

## Final Report Cover Sheet

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| <b>Name of document</b>  | Final Project Evaluation   |
| <b>Full title</b>  | Final Project Evaluation<br>Northern Uplands - Promoting Climate Resilience<br>Mai, Samphan, and Ngot Ou Districts, Phongsaly, Laos<br>CARE International, Laos  |
| <b>Acronym/PN</b>  | NU-PCR / DCI-ENV/2014/303-318  |
| <b>Country</b>   | Laos   |
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| <b>Evaluator(s)</b>  | Rick Krenzer   |
| <b>External?</b>   | Yes  |
| <b>Donor(s)</b>  | European Union, CARE Denmark, and OXFAM (OHK)  |
| <b>Scope</b>   | Project  |
| <b>Type of report</b>  | Final Project Evaluation   |
| <b>Brief abstract (description of project)</b>   | NU-PCR is a climate change adaptation project implemented in three districts -- Mai, Samphan, and Ngot Ou -- in Phongsaly, Laos. It has a budget of 2,152,800 €. The project is being implemented by CARE International in Lao PDR as the lead agency together with the partner organisations CCL and SAEDA. NU-PCR worked in 30 villages with 1,778 households and 9,562 direct beneficiaries. The project is designed to improve the resilience of local ethnic communities in Phongsaly Province to the impacts of climate change and to strengthen the capacity of government authorities and villagers.   |
| <b>Program (higher-level) Goal (to which the project contributes)</b>                  | NU-PCR is a project within the REW (Rural Ethnic Women) program in CARE Laos. The impact goal is: remote ethnic women - who are land poor, have the highest food insecurity and lowest nutrition and health status have and can maintain an equitable quality of life.   |
| <b>Project Purpose / Goal/ Specific Objective (for which project is accountable)</b>   | The overall objective of the project is to enable improved resilience of remote ethnic upland communities, in particular women, to the impact of climate variability and change, and contribute to the achievement of MDGs 1. poverty reduction, 3. gender equality, and 7. environmental sustainability.  |
| <b>Objectives / ERs (more specific outputs/ outcomes)</b>                              | The specific objective is that remote ethnic women, their families and communities have increased their adaptive capacity with the support of capable local authorities and the application of sustainable adaptation models.<br>Expected result 1: Improved capacity of local stakeholders to assess, plan, and implement CBA in a participatory and gender sensitive manner<br>Expected result 2: Improved community resilience through the implementation of CCA and DRR pilot interventions that benefit women in particular<br>Expected result 3: Comprehensive documentation informs mainstreaming and an enabling CCA/DRR policy environment for the Northern Uplands |
| <b>Evaluation Methodology</b>  | The evaluation determined the project's success in implementing activities and in attaining the project's goals and expected results. The evaluation included a review of relevant documents and participant interviews. Interviews were conducted with district government officials, project staff, and target community members to examine the impacts of the project. Interviewees provided their perceptions of the project's strengths, weaknesses, and impacts.   |
| <b>Summary of lessons learned (evaluation findings of interest to other audiences)</b> | The high degree of villager acceptance and adoption of various project activities validates the project's achievement and sustainability. CARE's and CCL's long-term commitment and extensive experience implementing development projects in Phongsaly is a principal reason for the success of the project. Project staff have developed the trust of communities required to motivate villagers to engage in new activities. The project's success can be directly attributed to the commitment, motivation, competence, and skill of project management and field staff.   |
| <b>Contribution to MDG(s)?</b>   | 1a: Income, 1b: Hunger, 3: Women's Empowerment, 7a: Environmental sustainability   |
| <b>Comments</b>  | The project should be extended to a second phase to build on the successes of NU-PCR and to further advance CARE's support to rural ethnic women. The continuation of the project would take advantage of existing capacity within CARE and CCL provincial offices. A second phase would allow for scaling up of successful interventions and extending into additional villages.  |



## Final Project Evaluation

Northern Uplands - Promoting Climate Resilience  
Mai, Samphan, and Ngot Ou Districts, Phongsaly, Laos  
CARE International, Laos



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8 May 2018

## **Disclaimer**

This report has been prepared at the request of CARE International, Laos. The opinions and interpretations expressed within are those of the author and do not necessarily reflect the views of CARE International in Lao PDR.

## Summary

The *Northern Uplands - Promoting Climate Resilience* (NU-PCR) is implemented by CARE International in Lao PDR in partnership with the Comité de Coopération avec le Laos (CCL) and the Sustainable Agriculture and Environment Development Association (SAEDA). The project, funded by the European Union (EU), CARE Denmark, and OXFAM (OHK), is designed to improve the resilience of local ethnic communities in Phongsaly to the impacts of climate change and to strengthen the capacity of government authorities and local ethnic communities. The objective of the project is *to enable improved resilience of remote ethnic upland communities, in particular women, to the impact of climate variability and change, and contribute to the achievement of MDGs 1, 3, and 7*. The purpose of the evaluation was to determine the project's success in implementing activities and in attaining the project's goals and expected results.

NU-PCR has implemented a wide variety of activities to increase the resilience of ethnic communities to climate change and climate variability. The project has been successful in achieving its objectives and expected results. Improvements in households' resilience to climate change have been validated from results of the end-line study in comparison to baseline values. Project support for cardamom and tea production; intercropping galangal, pineapple, and fruit trees; piloting rattan, bee keeping, and soybeans; vegetable gardening; improved rice production; mushroom production; fishponds; and support to women's savings and loans groups has resulted in reducing the impact of climatic hazards and improving villagers' incomes.

Villagers are pleased with the opportunities provided by the project and are adopting new climate change adaptation practices promoted by the project. Villagers expressed satisfaction with trainings conducted by the project; skills and understanding acquired through training are being put into practice. Activities implemented in villages are sustainable because villagers can readily see improvements and the potential for improvement in their lives by adopting project interventions. The benefits of the project will continue after the project ends.

Men's attitudes and behaviour toward women have changed dramatically because of gender training and their understanding that in order to move out of poverty men and women must work together. Men now realize that women can make valuable contributions as decision-makers in the family and community. Project staff have helped women to increase their self-esteem and confidence. Both men's and women's attitudinal and behavioural changes are permanent and will most likely evolve into greater empowerment of women.

The high degree of acceptance and adoption by villagers of the various climate change adaptation options demonstrates the project's achievement and sustainability. Villagers will continue to be positively impacted into the future from their participation in project supported interventions. CARE's and CCL's long-term commitment and extensive experience implementing development projects in Phongsaly combined with SAEDA's proven training expertise are the primary reasons for the success of the project.

The project should be extended to a second phase to build on the successes of NU-PCR and to further advance CARE's support to rural ethnic women. The continuation of the project would take advantage of existing capacity within CARE and CCL provincial offices. A second phase would allow for: 1. further monitoring of activities, 2. scaling up of successful interventions, and 3. extending into additional villages. The success of NU-PCR in creating sustainable improvements in villagers' lives can be accredited to the dedication and capacity of the project's managers and staff. Project staff have developed the trust of communities required to motivate villagers to engage in new activities.

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## List of Acronyms

|        |   |
|--------|---|
| ACIS   | Agro-climate Information Systems  |
| AFC    | Agriculture and Forestry Conservation   |
| CAMKID | Community Association for Mobilizing Knowledge in Development   |
| CBA    | Community Based Adaptation  |
| CBO    | Community Based Organisations   |
| CCA    | Climate Change Adaptation   |
| CCL    | Comité de Coopération avec le Laos  |
| CVCA   | Climate Vulnerability and Capacity Analysis   |
| DAFO   | District Agriculture and Forestry Office  |
| DIMC   | District Implementation and Monitoring Committee  |
| DONRE  | District Natural Resources and Environment  |
| DHO    | District Health Office  |
| DPCO   | District Planning and Cooperation Office  |
| DRR    | Disaster Risk Reduction   |
| DTCP   | District Transportation Communications and Post   |
| EU     | European Union  |
| FAO    | Food and Agricultural Organization  |
| ha     | Hectare   |
| IEC    | Information, Education, and Communication   |
| IRCAF  | International Research Centre for Agriculture and Forestry  |
| LBA    | Lao Biodiversity Association  |
| LWU    | Lao Women's Union   |
| MDGs   | Millennium Development Goals  |
| MAF    | Ministry of Agriculture and Forestry  |
| MOE    | Ministry of Education   |
| MOFA   | Ministry of Foreign Affairs   |
| MOU    | Memorandum of Understanding   |
| MONRE  | Ministry of Natural Resources and Environment   |
| NAFRI  | National Agriculture and Forestry Research Institute  |
| NU-PCR | Northern Uplands - Promoting Climate Resilience   |
| PAFO   | Provincial Agriculture and Forestry Office  |
| PONRE  | Provincial Natural Resources and Environment  |
| PSC    | Provincial Steering Committee   |
| SAEDA  | Sustainable Agriculture and Environment Development Association   |
| SUPA   | Scaling Up convergent Programme Approaches to improve food and nutrition security in the northern uplands |
| VSLG   | Village Savings and Loans Group   |
| VVW    | Village Veterinary Worker   |

## 1. Project overview

The *Northern Uplands - Promoting Climate Resilience* (NU-PCR) project is being implemented by CARE International in Lao PDR as the lead agency together with the Comité de Coopération avec le Laos (CCL) and the Sustainable Agriculture and Environment Development Association (SAEDA). The project is funded by the European Union (EU), CARE Denmark, and OXFAM (OHK). NU-PCR is designed to improve the resilience of local ethnic communities in Phongsaly to the impacts of climate change and to strengthen the capacity of government authorities and local ethnic communities. The overall objective of the project is *to enable improved resilience of remote ethnic upland communities, in particular women, to the impact of climate variability and change, and contribute to the achievement of MDGs 1, 3, and 7*. NU-PCR began operations in March 2014 and completed field activities in March 2018.

Project activities were conducted in 30 upland communities in Phongsaly targeting 1,778 households (Table 1) which included, 10 previous CARE project villages in Mai, 10 previous CARE project villages in Samphan, and 10 previous CCL project villages in Ngot Ou (refer to *Appendix 1: Map of NU-PCR Target Districts*).

Table 1. Target village data

| District | Villages | Households | Population | Women |
|----------|----------|------------|------------|-------|
| Mai      | 10       | 457        | 2,696      | 1,340 |
| Samphan  | 10       | 638        | 3,907      | 1,764 |
| Ngot Ou  | 10       | 683        | 2,959      | 1,442 |
| Total    | 30       | 1,778      | 9,562      | 4,546 |

Target villagers belong to a diverse array of ethnic groups, including Khamu, Akha, Kheu, Yao, Thai Dam, Thai Daeng, Leu, Ho, and Lolo. All ethnic communities engage in upland subsistence farming characterized by the cultivation of rain-fed upland rice, vegetables grown on swidden land, hunting, gathering, free-range grazing of livestock, and most recently, cardamom, galangal, and tea production. Some families farm paddy rice. Villages typically experience high levels of poverty and food insecurity and must now adjust their farming practices to cope with climate change and climate variability.

Phongsaly borders Vietnam to the east and China to the north and west. Traditionally, villagers have had limited engagement in a cash economy with the exception of opium poppy cultivation, which had been a major source of income for some ethnic groups. Throughout most of Phongsaly opium poppy cultivation has been significantly reduced and in some areas eradicated. Over the past decade, Chinese and Vietnamese traders as well as local Lao traders are increasingly coming to Phongsaly to purchase tea, cardamom, galangal, and NTFP from villagers. Improved access to the province and remote villages is creating expanded market opportunities for Phongsaly residents. In addition, the Chinese with cooperation from the Lao Government are promoting coffee, rubber, maize, and mono-cropped chemical dependent vegetable production.

Farmers in Phongsaly, as well as throughout Laos, are experiencing climate change and climate variability which negatively impacts their traditional farming systems. Formerly, Phongsaly farmers were able to plan agricultural activities around the timing of a relatively reliable wet and pronounced dry season. During the project's Climate Vulnerability and Capacity Assessment (CVCA) activity, farmers explained that the start and end of the rainy season no longer follows the pattern of beginning in April and ending in October. Rain now occurs during the dry season and the beginning and end of the rainy season can no longer be predicted. Additionally, the intensity of rainfall accompanied by strong winds during storms is increasingly damaging to agricultural production. Periods of drought are occurring

during the rainy season. Erratic temperature patterns with more severe cold and hot spells further negatively impacts farmers' agricultural systems.

The project's specific objective is that *remote ethnic women, their families and communities have increased their adaptive capacity with the support of capable local authorities and the application of sustainable adaptation models*. The project aims at developing the capacity of villagers and government officials by supporting a range of training opportunities and intervention activities. Project objectives are intended to be achieved through a variety of activities, including: cardamom production and drying; tea production and drying; intercropping galangal, pineapple, and fruit trees; piloting rattan cultivation, bee keeping, and soybeans; vegetable gardening; improved rice production by expanding paddy rice terraces, improved rice seed, and Sustainable Rice Systems (SRS) cultivation methods; mushroom production; fishponds; improved livestock health practises; timing agricultural activities around weather forecasts; and support to women's savings and loans groups. These activities are linked to the following expected results:

*Expected result 1: Improved capacity of local stakeholders to assess, plan, and implement CBA in a participatory and gender sensitive manner*

*Expected result 2: Improved community resilience through the implementation of CCA and DRR pilot interventions that benefit women in particular*

*Expected result 3: Comprehensive documentation informs mainstreaming and an enabling CCA/DRR policy environment for the Northern Uplands*

At the national level, the oversight agencies for the project are the Ministry of Foreign Affairs (MOFA), Ministry of Natural Resources and Environment (MONRE), and Ministry of Agriculture and Forestry (MAF). The Phongsaly Provincial Natural Resources and Environment office (PONRE) is the project's main partner and serves as the coordinating office between the project, provincial, and district government offices. Project activities focusing on climate change adaption are implemented in partnership with District Natural Resources and Environment (DONRE), District Agriculture and Forestry Office (DAFO), and the Lao Women's Union (LWU).

The project is co-funded by the European Union which contributed 1,600,000 € (74.32% of total funding) together with CARE Denmark and OXFAM (OHK) contributing 552,800 € to project funding. The total budget for the project is 2,152,800 €<sup>1</sup>.

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<sup>1</sup> The EURO exchange rate fluctuated at approximately 1 € = 10,100 Lao kip during project implementation

## **2. Evaluation methodology**

### **2.1 Overview**

The final project evaluation assessed the extent in which the *Northern Uplands - Promoting Climate Resilience* (NU-PCR) project has attained its overall objective *to enable improved resilience of remote ethnic upland communities, in particular women, to the impact of climate variability and change, and contribute to the achievement of MDGs 1, 3, and 7*. The evaluation examined the success the project has had in implementing activities to enhance the resilience of farmers to the impacts of climate change in 30 ethnic communities located in three districts in Phongsaly, Laos (Mai, Samphan, and Ngot Ou). The evaluation examined the degree in which the project's specific objective, expected results, and corresponding log frame indicators have been achieved.

Field research generated both qualitative and quantitative data to measure impacts from the project with a particular interest on changes in gender relations. Research in villages focused on assessing activities to improve the long-term resilience of remote ethnic women, their families, and communities to climate variability. The evaluation drew on qualitative and quantitative data developed during the baseline study, mid-term review, and end-line study.

The evaluation determined the success the project has had in strengthening the capacity of project staff, government authorities, and villagers to address climate change issues. Project implementers and beneficiaries provided their perceptions of the project's strengths, weaknesses, and impacts. The evaluation assessed the project's achievements and impacts from the perspective of district government officials (DONRE, DAFO, and LWU), CARE management and project staff, CCL management and project staff, SAEDA staff, and target villagers.

### **2.2 Evaluation objective**

The objective of the evaluation was to assess the project's achievements against the project logical framework based on the following criteria:

- relevance - the extent to which the project suited the priorities and policies of the target groups
- effectiveness - the extent to which the project results and the project specific objective were achieved
- efficiency - the extent to which the project was managed to get value for money from inputs of funds, staff, and other resources
- impact (higher level changes) - the positive and negative changes produced by the project, directly or indirectly, intended or unintended, for women and men and for the most vulnerable
- sustainability - to assess whether the benefits of the project are likely to continue after the project ends.

In addition, the evaluation:

1. assessed monitoring and learning - the effectiveness of project monitoring and learning processes;
2. assessed the specific management arrangements, such as staffing structure, quality of partnership arrangements, and technical assistance provided;
3. assessed contributions to women's empowerment, with reference to specific domains of change (agency, relationship, structure); and
4. identified lessons learned and recommendations to improve future programming.

## 2.3 Evaluation process

### Desk review

A desk review was conducted prior to beginning the field research. Documents reviewed included: project document (proposal), interim narrative reports (years 1, 2, and 3), baseline and end-line surveys, mid-term evaluation report, CARE Laos' gender strategy, logical framework, Results Oriented Monitoring Report, Climate Vulnerability and Capacity Assessment (CVCA) tools and report, budget and annual expenditure reports, activity monitoring and progress reports, training reports and participant lists, and other relevant project documentation (refer to *Appendix 2: Literature reviewed*).

### Interview procedure

The primary instrument for the evaluation was individual and small group semi-structured interviews. Interviews were conducted to assess the project's impact from the perspectives of:

1. CARE project management and field staff;
2. CCL project management and field staff;
3. SAEDA field staff;
4. government partners - district officials from participating government agencies (DONRE, DAFO, and LWU);
5. village leaders;
6. male members of village farmer groups; and
7. female members of village farmer groups, including women from village savings and loans groups (VSLG) and LWU representative.

(refer to *Appendix 3: Evaluation timetable*)

Project management and field staff provided background information on project activities, trainings, and intervention results (Table 2). Government partners provided input on the effects the project has had on improving their capacity and skills in planning and implementing climate resilient activities in villages (Table 3). Interviews conducted with villagers provided an indication of how the project has impacted their lives and enhanced the resilience of their communities to the impacts of climate variability and change (Table 4).

