24 hours, record 25. If unknown, record 99.</i>	_____ hours	If 50 = 0-23  If 51 = 1
53	When do you think is the best time to start breastfeeding a child after giving birth?	<b>Enumerators: read off all answer choices and circle the best one</b>  1.....Within the first hour after giving birth	

		2.....Within the first six hours after giving birth 3.....Within the first twelve hours after giving birth 4.....Within one day after giving birth 99.....Do not know	
54	Was (CHILD'S NAME) breastfed yesterday, either during the day or the night?	1.....Yes 0.....No 99.....Do not know	If 50=0-23
55	Did (NAME) drink anything from a bottle with a nipple yesterday, during the day or night?	1.....Yes 0.....No 99.....Do not know	If 50 = 0-23 months
56	Did (NAME) drink or eat vitamin or mineral supplements yesterday, during the day or night?	1.....Yes 0.....No 99.....Do not know	
57	Did (CHILD'S NAME) drink anything other than breastmilk yesterday?  <i>Such as canned, powdered or fresh animal milk, infant formula, juice, thin porridge, or clear soup (Nam Keang).</i>	1.....Yes 0.....No 99.....Do not know	If 50= 0-23 1→58 0→59 99→59
58	How many times has (CHILD'S NAME) received milk that is not breastmilk in the past 24 hours?	_____ times 99.....Do not know	If 50=6-23
59	How many times has (CHILD'S NAME) received other food or fluids in the past 24 hours?	_____ times 99.....Do not know	If 50=6-23
60	Did (CHILD'S NAME) eat any solid, semi-solid or soft food yesterday?  <i>Such as porridge, rice, pre-chewed rice, fruits, bread, meat, eggs, vegetables.</i>  <i>Enter 99 if unknown</i>	1.....Yes 0.....No 99.....Do not know	
61	How many meals did (CHILD'S NAME) eat any solid, semi-solid or soft foods	_____ times 99.....Do not know	If 60 = 'Yes'
62	I would like to ask you about foods that the selected child (CHILD'S NAME) may have had yesterday during the day or night. I am interested to know whether HE/SHE had the item even combined with other foods. Please include foods consumed both inside and outside of your home.  YESTERDAY DURING THE DAY OR NIGHT, DID THE SELECTED CHILD (CHILD'S NAME) DRINK/EAT (FOOD GROUP ITEMS)?  Always start with: 'YESTERDAY DID (NAME) EAT....'		If 60 = 'Yes'

<b>62a</b>	Commercially fortified baby food, e.g., cerelac	1.....Yes 0.....No 99.....Do not know	
<b>62b</b>	Sticky rice (white or brown), roasted rice, rice, pre-chewed rice, rice noodles, maize, noodles, porridge, or other foods made from grains?	1.....Yes 0.....No 99.....Do not know	
<b>62c</b>	Pumpkin, carrots or sweet potatoes that are yellow or orange inside?	1.....Yes 0.....No 99.....Do not know	
<b>62d</b>	White or purple coloured foods from roots such as white yams, purple yams, yam bean, cassava, white radish, white potato, or any other white or purple colored foods from roots.	1.....Yes 0.....No 99.....Do not know	
<b>62e</b>	Any dark green, leafy vegetables such as pak choi, swamp cabbage, morning glory, sweet potato leaves, Chinese kale?	1.....Yes 0.....No 99.....Do not know	
<b>62f</b>	Ripe or orange-fleshed mangos, or papayas	1.....Yes 0.....No 99.....Do not know	
<b>62g</b>	Any other fruits or vegetables	1.....Yes 0.....No 99.....Do not know	
<b>62h</b>	Liver, brain, lung, heart, gizzard, kidney, intestine, or other organ of any animal	1.....Yes 0.....No 99.....Do not know	
<b>62i</b>	Any meat, such as beef (fresh or dry), buffalo, pork, lamb, goat, chicken, goose, duck, sausage, blood sausage, sour sausage	1.....Yes 0.....No 99.....Do not know	
<b>62j</b>	Eggs from chicken, duck, turtle or other animals	1.....Yes 0.....No 99.....Do not know	
<b>62k</b>	Fresh, fermented or dried fish, swamp eel, squid, shrimp (fresh or dry), shellfish, crab, granulate ark, clam, snail	1.....Yes 0.....No 99.....Do not know	
<b>62l</b>	Any wild animals such as lizard, frog, rat, rabbit, wild bird, small bird	1.....Yes 0.....No 99.....Do not know	
<b>62m</b>	Insects or grubs such as silk worm pupa, cricket, weaver ant, any insect eggs, water insects	1.....Yes 0.....No 99.....Do not know	
<b>62n</b>	Any foods made from beans, Leucanea (bean), common pea, lentils, or nuts, including tofu?	1.....Yes 0.....No 99.....Do not know	
<b>62o</b>	Cheese, yogurt, or other food made from milk?	1.....Yes 0.....No 99.....Do not know	



<b>62p</b>	Any oil, pork fat, or butter or foods made with any of these	1.....Yes 0.....No 99.....Do not know	
<b>62q</b>	Any packaged foods such as packaged noodles, chocolates, sweets, candies, pastries, cakes, or biscuits	1.....Yes 0.....No 99.....Do not know	
<b>62r</b>	Other foods	1.....Yes 0.....No 99.....Do not know	

## Section 5 - Food Security and Expenditure

Household Food Security and Expenditure		
No.	Question	Response
<p>I would like to ask you some questions about how much your household spends on health services and other things.</p> <p><i>For all questions in this section report all values in local currency, whether paid in cash or in kind</i></p>		
64	<p>In the last 4 weeks, how much did your household spend on:</p> <p>Food, including such things as [rice], meat, fruits, vegetables, and cooking oils. Include the value of any food that was produced and consumed by the household, and exclude alcohol, tobacco and restaurant meals. Include children's daily snacks and pocket money.</p>	<p>_____,00</p> <p>0 kip</p>
65	<p>In the last 4 weeks, how much did your household spend on:</p> <p>Housing, gas, electricity, water, telephone, and heating fuel</p>	<p>_____,00</p> <p>0 kip</p>
66	<p>In the last 4 weeks, how much did your household spend on:</p> <p>Education fees and supplies</p>	<p>_____,00</p> <p>0 kip</p>
67	<p>In the last 4 weeks, how much did your household spend on:</p> <p>Health care costs</p>	<p>_____,00</p> <p>0 kip</p>
68	<p>In the last 4 weeks, how much did your household spend on:</p> <p>All other goods and services not yet mentioned</p>	<p>_____,00</p> <p>0 kip</p>
<p><b>69.</b> Now I would like to ask you some questions about food that the household ate in the last 7 days</p>		
	<p>How many <b>times</b> in the past week (last 7 days) did your household eat the following foods?</p> <p>Number of times eaten (in the last 7 days)</p>	<p>What is the source of this food for each item mentioned?</p> <p>Food Source Code:</p> <p>Source Codes:</p> <p>1. Home grown crop or livestock production</p> <p>2 Purchased food</p> <p>3 Gathered forest products</p>