Table 2. Project staff interviewed

| Date     | District  | Name                       | Position                     | Organization | With project |
|----------|-----------|----------------------------|------------------------------|--------------|--------------|
| 10 March | Khua      | Mr Thipphavanh Malaithong  | Provincial Programme Manager | CARE         | 1.5 years    |
| 12 March | Mai       | Ms Phonekham Soukkaserm    | Technical Field Advisor      | CARE         | 3+ years     |
| 15 March | Samphan   | Mr Sonexay Soulikhone      | Technical Field Advisor      | CARE         | 3+ years     |
| 16 March | Khua      | Mr Kemnakhone Xayyabouapha | Project Manager              | CARE         | 3+ years     |
| 21 March | Ngot Ou   | Ms Bouaphone Vongkhamson   | Field Coordinator            | CCL          | 3+ years     |
| 21 March | Ngot Ou   | Mr Monlack Phongdara       | Project Coordinator          | CCL          | 3+ years     |
| 2 April  | Vientiane | Mr Robin Aus Der Beek      | Program Coordinator          | CARE         | 3+ years     |
| 3 April  | Vientiane | Mr Anthony Gueguen         | Project Advisor              | CCL          | 3+ years     |
| 3 April  | Vientiane | Mr Bounlap Pathilath       | Program Officer              | SAEDA        | 3+ years     |
| 3 April  | Vientiane | Mr Chaykeo Bounphengphanh  | Program Assistant            | SAEDA        | 2 years      |

Table 3. Government partner staff interviewed

| Date     | District | Name                        | Position                 | Organization | With project |
|----------|----------|-----------------------------|--------------------------|--------------|--------------|
| 12 March | Mai      | Mr Somphet Soudsada         | Agricultural Officer     | DAFO         | 4 months     |
| 12 March | Mai      | Mr Phila Khemdandith        | Land Resource Officer    | DONRE        | 2+ years     |
| 14 March | Mai      | Ms Bouavanh Sounthonevichit | Vice Director            | LWU          | 1.5 years    |
| 16 March | Samphan  | Mr Somphone Laosoung        | Livestock Officer        | DAFO         | 6 months     |
| 16 March | Samphan  | Mr Vannasone Nouxaphone     | Weather Officer          | DONRE        | 1 year       |
| 16 March | Samphan  | Ms Phouangmala Souksa       | Vice Director            | LWU          | 3+ years     |
| 21 March | Ngot Ou  | Mr Somsouk Soudavone        | Land Protection Officer  | DAFO         | 3+ years     |
| 21 March | Ngot Ou  | Ms Bouasamone Aly           | Environmental Management | DONRE        | 2 years      |

Table 4. Villages interviews conducted

|                | Ethnic group | Households | Population | Women | Distance to field office | Travel time |
|----------------|--------------|------------|------------|-------|--------------------------|-------------|
| <b>Mai</b>     |              |            |            |       |                          |             |
| Naboua         | Tai Dang     | 86         | 430        | 245   | 35 km                    | 1 hour      |
| Mokchala       | Khamu        | 48         | 256        | 124   | 10 km                    | 20 min      |
| <b>Samphan</b> |              |            |            |       |                          |             |
| Namloy         | Khamu        | 58         | 334        | 167   | 8 km                     | 30 min      |
| Laoleo         | Akha         | 156        | 1007       | 462   | 16 km                    | 1 hour      |
| <b>Ngot Ou</b> |              |            |            |       |                          |             |
| Chomphor       | Kheu         | 63         | 273        | 139   | 5 km                     | 10 min      |
| Tungkualin Noy | Yao/Kheu     | 30         | 157        | 80    | 9 km                     | 30 min      |

All three project districts were involved in the evaluation (Mai, Samphan, and Ngot Ou). After reviewing village profiles, villages were selected which varied in: 1. size (small and large), 2. distance to the field office (near and far), and 3. ethnic group composition. Villages which had been included in the baseline and end-line studies were not selected as part of the sample.

In each district, one day was spent meeting with project field staff and district government counterparts. Two days were spent interviewing villagers in two villages per district and observing project implemented activities. Nai Bans selected five female and five male farmer group members from 'very poor' households and five female and five male farmer group members from 'average poor' households to participate in the separate men's and women's sessions. Ten women and ten men from different households participated in the two focus group discussions, including the male and female heads of the farmer groups. The women's group included VSLG management, LWU village representatives, and women from female-headed households. Visits to activity sites were conducted with women.

#### Implementer interview questions

Interview questions were prepared in advance and translated into Lao language and distributed to project staff and government partners to serve as launching points for discussing individuals' experience with the project (refer to *Appendix 4: Implementer interview questions*). Interview questions focused on ascertaining information relevant to particular interviewees' involvement with the project.

#### Implementer survey questionnaire

In addition to the interviews, six project staff and seven government staff completed an anonymous questionnaire assessing selected project activities (refer to *Appendix 5: Implementer survey questionnaire*). The questionnaire asked respondents for suggestions on how particular project activities could be improved and to rate these activities using the following criteria:

- 3 = Very successful – this activity has had a significant impact on improving villagers' lives
- 2 = Moderately successful – this activity has had a medium impact on improving villagers' lives
- 1 = A little successful – this activity has had a small impact on improving villagers' lives
- 0 = Not successful – this activity has not improved villagers' lives
- NF = Not familiar – I am not familiar with the impact of this activity

#### Villager interview questions

Interviews were conducted with villagers to get an indication of how the project has impacted their lives and communities. Interviewing questions were designed to collect information and draw out issues that the villagers felt were critical from their perspective. Questioning and emphasis on specific issues were adjusted depending on the particular group of interviewees' responses. Questioning included how the project has addressed the needs and challenges of women and the poorest families. In general, both men's and women's groups were asked to provide information on the following:

1. how their lives have changed from before until now after the project;
2. the most important (successful) activities of the project;
3. their perception of their involvement in the project;
4. their assessment of the project's impact on their lives;
5. the project strengths and weaknesses; and
6. opportunities and suggestions for future interventions.

## **2.4 Evaluation debriefing**

An evaluation debriefing meeting was conducted on 29 March 2018 after completing the field research with representatives from MOFA, MONRE, and MAF from Vientiane, POFA, PONRE, PAFO, and LWU from Phongsaly, and DONRE, DAFO, and LWU from all three project districts. The purpose of the debriefing was to present research findings and solicit comments on issues identified during the evaluation. A separate debriefing was held with Mr Ignacio Oliver-Cruz, Attaché Cooperation, from the Delegation of the European Union to Lao PDR on 3 April 2018.

## **2.5 Findings and analysis**

Information gleaned from the interviews has been expounded on within the evaluation findings and analysis. Responses from interviewees were synthesized to provide a comprehensive understanding of the project's progress, strengths, and weaknesses in relation to enhancing the resilience of farmers to the impacts of climate variability and change. Analysis and discussion of interviewee responses provides a rationale for lessons learned and recommendations. The evaluation report conforms to the evaluation framework as outlined in the consultancy terms of reference (refer to *Appendix 6: Terms of reference*), including the following topics:

1. relevance
2. effectiveness
3. efficiency
4. impact and achievement
5. sustainability.

## **2.5 Limitations**

Obtaining correct information from villagers is sometimes skewed by respondents replying to questions with answers they believe the interviewers would like to hear. All attempts were made to overcome this potential constraint by promoting a conducive atmosphere during interviews and emphasizing the objective nature of the review. Responses which appeared unsupported were followed up with casual further inquisition. In most cases, detailed questioning resulted in obtaining accurate information. Apparent unsubstantiated information was discarded.

Interviews with district counterparts and men's groups were translated from English to Lao and vice versa. A number of women interviewed only speak their local dialect. Interviews with these women were translated from English to Lao to the local dialect and vice versa. Interview sessions with both groups typically lasted for two or three hours. This provided an adequate amount of time to re-question and seek further clarification. Although some details may have been lost or misinterpreted during translation, the extended time spent with interviewees helped to minimize inaccuracies in obtaining accurate information.

## **2.6 Evaluation team**

The final project evaluation was led by an independent international consultant and assisted by two Lao interpreters (one female, one male).

### 3. Findings and analysis

#### 3.1 Relevance, effectiveness, and efficiency

##### Relevance

The project is highly relevant due to the need for ethnic communities living in remote mountainous environments to have coping strategies which address climate change and climate variability. Worldwide farmers are required to adjust their agricultural practices to deal with changes in climate brought on by increased CO<sup>2</sup> emissions and other greenhouse gases which contribute to global climate change -- Laos is no exception. Changes in climate are apparent throughout Laos. The start of the rainy season has shifted from starting as much as a month earlier or a month later than in previous decades. Concurrently, the end of the rainy season may vary by more than a month from traditional patterns. Periods of drought are occurring during the rainy season as well as rains during the dry season. Extremes in temperatures both cold and hot have reached record levels during the past decade. Increased rainfall and temperate variability are major impediments to the sustainability of agricultural production and increases the vulnerability of the farming families.

The project's objectives and activities are relevant at the national, district, and village level and suited to the priorities and policies of the Lao Government. NU-PCR contributes to the government's objective of reducing the number of 'priority poor' districts in the Northern provinces through the project's goal of increasing communities' resilience to climate variability and change by promoting livelihood diversification and income generation activities. The project's activities complement the government's objectives of poverty reduction, overcoming food insecurity, developing cash cropping opportunities, and strengthening commodity markets. The project is supporting the Lao Government in meeting MDG 1, 3, and 7 by implementing a variety of interventions which contribute to: MDG 1 - overcoming conditions of poverty, MDG 3 - empowering women, and MDG 7 - environmental sustainability from reducing slash-and-burn agriculture by promoting permanent forms of agricultural production.

The project is closely linked to the government's *Action Plan on Climate Change for 2013-2020*, particularly the initiatives on: 1. strengthening institutional and human resource capacities on climate change and 2. enhancement of adaptive capability for coping with climate change. The project has made a substantial contribution by training both district staff and villagers. The project's design and approach are relevant by providing numerous climate change adaptation options, which address villagers' needs. Information from both district authorities and villagers confirms that the project is having a positive impact on improving living conditions in target villages. Villagers explicitly identified significant improvements in their lives from the many activities promoted in their villages.

##### Effectiveness

The project has excelled in: 1. empowering women, 2. strengthening farmer groups, and 3. promoting high-value income generating crops (cardamom and tea). Gender training combined with establishing women's savings and loans groups have significantly improved women's voice in household and community decision-making, women's confidence, and women's status in the community. The project's design emphasises women's empowerment through both changing traditional attitudes of men toward women and by making women the leaders and decision makers in savings and loans groups. Both men and women concurred that women's status in the family and community has improved because of knowledge acquired from participation in gender training activities.

Collectively selling cardamom, tea, and NTFP has increased the income of villagers. Project interventions in cardamom and tea production; intercropping galangal, pineapple, and fruit trees; vegetable gardening; improved rice production; fishponds; and support to women's

VSLG are countering conditions of food insecurity, lack of income opportunities, and women’s inequality. These outcomes will be discussed in detail in the sections *Impact and achievement, Sustainability, and Women’s empowerment*.

The specific objective of the project is that *remote ethnic women, their families and communities have increased their adaptive capacity with the support of capable local authorities and the application of sustainable adaptation models*. The project has been successful in achieving the specific objective indicator -- *agroforestry systems including domesticated NTFP in plots allocated to at least 1,500 farming households are widely accepted and viable options in the upland landscape by year 4*.

Table 5. Indicator: Specific objective

| Households successfully implementing adaptation options | No of households |
|---|------------------|
| Cardamom  | 1,347            |
| Tea   | 358              |
| Paddy rice terraces                                     | 181              |
| Fruit trees   | 718              |
| Galangal  | 363              |
| Rattan  | 30               |
| Total   | 2,997            |

There is an overlap of households which have been involved in more than one of the six interventions identified above (Table 5). Only villagers in Ngot Ou (359 HH) are growing tea. It may be assumed that the target of 1,500 farming households implementing climate change adaptation options has been reached particularly since 1,347 are involved in cardamom production and the total number of households that are implementing adaptation options is almost 3,000. All villagers interviewed said that because of project interventions they are able to earn more money from crops promoted by the project than from their former income sources of selling NTFP, rice, and livestock.

### Efficiency

CARE is the lead agency implementing the project together with CCL and SAEDA. CARE is operating the project in Mai and Samphan districts and CCL in Ngot Ou district. Both NGOs have been working in Phongsaly province for more than 10 years. They have established productive working relationships with provincial and district government officials. Their long-term presence in the province make them acutely aware of conditions faced by villagers. This experience has facilitated efficient project implementation in villages.

SAEDA, a Lao NPA, provided technical training to CARE, CCL, and government staff on agricultural production techniques, setting up farmer groups, leadership training, negotiation skills, pesticide training, livestock health, and sustainable rice systems. Government staff from DONRE, DAFO, and LWU participated in trainings and joined project staff in the field, thereby increasing their capacity and increasing the quality of their work. Members from all four agencies (CARE, CCL, SAEDA, and government) reported that they have a positive and constructive working relationship.

Implementing the four-year project was delayed by 10 months due to complications in signing the Memorandum of Understanding (MOU). Certain activities planned, such as conducting the CVCA and baseline, in addition to starting climate change adaptation activities in villages were delayed. Beginning operations in December 2014 resulted in having 2.5 dry seasons for implementing climate change adaptation options. The project spent the lost time in the field training staff to conduct the CVCA, preparing climate change adaptation materials, and translating training material into Lao language. The quality of preliminary activities partly compensates for the loss in time waiting for MOU approval. Project staff made significant progress in implementing activities under tight time constraints.

A full audit is planned after financial closure of the project. A cursory review of project budgeting revealed that the project has been well managed in acquiring high value for money spent on inputs, staff, and other resources. Project expenditures are consistent with the price of materials and services available in Laos. Staff salaries and per diem are comparable to staffing costs common in Lao NGOs. Overall, project resources have been allocated efficiently.

### 3.2 Impact and achievement

Assessment of the extent in which the project's expected results and corresponding log frame indicators have been achieved is based on the impact of project interventions. Log frame indicators developed during the baseline study are presented with the results from the end-line study. Each of the project activities are described under its corresponding expected result.

Six project staff and seven government staff completed an assessment questionnaire, which asked respondents for suggestions on how selected project activities could be improved and to rate activities using the following criteria:

- 3 = Very successful - this activity has had a significant impact on improving villagers' lives
- 2 = Moderately successful - this activity has had a medium impact on improving villagers' lives
- 1 = A little successful - this activity has had a small impact on improving villagers' lives
- 0 = Not successful - this activity has not improved villagers' lives
- NF = Not familiar - I am not familiar with the impact of this activity

Ratings from the questionnaire are presented with each activity assessed by project and government staff. The following reviews the success of activities in accomplishing the project's expected results.

#### 3.2.1 Expected result 1

Improved capacity of local stakeholders to assess, plan, and implement CBA in a participatory and gender sensitive manner

##### Indicator: Expected result 1.1

Thirty farmer organizations are set up at village level and farmers benefit from them by receiving higher prices on cash crops as compared to individual selling

Table 6. Indicator ER 1.1

|   | Baseline value<br>March 2016       | Target (+ 25% of<br>baseline value ) | End-line value<br>March 2018 | Assessment |
|---|------------------------------------|--------------------------------------|------------------------------|------------|
| Functioning of groups: increase in scoring on the CBO assessment tool       | 37.3%                              | 46.6%                                | 56.1%                        | Achieved   |
| Receiving higher prices where groups sell together compared to individually | <b>Average price sold (kip/kg)</b> |                                      |                              |            |
| <b>Product</b>  | <b>Individually</b>                | <b>Farmer's group</b>                |                              |            |
| Cardamom  | 250-300,000                        | 350-400,000                          |                              | Achieved   |
| Galangal flower   | 15-20,000                          | 25-30,000                            |                              | Achieved   |
| Benzoin   | 120-140,000                        | 150-180,000                          |                              | Achieved   |
| NTFP tuber  | 12-15,000                          | 15-18,000                            |                              | Achieved   |

**Indicator: Expected result 1.2**

At least 25% increase of farmers receiving agro-advice from farmer groups

Table 7. Indicator ER 1.2

|  | <b>Baseline value<br/>March 2016</b> | <b>Target (+ 25% of<br/>baseline value )</b> | <b>End-line value<br/>March 2018</b> | <b>Assessment</b> |
|--|--------------------------------------|--|--------------------------------------|-------------------|
| Number of M/F farmers stating they received agro-advice from farmer groups | 28.2%                                | 35.2%  | 43.5%                                | Achieved          |
| Increase in scoring in area 2 of the CBO tool                              | 37.3%                                | 46.6%  | 56.1%                                | Achieved          |

**Indicator: Expected result 1.3**

Local government has analysed impacts of climate change and prioritized adaptation options for their district

Table 8. Indicator ER 1.3

|  | <b>Baseline value March<br/>2016</b>                               | <b>End-line value March<br/>2018</b>  | <b>Assessment</b> |
|--|--|---|-------------------|
| Participation of DONRE and DAFO in adaptation planning meetings and discussion of supporting village plans | DONRE and DAFO participated in planning and ranking of CCA options | DONRE and DAFO participated in monthly, quarterly, and annual CCA planning meetings | Achieved          |

**Indicator: Expected result 1.4**

Based on CVCA, adaptation options have been identified per village and included into village plans

Table 9. Indicator ER 1.4

|  | <b>Baseline value<br/>March 2016</b> | <b>Target</b> | <b>End-line value<br/>March 2018</b> | <b>Assessment</b> |
|--|--------------------------------------|---------------|--------------------------------------|-------------------|
| Village plans exist in 30 target villages and include adaptation options | 0                                    | 30            | 30                                   | Achieved          |

**Activity 1.1 Engage Non-Profit Associations (NPAs) in CVCA design and implementation, and support NPA capacity strengthening in key areas**

The CVCA training took place in October 2014. Implementing partners (CARE, CCL, and SAEDA) have extensive experience in rural development in Laos. The CVCA process has increased their capacities by adding a new dimension to their skills in analyzing community vulnerability to climate change.

SAEDA participated in the facilitation of the CVCA exercises in all three districts. In addition to this local NPA, three other NPAs participated in the CVCA process: 1. Community Association for Mobilizing Knowledge in Development (CAMKID), 2. Lao Biodiversity Association (LBA), and 3. Agriculture and Forestry Conservation (AFC). The capacities of these four NPAs has been strengthened in the areas of facilitation skills, planning research, team management, collaboration at district and village levels, understanding climate variability, and analysis of climate change impacts. Involvement with the project has strengthened their reporting, administrative, and financial systems by aligning these with project standards. Technical expertise in climate change adaptation methods has been developed through support from the project in trainings and fieldwork.