		4 Hunting/fishing 5 Borrowed 6 Food aid 7 Exchanged/barter 8 Gift from family/relatives
	Enter number of Times ↓	Enter Food Source Code (1-8) ↓
A. Rice (sticky rice, white rice)	—	—
B. Maize / Corn	—	—
C. cassava	—	—
D. other roots of tubers (potatoes, yam)	—	—
E. pulses/Lentils/Tofu/Bean Curd	—	—
F. vegetables (green leafy, carrot, pumpkin...)	—	—
G. bamboo shoots / mushrooms	—	—
H. fruits	—	—
I. fish, fish paste	—	—
J. other aquatic animals (crab, snail, shrimp...)	—	—
K. meat (beef, pork, chicken)	—	—

	L. Wild animals/Insects	—	—
	M. Eggs	—	—
	N. Milk	—	—
	O. Sugar	—	—
	P. Oil/Butter/Animal Fat	—	—
<b>70</b>	How many hours in the past week did you or household spend gathering food from the forest (NTEP)?		
<b>71</b>	How many hours in the past week did you or household spend hunting?		
<b>72</b>	How many hours in the past week did you or household spend fishing?		
<b>73</b>	In the past 7 days, if there have been times when you did not have enough food or money to buy food, how often has your household had to:		
<b>73a</b>	Rely on less preferred, less expensive foods?	Number of days out of the past seven: (Use numbers 0 – 7 to answer number of days; If household never does enter '99')	
<b>73b</b>	Borrow food or money from friends or relatives?	Number of days out of the past seven: (Use numbers 0 – 7 to answer number of days; If household never does enter '99')	
<b>73c</b>	Limit portions at mealtimes?	Number of days out of the past seven: (Use numbers 0 – 7 to answer number of days; If household never does enter '99')	
<b>73d</b>	Limit adult intake?	Number of days out of the past seven: (Use numbers 0 – 7 to answer number of days; If household never does enter '99')	
<b>73e</b>	Reduce the number of meals per day?	Number of days out of the past seven: (Use numbers 0 – 7 to answer number of days; If household never does enter '99')	

<b>74</b>	Has your household income increased through agricultural activities and collecting Non-Timber Forest Products?	1.....Yes 0.....No 99.....Do not know	
<b>75</b>	Is your HH involved in IGAs?	1.....Yes 0.....No 99.....Do not know	
<b>76</b>	If your household earns more money, do you spend more money on food?	1.....Yes 0.....No 99.....Do not know	
<b>77</b>	Do you produce enough rice for your household during the entire year?	1.....Yes 0.....No 99.....Do not know	
<b>78</b>	How many months a year do you not have enough rice?	_____	

<b>79</b>	<b><i>In the last 12 months, did you do any of the following:</i></b>		
<b>79a</b>	Grow vegetables	1. Yes 0. No	
<b>79b</b>	Grow fruits	1. Yes 0. No	
<b>79c</b>	Grow oil seeds	1. Yes 0. No	
<b>79d</b>	Raise poultry (chicken/ducks)	1. Yes 0. No	
<b>79e</b>	Raise pigs, goats or cattle	1. Yes 0. No	
<b>79f</b>	Raise fish or frogs	1. Yes 0. No	
<b>79g</b>	Gather NTFPs	1. Yes 0. No	
<b>80</b>	Does your household consume meat from your own domestic large animals? (e.g. cow, pig, buffalo)	1. Yes 0. No	
<b>81</b>	Does your household process food for preservation purposes? (e.g. fish)	1. Yes	

		0. No	
<b>82</b>	Do females have more income from NTFP and /or agriculture production.	1 Yes 0 No 99 Don't know	
<b>83</b>	Can you access and buy fresh food in markets?	1 Yes 0 No 99 Don't know	
<b>84</b>	Can you access and buy fresh food in shops?	1 Yes 0 No 99 Don't know	
Now I would like to ask you some questions about food. During the last 12 MONTHS, was there a time when _____?			
<b>85a</b>	You were worried you would not have enough food to eat because of a lack of money or other resources	1.Yes 0. No 98 Refuse 99 Don't know	
<b>85b</b>	Still thinking about the last 12 MONTHS, was there a time when you were unable to eat healthy and nutritious food because of a lack of money or other resources	1.Yes 0. No 98 Refuse 99 Don't know	
<b>85c</b>	You ate only a few kinds of foods because of a lack of money or other resources	1.Yes 0. No 98 Refuse 99 Don't know	
<b>85d</b>	You had to skip a meal because there was not enough money or other resources to get food	1.Yes 0. No 98 Refuse 99 Don't know	
<b>85e</b>	Still thinking about the last 12 MONTHS, was there a time when you ate less than you thought you should because of a lack of money or other resources	1.Yes 0. No 98 Refuse 99 Don't know	
<b>85f</b>	Your household ran out of food because of a lack of money or other resources	1.Yes 0. No 98 Refuse 99 Don't know	

<b>85g</b>	You were hungry but did not eat because there was not enough money or other resources for food	1.Yes 0. No 98 Refuse 99 Don't know	
<b>85h</b>	During the last 12 MONTHS, was there a time when you went without eating for a whole day because of a lack of money or other resources?	1.Yes 0. No 98 Refuse 99 Don't know	

Covid Specific Questions			
<b>513</b> (NEW)	Compared to before the pandemic, is it easier or harder to meet your family's food needs?	1. Much easier 2. Somewhat easier 3. No change 4. Somewhat harder 5. Much harder  99. Don't know/no answer	
<b>513a</b> (NEW)	What is the reason it is harder to meet your food needs during the pandemic?  Select all that apply	1. Items are more expensive 2. Markets being closed 3. Foods not available 4. HH had lost income from employment 5. HH had lost income from business 6. HH had lost income from farming 7. Travel restrictions 98. Others (specify)  99. Don't know/no answer	If 513 = 4 or 5
<b>514</b> (NEW)	Did you lose cash income due to the pandemic?	1.Yes 0. No 98. Refuse 99 Don't know	0→515
<b>514a</b> (NEW)	If yes, how much did you lose, as a proportion of your cash income? (give best guess)	1. A little 2. Almost half 3. Half or more than half 4. Nearly all	
<b>515</b> (NEW)	Do you spend less money due to the pandemic?	1.Yes 0. No	0→516

		98. Refuse 99. Don't know	
<b>515a</b> (NEW)	If yes, how much did you spend less, as a proportion of your expenditure? (give best guess)	1. A little 2. Almost half 3. Half or more than half 4. Nearly all	
<b>516</b> (NEW)	Is it more difficult to access health services now compared to before the pandemic?	1. Much easier 2. Somewhat easier 3. No change 4. Somewhat harder 5. Much harder	
<b>517</b>	If you have any debts or loans outstanding, have these...	1. None 2. Gone up since covid started 3. Gone down since covid started 4. About the same 99. Refuse/no answer	
<b>518</b>	If you have any savings, have they...	1. None 2. Gone up since covid started 3. Gone down since covid started 4. About the same 99. Refuse/no answer	



## Section 6 - Child Illness and Treatment

VI. Illness and Treatment			
Now we would like to ask about any recent illnesses that your child may have had.			
No.	Question	Response	
86	Did your child have diarrhoea in the past two weeks, where diarrhoea is defined as three or more loose stools or one loose, bloody stool in a 24 hour period?	1.....Yes 0.....No 99.....Do not know	1=87 0=89a 99=89a
87	Now I would like to know how much your child was given to drink, including breast milk, during the diarrhoea  How much was the child given to drink during diarrhoea? (including breast milk)  <i>Was he/she given less than usual to drink, about the same amount, or more than usual to drink? If less, probe: Was he/she given much less than usual to drink or somewhat less?</i>	1.....Much less 2.....Somewhat less 3.....About the same 4.....More 5.....Nothing to drink 99.....Do not know	
88	Was child given ORS/homemade fluids during diarrhoea? a) Choose one: a) A fluid made from a special packet called (ORALYTE/NAM THA LAY PHOUN)? b) b) Recommended homemade fluid such as coconut water or rice water with salt?	1.....Yes, Nam Tha Lay Phoun 2.....Yes, Recommended Homemade Fluid 3.....No 99.....Do not know	If 86=1
89	How much child was given to eat during diarrhoea? More or less than usual?  <i>If less, probe: Was he/she given much less than usual to eat or somewhat less?</i>	1.....Much less 2.....Somewhat less 3.....About the same 4.....More 5.....Nothing to eat 99....Do not know	
89a	Did your child have fever in the past 2 weeks	1.....Yes 0.....No 99.....Do not know	
90	Did your child have illness with cough in the past 2 weeks	1.....Yes 0.....No 99.....Do not know	1=91 0=93 99=93
91	When ill with cough, did the child breathe faster?	1.....Yes 0.....No 99.....Do not know	1=92 0=93 99=93

92	Was difficult breathing due to blockage in chest or nose?	1.....Chest only 2.....Nose only 3.....Both 4.....Other 99.....Do not know	
93	At any time during the past two weeks, did you ( <i>mother</i> ) have diarrhoea?	1.....Yes 0.....No 99.....Do not know	
94	At any time during the past two weeks, have you ( <i>mother</i> ) been ill with a fever?	1.....Yes 0.....No 99.....Do not know	
95	Did you (mother) seek treatment for your illness or your child's illness?	1.....Yes 0.....No 99.....Do not know	If 86, 89a 90, 93, or 94 =1 1 96 0 97 99 97
96	From where and from whom did you seek treatment? Do not prompt <i>Probe:</i> Anywhere else?  (Multiple response)	1.....Government hospital 2.....Health centre 3.....Village health worker 4.....Outreach team 5.....Lao Women Union worker 6.....Private hospital/ clinic 7.....Private physician 8.....Private pharmacy 9.....Mobile Clinic 10.....Relative/friend 11.....Shop 12.....Traditional healer 98.....Other	

## Section 7 - Maternal and Child Health

Maternal and Child Health			
Now we would like to ask about access and utilization of health care for you and your child.			
No	Question	Response	Notes
97	What is the distance (one way) to the nearest health centre in minutes?		
98	Do you have a vaccination card with the vaccine names? If yes, ask to see card	1.....Yes 0.....No	If 50 ≥ 9
If an immunization ( <b>child health</b> ) card is available, answer questions 99-103 according to what is on the card. If there is no card available or if the card is blank, ask the mother questions 99-103 verbally.			
99	Child ever received measles vacc – that is, a shot in the arm at the age of 9 months or older - to prevent him/her from getting measles?	0.....No 1.....Yes, on card 2.....Yes, from recall 99.....I don't know	If 50 ≥ 9
100	Has (name) ever received a vitamin A dose (this/any of these)?  <i>Show common types of capsules</i>	0.....No 1.....Yes, on card 2.....Yes, from recall 99.....I don't know	If 401 ≥ 6 1 → 101 2 → 102 3 → 102
101	Has (name) received a vitamin A dose like (this/any of these) within the last 6 months? <i>Show common types of capsules</i>	0.....No 1.....Yes, on card 2.....Yes, from recall 99.....I don't know	If 401 ≥ 6
102	HAS (NAME) EVER RECEIVED DEWORMING (THIS)?  <i>Show common types of pill</i>	0.....No 1.....Yes, on card 2.....Yes, from recall 99.....I don't know	If 401 ≥ 12 1 → 103 2 → 104 3 → 104`
103	HAS (NAME) RECEIVED DEWORMING (THIS) WITHIN THE LAST 6 MONTHS?  <i>Show common types of pill</i>	0.....No 1.....Yes, on card 2.....Yes, from recall 99.....I don't know	If 401 ≥ 18
104	Who assisted with the birth?  <i>(Multiple response)</i>	1.....Doctor 2.....Nurse/midwife 3.....Medical assistant 4.....Traditional birth attendant 5.....Community health worker 6.....Relative/friend 7.....Other person 8.....No one	
105	Where did you give birth to (CHILD'S NAME)?	1.....Home 2.....Other's home 3.....Government hospital	

	<i>Probe to identify the type of source.</i>	4.....Government clinic/health centre 5.....Private hospital/clinic 98.....Other	
<b>106</b>	Was (CHILD'S NAME) weighed at birth?	1.....Yes 0.....No 99.....Do not know/Do not remember	1?107 0?109 99?109
<b>107</b>	How big/small was the child at birth?	1.....Very large 2.....Larger than average 3.....Average 4.....Smaller than average 5.....Very small 99.....Don't know	
<b>108</b>	What was the relative birth weight of (CHILD'S NAME)? <i>Answer in kg. Use the weight recorded on card if available. Record 99 if unknown.</i>	— — . —	
<b>Now, I am interested in your most recent pregnancy (YOUR LAST CHILD) that resulted in a live birth.</b>			
<b>109</b>	During this recent pregnancy, did you see anyone for antenatal care?	1.....Yes 2.....No	2?112
<b>110</b>	Whom did you see?  Probe: Anyone else?  <i>Mark down all mentioned.</i>	1.....Doctor 2.....Nurse/midwife 3.....Medical assistant 4.....Traditional birth attendant 5.....Community health worker 98.....Other person 99.....Do not know	
<b>111</b>	How many times did you receive antenatal care during the last pregnancy? <i>Probe to identify the number of times antenatal care was received. If a range is given, record the minimum number of times antenatal care received.</i>	_____ times  99.....Don't know	
<b>112</b>	During this recent pregnancy, were you given or did you buy any iron/iron-folic acid tablets?	1.....Yes 0.....No 99.....Do not know	
<b>113</b>	During the last three months of your most recent pregnancy, were you given or did you buy any B1 vitamins? <i>Show tablet</i>	1.....Yes 0.....No 99.....Do not know	
<b>114</b>	After this pregnancy, were you given or did you take any vitamin A tablets?  <i>Show tablet</i>	1.....Yes 0.....No 99.....Do not know	