**Activity 1.2 Develop appropriate tools and training curricula for the CVCA in Phongsaly and carry out training for partner and NPA staff**

CARE developed the CVCA handbook which was used by the project to understand the implications of climate change on the livelihoods of remote ethnic upland communities particularly highlighting the impact on women. The CVCA process involves a step-by-step

participatory approach which analyses climate change vulnerability and the adaptive capacity of villagers. The method combines community knowledge and scientific data to yield an understanding of local impacts of climate change. The CVCA process uses a series of guiding questions to analyse information at national, local government/community, and household/individual levels. The information gained at different levels provides guidance for the analysis, design, and implementation stages. Using this information, CARE and its partners determined the adaptive capacity of target communities and developed appropriate interventions to support adaptation.

Based on their knowledge and experience in conducting CVCA in Thailand the Thai NGO, Raks Thai, was contracted to facilitate the CVCA training. CARE, CCL, SAEDA, CAMKID, LBA, and AFC staff together with government staff from PAFO, POFA, PONRE, LWU, DAFO, and DONRE participated in a six-day training with three days of fieldwork (Table 10). The training included conceptual tools, such as CARE’s community-based adaptation framework as well as field application of the five CVCA tools. The training was successful in teaching participants how to use the CVCA tools and their expected output. Cross learning and relationship building among NPA’s was a valuable indirect benefit from the activity.

Table 10. CVCA training

|                                | <b>Participants</b>                | <b>No. Participants</b> | <b>Women</b> |
|--------------------------------|------------------------------------|-------------------------|--------------|
| CVCA process training          | Project, government, and NPA staff | 35                      | 15           |
| Adaptation planning process I  | Project and government staff       | 16                      | 5            |
| Adaptation planning process II | Project and government staff       | 21                      | 8            |

### Activity 1.3 Undertake the CVCA process in project districts

The same project (CARE, CCL, SAEDA), NPA (CAMKID, LBA and AFC), and government (PAFO, POFA, PONRE, LWU, DAFO, and DONRE) staff that participated in the CVCA training conducted the CVCA analysis in 30 villages in the three project districts. Teams spent one day in each village discussing climate change issues with 45 to 50 villagers (Table 11).

Table 11. CVCA conducted in villages

|                      | <b>Participants</b> | <b>No. Participants</b> | <b>Women</b> | <b>Villages</b> |                |                |
|----------------------|---------------------|-------------------------|--------------|-----------------|----------------|----------------|
|                      |                     |                         |              | <b>Mai</b>      | <b>Samphan</b> | <b>Ngot Ou</b> |
| CVCA data collection | Villagers           | 1,552                   | 557          | 10              | 10             | 10             |

The key findings include:

1. farmers currently experience significant risks from climatic hazards, which closely mirrors the global projections for Laos;
2. impacts on agricultural livelihoods are significant -- crops impacted are those that farmers rely on most for their income and food security;
3. rainfall patterns vary significantly from the past and are no longer predictable;
4. serious losses occur for upland rice due to early or late onset of the rainy season;
5. drought and hot temperatures increasingly affect agricultural production leading to shortages in rice, insufficient clean water, spreading of disease, and reduce NTFP;
6. drought increases crop diseases and crop losses from rats and birds;
7. extended periods of extreme cold have become more frequent and affect fishponds and vegetable production (both from forest and home gardens);
8. large and small livestock die during extreme cold conditions;
9. heavy rains during storms are more frequent causing landslides, destroying fishponds, polluting water, and damaging crops (maize, upland rice, coffee, and cardamom);

10. human diseases (malaria and diarrhoea) result from extended rains and floods; and
11. hailstorms damage houses, rice storage, and crops.

Activity 1.4 Organization of local consultations and district and provincial inception meetings to review CVCA analysis and organize provincial steering committee

CVCA consultations were organized in two stages. After the CVCA exercise had been completed and findings consolidated the information collected during the process was discussed with district authorities and at the village level. The initial consultation identified that district staff’s knowledge and capacities to understand climate change and disaster risk reduction were limited.

The second stage involved organizing a review and planning meeting at the district level with district authorities and village representatives to jointly develop recommendations for action based on the analysis. One official consultation per district was held in April 2015. CVCA data and analysis were presented during the consultations and climate change adaptation options were discussed.

A provincial steering committee meeting was held in July 2015. The project presented a progress report including the results from the CVCA. The government endorsed the project’s plan to proceed with implementing the proposed climate change adaptation options in villages. Agreement was made on a plan of implementation identifying the responsibilities of key actors.

Activity 1.5 Identify target villages and strengthen village leadership capacity

Target villages were identified during initial planning meetings in coordination with provincial and district counterparts. Leadership capacity in villages is synonymous with leadership capacity of farmers groups. All community capacity building initiatives for resilience have been implemented through farmer groups. Two farmer group management trainings were conducted in target villages (Table 12).

Table 12. Farmer group management training

|                                  | <b>Participants</b>  | <b>No. Participants</b> | <b>Women</b> |
|----------------------------------|----------------------|-------------------------|--------------|
| Farmer group management I and II | Farmer group leaders | 69                      | 34           |

Activity 1.6 Review village and district development plans based on CVCA analysis and organize three CBA design workshops (one in each project district)

After the CVCA exercise was conducted, the project worked with village leaders and government partners to review village development action plans and provided support to revise the plans with a focus on climate change adaptation. Adaptation planning was conducted which identified and analysed livelihood options together with farmers and government staff from the perspective of increasing livelihood diversification to promote food and cash crops with low sensitivity to climate change risks.

The adaptation planning process involved analysing the selected options at district level. The selection was done through a participatory ranking exercise including DAFO, DONRE, DPI, and LWU. The planning process was then conducted with each village using a simplified version of the ranking system in separate male and female groups and then together combining results. The ranking in villages allowed farmers to discuss and weigh risks and advantages of each option. The process resulted in developing individual village adaptation plans identifying priority options per village and available resources from farmers, government, and NGO partners.

Priority options per district and village were presented and approved during a provincial steering committee meeting. Further meetings were conducted to discuss how climate hazards identified during the CVCA process affect district government planning. The project worked with government partners to integrate adaptation planning into district development plans.

#### Activity 1.7 Develop training modules, coaching, and follow up protocols and supporting IEC material for agriculture activities

SAEDA produced an extension training manual on key agricultural topics and climate change adaptation strategies. The manual was developed by collecting a range of materials from different organizations and combining them into a comprehensive training manual. The manual covers the following topics:

- sustainable agriculture - sustainable rice systems, seed conservation, organic vegetable production, composting, mushroom production, and integrated cropping systems
- impact and proper use of pesticides
- management of natural resources - protection of water sources, zoning of agricultural land, sloping agricultural land technology, reforestation, and rattan conservation
- management of cash crops - cardamom, tea, fruit trees, and galangal
- establishment and management of farmer organisations, including gender mainstreaming

#### Activity 1.8 Develop capacity building approaches on key resilience themes

Key resilience themes were identified during the CVCA process, the adaptation planning process, and the baseline. Capacity building approaches have been implemented under the following themes.

1. Implementing diversified agriculture activities for climate change adaptation strategies. CARE, CCL, and SAEDA technical training materials were consolidated for the various intervention options in which SAEDA produced a comprehensive CCA training manual.
2. Practicing long-term livelihood planning and seasonal planning based on whether forecasts. Long-term planning was conducted during the adaptation planning process and annual review of village plans. Seasonal planning was conducted in villages three times during the agricultural cycle – prior to planting, mid-cycle, and during the harvesting stage. Tools from CARE Vietnam and NAFRI have been adapted to the Lao context.
3. Improving disaster preparedness at district and village levels. A DRR training for district DRR committees was conducted in Mai and Samphan. Training for disseminating weather information was provided to village emergency committees.
4. Increasing women’s involvement by promoting joint decision-making between husband and wife on family and community issues. Gender training I was completed in eight Mai villages and five Ngot Ou villages. Gender training I was conducted during a previous CARE project in Samphan. Gender training II was completed in five Samphan villages. A workload monitoring tool for workload sharing within households was developed.
5. Building the capacity of farmer groups to improve resilience by expanding access to information. Trainings in the following topics have been conducted: 1. group structure and management, 2. leadership skills, 3. agricultural techniques, 4. creation of district networks, 5. community based organization self-monitoring, and 6. natural resource management (fish conservation zones and sustainable harvest of NTFFP).

### 3.2.2 Expected result 2

Improved community resilience through the implementation of CCA and DRR pilot interventions that benefit women in particular

#### Indicator: Expected result 2.1

Increase of 25% in proportion of project farmers who have long-term livelihood planning based on weather information

Table 13. Indicator ER 2.1

|  | Baseline value<br>March 2016 | Target (+ 25% of<br>baseline value ) | End-line value<br>March 2018 | Assessment |
|--|------------------------------|--------------------------------------|------------------------------|------------|
| Average % of farmers who have livelihood plans for next year and % of farmers who use weather information for planning sometimes or all the time | 27.2%                        | 34%                                  | 47.4%                        | Achieved   |

#### Indicator: Expected result 2.2

Increase of 25% over baseline of the number of farmers who adopt an adaptation action

Table 14. Indicator ER 2.2

|  | Baseline value<br>March 2016 | Target (+ 25% of<br>baseline value ) | End-line value<br>March 2018 | Assessment |
|--|------------------------------|--------------------------------------|------------------------------|------------|
| Farmers adopt one or more of the adaptation actions as defined in the baseline |                              |                                      |                              |            |
| Stock seeds and fodder   | 67.8%                        | 84.7%                                | 86.3%                        | Achieved   |
| Use more intercropping or agroforestry   | 59.7%                        | 74.6%                                | 78.1%                        | Achieved   |
| Use weather info for planting  | 34.1%                        | 42.6%                                | 64.0%                        | Achieved   |
| Improve animal cages   | 43.4%                        | 54.2%                                | 62.7%                        | Achieved   |
| Change farming techniques or seed variety                                      | 41.3%                        | 51.6%                                | 64.9%                        | Achieved   |
| Forest protection rules  | 43.1%                        | 53.8%                                | 58.1%                        | Achieved   |
| Plant trees between crops  | 19.1%                        | 23.9%                                | 39.1%                        | Achieved   |
| Vaccination for livestock  | 40.6%                        | 50.7%                                | 66.5%                        | Achieved   |

#### Indicator: Expected result 2.3

Increase of 25% in sharing of workloads and joint decision-making between husband and wife on agricultural purchases, negotiation with traders, and household decisions

Table 15. Indicator ER 2.3

|  | Baseline value<br>March 2016 | Target (+ 25% of<br>baseline value ) | End-line value<br>March 2018 | Assessment |
|--|------------------------------|--------------------------------------|------------------------------|------------|
| Division of on- and off-farm labor as measured by combined indicator in baseline | 18.2%                        | 22.7%                                | 28.2%                        | Achieved   |

#### Indicator: Expected result 2.4

At least five VSLA groups for women established by the project and operational in target villages by year 4

Table 16. Indicator ER 2.4

|   | Baseline value<br>March 2016 | Target   | End-line value<br>March 2018 | Assessment |
|---|------------------------------|----------|------------------------------|------------|
| Five VSLA groups have a constitution, regular meetings, and positive saving, loaning, and payback rates | 3 groups started             | 5 groups | 21 groups                    | Achieved   |

## Activity 2.1 Establish and strengthen farmer groups

### **Activity 2.1 rating**

Project staff 2.4  
Government partners 2.2

Table 17. Farmer groups

| District | Villages | Households | Farmer groups |
|----------|----------|------------|---------------|
| Mai      | 10       | 457        | 10            |
| Samphan  | 10       | 638        | 10            |
| Ngot Ou  | 10       | 683        | 10            |
| Total    | 30       | 1,778      | 30            |

Farmer groups have been established in all 30 target villages; all households are members of the village farmer groups (Table 17). Within each farmer group separate committees are set up for different activities. The purpose of establishing farmer groups is to:

1. provide support to farmers for long-term livelihood planning;
2. provide market information and market outlets for farmers;
3. improve the internal quality control of commodities to increase selling prices;
4. improve farmer-to-farmer exchanges and knowledge transfer on specific commodities;
5. collect and disseminate agro-weather information to farmers; and
6. improve women's confidence and role in collective decision-making regarding livelihood planning.

Groups are well run with good management of village funds, record-keeping, reporting, and planning of activities. Each group has a five-member management committee with at least two women having leadership roles. SAEDA conducted a training of trainers on establishing farmer groups. The farmer group structure and roles of each committee member is based on the approach developed by SAEDA. CARE developed a Community-Based Organization Capacity Assessment Tool to help farmer groups identify areas for improvement and for the project to provide more targeted support based on group needs.

When questioned as to the benefits of belonging to the farmer's group, villagers' first response was that they are now able to earn more money selling their products collectively (refer to Table 6). Villagers stated that the reasons they are able to earn more when they sell collectively is that: 1. they control the quality of the product which is sold in large quantities, 2. they have found new traders to buy their products, and 3. they have improved their negotiation skills from the training provided by the project. They further stated that as members of the farmer groups they can select the project's activities which most interest them and that they have learned valuable skills in adopting new farming practices.

## Activity 2.2 Deliver agricultural training package, provide inputs and follow up to farmer groups and local government extension workers in three districts

The project provided 12 climate change adaptation options for farmers to select. Training and input support was provided for all the options. The project used the wealth ranking of households produced by the government. The quantity of inputs provided by the project varied depending on villagers' relative wealth status. Villagers determined which activities they would join based on their interest and available labour within their families. Households could select to participate in more than one activity.

### Option 1. Promote cardamom under forest cover

#### **Activity 2.2.1 rating**

Project staff 2.6  
Government partners 2.6

Table 18. Cardamom seedlings distributed

| District | Villages | Households | Seedlings | Area (ha) |
|----------|----------|------------|-----------|-----------|
| Mai      | 10       | 667        | 488,000   | 80        |
| Samphan  | 7        | 288        | 152,500   | 25        |
| Ngot Ou  | 8        | 392        | 527,870   | 86.5      |
| Total    | 25       | 1,347      | 1,168,370 | 191.5     |

The project promoted two types of cardamom: 1. kouangtong which grows under shade and has a higher market price and 2. paksong which grows in full sunlight but has a lower market price. The paksong variety is more resilient to climate variability, particularly extended dry periods. Villagers are planting the paksong variety in former upland rice areas; the kouangtong variety is planted on the edge of forests and along streams. Three to four years are required before a marketable product (cardamom seeds) may be harvested. Villagers who recently began planting cardamom were able to earn an average from between 4 to 7,000,000 kip. Villagers explained that their incomes steadily increase over time as the quantity of cardamom seeds increases.

Samphan district has a longer history of planting cardamom and some households have been growing cardamom for up to eight years. Villagers who have been growing cardamom for five or six years have an annual income averaging 30 to 40,000,000 kip. Early adopters who began planting cardamom eight years ago are now earning 70 to 100,000,000 kip/year. One interviewee in Namloy, Samphan stated that his family earned 120,000,000 from cardamom sales last year. Villagers in Samphan are building new concrete homes and almost all families have either a motorbike or truck.

Farmers are expanding their cardamom plantations without additional input support from the project. Villagers in Samphan reported that they have reduced their upland rice fields by as much as 75% because they now purchase rice. An upland rice swidden which was once farmed by one family is now being farmed by three or four families. Reducing slash-and-burn agriculture is in compliance with the government's policy to eradicate slash-and-burn agriculture by the year 2000. Seventy-five percent of target village households have been supported by the project to grow cardamom.

### Option 2a. Intercropping galangal

#### **Activity 2.2.2a rating**

Project staff 2.0  
Government partners 2.5

Table 19. Galangal seedlings distributed

| District | Villages | Households | Seedlings | Area (ha) |
|----------|----------|------------|-----------|-----------|
| Mai      | 9        | 235        | 78,300    | 20.26     |
| Samphan  | 5        | 128        | 38,400    | 7.2       |
| Ngot Ou  | -        | -          | -         | -         |
| Total    | 14       | 363        | 116,700   | 27.46     |

Galangal is being intercropped with upland rice. Upland rice can be planted together with galangal for two years until the third year when galangal has taken over an upland field and begins to produce harvestable products. Galangal flowers and tubers can be harvested for 15 to 20 years; it is an excellent crop for long-term permanent agriculture.

Farmers reported that galangal is growing well and they have begun selling flowers and tubers to Chinese and Lao traders. Earnings from initial sales were reported as 2 to 5,000,000 kip. Farmers expect income from galangal to increase as their plantings further mature and spread. With the success of growing and earning high incomes from cardamom, some farmers are reducing the amount of time they invest in growing galangal and focusing their labour on cardamom or tea growing. Other farmers stated that they will continue to

maintain their galangal plantings for potential future income, especially from the sale of flowers.

### Option 2b. Intercropping pineapple

#### **Activity 2.2.2b rating**

Project staff 2.3  
Government partners 1.0

Table 20. Pineapple seedlings distributed

| District | Villages | Households | Seedlings | Area (ha) |
|----------|----------|------------|-----------|-----------|
| Mai      | 5        | 70         | 7,000     | .25       |
| Samphan  | 5        | 45         | 4,500     | .16       |
| Ngot Ou  | -        | -          | -         | -         |
| Total    | 10       | 115        | 11,500    | .41       |

Farmers reported that the survival rate of pineapple was good. Farmers like the variety of pineapple provided by the project because it does not have spines on the leaves; this makes weeding pineapple plots much easier to manage than farmers' traditional pineapple variety. Government staff gave both pineapple and fruit trees a low rating since they are not producing a harvestable crop and therefore have not yet improved villagers' livelihoods.

### Option 2c. Intercropping fruit trees

#### **Activity 2.2.2c rating**

Project staff 2.0  
Government partners 1.0

Table 21. Fruit tree seedlings distributed

| District | Villages | Households | Seedlings | Survival rate |
|----------|----------|------------|-----------|---------------|
| Mai      | 10       | 150        | 4,400     | 86%           |
| Samphan  | 10       | 125        | 6,295     | 76%           |
| Ngot Ou  | 10       | 443        | 13,390    | 47%           |
| Total    | 30       | 718        | 11,500    | na            |

The project provided a variety of fruit tree seedlings including, mango, orange, durian, longan, and dragonfruit. In Mai and Samphan fruit trees have been planted during the past two years and are not yet producing fruit. In Ngot Ou farmers are harvesting fruit for home consumption from trees that were provided in an earlier project. Ngot Ou farmers attributed the low survival rates of this projects' fruit tree seedlings to three factors: 1. some fruit tree seedlings were poor quality (dried out and dead on arrival), 2. seedlings were planted improperly, and 3. a dry spell occurred directly after planting seedlings. The distance fruit trees were planted from their village prohibited carrying water to water newly planted seedlings.