	<i>Probe: Vitamin A given after immediate birth</i>		
<b>115</b>	Did you take deworming drugs during the most recent pregnancy? <i>Show deworming tablet</i>	1.....Yes 0.....No 99.....Do not know	
<b>116</b>	Did you eat more than usual during pregnancy?	1.....Yes 0.....No 99.....Do not know	
<b>117</b>	Were you having at least 3 meals a day?	1.....Yes 0.....No 99.....Do not know	
<b>118</b>	Did you gain weight during pregnancy?	1.....Yes 0.....No 99.....Do not know	

## Section 8 - Decision Making and Workload

Decision Making and Workload			
<i>Now I am going to ask you some questions about who makes decisions in the household, and also who performs certain tasks in the household.</i>			
No	Question	Response	Notes
119	Who usually decides whether your child will be taken for health care to a health facility when s/he is sick?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
120	Who usually decides whether you or your partner will use any type of contraception, such as condoms or pills?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
121	Who decides how many children you will have?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
122	Who decides what and when to feed your infant (s)?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
123	Who usually decides how much of the staple crops grown by your household will be kept for consumption in the household and how much will be sold?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
124	Who usually decides how much of the vegetables grown by your household will be kept for	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly	

	consumption in the household and how much will be sold?	4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
<b>125</b>	Who usually decides how to spend any income that you bring into the household?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
<b>126</b>	Who usually decides how to spend any income that your husband brings into the household?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
<b>127</b>	Who usually decides about making smaller purchases such as food, medicine, hygiene products and other less expensive items?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
<b>128</b>	Who usually decides about making expensive purchases such as latrine or time-saving HH equipment?	1.....Respondent herself 2.....Husband 3.....Respondent and husband jointly 4.....Another household member 5.....Respondent and another household member jointly 6.....Someone outside the household 7.....Household not involved in this activity	
<b>129</b>	Who in your household usually fetches water?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	
<b>130</b>	Who in your household usually collects firewood?	1.....The woman does most of the work 2.....The work is equally shared between the	

		woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	
<b>131</b>	Who in your household usually purchases and/or gathers food?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	
<b>132</b>	132. Who in your household usually prepares food?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	
<b>133</b>	Who in your household usually washes clothes?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	
<b>134</b>	Who in your household usually cleans the house?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	



<b>135</b>	Who in your household usually plays with children?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	
<b>136</b>	Who in your household usually bathes your children?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	
<b>137</b>	Who in your household usually takes care of sick children?	1.....The woman does most of the work 2.....The work is equally shared between the woman and her husband (or partner) 3.....The work is equally shared between the woman and someone other than her husband 4.....The work is equally shared between the husband and someone other than his wife 5.....The husband does most of the work 6.....Someone else does it 7.....Household is not involved in this activity	

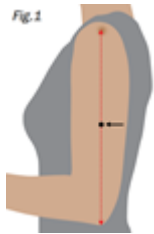
## Section 10 - Recognized Activities & Interventions

Recognized Activities & Interventions			
I'm going to read a list of activities that happened in villages where the project worked. Please tell me if you or anyone in your household participated in or received information directly from these activities over the last four years. If you are not sure, please say so.			
No	Question	Response	Notes
200	Advice about feeding your baby from a volunteer who came to your house	1.....Yes 0.....No 99.....Do not know/Not Sure	
201	An informational event about healthy eating in your village	1.....Yes 0.....No 99.....Do not know/Not Sure	
202	A mobile clinic visit at your village	1.....Yes 0.....No 99.....Do not know/Not Sure	
203	A women's savings and lending group	1.....Yes 0.....No 99.....Do not know/Not Sure	
204	A workshop about sharing workloads between husbands and wives	1.....Yes 0.....No 99.....Do not know/Not Sure	
205	A leadership training for women	1.....Yes 0.....No 99.....Do not know/Not Sure	
206	A committee to manage village water and sanitation systems	1.....Yes 0.....No 99.....Do not know/Not Sure	
207	A new water system in your village	1.....Yes 0.....No 99.....Do not know/Not Sure	
208	Purchased or installed a latrine for your household	1.....Yes 0.....No 99.....Do not know/Not Sure	
209	Child in Lower Secondary School received information about nutrition	1.....Yes 0.....No 99.....Do not know/Not Sure	

## Observation

<b>37a</b>	<b>Observe</b> presence of water for flushing	1.....Available 0.....Not available 99.....Do not know	If 37 = '1' or 3
<b>37b</b>	<b>Observe</b> presence of feces inside latrine, around hole	0.....Absent 2.....Present 99.....Do not know	If 37 = '1' or 3
<b>37c</b>	<b>Observe</b> if feces inside latrine hole appears wet	0.....Absent 2.....Present 99.....Do not know	If 37 = '1' or 3
<b>37d</b>	<b>Observe</b> if there is a worn path from the home to the latrine	1.....Path visible 0.....Path not visible 99.....Do not know	If 37 = '1' or 3
<b>37e</b>	<b>Observe</b> if the superstructure is intact	1.....Intact 0.....Crumbing 99.....Do not know	If 37 = '1' or 3
<b>37f</b>	<b>Observe</b> other		If 37 = '1' or 3

## Section 9 - Anthropometry

Pregnant Women			
No	Question	Response	Notes
138	Are you currently pregnant?	1.....Yes 2.....No	1 → 139 2 → Next Section
139	Which trimester?  Probe: for how many months have you been pregnant? How long ago was your last menstrual period?	1.....First 2.....Second 3.....Third 99.....Don't know	
140	Do you smoke cigarettes/tobacco?	1..... Yes 2..... No	
141	How many cigarette sticks a day?	1.....1-4 sticks 2.....5-9 sticks 3.....10 or more sticks 98 Don't know	If 140 = Yes
142	MUAC of pregnant women  <i>Determine the mid-point between the elbow and the shoulder. Place the tape measure around the LEFT arm (the arm should be relaxed and hang down the side of the body). Record In mm</i>  		

Mother and Children			
No	Question	Response	Notes
150	Height of the mother <i>In cm</i>		
151	Weight of the mother <i>In Kg to 0.5kg</i>		
<b>Measurements of child under 5</b>			
152	Child height  <i>If child is less than 23 months, measure the child lying down. In cm</i>		
153	Child standing/lying	1.....Standing	

		2.....Lying	
<b>154</b>	Child weight <i>If child is less than 23 months/unable to stand. Weigh mother and child together and then weigh mother separately to determine weight of child. In Kg to 0.05kg</i>		
<b>155</b>	Child undressed to the minimum?	1.....No clothes 2.....Few clothes 3.....Many clothes	
<b>156</b>	Date of Birth <i>If not known, then give age in months</i>  <i>Using MCH book, or other official registration documents.</i>	_____	
<b>158</b>	Sex of the child	1.....Male 2.....Female	

#### Other Pregnant Women

No	Question				Response	Notes
<b>159</b>	Are there any pregnant women in this household?				1.....Yes 2.....No	
<b>160</b>	If yes, how many people?					
	No	Name	Age	Month of pregnancy (0-9)	How many times were you pregnant before this?	MUAC
	1					
	2					
	3					

#### Closing Statement to the Interview

The interview is complete. Thank you so much for your time and patience. Your help will allow us to work together to improve the health and nutrition of your child and community.

**Enumerators:** indicating completeness:

☐ Yes, interview is complete ⇒ Move to the next household

☐ No, interview was not complete ⇒ Tell this result to your supervisor and move to the next household.

For new questions 200-209 these are the translations to support correct understanding of the activities/interventions

Initiative	Lao translation
Village nutrition events	ງານໄພຊະນາການຂຶ້ນບ້ານ
HH visits for CU5 (1000 days)	ການຢ້ຽມຢາມຄອບຄົວໄດ້ກອກຢູ່ຕໍ່າກວ່າ5ປີ (ໄດ້ກພັນວັນ)
VSLA committee	ຄະນະກຳມະການກຸ່ມທ້ອນເງິນ
WWR workshop	ກອງປະຊຸມການແບ່ງເປົ້າພາລະຂອງແມ່ຍິງ
WWR relationship training	ຝຶກອົບຮົມການສ້າງສຳພັນໃຫ້ແກ່ແມ່ຍິງ
Women's leadership training	ການຝຶກອົບຮົມຫັກສະການເປັນຜູ້ນຳຂອງແມ່ຍິງ
WASH committee	ຄະນະກຳມະການຄຸ້ມຄອງນ້ຳ ແລະ ສຸຂະອະນາໄມ
Water system infrastructure	ວຽກງານໂຄງລ່າງພື້ນຖານລະບົບນ້ຳ ແລະ ສຸຂະອະນາໄມ
LSS, SBCC, nutrition and SRH awareness	ວຽກງານສົ່ງເສີມໄພຊະການຢູ່ໃຮ່ງຮຽນມັດທະຍົມຕົ້ນ, ການສື່ສານເພື່ອການປ່ຽນແປງພຶດຕິກຳສັງຄົມ, ການປູກຈິດວຽກງານໄພຊະນາການ ແລະ ເພດ - ສຸຂະພາບໄວຈະເລີນພັນ
Health Center	ໂຮງໝໍນ້ອຍ

## ANNEX 6 QUALITATIVE RESEARCH COMPONENT SITE SELECTION CRITERIA

### SCALING final evaluation

#### Criteria for selection of sites for qualitative data collection

The Inception Report for the SCALING final evaluation anticipates the following diversity of key informants for component 2 (Table 8.). This paper focuses on site selection for District, Village and LSS levels. It is anticipated that most national and provincial level respondents will be interviewed remotely ahead of the district/village data collection. The UNICEF PIN evaluation will also gather data from LPB PNC and DNC in Aug/Sept, which may be supplemented with further interviews under the SCALING evaluation.

#### List of Stakeholders to be interviewed in Component 2

Stakeholder Group	Number of respondents
<b>National</b>	
Consortium partners (4): SCI, CARE, CCL, CFL	8
NUSAP	1
EU/PIN	1
UNICEF?	1
MoH: NNC, DHP*	1
SUN CSA	1
<b>Total national</b>	<b>13</b>
<b>Provincial</b>	
Provincial Health Office	1
Provincial Nutrition Committee*	1
SCALING Project Staff	2
Mentors for Early Essential Newborn Care	1
<b>Total interviews at provincial level</b>	<b>5/provinces x 4 provinces= 20</b>
<b>District</b>	
Consortium staff- Field facilitators/Project Officers	2
District Nutrition Committee*	1
District Lao Women's Union	1
Private vendors of WASH products	1
<b>Total interview at district level</b>	<b>5/district x 8 districts = 40</b>
<b>Village/Community</b>	
Village Development Committee /Water management committee group leaders*	4 (semi-structured)
Village Savings and Loan Association*	2
SBCC volunteers	2
Health Centre/small hospital Management and outreach staff	1

Total interviews at village level	9/village x 10 villages = 90
<b>Lower Secondary School**</b>	
School principal and teacher	2
Student facilitators (Adolescent Facilitators)	2
Adolescent peer support groups (FGDs)	2 (1 male ; 1 female)
<b>Total interviews at participating LSS</b>	<b>6 x 8 schools=48</b>
<b>TOTAL KIIs/FGDs participants</b>	<b>211</b>

**Selection criteria for districts and villages** put forward in the Inception Report include:

1. Representation from different districts
2. Avoidance of sites where the Endline survey will be undertaken
3. Ethnic diversity
4. Sites where i) only SCALING and ii) SCALING + other interventions have been carried out by SCALING partners
5. Overlap with NUSAP

LSR requests SCALING partners to consider these and the following additional criteria to confirm the optimal selection of sites for qualitative data collection:

- a. High and low performing sites for key types of project interventions (to learn what works and why) *Impact, effectiveness, sustainability, relevance*
- b. High and low intensity sites: sites that received all of the SCALING interventions over the maximum period of time vs sites that received some but not all interventions, potentially for shorter periods (to explore synergies amongst interventions and investment to kick start anticipated outcomes) *Impact, efficiency, sustainability*
- c. Representation of sites for each partner (this appears to be possible with at least one district in each of the four provinces) *Impact, consortium relevant findings*
- d. Sites that offer evaluators clear stories of change—where the implementing partner can identify individuals or groups that lend themselves to documentation. Importantly, these should be best practice sites that highlight outcomes emerging in other sites. *Effectiveness, impact, sustainability*
- e. \*\*\*Minimizing travel time in order to maximize interview time for field teams. Two teams of two facilitators and a note taker are expected to be in the field for 10 days (including one rest day).

There are going to be trade offs in terms of site selection given the limitations noted in e. We would appreciate SCI and partner review of the proposed sites (Table 9 from Inception Report, below), with these criteria in mind.

#### Proposed sites for Component 2

Province	Districts with Quantitative & Qual	Qualitative and not part. baseline	Number of villages to be selected for Evaluation
HUAPHANH	1. Xam Neua		2 villages
	2. Luang Prabang		1 village
	3. Pak Xeng		1 village
LUANG PRABANG		4. Nan*	1 village
		5. Viengkham*	1 village



LUANG NAMTHA	6. Long		2 villages
PHONGSALY	7. Phongsaly		1 village
		8. Nyot Ou	1 village
4 provinces	5 baseline districts	3 non-baseline	10 villages

\* Also received NUSAP support from 2019.

## ANNEX 7 QUALITATIVE SURVEY INSTRUMENTS

### Qualitative instruments, SCALING final evaluation

These instruments are meant to be used in the qualitative element of the SCALING final evaluation. They are guiding questions, not survey questions, and designed to help stimulate an informative conversation about aspects of the project that are most familiar to the respondent.

Two exercises will help focus conversations, described here and referred to in the guidance below.

#### Sentence completion exercise

In order to encourage all voices to be heard, and to give us some more “data” points, we will use a simple and fun exercise in some of the FGDs. Please refer to these instructions where you see the sentences in italics below.