### Option 3. Sustainable harvesting, marketing, and processing of rattan

#### **Activity 2.2.3 rating**

Project staff 1.3  
Government partners 1.6

Table 22. Rattan seedlings distributed

| District | Villages | Households | Seedlings | Area (ha) |
|----------|----------|------------|-----------|-----------|
| Mai      | 5        | 15         | 3,000     | .03       |
| Samphan  | 3        | 15         | 3,000     | .03       |
| Ngot Ou  | -        | -          | -         | -         |
| Total    | 8        | 30         | 6,000     | .06       |

Rattan has been overexploited in most of the forests in Phongsaly. Initially the project considered establishing rattan nurseries in villages, but due to the time required to start seedlings the project decided to purchase a limited number of seedlings. The purpose of

piloting rattan was to demonstrate that rattan production can be a profitable enterprise. It is too early to determine the success of planting and harvesting rattan.

Progress has been made on setting up sustainable harvesting areas in two Samphan villages. Villagers identified forest areas where rattan grows abundantly and conducted a survey indicating the exact production volume. Rules were established for sustainably harvesting in these areas; production will be monitored by farmers.

#### Option 4. Year round vegetable production / home gardening

##### **Activity 2.2.4 rating**

Project staff 2.8  
Government partners 1.8

Table 23. Vegetable gardens

| District | Villages | Households | Varieties of seeds | School gardens |
|----------|----------|------------|--------------------|----------------|
| Mai      | 7        | 80         | 10                 | 5              |
| Samphan  | 5        | 42         | 10                 | 4              |
| Ngot Ou  | 5        | 107        | 9                  | -              |
| Total    | 17       | 229        | na                 | 9              |

Women identified vegetable gardening as a highly successful activity. Vegetables are primarily for home consumption and in some cases women are selling vegetables to their neighbours and in district markets. Some women claimed that they are using compost and animal manure to fertilize their gardens and that this is a concept which they learned from the project. Other villagers consider using manure in their gardens as unsanitary. They stated that their soils were productive and did not require additional fertilizing. Women explained that they learned techniques in seed selection and storage and are able to replant their gardens without having to purchase seeds. Women said they are giving seeds to their neighbours who are now planting vegetable gardens. Productive vegetable gardens were observed in all six evaluation villages.

The project initially purchased seeds from China which had poor germination rates. A second supply of seeds was purchased from Thailand (open-pollinated seeds) which produce viable seeds for continuous planting.

#### Option 5. Up-scaling and intensification of paddy rice production (terracing)

##### **Activity 2.2.5 rating**

Project staff 2.5  
Government partners 2.3

Table 24. Rice terracing

| District | Villages | Households | Area (ha) |
|----------|----------|------------|-----------|
| Mai      | 7        | 61         | 22.9      |
| Samphan  | 3        | 61         | 36.38     |
| Ngot Ou  | 3        | 59         | 21.73     |
| Total    | 13       | 181        | 81.01     |

Table 25. Sustainable rice systems

| District | Villages | Households | Area (ha) | Yield (t/ha) |
|----------|----------|------------|-----------|--------------|
| Mai      | 7        | 29         | unknown   | 3.5 - 4.0    |
| Samphan  | -        | -          | -         | -            |
| Ngot Ou  | 7        | 64         | 23        | 4.87         |
| Total    | 14       | 93         | -         | na           |

Table 26. Improved paddy rice seed production

| District | Villages | Households | Area (ha) | Yield (t/ha) |
|----------|----------|------------|-----------|--------------|
| Mai      | 7        | 42         | 7.8       | 3.5 - 4.0    |
| Samphan  | 3        | 20         | 3.8       | 3.0 - 3.5    |
| Ngot Ou  | 7        | 78         | 22        | 4.51         |
| Total    | 17       | 140        | 33.6      | na           |

A substantial amount of land (81 ha) has been converted into paddy rice terraces through provisions from the project in tools and support for irrigation (Table 24). SAEDA promoted the Sustainable Rice Systems (SRS) technique which has had a significant impact on increasing paddy rice yields (Table 25). Villagers who have observed production increases from farmers using SRS said that although SRS involves more work they will attempt this method during the upcoming rice season. One limitation to SRS is that it requires continuous irrigation. The improved paddy rice seed piloted by the project did not grow well in Samphan (Table 26). Farmers said that the rice grains were small and that there were only a few grains of rice on the panicle. Samphan farmers will revert to using their traditional paddy rice varieties. In Ngot Ou improved paddy seed were reported as improving yields over traditional varieties.

#### Option 6. Commercial mushroom production

##### **Activity 2.2.6 rating**

Project staff 3.0  
Government partners 1.8

Table 27. Mushroom production

| District | Villages | Households | Production 2017 |               |           |              |
|----------|----------|------------|-----------------|---------------|-----------|--------------|
|          |          |            | Total (kg)      | Consumed (kg) | Sold (kg) | Income (kip) |
| Mai      | 6        | 17         | 1,161           | 284           | 877       | 16,385,000   |
| Samphan  | 7        | 14         | 993             | 389           | 604       | 15,100,000   |
| Ngot Ou  | -        | -          | -               | -             | -         | -            |
| Total    | 13       | 31         | 2,154           | 673           | 1,481     | 31,485,000   |

Mushroom growing is being piloted in Mai and Samphan with mixed success. Mushroom production was first trialled with two families in four villages. The activity was up-scaled to include 26 families in 13 villages. Considered a minimal labour intensive activity, the project provided support to villagers from the very poorest families that were both land poor and had limited labour resources. Successful women stated that is not difficult to grow mushrooms and that they are able to produce much larger quantities with less time spent than searching for mushrooms in the forest. They further stated that they are able to easily sell mushrooms in the Khua market and district centres at a high price (25-30,000 kip/kg).

Producing mushrooms using mushroom spores from Vientiane was successful in both districts. The project began training farmers to produce mushroom spores to circumvent reliance on an outside source. Producing mushroom spores in Mai was successful and farmers are continuing to grow mushrooms. An attempt to produce mushroom spores in Samphan failed. CARE plans to continue support for mushroom production in their SUPA project.

#### Option 7. Integrated fishponds / fish protection zones

##### **Activity 2.2.7 rating**

Project staff 2.4  
Government partners 2.2

Table 28. Fish fingerlings distributed

| District | Villages | Households | Fingerlings (kg) | Area (ha) |
|----------|----------|------------|------------------|-----------|
| Mai      | 9        | 204        | 850              | 4.6       |
| Samphan  | 6        | 235        | 457              | 2.9       |
| Ngot Ou  | 7        | 87         | 235              | 1.7       |
| Total    | 22       | 526        | 1,542            | 9.2       |

Villagers are enthusiastic to raise fish in fishponds. They stated that in the past they had failed in attempts to raise fish, but after receiving training and assistance from the project they now know how to successfully raise fish. The project provided four varieties of fish for fishponds. The four different types of fish feed at different trophic levels in the ponds which

improves the overall productivity of the fishponds. Villagers were pleased with the varieties of fish distributed and reported that their growth is fast when regularly fed. Fish have been harvested for home consumption and also for community events. Villagers enjoy eating fish from fishponds and stated that it is less work to raise fish than catch fish in streams and rivers.

The project has established fish conservation breeding zones in rivers to increase the volume of fish by setting up rules for sustainable management. In both Mai and Ngot Ou, villagers explained that they are following the rules established and that they are now catching more and larger fish in designated fishing areas. Villagers stated that outsiders do not respect their regulations and that government employees have been harvesting fish from conservation zones. They said that they feel powerless to enforce fines.

#### Option 8. Promoting honey production and marketing

This activity has been delayed since the project was unable to purchase beehives until just recently. The beehives have been delivered to villages and CARE will resume this activity during the SUPA project.

#### Option 9. Improving animal health

##### **Activity 2.2.9 rating**

Project staff 1.8

Government partners 1.4

Table 29. Livestock housing

| District               | Villages | Households |
|------------------------|----------|------------|
| <b>Chicken housing</b> |          |            |
| Mai                    | 5        | 25         |
| Samphan                | 3        | 15         |
| Ngot Ou                | 4        | 72         |
| Total                  | 12       | 112        |
| <b>Pig housing</b>     |          |            |
| Mai                    | -        | -          |
| Samphan                | -        | -          |
| Ngot Ou                | 2        | 118        |
| Total                  | 2        | 118        |

The project provided materials for farmers to build housing for chickens and pigs. In Ngot Ou the project has been successful in encouraging farmers to raise pigs away from their homes to improve sanitation conditions in the villages. Women in Ngot Ou cited having cleaner villages as a major benefit from their involvement in the project. The project has not been successful in combating livestock disease. In four of the six villages visited all chickens died last year. Farmers also reported high rates of pig mortality. In general, farmers do not have their livestock vaccinated.

SAEDA provided technical training on organic feed and herbal medicine to improve chicken health. Women said the chicken feeding technique promoted by the project involved many ingredients and some were not available in the village; therefore, they have not adopted this practice.

#### Option 10. Up-scaling and quality improvement of organic tea under forest

##### **Activity 2.2.10 rating**

Project staff 3.0

Government partners 2.5

Table 30. Tea seedlings distributed

| District | Villages | Households | Seedlings | Area (ha) |
|----------|----------|------------|-----------|-----------|
| Mai      | -        | -          | -         | -         |
| Samphan  | -        | -          | -         | -         |
| Ngot Ou  | 8        | 359        | 491,110   | 74        |
| Total    | 8        | 358        | 491,110   | 74        |

Promoting tea has been very successful in Ngot Ou. The project did not support tea cultivation in Mai and Samphan because growing conditions are not conducive for tea in these districts. Six of the Ngot Ou target villages have been harvesting tea from the forest over the past decade. Forest tea commands a very high price from Chinese traders (Table 35). Eight target villages have begun planting tea during the past few years. Most of the very poorest families had never planted tea. Women said that the inputs from the project have now enabled them to begin planting tea. Without these inputs and training from the project, the poorest families would not have been able to begin the transition from shifting upland rice cultivation to permanent tea gardens. The project determined the quantity of seedlings allotted for establishing tea gardens based on villagers' wealth ranking and labour resources. Production from tea seedlings provided by the project is expected for 2019.

#### Option 11. Improving soil fertility and soil erosion control in upland areas

##### **Activity 2.2.11 rating**

Project staff 2.5

Government partners 1.6

Table 31. Soybean production

| District | Villages | Households | Area (ha) | Yield (t/ha) |
|----------|----------|------------|-----------|--------------|
| Mai      | -        | -          | -         | -            |
| Samphan  | -        | -          | -         | -            |
| Ngot Ou  | 8        | 274        | 4.04      | 5.335        |
| Total    | 8        | 274        | 4.04      | 5.335        |

The project has been successful in promoting soybeans in Ngot Ou where villagers are accustomed to eating soybeans. They said they liked the variety of soybeans provided by the project, that it grows well, and has a good taste. Soybeans have been sold locally and are being consumed by families.

Project staff together with farmers visited a project implemented by the International Research Centre for Agriculture and Forestry (IRCAF) which is promoting Sloping Agricultural Land Technology (SALT) in Dien Bien Phu province, Vietnam. SALT involves planting hedgerows on contours to create natural barriers which over time reduce soil erosion. A variety of methods exist in creating natural terraces including, planting luminous perennial crops, grasses, or levelling land by soil excavation. Planting tea along contours has been encouraged by the project with limited success. The project has not been successful in persuading farmers to plant perennials or grasses on contours to create erosion barriers.

#### Option 12. Value-added commodity processing

##### **Activity 2.2.12 rating**

Project staff 3.0

Government partners 3.0

Table 32. Cardamom ovens

| District | Villages | Households | Cardamom ovens |
|----------|----------|------------|----------------|
| Mai      | 9        | 308        | 154            |
| Samphan  | 10       | 429        | 214            |
| Ngot Ou  | 1        | 39         | 13             |
| Total    | 20       | 776        | 381            |

Table 33. Tea ovens

| District | Villages | Households | Tea ovens |
|----------|----------|------------|-----------|
| Mai      | -        | -          | -         |
| Samphan  | -        | -          | -         |
| Ngot Ou  | 8        | 235        | 129       |
| Total    | 8        | 235        | 129       |

Table 34. Price comparison: fresh vs dry cardamom

| Cardamom   | Price per kilo (kip) |             |
|------------|----------------------|-------------|
|            | Fresh                | Dry         |
| Paksong    | 10,000               | 180,000     |
| Kouangtoun | 50,000               | 350-400,000 |

Table 35. Price comparison: fresh vs dry tea

| Tea     | Price per kilo (kip) |                   |
|---------|----------------------|-------------------|
|         | Fresh                | Dry               |
| Forest  | 100-150,000          | 600,000-1,000,000 |
| Planted | 15-25,000            | 80-120,000        |

Cardamom ovens have been promoted in Mai and Samphan and tea ovens in Ngot Ou (Tables 32 and 33). Both types of ovens have been successful in increasing the amount of money which farmers can earn from harvesting and drying tea or cardamom (Tables 34 and 35). Almost all cardamom in Mai and Samphan is sold dry to Chinese traders. Farmers producing large quantities of cardamom sometimes sell some fresh, if they do not have time to dry all of it. In Ngot Ou farmers typically sell fresh cardamom so as not to be burdened with additional time spent collecting firewood and tending to the drying process which can take one month. They consider selling fresh cardamom as being more cost-effective (6 kg of fresh = 1 kg of dry). They only sell dried tea because of the increased value from drying.

The price of both commodities fluctuates based on time of purchase and quality. Farmers in Mai and Samphan dry cardamom and store it for sale when the price is high. Cardamom ovens are also being used to dry other NTFP products thereby increasing value. Both tea and cardamom ovens observed during the evaluation were well constructed.

### Activity 2.3 Establish voucher system to link farmers with input sellers

#### **Activity 2.3 rating**

|                     |     |
|---------------------|-----|
| Project staff       | 2.8 |
| Government partners | 2.0 |

The voucher system was used to purchase cardamom, galangal, and tea seedlings. The purpose of the voucher system is to involve villagers in the purchase of agricultural inputs and increase their ownership of the activity. The project identified suppliers (minimum three) selling seedlings and put villagers in contact with the suppliers. Villagers visited suppliers to check the price and quality of seedlings and determined from which supplier they would purchase. Villagers used a voucher provided by the project to pay for seedlings delivered to their village. In a few cases, the quality of some seedlings was poor and not to the standards originally shown by the supplier. Villagers did not realize that they could reject substandard seedlings and not accept a full delivery. Villagers accepted seedlings which were poor quality and resulted in mortality when planted out into their fields.

Providers of cardamom and galangal seedlings in Mai, Samphan, and Ngot Ou are small traders from the district capital who buy from farmers in other villages in the district and are able to deliver in bulk. This procurement process increases income opportunities for farmers from the district. Overall, this was a successful activity which has made villagers more self-sufficient, has improved the sustainability of the activity, and generated income within the districts.

## Activity 2.4 Implement capacity building on key aspects of resilience and improve local disaster resilience

### **Activity 2.4 rating**

Project staff 2.7  
Government partners 2.4

A significant problem affecting villagers in Mai, Samphan, and Khua districts has been a grasshopper infestation which started in 2015. CARE coordinated with FAO, MAF, PAFO, and DAFO to identify a course of action to address this problem. CARE collected lessons learned and discussed these with government authorities. In 2016, a response was led and funded by FAO. The government has since taken over the response.

The project assisted the government in setting up DRR committees at the district level. CARE and PONRE conducted a two-day DRR training for committee members -- district vice governors, DONRE, PAFO, DAFO, LWU, DPCO, and DTCP. The training included:

1. legal framework for DRR in Laos, including DRR in agriculture policy;
2. orientation on the decree and role of the DRR committees;
3. basics of climate change and trends identified for the Northern Laos;
4. findings from CVCA research and vulnerabilities in the districts;
5. contingency planning at district level; and
6. setting up of district DRR strategy, including risk analysis, main areas for response, joint data collection standards, and overall responsibilities per department.

The project has since scaled back DRR activities and focused on long-term climate change adaptation as per recommendations from the European Union ROM mission.

## Activity 2.5 Undertake a review of infrastructure, messaging, and dissemination channels for short-range weather information, seasonal forecasting, and early warning and preparedness in Phongsaly and support community-based opportunities for improvements

### **Activity 2.5 rating**

Project staff 2.4  
Government partners 2.0

Table 36. Village loudspeaker systems

| District | Villages | Speaker systems |
|----------|----------|-----------------|
| Mai      | 10       | 10              |
| Samphan  | 10       | 10              |
| Ngot Ou  | 10       | 10              |
| Total    | 30       | 30              |

Farmers receive weather information primarily from television, radio, and weather forecasts supplied by DONRE. Farmers stated that they receive information from the district 2 or 3 times per month and more regularly during severe weather events. In some villages DONRE staff telephone weather information to a village representative and in other villages weather information is sent by a letter from the district office. Information received from DONRE is broadcast over loudspeaker systems provided by the project in all villages. Speaker systems are also used to announce agricultural planting and harvesting events based on weather forecasts from either DONRE or television. Speaker systems are useful in helping villagers organize themselves around different agricultural activities. In addition, speaker systems are used to announce local village news, information provided by the district, and provide music for entertainment.

Weather monitoring stations have been set up in all three districts by Agro-climate Information Systems (ACIS), through additional funding that CARE managed to secure for its Lao program (in collaboration with CARE Vietnam and Cambodia). These monitoring stations collect weather data which can be transmitted directly to the National Department of

Meteorology and Hydrology in Vientiane and also be monitored directly at the station. The purpose of the stations is to provide timely weather data and to determine changes in climate over time.

CARE worked with the National Agriculture and Forestry Research Institute (NAFRI) to produce a seasonal forecasting agricultural calendar which was printed in poster form. Villagers received training in using the seasonal calendar. Villagers reported that the calendar was not useful or accurate. The vast amount of information on the calendar was confusing and difficult to read. It was produced in Lao language which few village women are able to read. CARE will continue to support agro-climate advisory services beyond the current project completion, based on lessons learned during this initial trial and additional funding secured.

**Activity 2.6 Establish village savings and loans groups in target communities for women in project farming households**

**Activity 2.6 rating**

Project staff 2.6  
Government partners 2.5

Table 37. Women savings and loans groups

| District | Villages | Households | Groups |
|----------|----------|------------|--------|
| Mai      | 9        | 149        | 9      |
| Samphan  | 7        | 151        | 7      |
| Ngot Ou  | 5        | 110        | 5      |
| Total    | 21       | 410        | 21     |

Women’s village savings and loans groups have been established in 21 villages well beyond the project’s target of five groups (Table 16). Project staff together with district LWU counterparts provided training in six modules which covered the savings group’s constitution and key regulations for operation. Project staff join the monthly village savings meetings for the first six months to provide support and ensure that the activity is being run correctly.