For this exercise you will need: small pieces of paper, pens or pencils, a small box, rubber bands.

1. Say: Now we are going to play a game. I’m going to give each of you a two pieces of paper. Then I will read you the beginning of a sentence, and ask you to write down the end of the sentence in your own words. You can use more than one paper to do this, just write one, short thought on each paper.

When you are finished, put your paper in this box. I will mix them up. The I will pass the box around. Each of you will chose a piece of paper and read it back to the group. Then we’ll talk about the different responses.

2. Discuss each topic one by one. Following the reading, facilitate a short discussion.

- a. Summarize the main points of agreement and note some minority points of view (without judgement)
- b. Ask why the group feels this way: probe for reasons and examples.
- c. Encourage different points of view.
- d. Encourage everyone to speak.

3. Be sure to save the responses (papers) and keep them together for each question in a rubber band. Put a cover paper to remind you WHERE you collected this information, WHICH stakeholder group, the DATE.

4. Be sure to take good notes during the discussion (the papers are not enough).

## 1. Project managers

Project managers may have different expertise and different responsibilities. The KII or FGD is an opportunity for you to dig deep on what they have learned in implementing the program. So focus on what they know most about.

1. SCALING is winding down, your experience and reflections on various strategies will help learning and stronger strategies in future. Let's talk about the activities one by one.

Activities:

- a. 1000 day hh visits by volunteers
- b. Nutrition events in the village
- c. Health centre strengthening: training, mentoring, accountability and outreach
- d. Water systems improvement\*
- e. Sanitation systems improvement
- f. Women's workload reduction and leadership workshops (including with husbands)
- g. Lower Secondary School nutrition and reproductive health education
- h. PNC and DNC governance support
- i. BMS monitoring

\*if this community has a water system support from SCALING please probe on

- How decisions about systems and beneficiaries were reached
- How work was divided
- How repairs are managed
- Payment for water

For each activity, please tell me:

- a. How effective do you think it has been? Why? (Probe on reasons).
- b. What made this component easy to implement?
- c. What were the main implementation challenges? (Ask for examples).
- d. Do you think this activity is sustainable? Probe for reasons and assumptions about who will be responsible for the activity after SCALING is over.
- e. What would you recommend doing differently next time?
- f. If xxx [consortium partner] were starting this activity in a new village, what would you suggest they do differently?

2. Let's talk about the consortium.

- a. How did the impact of SCALING benefit from being carried out by a consortium as opposed to an individual agency? (Probe for examples)
- b. What were the biggest challenges to coordination? (Probe for examples)
- c. How was your own work affected—positively and negatively—by being part of a consortium project? (Probe for examples)

## 2. Provincial Health Office

1. What are the main nutritional challenges in your province?

2. What contributions has the SCALING project (xx agency) made to addressing these challenges?
  - a. Probe on awareness of specific strategies and what the PHO thinks about the strategies. In particular Health Systems Strengthening. Assess awareness of SCALING strategies and opinions of impact.
  - b. Which of these strategies will you continue to implement or replicate in other places? Ask for specifics, resourcing.
3. The SCALING project aims to strengthen the capacity of PNCs and DNCs to manage nutrition programming. Over the last 3 years, how has SCALING (xx agency) done that?
  - Probe for examples.
  - What could SCALING have done better?
4. What challenges do PNCs and DNC's face going forward?
  - a. Probe on impacts of COVID and other contextual challenges
  - b. Probe on expectations from INGOs going forward.

### 3. Provincial Nutrition Committee/District Nutrition Committee

Please observe how this committee functions. Does one person dominate? Do members appear comfortable sharing their views with each other? Please make notes about group dynamics.

1. Composition of the committee: number of members, who they represent, gender (include those who attend the FGD and those who are not present—and note which are at the FGD).
2. Ask:
  - a. how often they meet?
  - b. What proportion of members come for each meeting (eg half, more than half, less than half)? Probe on which departments are most active; least active.
  - c. whether there have been SCALING staff in attendance as observers or participants?
  - d. How many members have visited a SCALING site? How often last year?
3. Say: let's start off with a short game. Introduce the sentence completion approach and ask participants to complete the following sentences (discuss each before moving to the next):
  - i. *The main purpose of the Provincial Nutrition Committee [District Nutrition Committee] is.....*

After reading the responses, talk about

- a. how the PNC achieves its purpose
- b. the most important achievements over the last 3 years
- c. how it measures what it is achieving
- d. what the challenges it has faced and
- e. how it has addressed them.

#### 4. SCALING support: Sentence completion

ii. *SCALING [or name of consortium partner in that district] has supported the PNC/DNC to do its work by.....*

After reading the responses, talk about

- a. Some specific examples of support from SCALING, and impact
- b. How SCALING support might have changed over the last few years (especially in light of COVID)?
- c. Sustainability?

- d. What other assistance the PNC needs to do its work?
5. Please mention elements of the SCALING project that you know about or have observed?
  - a. If members are not aware of SCALING components you could mention some and ask members to describe them to verify they are aware. Please note how much you need to probe.
  - b. . Which components do you think are most effective in changing the nutritional status of women and CU5? Why do you think they are effective?
6. Did you work with villages to develop Village Nutrition Plans? Ask about results and challenges of implementation. Ask for examples.  
(please observe and note if any members of the PNC/DNC refer to HMIS or other data in their comments). ~~SCALING survey data~~)
7. Ask DNC: how much interaction do you have with the Provincial Nutrition Committee? Ask about frequency and type of interaction.

#### 4. Lao Women's Union, District

Respondent no doubt is involved in many projects. It's important that she understands you only want to talk about her participation in SCALING (If she has other nutrition-related work in the SCALING district, note that too).

1. Background on respondent: age, education, where she lives, how long with LWU, job?
2. Please describe what kind of activities you have participated in in the SCALING project in xx [district], what kind of training and other support you received like transportation, logistics, supervision etc?
  - a. Women's Workload Reduction
  - b. Women's leadership training
  - c. VSLA
  - d. WASH
  - e. 1000 day hh outreach
  - f. Anything else?

Ask about each of the activities she has been involved in:

  - g. What would you say are the biggest impacts of this activity? (Probe for examples).
  - h. What were the biggest challenges in implementation? How did you solve them?
  - i. Who benefited? (probe on whether it was the better off, poorer hh, more educated, village leaders, male/female etc).
    - Is there anyone who needed these benefits who was not reached?
  - j. The project is finishing soon. Does LWU plan to continue the activity?
    - If yes, probe for how LWU will continue to be involved.
    - If no, do you expect the activity will continue? (Probe for reasons).
3. Are you involved in other development projects? Probe on which and how she is involved.

#### 5. FGD with members of the Village Development Nutrition Committee/Village WASH Committee

We have combined these committees to save time, we are making an assumption that there will be a lot of overlap in membership. Please be sure to cover all of the issues—WASH and non WASH in the FGD. Please also observe how the group functions. Does one person dominate the conversation? Do people feel comfortable expressing different viewpoints? Are women and minority representatives in the group? Do they feel comfortable speaking? Please make notes about this.

1. Get a profile of the committee in terms of age, gender, role in community, work—including govt officials (note those who are present, not present). Also ask which committee they are members of.
2. Over the last three years, what projects have been implemented in this community? (Probe on implementing agency and what issues each project has addressed. This should include but not be limited to SCALING).
3. What are the key development nutrition challenges in this community?
4. Do you have a village nutrition plan for 2020-2024 (a part of the village development plan)?  
If yes:

- a. probe on the content
- b. if available, take legible photos of the Plan.
- c. Ask: how was it developed? Who contributed? Who wrote it?
- d. Why do you think such a plan is necessary?
- e. What activities have you completed or are implementing now?
- f. What support did you receive from the District or SCALING (probe on *who* helped and *how* they helped)?
- g. What kind of help do you expect in implementing the plan?
- h. How will you monitor implementation?

If no:

- a. Are you aware that a village nutrition plan is part of the national program?
- b. Why do you think such a plan is necessary?
- c. If you are aware, what prevented you from moving ahead with the planning?
- d. Did the District or SCALING offer assistance to prepare a plan?

5. Now that SCALING is winding down, your reflections on this project will help xxx [consortium partner] learn and improve. As community leaders, your honest feedback is important.

Let's talk about each of the activities:

- a. 1000 day hh visits by volunteers
- b. Nutrition events in the village
- c. Health centre training, mentoring, community accountability and outreach
- d. Water systems improvement\*
- e. Sanitation systems improvement
- f. Women's workload reduction workshops (including with husbands)
- g. Lower Secondary School nutrition and reproductive health education

\*if this community has a water system support from SCALING please probe on

- How decisions about systems and beneficiaries were reached
- How work was divided
- How repairs are managed
- Payment for water

Probe for examples

For each activity ask:

- What problem did this address?
- How effective do you think it has been? (Probe on reasons). What went well? what could have been done better? Ask for examples.
- Do you expect it to continue in your village? (Probe on how it will continue?)
- If resources are needed, where will they come from? who will be responsible (probe on responsibility of the VDC, district and provincial governments, community members, expectations of external assistance etc. Ask for specifics)?
- If xxx [consortium partner] were doing this in another village, what would you suggest they do differently next time?

Encourage multiple people to speak, and different points of view. You could post these questions and a list of the activities on a flip chart to give the participants a structure to the conversation.

## 6. FGD with VSLAs

This is the only interview with female project “beneficiaries”. So it is very important to cover all of the topics, even if not every member of the VLSA who is present has participated in every activity being discussed.

1. Ask for a history of the group and
  - a. Number of members and profile of membership: age, ethnicity, education.
  - b. When did this group form?
  - c. How did you form this group? How did you select the members?
  - d. Are all the members the same as when you started? (probe for reasons for change)
2. How does the group work? Ask for an explanation of savings, lending and responsibilities of members.
  - a. Probe on amounts.
  - b. Ask about what happens if there is a financial emergency.
3. What kind of support did you receive to help form this group?
  - a. Did SCALING/INGO (name) help form this group? (probe for specific types of help in formation of group)
  - b. Did SCALING/INGO (name) offer other types of help since the group formed? (probe on type, source frequency of support)
4. Has the group received information about nutrition or health?
  - a. Probe on what type of information was received and frequency.
  - b. Who provided information?
  - c. What about written information?
5. Now we are going to play a game. Complete these sentences:
  - i. For me, the best thing about being in this VSLA is.....
  - ii. If I could change one thing about this VSLA it would be.....

6. Now ask: How many members of this group (be sure you verify how villagers talk about each of these activities—use the local words, not project references):

- a. Are Community Facilitators
- b. Have received support from Community Facilitators during and after pregnancy
- c. Have participated in WWR
- d. Have a new latrine or water source

For each item, please record i) total group members; and ii) number of members present in the FGD.

Then say: we are going to talk about some of these activities one by one. Even if you did not participate you probably know someone who did, so your ideas are valuable and welcome. [NB. There are separate FGS for Community Facilitators and WWR participants, so no need to go into more detail about that—just find out whether VSLA members participated].

7. Received support from Community Facilitators. Ask:

- a. How many were visited before their baby was born?
- b. How often volunteers visited?
- c. Finish this sentences:
  - i. *The two most valuable things the volunteer told me were.....*
- d. Talk about changes observed in women's or infant's health as a result. Ask for examples
- e. Talk about how husbands accepted new information.

8. WASH: Ask: where do you get your drinking water? Has the drinking water system changed over the last two years?

If yes, probe on the story of the new water system.

- a. What the community contributed (and who in the community), what district government contributed, project contribution?
- b. Probe on how it is managed now.

If no, probe on whether the need for a new system is there, and what the expectations for getting one are.

- c. Did you purchase a new latrine in the last few years? Why? How did you decide to do this in the family?

9. Health centre : Ask: how many times have you visited the health centre in the last year?

- a. Have services changed? Ask for examples
- b. Have you attended mobile clinics in the last year? Have those services changed? Ask for examples.

## 7. Women's Workload Reduction participants

This should be a small group who have participated in the WWR activity. Ideally please try to interview a group of women *and* a group of men—separately. They don't necessarily have to be from the same village (so you can interview a group of women in one village and a group of men in another if necessary).



1. How many in the FGD did the WWR? How many did the women's leadership training? How many participated with their husbands in the WWR?
2. How did you hear about this opportunity? Why did you decide to join? Did you seek agreement or discuss it with anyone from anyone in your family or friends before you made this decision?
3. Sentence completion (encourage more than one response):

*i. The biggest result of this course has been.....*

Gather some examples and encourage discussion.

4. Would you recommend that others participate in this training? Why? Why not?
5. Do you have any suggestions for how xxx [partner name] and Lao Women's Union might improve this training? Probe for specifics.

## 8. SBCC volunteers

This should be a small FGD with no more than five 1000 days volunteers.

The purpose of this session is to understand what kind of person volunteers to be a SBCC volunteer, what motivates him or her, and to understand her or his challenges.

1. Ask about the volunteers': age, education, current work or study, marital status, number of children.
2. Ask: how did you hear about the opportunity to become a volunteer?
3. Why did you decide to become a volunteer?
4. How long have you been a volunteer?
5. How many women have you helped?
6. What kind of training did you receive? Refresher training?
7. What is the best thing about being a volunteer? Ask for examples.
8. What is the hardest thing about being a volunteer? Ask for examples
9. What are the two most important facts or new practices you have shared with pregnant women or new mothers that has made a difference to their health?
10. What kind of support did you get from the LWU to do your work?
11. What other support would you like in future?
12. Do you plan on continuing to volunteer after the project finishes? Why or why not?
13. Would you suggest other young people become volunteers? Why or why not?