Women considered this as one of the most important activities promoted by the project. They said they are now able to take small loans at reasonable interest rates and earn money from their savings. Members of VSLG pay 3% monthly on loans (each group is free to decide the interest rate to be applied). Previously families had to pay 10% per month on bank loans and even as much as 20% from moneylenders. Loans are typically taken to cover unexpected medical expenses, support children attending school, and in a few cases setting up small village shops. Women are proud to be managing the savings and loans groups.

This activity has been extremely successful as a means to empower women for the following reasons:

1. the savings and loans method promoted by CARE is easy for women to understand;
2. job responsibilities for operating VSLG are spread across a committee involving seven women with distinct roles;
3. interest rates for loans are 3% per month compared to other methods of borrowing which typically charge 10% per month;
4. women can earn money from their savings; and
5. the project does not provide seed money which is often the reason for savings and loans schemes to fail in other projects.

The district vice governor of Mai recognized the value of this activity and requested that the project support LWU to establish village savings and loans groups in all district villages.

## Activity 2.7 Develop linkages between farmers and service and input providers in the value chain

### Activity 2.7 rating

Project staff 2.2

Government partners 1.8

Under another CARE project, a study on cardamom, rattan, and bamboo was conducted in 2016 to assess local and national market potential. The study identified processing cardamom into oil and constructing bamboo and rattan furniture as potential options. Production zones for sustainable management of rattan were set up in two villages. Villagers were trained in bamboo and rattan processing and furniture making. Farmers attended a study tour to a furniture construction cooperative in Vientiane to learn more on developing products from bamboo and rattan. Furniture construction is part of a long-term effort by CARE to support farmers on product diversification and will be continued under the SUPA project.

### 3.2.3 Expected result 3

Comprehensive documentation informs mainstreaming and an enabling CCA/DRR policy environment for the Northern Uplands

#### Indicator: Expected result 3.1

Five CCA information products (report, films, policy briefs) developed and disseminated to Vientiane-based development stakeholders in northern upland development (including: NUDP, MAF, MONRE, NAFRI, SSWG Uplands, SSWG Land, LIWG, INGO, NPA partners) by year 4

Table 38. Indicator ER 3.1

| <b>Five CCA information products developed and disseminated to Vientiane-based development stakeholders</b>   | <b>Target</b> | <b>End-line value March 2018</b> | <b>Assessment</b> |
|---|---------------|----------------------------------|-------------------|
| Films:<br>1. <i>Climate Change Adaptation in the Mountains of Phongsaly</i>   | 5             | 1                                | Achieved          |
| Policy briefs:<br>1. <i>Advancing Gender Equality through Climate Change Adaptation</i><br>2. <i>Agro-Climate Information: Tools for livelihood decision-making in the face of climate change</i><br>3. <i>Livelihood Resilience in a Changing Climate</i>                |               | 3                                |                   |
| Training manuals:<br>1. <i>CCA Training Manual: Agriculture Promotion Techniques in Climate Change Adaptation</i>   |               | 1                                |                   |
| PowerPoint presentations:<br>1. <i>Reflecting on change: NU-PCR Baseline assessment and formative review: Initial observations</i><br>2. <i>Elevating Farmers' Resilience to Climate Change: Experiences and Learnings from Phongsaly Province</i>                        |               | 2                                |                   |
| Reports:<br>1. <i>Promoting Climate Resilience through Community-Based Adaptation Planning</i><br>2. <i>Climate Change Adaptation: Technical Support Mission to CARE Laos (2x)</i><br>3. <i>Climate Vulnerability and Capacity Analysis (CVCA) at Institutional level</i> |               | 4                                |                   |
| Case Study:<br>1. <i>A sustainable and eco-friendly livelihood for the upland families of Nhot Ou district, Phongsaly Province</i>  |               | 1                                |                   |
| Poster:<br>1. <i>Managing Increasing Weather Uncertainty</i>  |               | 1                                |                   |

{Note: Refer to Appendix 3: Literature reviewed for complete citations of documents}

**Indicator: Expected result 3.2**

Project lessons learned and tools shared with relevant development partners and district and provincial GOL counterparts

Table 39. Indicator ER 3.2

| <b>Project lessons learned and tools shared with partners and district and provincial counterparts</b>      | <b>End-line value March 2018</b> | <b>Assessment</b> |
|---|----------------------------------|-------------------|
| 1. Baseline and mid-term reports presented to district and provincial counterparts and shared with partners | 1                                | Achieved          |
| 2. CCA tools for climate change adaptation planning presented to district and provincial counterparts       | 1                                |                   |
| 3. Lessons learned presented to district and provincial counterparts during PSC meetings                    | 3                                |                   |
| 4. Lessons learned presented at <i>Lao Uplands Forum 2018</i>   | 1                                |                   |

**Indicator: Expected result 3.3**

At least one workshop organized in Phongsaly by CARE, CCL and SAEDA to discuss the application of NU-PCR activities with a broader group of stakeholders by year 4

Table 40. Indicator ER 3.3

| <b>Workshop organized</b>   | <b>End-line value March 2018</b> | <b>Assessment</b> |
|---|----------------------------------|-------------------|
| CVCA findings workshop and discussion on village development planning | 1                                | Achieved          |

**Indicator: Expected result 3.4**

At least one advocacy issue for district and one for provincial level identified and action taken to address it

Table 41. Indicator ER 3.4

|   | <b>Target</b> | <b>End-line value March 2018</b> | <b>Assessment</b> |
|---|---------------|----------------------------------|-------------------|
| Advocacy issues identified and discussed at provincial and district levels                                      | 2             |                                  | Achieved          |
| 1. Grasshopper infestation - provincial and district levels   |               | 1                                |                   |
| 2. DRR committees - district level  |               | 1                                |                   |
| 3. Pesticide regulations in Laos - provincial and district levels   |               | 1                                |                   |
| 4. Pesticide use trainings - village and district levels  |               | 1                                |                   |
| 5. Support to government for livestock disease outbreak in non-target villages - provincial and district levels |               | 1                                |                   |
| 6. Participatory approaches for Community Based Adaptation - provincial and district levels                     |               | 1                                |                   |
| 7. Gender mainstreaming in Climate Change Law - national levels   | 1             |                                  |                   |

**Activity 3.1 Maintain comprehensive process documentation on project activities using elements of CARE’s participatory monitoring, evaluation, reflection, and learning (PMERL) approach**

Project activities are well documented and information requested for the evaluation was supplied in a complete and timely manner. The following is a representative list of information compiled by and available from the project.

1. village profiles
2. data on inputs provided by the project
3. data on production, sales, and consumption of agricultural crops
4. CARE’s activity tracking tool
5. technical information on climate change adaptation options
6. climate change adaptation option monitoring reports
7. CVCA process documentation
8. adaptation planning process documentation
9. CBO monitoring documentation
10. documentation of lessons learned
11. documentation of PSC meetings
12. VSLG monitoring reports including, records of savings and loans

13. training materials and reports
14. quarterly partner planning meetings
15. monthly and annual work plans
16. monthly internal project reports
17. annual narrative reports
18. annual financial reports
19. case studies
20. mission reports

### Activity 3.2 Mixed method assessments to build evidence base on resilient livelihood models for advocacy and scale

The baseline survey was completed in February 2016 and the end-line survey completed in March 2018. The baseline collected qualitative and quantitative data against project indicators. It assessed the resilience of communities at the household level and examined factors, such as crop yields, income, commodity prices, and asset ownership. Data on common agricultural practices was assessed -- livestock production, upland rice cultivation, inter-cropping, and cash cropping. The baseline explored gender relations with regards to women's workload, control over assets, and access to information. The end-line survey correlated information to determine the achievement of the project indicators. The baseline and end-line used mixed methods of assessment to provide evidence of changes in the resilience of beneficiaries' communities and livelihoods.

### Activity 3.3 Formative mid-term review and summative final evaluation

The mid-term review was completed in February 2016 together with the baseline study. The mid-term review assessed the efficiency, effectiveness, and relevance of the project strategies towards achieving the project's objectives. The mid-term review included an assessment and recommendations on how the project is integrating gender considerations into project activities. Field research for the final evaluation was conducted in March 2018 and the report was completed in April 2018.

### Activity 3.4 Organization of learning opportunities in project districts, among districts in Phongsaly, and with other initiatives in the NUDP program area.

#### **Activity 3.4 Rating for staff training**

Project staff 3.0  
Government partners 2.6

#### **Activity 3.4 Rating for villager training**

Project staff 2.2  
Government partners 2.2

Table 42. Key trainings conducted

| Topics                                | Participants                   | No. Participants | Women |
|---------------------------------------|--------------------------------|------------------|-------|
| CVCA process training (TOT)           | CARE, GOL, and 3 NPAs          | 35               | 15    |
| CVCA data collection                  | Villagers                      | 1,019            | 387   |
| Adaptation planning process I (TOT)   | GOL and CARE staff             | 16               | 5     |
| Adaptation planning process II (TOT)  | GOL and CARE staff             | 21               | 8     |
| Seed selection                        | Villagers                      | 233              | 32    |
| Chicken raising                       | GOL, CARE, CCL, and villagers  | 566              | 421   |
| Contract farming training I (TOT)     | GOL, CARE, CCL staff           | 14               | 3     |
| Contract farming training II          | Villagers                      | 1,370            | 580   |
| Leadership training for farmer groups | Villagers                      | 20               | 9     |
| NFTP inventory (TOT)                  | GOL and CARE staff             | 10               | 0     |
| Marketing stakeholder meeting         | GOL, CARE staff, and villagers | 39               | 11    |
| Farmer group setup and review rules   | Villagers                      | 49               | 9     |
| VSLA group management                 | Villagers                      | 48               | 48    |
| Farmer group management I             | Villagers                      | 18               | 9     |
| Farmer group management II            | Villagers                      | 51               | 25    |

|  |                                |    |    |
|--|--------------------------------|----|----|
| Bamboo processing training I                                     | GOL, CARE staff, and villagers | 16 | 14 |
| Bamboo processing training II                                    | Villagers                      | 13 | 10 |
| Study tour rattan processing                                     | GOL, CARE staff, and villagers | 17 | 5  |
| Study tour bamboo processing                                     | Villagers                      | 21 | 3  |
| Rattan processing training I                                     | Villagers                      | 8  | 0  |
| Rattan processing training II                                    | Villagers                      | 12 | 0  |
| Cardamom planting exchange lessons learned                       | Villagers                      | 29 | 3  |
| Farmer group exchange lessons learned                            | Villagers                      | 52 | 20 |
| Exchange lessons learned on paddy expansion in Thailand          | CARE staff                     | 5  | 1  |
| Exchange lessons learned on SALT system in Viet Nam              | GOL, CARE staff, and villagers | 11 | 2  |
| Exchange lessons learned on fruit tree planting in Luang Prabang | Villagers                      | 6  | 3  |

Table 43. Gender training I

| District | Villages | Households         | No. Participants | Women |
|----------|----------|--------------------|------------------|-------|
| Mai      | 8        | 328                | 328              | 199   |
| Samphan  | 10       | Data unavailable   |                  |       |
| Ngot Ou  | 5        | 149                | 149              | 69    |
| Total    | 25       | Total undetermined |                  |       |

Table 44. Gender training II

| District | Villages | Households | No. Participants | Women |
|----------|----------|------------|------------------|-------|
| Mai      | -        | -          | -                | -     |
| Samphan  | 5        | 231        | 231              | 132   |
| Ngot Ou  | -        | -          | -                | -     |
| Total    | 5        | 231        | 231              | 132   |

A significant number of trainings have been conducted for government partners, project staff, and villagers (Table 42). District government counterparts are involved in field activities on an ongoing basis and engage in the process of learning while doing. Government partners responded positively during interviews and on the written questionnaire regarding the training they received from the project. Government staff mentioned that project training has provided them with useful skills and improved their knowledge in a range of areas. Specifically, government partners identified improved skills in using computers, monitoring and reporting, planning activities, and working with and transferring their knowledge to villagers.

Villagers expressed satisfaction with trainings conducted by the project. Women comprised 44% of the participants in village trainings. Topics covered and new knowledge gained from trainings were easily recalled during interview sessions. Skills and understanding acquired through training are being put into practice. Villagers are pleased with the training opportunities provided by the project and are adopting new climate change adaptation practices promoted by the project.

Gender training has been an important component of the project. Gender training I was conducted in eight villages in Mai and five villages in Ngot Ou (Table 43). All villages in Samphan participated in gender training I during a previous project. Gender training II has been completed in five Samphan villages (Table 44).

Project and LWU staff conducted gender trainings and action planning in target villages. The gender training model was developed by CARE for ethnic communities. Training consists of 'gender negotiation' meetings and follow-up activities focusing on building understanding of gender roles, constraints, and capacities. Gender training participants (Part 1: Problem analysis) identify problems related to women's roles in the family and community. These problems are analysed using a problem tree and participants discuss

possible solutions. Typical problems identified during the initial meetings included: 1. high workloads for women in maintaining homes and doing agricultural work; 2. high workloads for women during pregnancy; and 3. high workloads related to caring for large families. In addition, problems relating to poor health and sanitation conditions in villages were pinpointed.

Follow-up meetings (Part 2: Gender plan discussions) focus on developing action plans to address problems identified during the first meetings. Villagers identified the following means to address these issues: husbands and wives discuss sharing household and agricultural responsibilities; and village elders, teachers, and district staff encourage men to help their wives. The training engages men in the process of understanding the difficulties experienced by women and how they can help their wives in everyday chores. Knowledge gained by training participants is extended to other villagers through informal discussions among family and community members.

### Activity 3.5 Development and implementation of a project advocacy strategy

The key project advocacy strategy has been the diversification of livelihoods through promoting climate adaptation strategies that allow for income generation while conserving biodiversity and natural resources. The promotion of cardamom and tea has proven to be an environmentally sustainable adaptation practice which allows farmers to earn substantial income over time. Making weather information available to farmers so that they can plan and adjust agricultural activities is part of the adaptation strategy. Providing a diverse array of climate change adaptation options allows farmers to select strategies which they feel most comfortable in adopting and which they are able to secure the greatest benefits from their labour.

### **3.3 Sustainability**

Farmer groups have been successful in increasing villagers' income from selling commodities collectively. Villagers realize the importance of quality control to ensure the highest price for their products. Farmers have improved their negotiation skills and are no longer being taken advantage of by Chinese and Vietnamese traders. The value of belonging to village farmer groups is apparent to villagers.

Cardamom and tea cultivation are guaranteed to be sustainable. Both crops are resilient to climate variability and have high income potentials. Farmers recognize the value of these crops and will expand their plantations based on available labour. Cardamom is easy to regenerate from vegetative runners. Income from tea sales may encourage families with sufficient labour to purchase tea seedlings to expand their tea plantations. Cardamom and tea ovens will be maintained because villagers recognize the added value in selling these commodities dry.

Galangal flowers for Chinese medicine have a high market value and there is a high demand for galangal roots. Although some farmers have discontinued maintaining galangal to concentrate their time in cardamom production, many farmers said they would continue to maintain their galangal for its income potential.

The pineapple provided by the project is preferred over traditional varieties because it is easier to maintain. Farmers are familiar with propagating pineapple and it may be assumed that farmers will continue pineapple cultivation. Fruit trees require minimal maintenance after being established. Villagers enjoy eating fruit and selling fruit is another potential income source.

The project is piloting rattan with 30 families. Rattan sustainable harvest zones in forests have been established in two villages. The project provided support for 20 farmers to learn bamboo and rattan furniture construction. The SUPA project will continue to provide support for rattan furniture construction. It is too early to assess the sustainability of this activity.

Vegetable gardening has been widely adopted by villagers. Women have learned how to save and store vegetable seeds. Families who were not direct recipients of vegetable seeds have started their own gardens from seeds shared by their neighbours. Some families are using compost and manure to fertilize their gardens. Villagers will continue planting vegetable gardens.

Villagers will maintain project supported paddy rice terraces because: 1. rice grown on terraces has higher yields than upland rice and 2. growing paddy rice requires less labour than upland rice cultivation. Farmers will continue using SRS rice planting techniques prescribed by the project because of significant increases in yield over traditional methods. Farmers with adequate irrigation will convert to the SRS technique because they have observed the higher rice yield potential of SRS.

Mushroom production has a high income potential and is particularly suited for families with insufficient labour. The sustainability of mushroom production is dependent on villagers being able to successfully produce mushroom spores or obtain spores from Vietnam. SUPA will continue support for this activity.

Villagers are successfully raising and harvesting fish. Fishponds are being maintained and fish are being fed. Raising fish in fishponds is less time-consuming than fishing in streams and rivers. Villagers enjoy having fish for special occasions.

Worldwide bee populations are on the decline due to pesticide use, disease, and climate change. Raising bees in fruit tree orchards significantly improves fruit production. The SUPA project will take over the beekeeping and honey production activity from NU-PCR.

Women identified improved sanitation conditions in their villages by raising pigs in pens away from their homes. The practice of penning pigs is likely to be sustained. The project has failed in combating high rates of livestock mortality.

If left to produce mature seeds, leguminous annual crops, such as soybeans reabsorb a large portion of the atmospheric nitrogen fixed in the soil. Growing soybeans and harvesting mature seed minimally improves soil fertility. Although not necessarily making a large contribution to improving soil fertility, soybeans are a nutritious high-protein crop. Villagers will likely continue growing soybeans for home consumption and sale. Villagers are not practicing soil erosion control.

DONRE sends weather forecasts to villages two or three times per month and more often during severe weather events. Weather forecasts both from information obtained from the district and from Lao television news stations is regularly broadcasted over village loudspeaker systems to coordinate agricultural activities. Weather monitoring systems have been set up in all three districts which transmit real-time weather data to the National Department of Meteorology and Hydrology for analysis of current and long-term weather trends. District DRR committees have been established with respective governments offices having specific roles and responsibilities. It is yet to be determined the operational capacity of DRR committees or the utility of the monitoring stations.

Women are pleased and proud to be members of the village savings and loans groups. They are able to take loans at low interest rates and earn a small amount of money from their savings. Women who had not initially joined the savings and loans groups said that they now recognize the benefits of being a member and will join during the next round of membership. Membership in VSLG will likely increase.

Men's attitudes and behaviour toward women have changed dramatically in that they are helping their wives with all types of work. In addition, men now realize that women can make valuable contributions as decision-makers in the family and community. Project staff have helped women to increase their self-esteem and confidence. Both men's and women's attitudinal and behavioural changes are permanent and will most likely evolve into greater empowerment of women.

Climate change adaptation activities implemented in villages are sustainable because villagers can readily see improvements and the potential for improvement in their lives by adopting project interventions. The high degree of acceptance and adoption by villagers of the various project activities validates the project's achievement and sustainability. Villagers will continue to be positively impacted into the future from their participation in project supported interventions. The benefits of the project will continue after the project ends.

### **3.4 Monitoring and learning**

Information sharing between project managers (CARE and CCL) and their field staff has facilitated efficient project coordination at the village level. Field staff conduct debriefings with project managers after village visits; collectively decisions are made regarding actions to take on issues discovered in villages. Project managers conduct monthly review and planning meetings with their staff and government counterparts at the end of each month. Issues are discussed and follow-up action is determined at this time and later shared during monthly management meetings with the provincial coordinator. Verbal communication between project managers and field staff operates effectively in keeping staff up-to-date on activity implementation in villages.

CARE has a number of well-developed monitoring tools -- field staff monthly progress reports, monitoring of VSLG record-keeping, progress activity tracking, and monthly and quarterly financial reports. The project uses a 'resilience spider' (a graphic presentation of 10 quantitative and qualitative dimensions of resilience) to measure the capacity and functioning of farmer groups. Effective formal and informal monitoring structures has ensured that the project is grounded in operational realities, is responsive to changing circumstances, and can exploit unforeseen opportunities as they emerge.

The project conducts quarterly full-staff meetings. District teams for all of CARE's projects provide progress reports, identify problems, and propose actions to be taken. Field staff actively express their ideas and concerns during these meetings. Project management is responsive and follows up on issues identified. Project staff concurred that quarterly meetings were productive; exchange of information between CARE's Muang Khua office and the district field offices is effective. Following quarterly full-staff meetings project updates are provided to district vice governors and counterpart office heads.

### **3.5 Management arrangements and partnership approach**

The Ministry of Natural Resources and Environment (MONRE) is the primary oversight partner at the national level and the Phongsaly Provincial Natural Resources and Environment office (PONRE) leads provincial coordination of project activities. The focal point for district coordination is District Natural Resources and Environment office (DONRE).

The project has a Provincial Steering Committee (PSC) and District Implementation and Monitoring Committees (DIMC). The PSC works with the project and districts to plan and implement project activities in partnership and facilitates the project in coordination with other offices associated with project implementation. PSC is chaired by the Provincial Vice-Governor and meets every six months. A representative of CARE Laos' senior management attends PSC meetings. On a day-to-day basis the project is managed by CARE's Provincial Program Coordinator, CCL's Project Coordinator, and CARE's Project Manager.

Table 45. Government staff turnover

| District | DONRE | DAFO | LWU |
|----------|-------|------|-----|
| Mai      | 2     | 3    | 1   |
| Samphan  | 2     | 5    | 3   |
| Ngot Ou  | 4     | 1    | 2   |
| Total    | 9     | 8    | 6   |

The project has experienced difficulties in seconding and retaining government counterpart staff. One government staff member from the three offices (DONRE, DAFO, and LWU) is responsible for working with the project in each of the three districts. As is apparent in Table 45, staff turnover has been excessive for each of the three government departments. The project has invested both time and resources to train counterpart staff in climate change adaptation concepts and activities. Investment in capacity building of government counterparts is lost each time a staff member is changed. Newly assigned government staff must be familiarized and trained to function in the project. Continuous reassigning of government personnel to the project not only results in a financial loss and human resource loss for the project but additionally impedes on the coordination of activities and the effectiveness of time spent in villages by project staff. The lack of continuity in assigning personnel to the project has limited the effectiveness of building government capacity in climate change adaptation.

### 3.6 Women's empowerment

One of the greatest achievements of the project has been the empowerment of ethnic women in target villages. When asked, 'How has your life changed because of the project?', the first response from women in five of the six villages interviewed was that men are now helping them with both household and agricultural chores. Women said that men are now doing work they had never done in the past, such as taking care of children, cooking, washing dishes, carrying water for the home and gardens, transporting firewood, weeding fields, and harvesting crops. Women stated that prior to the project they seldom discussed anything with their husbands -- women associated together and men associated together. Now husbands and wives are discussing both family and agricultural matters. Women further stated that they no longer fight and argue with their husbands as in the past. One woman amusingly said, 'Now I'm the boss of the family and I make my husband work more than me.'

CARE's gender training has been remarkably successful in changing traditionally held attitudes of women functioning as subordinate to men in the family and community. The effectiveness of the training has resulted in an extraordinary change in men's attitudes and behaviour toward women. It was universally observed in all six villages visited that men recognize that women should be treated with respect and as equals. Women explained that they now speak up during farmer group meetings and that men listen to their opinions. Men said that women sometimes know more about planting, maintaining, and harvesting the crops promoted by the project than they.

Women specifically mentioned that the training they received on operating village savings and loans groups has increase their confidence and provided them with skills in managing money. The project's support for farmer groups and VSLG activities has made women equals in community development.

### 3.7 Overall objective

The project's overall objective is *to enable improved resilience of remote ethnic upland communities, in particular women, to the impact of climate variability and change, and contribute to the achievement of MDGs 1, 3 and 7.* There are two indicators of achievement.

#### Indicator 1: Overall objective

Target villages demonstrate improved characteristics of a resilient community as per the project resilience measure designed during the NU-PCR baseline

Table 46. Indicator 1: Overall objective

| Target villages demonstrate improved characteristics of resilient communities | Baseline value March 2016 | Target (+ 25% of baseline value ) | End-line value March 2018 | Assessment           |
|---|---------------------------|-----------------------------------|---------------------------|----------------------|
| Farmer long-term planning   | 31.3%                     | 39.1%                             | 51.4%                     | Achieved             |
| M/F HH and public decision-making   | 34.7%                     | 43.4%                             | 40.6%                     | Moderate improvement |
| Household disaster preparedness   | 51.0%                     | 63.7%                             | 59.2%                     | Moderate improvement |
| M/F access to agro-weather information and services                           | 34.2%                     | 42.7%                             | 50.2%                     | Achieved             |
| Livelihood diversification  | 56.7%                     | 70.9%                             | 59.1%                     | Little improvement   |
| M/F access to and control over resources                                      | 38.7%                     | 48.4%                             | 49.3%                     | Achieved             |
| State of natural resources  | 24.4%                     | 30.5%                             | 30.7%                     | Achieved             |
| Livelihood recovery rate  | 36.1%                     | 45.1%                             | 51.6%                     | Achieved             |
| Division of labor, with shared work loads                                     | 18.2%                     | 22.7%                             | 28.2%                     | Achieved             |
| Women's agency  | 47.3%                     | 59.1%                             | 70.6%                     | Achieved             |

#### Indicator 2: Overall objective

Agro-climate information system established that enable farmers to adjust their agriculture practices to annual fluctuations of weather

Table 47. Indicator 2: Overall objective

|  | Target                               | End-line value March 2018   | Assessment |
|--|--------------------------------------|---|------------|
| Farmers in 30 target villages receive and discuss seasonal forecasts | Receive forecasts two times per year | Seasonal planning conducted in villages three times during the agricultural cycle - before planting, mid-cycle, and during harvesting | Achieved   |

The first overall objective indicator of achievement is comprised of ten dimensions (Table 46). Seven of the ten individual components of the overall objective indicator 1 have been achieved. The value of the resilience indicator component *M/F HH and public decision-making* indicates moderate improvement. Qualitative analysis derived from men's and women's interviews concluded that women have made significant advances in participating in both household and community decision-making. Communication between husbands and wives have meaningfully improved; family and agricultural matters are regularly discussed. Women participate in farmer group meetings and men pay attention to their views and opinions.

The indicator value for *household disaster preparedness* shows moderate improvement. The economic improvement in the lives of the vast majority of target villagers suggests that families are in a much better position to cope with disasters.

The initial value for the *livelihood diversification* indicator implies that many families were already involved in numerous livelihood activities, such as livestock raising, upland rice cultivation, vegetable production in swiddens, NTFP collection, food gathering, hunting, and to a limited extent cardamom, galangal, and tea production. Findings from the evaluation demonstrate that the project has made substantial progress in expanding the diversification of villagers' livelihoods and that communities have increased their resilience to climate variability and climate change. All expected results indicators have been achieved.

#### 4. Lessons learned

1. The baseline study was conducted in 15 of the 30 target villages. Enumerators did a good job in obtaining quality data. The methodology was sound and captured key aspects of villagers' livelihoods as they relate to climate change adaptation. The household survey questionnaire was 20 pages long. Although the questions from the questionnaire were pertinent in obtaining detailed livelihood information, it required an extensive amount of time to conduct a single interview (approx. 2 hours/interview). Fifty percent of the households in each village were interviewed. Villages are relatively homogenous and a smaller sampling from each household wealth ranking category ('very poor', 'poor', and 'not so poor') would likely render similar results. Future climate change baseline studies can use the same household questionnaire template, but the total number of questions should be scaled back by as much as 50%. A shorter questionnaire with fewer families interviewed would improve the efficiency of data collection and analysis without significantly impairing the results.
2. Soil erosion and the decline in soil fertility is a serious problem throughout the mountains of Laos. Sloping Agricultural Land Technology (SALT) is an effective means to reduce soil erosion and improve soil fertility. The technique has been promoted by development agencies since the 1980s. Typically, farmers have not adapted this technology because it is extremely labour-intensive and the results are not visible until years into the future. It works when projects heavily subsidize labour and inputs. It is seldom sustainable after high costs inputs from a project end. Rather than promoting SALT, farmers would be better served by staff simply encouraging farmers to plant any type of seedling, particularly galangal, cardamom, and tea on the contour of a mountain slope. Some farmers in Phongsaly have experience planting rubber on contours. Farmers can visualize a contour and do not need to use contouring techniques prescribed in SALT (A-frame and water level devices).
3. The voucher system increases the capacities of communities to link with service providers and negotiate prices; it is a cost-effective means of input distribution. To avoid problems of villagers receiving inputs which do not meet the quality standards originally shown by the trader, there should be a clause in the voucher contract stating that villagers have the right to reject a delivery if more than 20% of the merchandise are substandard. Villagers must be informed of this right and project staff should monitor deliveries.
4. To avoid the negative consequences of excessive government staff turnover, the MOU between NGOs and government should have a provision which explicitly states that government staff seconded to a project must work with the project for its entirety regardless of being promoted or other justifications. The only two circumstances under which a counterpart staff may leave a project are for maternity leave or to attend to family emergencies which require reassignment to another province.
5. Although not a climate change adaptation option, CCL responded to villagers' need to be informed of the dangers of herbicide and pesticide use. In Ngot Ou villagers are actively pursuing contract farming of maize, green beans, green peppers, and other vegetables with Chinese entrepreneurs. SAEDA conducted a pesticide awareness training of trainers with CCL and government counterparts who in turn conducted trainings with villagers. For the most part, villagers knew nothing of the hazards of pesticide use before the training. The training was effective in building the understanding of villagers of the dangers of herbicides and pesticides; but farmers are not taking precautions in pesticide application. Farmers said that they understood they should wear a mask when applying pesticides but instead simply stand up-wind from the spray. No farmers owned pesticide protective gear. CCL is coordinating with the government and Chinese contractors to set up Lao intermediary agencies (Lao middlemen) that oversee the contract arrangements between the Chinese and villagers. In addition to the Chinese providing seeds and chemical inputs to farmers, contract agreements should mandate that the Chinese contractors also provide pesticide protective gear, including goggles,

face mask respirators, rubber boots, and rubber gloves. The Lao intermediary agencies and DAFO, under consultation provided by SAEDA, should take responsibility for assuring the quality of pesticide protection gear supplied by the Chinese contractors. The Chinese will recoup the cost of supplying pesticide protective gear to farmers by reducing the purchase price for commodities paid to villagers. This minimal reduction in farmers' earnings would be insignificant to the need for farmers to be protected from the hazards of pesticide application. Poor farmers are not going to invest in pesticide protective gear on their own. It should be made the responsibility of the Chinese contractors to minimize the impact of promoting human health endangering and environmentally destructive monocrop chemical intensive agriculture.

6. Three villages in Ngot Ou were relocated by the government and villagers now live on the opposite side of the Ou River from their agricultural production areas in their former villages. Villagers must cross the river in order to reach their agricultural plots. Villagers are sometimes stranded on the opposite side of the river from their new village for months at a time because of increased river levels. All three villages have requested project assistance in constructing bridges across the river. Provincial and district authorities do not consider building bridges -- for these villagers to provide access to their agricultural fields and to minimize the dangers of crossing the river -- as a priority consideration in their development plans. As with government relocation, services promised usually require projects to provide them. Future CCL projects should include funding for bridge construction.

## 5. Recommendations

The project should be extended to a second phase to build on the successes of NU-PCR and to further advance CARE's support to rural ethnic women. The continuation of the project would take advantage of existing capacity within CARE and CCL provincial offices. A second phase would allow for scaling up of successful interventions and extending into additional villages.

A second phase of the project could expand from its current 30 villages to include five additional villages in each district (total 15 new villages). Project staff will be able to continue to monitor and upscale activities implemented during the first phase of NU-PCR. Climate change adaptation options promoted under this project can be promoted in new villages more effectively and efficiently from the experience gained during the implementation of NU-PCR.

It should no longer be necessary to supply cardamom, galangal, pineapple, soybean, or vegetable seeds to the initial NU-PCR villages since these crops are easily replicated. Villagers who have participated in these various agriculture activities can become the input suppliers for activities in new villages.

Although the paksong cardamom variety has a lower market price, it is more resilient to extended dry periods. The project should continue to promote both varieties of cardamom. In addition, the project should encourage farmers to continue planting a diverse number of crops and not solely concentrate on cardamom or tea. Focusing labour resources on a single high income crop has the potential for disastrous outcomes if that crop fails due to pest infestations, disease, intolerance to severe weather conditions, or market fluctuations.

Starting tea from seeds is relatively easy. The second phase of the project should investigate the cost-effectiveness of producing tea seedlings over purchasing seedlings. Villagers would be able to increase their self-reliance by learning how to grow tea seedlings and manage tea nurseries.

Fishponds already established can be the source of fingerlings for new fishponds. The activity can be scaled up to train farmers in fingerling production. Fish fingerling production could develop into an income generation source for select fish farmers.

Farmers explained that there are now very few bees; this was attributed to using pesticides and herbicides. Farmers are also aware that bees are important for pollinating flowers to produce fruit. Villagers practicing traditional beekeeping said that it is more difficult to attract bees to their hives and that their production of honey has declined. A second phase of the project can take advantage of farmers' traditional beekeeping knowledge in pursuing the beekeeping activity. Regenerating bee populations in Phongsaly would be an achievement toward combating one consequence of global climate change.

Further support for irrigation systems, rice terracing, and training in SRS should be provided for both current and new villages. A number of project villages have additional potential paddy land which could be developed if irrigation were available. A second phase of the project should secure adequate funding to expand paddy rice terraces with irrigation systems. Support for improved rice production reduces villagers' reliance on upland rice cultivation which is more labour-intensive than paddy rice and highly susceptible to climate variability.

Rattan cultivation along with bamboo and rattan furniture construction are activities which require continued technical and marketing support if they are to become viable income sources for villagers.

Some villagers have constructed their own cardamom ovens. Further technical support but not input support could be provided to villages to construct additional cardamom and tea drying ovens. All villagers interviewed requested more ovens but with significant income from these commodities villagers from the current project should be able to pay for the construction.

Farmers explained that they get weather information from weather apps on their children's smart phones. Villagers stated that a Chinese weather app was very accurate for weather conditions in Ngot Ou. Most weather apps are graphical and to a certain extent understandable even if a person is not familiar with the language of the app. The quality of weather information for Laos and its presentation varies considerably by weather app. During a second phase, the project could identify a relatively simple and accurate smart phone weather app and develop training around using it in a non-literate context. During the evaluation, *1 Weather: Widget Forecast Radar* available on Google Play proved to be relatively accurate in Phongsaly; it has a simple graphical interface.

Additional training and awareness building of the dangers of pesticide and herbicide use including proper application is required not only for Ngot Ou villagers involved in contract farming, but also for farmers in Mai and Samphan who use large quantities of herbicides for land clearing, specifically paraquat which is banned in Laos but easily available. The new project could support an advocacy issue around enforcement of Lao laws regarding the sale of illegal herbicides and pesticides.

CARE has developed an approach to reducing livestock mortality which combines capacity building for community-based Village Veterinary Workers (VW) and improving farmers' willingness to pay for vaccinations. This approach has had proven results in projects implemented by CARE in Sayabuli and Sekong. Working with DAFO, CARE should introduce this model in all second phase project villages. The model involves a graduated phase-out subsidy program for livestock vaccination. The phase-out vaccination subsidy allows farmers to witness the efficacy of proper livestock vaccination and as the subsidies are withdrawn villagers willingly accept the cost of further livestock vaccinations.

The second feature of the model involves training one female VW responsible for small livestock and one male VW responsible for large livestock in each village. Project and DAFO staff train village veterinarians in the: vaccination subsidy system; prevention and treatment of livestock disease; and proper use of vaccines and vaccination equipment. Female VW in other projects have proven to be both diligent and competent village veterinarians. Establishing women as VW is another component of CARE's support for rural ethnic women. CARE's village veterinary training and livestock vaccination approach is well documented for replication in project villages.

To restore small livestock populations, a women's small livestock raising group could be established in villages which have no or very few chickens or ducks. It would be an activity specifically geared toward women from very poor households. Poor women would be provided with chickens or ducks and materials for housing. The activity would take the form of a small livestock revolving fund where women would share half their livestock offspring with other families. This activity has been successful in other CARE projects to provide support to the most destitute women.

Women's illiteracy in Lao language was discussed during interview sessions with village women. Women stated that they felt disadvantage by not being able to speak Lao. They said they would be able to communicate better with project staff and more fully participate in negotiating with traders if they knew how to speak Lao. Women mentioned that their children are now learning Lao and that they had no opportunity to attend school while growing up. Women from Akha, Kheu, and Yao villages expressed a keen and sincere

interest in learning to speak Lao. Women in Khamu villages said that they know a little Lao and do not encounter communication problems since most of their contacts speak Khamu. Khamu women interviewed were not interested in further learning Lao language. A second phase of the project could pilot Lao literacy training for women who express an interest in learning Lao. *Appendix 7: Proposed Lao literacy training* provides a description and budget for piloting Lao literacy training. World Renew, formerly CRWRC, has conducted adult literacy training in Mai district. World Renew's experience in Lao language training could help guide the development of this activity during a second phase of the project.