## 9. Health Centre Staff

1. Please describe the types of support you have received from SCALING (xx agency) over the last 3 years?
  - Probe about types of training, mentoring, action planning, outreach support, equipment, data management (let respondent tell you and take detailed notes; don't prompt unless necessary).
2. As a result of this support, what do you see as the most important change in the type and quality of services offered by this HC?
  - Probe for examples, data
3. What is your relationship with the Community Facilitators?
  - Probe on supervision, referral, training. Ask for examples

- Do you see a difference in women coming for Ante natal or post-natal care because of these volunteers? Ask for data if any
4. Last year, did this HC conduct any mobile clinic outreach?
- If yes, ask for numbers of villages reached, who conducted
  - What kinds of services did you provide?
  - What kinds of information was disseminated, if any?
  - What kind of training or other support did SCALING provide for these clinics?
5. Has your clinic participated in the community accountability scorecard initiative? If yes, ask:
- What issues did you rate yourselves high and low on?
  - How did that compare with the community's rating?
  - What changes did you make as a result?
  - How helpful is this initiative? Will you continue it?
6. Be sure you observe the state of the HC? IS it busy? Is it clean? Are there staff in attendance? Are there informational posters or other materials?

### **Lower Secondary School Interviews**

#### **10. LSS peer facilitators**

This should be a KII for one or two LSS youth facilitators. The purpose of this interview is to understand the benefits to the facilitators and what they see as the benefits of the activity to the participants.

1. Ask about the facilitator: age, grade, (also note sex)
2. How were you selected for this role?
3. What kind of training did you get? What kind of materials?
4. How many students attend your sessions, on average? Probe on:
  - gender, age of students who attend
  - regularity of attendance (do most come regularly?)
  - reasons for attendance/nonattendance (probe on reasons and differences b/w m/f attendance and why)
5. Are there other programs like this at your school?
6. Is there a teacher who attends the session? What does he or she do in the session? Probe about teacher role, and how the youth facilitator feels about it: supported or not.
7. Does anyone else attend your session to provide supervision? (Probe for whether they are teachers, head teachers, LWU members, project staff)
8. What topics are the students most interested in?
9. What topics are the students least interested in?
10. What is the best thing about being a facilitator? (Ask for examples)
11. What is the hardest thing about being a facilitator? (Ask for examples)

12. If you could suggest two changes to this program, what would you change?

### 11. Teacher and principal involved with adolescent peer support groups

If they are both available, interview the principal and teacher who work with the adolescent groups under SCALING together. If only one is available, interview them.

1. How long has the SCALING program been going on at your school?
2. What kind of training and materials did you receive to help you launch it?
3. Are sessions held during or after school hours? How often? What happened during COVID?
4. How many students attend on average? Is attendance fairly regular or do students come and go?
5. What type of students attend? (Probe on sex, age, economic status, academic performance, distance from school or any other factor that respondents have observed about kids who attend).
6. Is this a popular program with students? Why or why not? (Probe for reasons)
7. What topics do you feel are most important in the curriculum? Which topics are most popular with students? (Probe for reasons)
8. Have you observed any changes in students' awareness or behaviour as a result of participation in the program?
9. How are peer trainers supported? supervised?
10. Will you continue this program after SCALING ends? (Probe for reasons for continuation or not).
  - a. For those planning to continue ask for more details on how they plan to continue without project support.
11. If you had to change anything about this program, what would it be?

### 12. Students participating in peer support groups

Two FGDs should be held in each LSS—one for girls, one for boys. All participants should be participants in the SCALING LSS peer support group.

1. Ask about age, grade and any other factors you think are important about participants.
2. How long have you participated in the peer support group? Do you attend every session or have you missed some sessions? (probe on reasons)
3. Complete these sentences:
  - i. *The two topics I found most interesting were.....*
  - ii. *It is important that we learn about nutrition because.....*
  - iii. *It is important that we learn about sex and reproductive health because.....*
  - iv. *If I could change one thing about this program it would be.....*

## ANNEX 8 KOBOTOOLBOX QUESTIONNAIRE FOR SCALING STAFF

### Kobotoolbox questionnaire for SCALING staff

For formatting and translation

2021.09.03

Thank you for taking the time to complete this questionnaire. It is an important part of the final evaluation of the SCALING project. Your honest reflections will contribute to learning about what worked and what can be improved in future projects. Your responses are completely confidential and anonymous.

The questionnaire should not take more than 30 minutes of your time.

If you experience any issues in completing this questionnaire please text or call xxxx

1. How long have you worked in the SCALING project? \_\_\_\_

2. Which consortium partner do you work for?

\_\_SCI

\_\_CCL

\_\_CARE

\_\_CCF

3. What is your role in the project

\_\_National manager

\_\_National technical (including MEAL)

\_\_Provincial technical

\_\_Village based

4. How long have you worked in SCALING? \_\_\_\_

5. Each of the project's main activities is listed below. Please rate each in terms of whether you think it

- a. Achieved its intended purpose (impact)
- b. Reached vulnerable households (inclusion)
- c. Will continue after the project finishes (sustainability)
- d. Resulted in any unintended, or unexpected negative outcomes

After rating each activity, there is space to explain your answers.

If you don't know enough about the activity, please tick the box at the end of that section and continue.

- FORMATTING: for each of the activities 1)-9) is identical (ie repeat a.-d).
- IF COMPLETION OF EACH SECTION CAN BE "REQUIRED" THAT WOULD BE GOOD.

### 1) SBCC: 1000 day hh volunteer program

a. Achieved its intended purpose (*impact*)

|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|  
1        2        3        4        5  
No        Somewhat    Yes

b. Reached vulnerable households

|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|  
1        2        3        4        5  
No        Somewhat    Yes

c. Will continue after the project finishes (sustainability)

|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|\_\_\_\_\_|  
1        2        3        4        5  
Unlikely   Somewhat        Very  
likely    likely

d. Resulted in any unintended, or unexpected negative outcomes

\_\_\_Yes \_\_\_No

Please explain your answers. [Expandable text box]

\_\_\_I don't know enough about this activity to comment

**2) Nutrition events in villages**

**3) Health centre strengthening**

**4) Water systems**

**5) WASH Marketing**

**6) Latrines**

**7) Women's Workload Reduction**

**8) Lower Secondary School peer engagement**

**9) PNC/DNC governance**

## 10) BMS monitoring

6. This section is about SCALING collaboration and synergies with NUSAP.

a. Have you worked in a district where NUSAP was active at any point in the SCALING implementation? ☐y; ☐n; ☐not sure [if n or not sure, skip to 5.]

b. In your view, how did the day to day collaboration between the two projects work?

☐ ☐ ☐ ☐ ☐

1 2 3 4 5

Collaboration: None Some Extensive

Please explain. Text box for open ended response

c. In the villages where both SCALING and NUSAP were active, did you observe any positive synergies in terms of early impacts on nutrition or other outcomes?

☐yes; ☐no

If yes, please describe. Text box for open ended response

5. This section is about the SCALING consortium.

Please complete these sentences in your own words....[TEXT BOXES after each item]

a. The consortium approach improved project effectiveness because.....

b. The biggest challenges to implementation as a consortium were...

c. I personally benefited from being part of a consortium by.....

d. My biggest challenge participating in the consortium was.....

Thank you for your responses. Please press HERE to send this.

End