To increase the effectiveness of training and to provide follow-up and ongoing monitoring support for activities in villages, CARE could contract directly with SAEDA to provide three experienced SAEDA staff to work in each of the three districts. SAEDA has a pool of 20 qualified personnel currently working in Vientiane, Xiengkhouang, Luang Prabang, and Luang Namtha. SAEDA could provide staff with different expertise to be stationed in one districts and called upon to work in other districts. This staffing arrangement would facilitate increasing the effectiveness of training of trainers and improving technical training support for villagers.

During a second phase, the project will be able to build on the successes of gender mainstreaming to further empower women in their communities. A second phase of the project will provide opportunities for more women and the most disadvantaged to increase their adaptive capacity to deal with climate variability and climate change.

All current interventions -- cardamom and tea production and drying; intercropping galangal, pineapple, and fruit trees; piloting rattan cultivation, bee keeping, soybeans, and mushroom production; vegetable gardening; improved rice production; fishponds; improved livestock health practises; timing agricultural activities around weather forecasts; increasing marketing opportunities; gender training; and support to women's savings and loans groups -- have proven to be successful. A second phase of the project can expand these activities to new villages and enhance them in current villages.

## 6. Conclusion

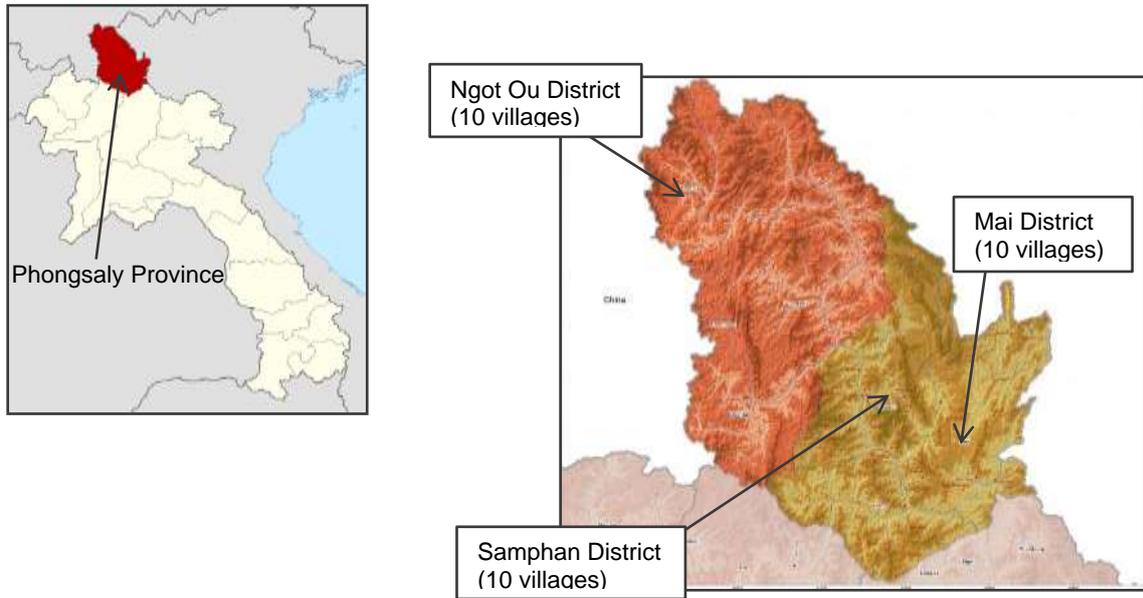
CARE and CCL have been working with ethnic communities in the remote highlands of Phongsaly for more than a decade implementing projects in: poverty reduction; livelihood support; water and sanitation; mother and child health care; natural resource management; and women's empowerment. CARE's and CCL's long-term commitment and extensive experience implementing development projects in Phongsaly combined with SAEDA's proven training expertise are the primary reasons for the success of the project. The project has gained considerable momentum in promoting adaptation strategies to counter climate variability and promoting women's empowerment.

Project success is highly dependent on implementers' commitment, motivation, competence, and skill. The success of NU-PCR in creating sustainable improvements in villagers' lives can be accredited to the dedication and capacity of the project's managers and field staff. Project managers along with key field staff have worked with previous CARE and CCL projects before working with NU-PCR. Through this experience, they have toned their skills enabling them to effectively institute positive change in villages.

Influencing change requires trust from community members. Villagers are very familiar with project staff and readily named project staff coming to their village. Villagers consistently said that project staff are regularly in their villages and often sleep in their villages. Project staff have developed the trust of communities required to motivate villagers to engage in new activities. One woman in Namloy, Samphan without any provocation stated, "I am so happy with the help I have received from the staff I could hug them."

Project staff's commitment to community development work is evident in the time they spend in the field. They often work beyond office hours -- during evenings, on weekends, and when villagers are available at night in villages. In addition to doing an excellent job working with and inspiring villagers, their endurance to live under difficult conditions in districts indicates their sincere concern for helping the poor. Often the commitment of NGO project staff is less than optimal in Laos. CARE and CCL are fortunate to have such dedicated and capable staff implementing their projects in Phongsaly. The project's success can be directly attributed to the commitment, motivation, competence, and skill of project management and field staff.

**Appendix 1**  
**Map of NU-PCR Target Districts**



{Source: CARE Climate Change PowerPoint Presentation}

## Appendix 2 Evaluation timetable

| Day          | Date                | Activity  | Participants                         |
|--------------|---------------------|---|--------------------------------------|
| Fri -<br>Wed | 23 Feb -<br>28 Feb  | Desk review<br>Prepare proposed evaluation methodology  | Lead consultant                      |
| Wed          | 28 Feb              | Send proposed evaluation methodology to CARE  | Lead consultant                      |
| Fri          | 2 March morning     | Skype meeting to discuss proposed methodology   | CARE management<br>Lead consultant   |
| Sat<br>Sat   | 3 March<br>10 March | Develop field research tools  | Consultancy team                     |
| Sat          | 10 March afternoon  | Fly - Vientiane to Oudomxay   | 1 Lao assistant                      |
| Sun          | 11 March            | Travel - Oudomxay to CARE field office in Muang Khua and meet field staff to discuss field research plan    | Consultancy team<br>CARE field staff |
| Mon          | 12 March morning    | Travel to Mai field office and meet CARE field staff in Mai to discuss field research plan                  | Consultancy team<br>CARE field staff |
| Mon          | 12 March morning    | Interview project staff - Mai   | Consultancy team                     |
| Mon          | 12 March afternoon  | Interview district government partners - Mai  | Consultancy team                     |
| Tues         | 13 March morning    | Meet with Nai Ban, village leaders, and men's farmers group – 1 <sup>st</sup> village Mai – Ban Naboua      | Consultancy team                     |
| Tues         | 13 March afternoon  | Meet with women's farmers group – 1 <sup>st</sup> village Mai – Ban Naboua                                  | Consultancy team                     |
| Wed          | 14 March morning    | Meet with Nai Ban, village leaders, and men's farmers group – 2 <sup>nd</sup> village Mai – Ban Mokchala    | Consultancy team                     |
| Wed          | 14 March afternoon  | Meet with women's farmers group – 2 <sup>nd</sup> village Mai – Ban Mokchala                                | Consultancy team                     |
| Thurs        | 15 March morning    | Travel - Mai field office to Samphan field office   | Consultancy team                     |
| Thurs        | 15 March afternoon  | Meet CARE field staff in Samphan and discuss field research plan  | Consultancy team<br>CARE field staff |
| Fri          | 16 March morning    | Interview district government partners - Samphan  | Consultancy team                     |
| Fri          | 16 March afternoon  | Interview project staff - Samphan   | Consultancy team                     |
| Sat          | 17 March afternoon  | Meet with Nai Ban, village leaders, and men's farmers group – 1 <sup>st</sup> village Samphan – Ban Namloy  | Consultancy team                     |
| Sat          | 17 March morning    | Meet with women's farmers group – 1 <sup>st</sup> village Samphan – Ban Namloy                              | Consultancy team                     |
| Sun          | 18 March            | Day off   | Consultancy team                     |
| Mon          | 19 March morning    | Meet with Nai Ban, village leaders, and men's farmers group – 2 <sup>nd</sup> village Samphan – Ban Laoleu  | Consultancy team                     |
| Mon          | 19 March afternoon  | Meet with women's farmers group – 2 <sup>nd</sup> village Samphan – Ban Laoleu                              | Consultancy team                     |
| Tues         | 20 March morning    | Travel – Samphan to CCL field office in Ngot Ou   | Consultancy team                     |
| Tues         | 20 March afternoon  | Meet CCL field staff in Ngot Ou and discuss field research plan   | Consultancy team                     |
| Wed          | 21 March morning    | Interview CCL project staff - Ngot Ou   | Consultancy team                     |
| Wed          | 21 March afternoon  | Interview district government partners - Ngot Ou  | Consultancy team                     |
| Thurs        | 22 March morning    | Meet with Nai Ban, village leaders, and men's farmer group – 1 <sup>st</sup> village Ngot Ou – Ban Chomphor | Consultancy team                     |

|       |                       |   |                  |
|-------|-----------------------|---|------------------|
| Thurs | 22 March afternoon    | Meet with women's farmer group – 1 <sup>st</sup> village Ngot Ou – Ban Chomphor                                   | Consultancy team |
| Fri   | 23 March morning      | Meet with Nai Ban, village leaders, and men's farmer group – 2 <sup>nd</sup> village Ngot Ou – Ban Tungkualin Noy | Consultancy team |
| Fri   | 23 March afternoon    | Meet with women's farmer group – 2 <sup>nd</sup> village Ngot Ou – Ban Tungkualin Noy                             | Consultancy team |
| Sat   | 24 March morning      | Debriefing with CCL project manger  | Consultancy team |
| Sat   | 24 March afternoon    | Travel - Ngot Ou to CARE's field office in Muang Khua   | Consultancy team |
| Sun   | 25 March              | Prepare for debriefing with government officials, field team, and local partners                                  | Consultancy team |
| Mon   | 26 March              | Prepare for debriefing with government officials, field team, and local partners                                  | Consultancy team |
| Tues  | 27 March              | Prepare for debriefing with government officials, field team, and local partners                                  | Consultancy team |
| Wed   | 28 March              | Prepare for debriefing with government officials, field team, and local partners                                  | Consultancy team |
| Thurs | 29 March              | Debriefing with government officials, field team, and local partners  | Consultancy team |
| Thurs | 29 March              | Closing dinner  | Consultancy team |
| Fri   | 30 March              | Travel - Muang Khua to Oudomxay   | Consultancy team |
| Sat   | 31 March              | Work on Lao translations  | Consultancy team |
| Sun   | 1 April               | Fly Oudomxay to Vientiane   | Consultancy team |
| Mon   | 2 April               | Meet with CARE management   | Consultancy team |
| Tues  | 3 April               | Meet with CCL, SAEDA, EU  | Consultancy team |
|       |                       | Fly Vientiane to Oudomxay   | Lead consultant  |
|       |                       | Prepare draft evaluation report   | Lead consultant  |
| Fri   | 27 April              | Submit draft evaluation report to CARE  | Lead consultant  |
|       | Date to be determined | Receive evaluation report comments from CARE and submit final evaluation report within one week of receipt        | Lead consultant  |

### Appendix 3 Literature reviewed

*Advancing Gender Equality through Climate Change Adaptation: Lessons from work with ethnic communities in the Northern Uplands of Lao PDR.* Policy Brief, CARE International in Lao PDR, February 2018

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*Grant Application Form: Lao PDR Global Climate Change Alliance Programme, Northern Uplands - Promoting Climate Resilience (NU-PCR).* The European Union, 22 March 2013

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*Managing Increasing Weather Uncertainty.* Poster, CARE International in Lao PDR, date unknown

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*Northern Uplands Promoting Climate Resilience (NU PCR), Laos PDR: Reflecting on change - NU-PCR Baseline assessment and formative review: Initial observations.* PowerPoint presentation, CARE International in Lao PDR, 11 March 2016

*NU-PCR Y3 report and year 4 forecast to EU final.* Excel file, CARE International in Lao PDR, 11 May 2017

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*Reflecting on Change - NU PCR Midterm Report.* Miguel Coulier, CARE International in Lao PDR, April 2016

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*Report of factual findings from an expenditure verification of an European Commission financed grant contract for external actions: Period from 12 March 2014 to 11 March 2015.* KPMG Lao Co., Ltd., Vientiane, Laos, 10 August 2015

*Report Results on Potentiality Survey and Evaluation Production, Processing and Marketing of Rattan and Other Products for Diversifying Income Sources for Poor Farmers in Phongsaly.* Nguyen Viet Kim, CARE International in Lao PDR, April 2016

*ROM Report: Northern Uplands - Promoting Climate Resilience (NU-PCR).* Jan Douwe Meindertsma, The European Union, 4 May 2016

## **Appendix 4**

### **Implementer interview questions**

#### General questions

1. most important (successful) activities of the project;
  - 1.1 What do you think are the most important or successful activities of the project?
2. perception of their involvement in the project;
  - 2.1 How were you involved in the project?
  - 2.2 How do you feel (your opinion) about your involvement with the project?
  - 2.3 Would you like to be involved in another project similar to this? Why?
3. assessment of the project's progress, achievements, impact, and sustainability;
  - 3.1 How would you assess the project's progress?
  - 3.2 How would you assess the project's achievements?
4. project strengths and weaknesses;
  - 4.1 What are the project's strengths?
  - 4.2 What are the project's weaknesses?
5. achievement of project outcomes from the logframe; (only project manager)
6. project constraints and further resources needed to achieve project objectives; and
  - 6.1 What problems or constraints has the project had?
  - 6.2 What further resources are needed to achieve project objectives?
7. opportunities and suggestions for improving interventions for future project design.
  - 7.1 Do you have any suggestions for how the projects activities or trainings could be improved for future projects?

#### Relevance effectiveness, efficiency, impact, and sustainability questions

- relevance - the extent to which the project suited the priorities and policies of the target groups
  - How has the project been useful for you and your office?
  - How has the project been useful for villagers?
- effectiveness - the extent to which the project results and the project specific objective are expected to be achieved
  - Do you think the project has been operated effectively? Please explain.
- efficiency - the extent to which the project was managed to get value for money from inputs of funds, staff, and other resources
  - 10.1 Do you think the project has been operated efficiently? Please explain.
- higher level changes (impact) - the positive and negative changes produced by the project, directly or indirectly, intended or unintended, for women and men and for the most vulnerable
  - 11.1 How has the project impacted you and your office?
  - 11.2 How has the project impacted villagers?
  - 11.3 Has there been any negative impacts from the project?
- sustainability - to assess whether the benefits of the project are likely to continue after the project ends.
  - 12.1 Do you think the benefits of the project will continue after the project ends?
  - 12.2 Why do you think that?

#### Additional questions

- assess monitoring and learning - the effectiveness of project monitoring and learning processes;
  - 13.1 What is your opinion of how the project has been monitored? Please explain.
  - 13.2 What trainings have you attended?
  - 13.3 What is your opinion of the project's training? Please explain.
  - 13.4 How have you and your staff benefited from the trainings?
  - 13.5 What other kind of training would be useful for you or your staff?

- assess the effectiveness of a specific technical approach or methodology used (CVCA, ‘no-regret’ model, evidence-based advocacy for scale);
  - 14.1 What is your opinion of the CVCA activity? Please explain.
- assess the specific management arrangements, such as staffing structure, quality of partnership arrangements, and technical assistance provided;
  - 15.1 What is your opinion of how the project has been managed? Please explain.
  - 15.2 What is your opinion of your partnership with CARE? Please explain.
  - 15.3 What is your opinion of the technical assistance provided by the project? Please explain.
- assess contributions to women’s empowerment, with reference to specific domains of change (agency, relationship, structure); and
  - 16.1 How have men’s and women’s roles been affected by the project in villages? Please explain.
  - 16.2 How have men and women’s roles been affected by the project in your office? Please explain.
- identify lessons learned and recommendations to improve future programming.
  - 17.1 What lessons have you learned from the project?
  - 17.2 What recommendations would you give for future projects?

## Appendix 5 Implementer survey questionnaire

Please do not put your name on this questionnaire. I would like this to be an anonymous questionnaire so that you feel comfortable expressing your honest opinions about the project's activities.

1. Do you work for?

\_\_\_\_\_ P/DAFO    \_\_\_\_\_ P/DONRE    \_\_\_\_\_ P/DLWU    \_\_\_\_\_ CARE  
\_\_\_\_\_ CCL

2. Are you based in?

\_\_\_\_\_ Mai    \_\_\_\_\_ Samphan    \_\_\_\_\_ Ngot Ou    \_\_\_\_\_ Khua

3. How long have you been working for the project?

\_\_\_\_\_ years    \_\_\_\_\_ months

Please rate the following project activities as follows: (circle your choice)

**3 = Very successful** – this activity has had a significant impact on improving villagers' lives

**2 = Moderately successful** – this activity has had a medium impact on improving villagers' lives

**1 = A little successful** – this activity has had a small impact on improving villagers' lives

**0 = Not successful** – this activity has not improved villagers' lives

**NF = Not familiar** – I am not familiar with the impact of this activity

### **Part I**

#### **Activity 1.3**

Conduct the Climate Vulnerabilities and Capacities Assessment (CVCA)

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

#### **Activity 2.1**

Establish and strengthen farmer groups

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

#### **Activity 2.2**

Conduct agricultural training, provide inputs, and follow up with farmer groups and local government extension workers in three districts

##### Option 1

Promote cardamom

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 2a

Intercropping galangal

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 2b

Intercropping pineapple

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 2c

Intercropping fruit trees

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 3

Promoting rattan

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 4

Promoting vegetable gardening

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 5

Expanding paddy rice

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 6

Promoting mushrooms

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 7

Promoting fishponds

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 8

Promoting honey production

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 9

Improving animal health – chicken and pig housing

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 10

Promoting tea

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 11

Promoting soybeans

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 12

Promoting Sustainable Rice System (SRS)

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 13

Promoting improved upland rice seed

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 14

Promoting improved paddy rice seed

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

Option 15

Promoting cardamom ovens

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

**Activity 2.3**

Establish voucher system to link farmers with input sellers

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

**Activity 2.4.**

Implement capacity building (training)

Training for villagers

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

**Training for you**

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

**Activity 2.5**

Improve weather forecasting systems and farmers using weather information

**Improve weather forecasting systems**

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

**Improve farmers using weather forecasts (weather information)**

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

**Activity 2.6**

Establish village savings and loans groups in target communities for women

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

**Activity 2.7**

Strengthen farmers' understanding of markets and their negotiation position with traders

How would you rate this activity? Circle your choice.

3                      2                      1                      0                      NF

Why did you give this rating?

How can this activity be improved?

## Appendix 6 Terms of reference



Funded by  
European Union  
Civil Protection and  
Humanitarian Aid



|                  |  |
|------------------|--|
| <b>ToR Type:</b> | International Consultant   |
| <b>Project:</b>  | Northern Uplands – Promoting Climate Resilience<br>(NU-PCR) Project <i>(funded by the European Union)</i>    |
| <b>Location:</b> | National and provincial level, including Samphan, Ngot Ou and Mai<br>districts, Phongsaly province/ Laos PDR |
| <b>Title:</b>    | Final project Evaluation   |
| <b>Timeframe</b> | 26 days in March 2018  |

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## **1. Introduction**

The Northern Uplands – Promoting Climate Resilience Project (NUPCR), funded by the European Union (EU), is being implemented by CARE International in Lao PDR together with the partner organisations CCL and SAEDA in Phongsaly from December 2014 to March 2018. The overall objective of the project is to enhance resilience of small scale farmers in the Northern Uplands to the impacts of climate variability and change – in particular in the three districts in Northern Lao, namely of Mai, Samphan and Gnot Ou in Phongsaly province.

The envisaged consultancy aims to evaluate the implementation of the project and related achievements. The evaluation will consider quantitative and qualitative data related to the activities implemented as well as against the indicators defined in the project logical framework. Qualitative research should focus on aspects of communities' resilience with a particular focus on capacities of community groups and gender relations. Other considerations include partnerships, project management and project efficiency/effectiveness. Reference should also be made to the base-line, the mid-term review and the end-line of the project.

Findings will be reported to the Donor, to CARE, to host government (particularly MONRE), to implementing partners (SAEDA and CCL) and to other Lao PDR Global Climate Change Alliance Programme (GCCA) partners (IUCN and CIRAD). At the same time, the findings contribute to CARE's accountability and will be used to improve the quality of future activities, the design of future projects, and CARE Laos' long term program design and quality improvement.

## **2. CARE International in Lao PDR**

CARE International in Lao PDR is implementing two long-term programs designed around two impact groups. The goal of the Remote Ethnic Women (REW) program is to ensure that the Impact Group (remote ethnic women who are land poor, have the highest food insecurity, and lowest nutrition and health status) has, and can maintain, equitable quality of life.

## **3. Project summary**

The Northern Uplands – Promoting Climate Resilience (NU-PCR) project is designed to improve the resilience to the impacts of climate change of local ethnic communities in Phongsaly Province, and to strengthen the capacity of government authorities and local ethnic communities in that province. The project design is based on strong partnership and capacity building approaches, combined with participatory processes that develop joint ownership over effective interventions, to improve livelihood resilience to climate change, and other shocks and stresses. The project builds on and extends CARE's current implementation experience in Phongsaly Province and throughout Lao PDR. NUPCR works in partnership between CARE, Comité de Cooperation pour le Laos (CCL) and Sustainable Agriculture and Environment Development Association (SAEDA), building on the experience of all three partners.

The project aims at improving adaptive capacity of local communities and working in partnership with local authorities to improve the long-term resilience of remote ethnic women, their families and communities to climate variability and impacts.

The project approach to addressing adaptive deficit is grounded in the CARE Community-based Adaptation (CBA) Framework,<sup>1</sup> which involves four inter-related elements that guide the integration of adaptation activities into CARE's programs:

---

<sup>1</sup> CARE International Toolkit for Integrating Climate Change into Development Projects <http://www.careclimatechange.org/toolkits>

- Promotion of ‘no-regrets’ livelihoods strategies in combination with capacity building for improved livelihood planning and risk management;
- Disaster risk reduction strategies to reduce the impact of hazards, particularly on vulnerable households and individuals;
- Capacity development for local civil society and governmental institutions so that they can provide better support to communities, households and individuals in their adaptation efforts; and
- Advocacy and social mobilization to address the underlying causes of vulnerability, such as poor governance, lack of control over resources like land, and limited access to basic services.

The project's overall goal and objectives are:

**Overall objective:** To enable improved resilience of remote ethnic upland communities, in particular women, to the impact of climate variability and change, and contribute to the achievement of MDGs 1, 3 and 7

**Specific objective:** Remote ethnic women, their families and communities have increased their adaptive capacity with the support of capable local authorities and the application of sustainable adaptation models

The project focuses on three expected result areas:

- 1) Improved capacity of local stakeholders to assess, plan, and implement CBA in a participatory and gender sensitive manner.
- 2) Improved community resilience through the implementation of CCA and DRR pilot interventions that benefit women in particular
- 3) Comprehensive documentation informs mainstreaming and an enabling CCA/DRR policy environment for the Northern Uplands.

The project aims to achieve maximum impact through the combination of 1) improving local capacities for understanding and adapting to the impacts of climate change both at community and local government planning level, 2) testing resilient livelihood approaches that contribute to supporting the adaptive capacity of local communities and 3) scaling up impact through advocacy as well as documentation and sharing of learnings.

The project is working at community level through the capacity building of 30 farmer groups and women’s groups (in all target villages) and aims at establishing three district-level farmer associations.

Key strategic Government partners are the Provincial and District Office of Natural Resources and Environment (PONRE/DONRE) and the Lao Women Union (LWU). Networking, sharing and synergies were also envisaged with several other line agencies and development organizations at national and local levels.

Please see Annex 1: Logical Framework

A base-line on the climate change context in target villages was conducted in April 2016 (after completing the Climate Vulnerability and Capacity Assessment - CVCA), combined with an overall project mid-term evaluation (detailed reports available as reference).

#### 4. Objectives

The overall objective of the consultancy is to assess the project's achievements against project logical framework based on identified evaluation criteria.

Specifically:

1. Assess project's achievements based on the following criteria:
  - **Relevance:** *The extent to which the project suited the priorities and policies of the target group, and donor*
  - **Effectiveness:** *The extent to which the project results and the project specific objective are expected to be achieved*
  - **Efficiency:** *The extent to which project was managed to get value for money from inputs of funds, staff and other resources*
  - **Higher level changes (Impact):** *The positive and negative changes produced by the project, directly or indirectly, intended or unintended, for women and men and for the most vulnerable.*
  - **Sustainability:** *To assess whether the benefits of the project are likely to continue after the project ends.*
2. Monitoring and learning: The effectiveness of project monitoring and learning processes.
3. Assessment of the effectiveness of a specific technical approach or methodology used (CVCA, 'no-regret' model, evidence-based advocacy for scale).
4. Assessment of the specific management arrangements, such as staffing structure, quality of partnership arrangements, technical assistance provided
5. Assessment of contributions to women's empowerment, with reference to specific domains of change (agency, relationship, structure<sup>2</sup>)
6. Identify lessons learned and recommendations to improve future programming.

#### 5. Methodology

The consultant will be required to design the methodology for the research. A mix of quantitative and qualitative instruments and methods will be used, and a participatory approach should be adopted, capturing the perspectives of key stakeholders. The methodology, tools and scheduling used must be gender and target group sensitive.

The methodology will include a phase of documentation review. Key documents will be provided by CARE, and include:

- Project documents, including proposal, other assessment studies and annual reports
- Baseline and End-line surveys and findings
- Mid Term Evaluation Report and Results of project monitoring and annual assessments
- CARE Laos' program strategies, such as Gender Strategy
- CARE Laos' long term program strategy summary documents, and framework)
- Results Oriented Monitoring Report (ROM – conducted in May 2016)

The methodology will also include:

- Training staff on data collection
- Initial review of relevant stakeholders with whom to meet
- Field visits - to meet beneficiaries, village, district, and provincial stakeholders (including relevant government staff) using engendered participatory approaches.
- Presentation of findings to relevant partners

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<sup>2</sup> CARE's women's empowerment frame work considers the need for agency, relationship, structure to be 3 key focuses to be addressed in combination to support women's empowerment, and the evaluation in relation to gender should consider impact in relation to this structure.

## 6. Roles and responsibilities

In consultation with CARE staff, the consultant is responsible for:

- Designing the Evaluation methodology
- Implementing the agreed methodology in consultation with all relevant stakeholders
- Presenting the initial results to stakeholders
- Documenting outcomes of the Evaluation (report + data)
- Preparation of a PowerPoint presentation summarizing the study findings for use by CARE with external audiences.

CARE will ensure effective administrative support for the assessment, and provide inputs into the research process, as determined by the agreed methodology.

CARE will also make available preparatory documentation on the project, as per section 4, above.

CARE will support for seeking and covering the cost of external Lao/English and ethnic translators as necessary.

## 7. Key deliverables and reporting arrangements

- Evaluation strategy and plan agreed with CARE – detailing the evaluation approach, methods, timeline, budget/resources
- Assessment on the project's performance against the evaluation objectives.
- Briefing or workshop of key findings with the project staff/senior management
- Preliminary report for consideration and feedback from CARE and implementing partners.
- Final quality report in English based on feedback from the initial draft. The report shall be no more than 25 pages (excluding annexes and attachments) that includes:
  - *Front cover, table of contents, acronyms*
  - *Executive Summary (1-2 pages)*
  - *Introduction and background*
  - *Summary of methodology, including limitations*
  - *Results, analysis and discussion, as per criteria outlined in section 3, and against project objectives and indicators where relevant. This must include a discussion of gendered benefits and approaches, as well as analysis of other specified themes.*
  - *Analysis of key learning*
  - *Conclusion*
  - *Recommendations*
  - *References*
  - *Annexes – Including tools used in the Final Evaluation.*

The report is written in English. The report should include a table form summary of end-line status of all indicators.

The reports will be submitted electronically in Word format. An initial draft will be submitted to CARE, CCL and SAEDA for comments. The Donor (EU) will be given the opportunity to share comments as well. The draft final report will be submitted to and accepted by CARE prior to final payment and within two weeks of completing field work.

## 8. Timing

Fieldwork should be conducted in March 2018 with the final report due by middle of April 2018.

Suggested timeframe: 26 days

The following table shows the anticipated work schedule:

| Item         | Specific task        | Days  | Cumulative |    |
|--------------|----------------------|---|------------|----|
| 1            | Pre-field activities | Project literature review - CARE to support with documents.   | 3          | 3  |
|              |                      | Design assessment methodology and plan data collection. Develop research tools                              | 2          | 5  |
| 2            | Field activities     | Travel to Phongsaly Province – Khua district.   | 1          | 6  |
|              |                      | Meeting/revision of methodology with CARE staff   |            |    |
|              |                      | Field data collection and stakeholder consultations in Mai, Samphan, Gnot Ou district / Data entry/analysis | 10         | 16 |
|              |                      | Debriefing (1/2 day workshop) with field team and local partners  |            |    |
|              |                      | Travel to Vientiane   | 1          | 17 |
| 3            | Report writing       | Write / Submit Draft Report prepared in English (followed by time for feedback from CARE Laos)              | 5          | 22 |
|              |                      | Feedback on first draft report  |            |    |
|              |                      | Finalise report (taking into account comments from CARE)  | 2          | 24 |
| 4            | Travel               | Travel to/from Lao PDR (if applicable)  | 2          | 26 |
| <b>Total</b> |                      | <b>Days</b>   | <b>26</b>  |    |

## 9. Selection criteria

- 1 Experience** At least 5 years experience in development and/or humanitarian response programming, with a focus on SE Asia preferable also in Lao PDR.  
 Demonstrated research and reporting skills  
 Demonstrated successful experience in conducting project evaluation  
 Relevant technical experience (e.g. climate change adaptation, gender mainstreaming, ethnicity, agriculture, livelihoods, institutional development, etc.).
- 2 Qualification** Relevant post graduate qualifications
- 3 Technical skills** Research, survey (e.g. PRA/PLA), stakeholder interviews (ranging from field level to national level stakeholders), report writing, presentation. Proven skills in conducting baseline and end line survey. Ability to work autonomously, and demonstrated skills in leading a research project.
- 4 Language** Excellent written and spoken English language skills.  
 Experience in Lao PDR and Lao language skills are desirable

- 5     References     A minimum of two referee contacts who have managed the proposed consultant previously

As a matter of course, all consultants are subject to the following policies:

- CARE Lao Child Protection Policy
- Terrorist Check Safety and Security Management Plan
- CARE Code of Conduct

## **10. Application**

- Brief document of introduction, 2 pages or less demonstrating how the candidate meets the selection criteria
- CV (including minimum of 2 references)
- Daily rate for consultant (note CARE does not provide separate per diem)
- Other anticipated costs

It should be noted that CARE does not pay a separate per diem/DSA on top of the daily rate.

CARE will also cover for accommodation at pre-selected guesthouse, flight to/from Lao PDR if required, in-country transportation (incl. flight to/from target province. Perdiem/DSA should be included in the daily consultancy fee.

## **11. Annexes**

- Annex 1:       Logical Framework  
Annex 2:       Annual Reports (YR1-3)  
Annex 3:       Final report Cover sheet  
Annex 4:       Example letter of agreement for CARE consultancy  
Annex 5:       General conditions for engagement of Care Consultant

**Annex 1: Logical Framework (See excel attached as another file)**

**Annex 2: Annual reports YR1-3 (attached as another file)**

## Appendix 7 Proposed Lao literacy training

### Lao literacy training activity

The Northern Uplands - Promoting Climate Resilience Phase II could initiate a Lao literacy training activity to address low literacy rates among ethnic women. The project would support Lao literacy training for women to assist them in adapting to changes occurring as villages open up to new opportunities in trade and commerce.

### Objective

Provide Lao language instruction for ethnic women to:

1. better enable women to participate in newly expanding market opportunities;
2. equip women with communication skills to interact with outsiders;
3. build women's confidence in travelling outside of the village;
4. strengthen women's self-esteem; and
5. inspire women to take on leadership roles previously restricted by language barriers.

### Lao literacy training description

The Department of Non-Formal Education, Lao Ministry of Education (MOE), promotes adult non-formal literacy and numeracy training in rural ethnic villages. The MOE Literacy Division provides training for teachers in adult literacy instruction. Their student curriculum consists of three modules; lessons are divided into three subject areas: 1) health, 2) rural living skills, and 3) Lao culture. Modules also contain numeracy instruction. Each module is designed to be covered during approximately 50 hours of instruction.

### Activity start up and targeting

Villages with the highest female illiteracy rates will be selected for the activity. Lao literacy training will be piloted in 10 villages during the first year of the project (three or four villages per district). The activity may be scaled up to an additional villages depending on the appropriateness and success of the pilot.

The suggested timeframe for instruction of each module is two 1-hour classes per week for 25 weeks. Depending on teacher availability and student preferences, class scheduling can be adjusted to best meet participants' needs. A timeframe for implementing the literacy training activity is presented below.

|                    | Year 1   |          | Year 2   |          | Year 3   |  |
|--------------------|----------|----------|----------|----------|----------|--|
| 10 pilot villages  | Module 1 | Module 2 | Module 3 |          |          |  |
| Scaled-up villages |          |          | Module 1 | Module 2 | Module 3 |  |

### Criteria for selection of participants

With support from CARE and CCL field staff, women in each village will identify persons with the most interest and potential for learning Lao language. The criteria for participation in the literacy training is as follows:

1. female 16-40 years old
2. 1 woman per household
3. illiterate in Lao language - unable to answer simple questions in Lao.

### Teacher selection and training cost

One primary or secondary school teacher in each village will be identified by field staff to conduct the literacy training. The MOE Department of Non-Formal Education, Literacy Division conducts a five-day adult literacy training of teachers (TOT). Contact details are provided below.

*Ms Bounpheng, TOT Trainer*

*Economic Department, Non-formal Education, Ministry of Education  
(020 9965-4299)*

The approximate cost for MOE trainers from Vientiane to conduct an adult literacy training of teachers is presented below (5-day training - 3 trainers).

| Item                           | Unit price (kip) | No. trainers | No. nights | No. hours | Total cost (kip)  | Total cost (Euro)* |
|--------------------------------|------------------|--------------|------------|-----------|-------------------|--------------------|
| Round-trip airfare VTE-OUD-VTE | 2,045,000        | 3            |            |           | 6,135,000         | 676.92             |
| Government per diem rate       | 120,000/night    | 3            | 9          |           | 3,240,000         | 357.50             |
| Government food allowance      | 70,000/day       | 3            | 9          |           | 1,890,000         | 208.54             |
| Preparation time**             | 30,000/hour      | 3            |            | 10        | 900,000           | 99.30              |
| Training materials***          |                  |              |            |           | 906,300           | 100.00             |
| Other costs                    |                  |              |            |           | 906,300           | 100.00             |
| <b>Total</b>                   |                  |              |            |           | <b>13,977,600</b> | <b>1,542.26</b>    |

\* Euro conversion rate - 1 € = 9063 kip

\*\* estimated from discussion with Ms Bounpheng

\*\*\* estimated

The approximate cost for primary or secondary school teachers from districts to attend an adult literacy TOT is presented below (5-day training - 10 trainees).

| Item  | Unit price (kip) | No. trainees | No. nights | Total cost (kip)  | Total cost (Euro)* |
|---|------------------|--------------|------------|-------------------|--------------------|
| Villager accommodation rate                 | 80,000/night     | 10           | 7          | 5,600,000         | 617.90             |
| Villager food allowance                     | 70,000/day       | 10           | 7          | 4,900,000         | 540.66             |
| Training material**                         |                  |              |            | 1,812,600         | 200.00             |
| Training refreshments**                     |                  |              |            | 906,300           | 100.00             |
| Transportation Village-Muang Khua-Village** |                  |              |            | 1,359,450         | 150.00             |
| Other costs                                 |                  |              |            | 906,300           | 100.00             |
| <b>Total</b>                                |                  |              |            | <b>15,484,650</b> | <b>1,708.56</b>    |

\* Euro conversion rate - 1 € = 9063 kip

\*\* estimated

The total cost for an adult literacy TOT conducted by MOE trainers from Vientiane for teachers from three Phongsaly districts is approximately 3,300 €.

### Incentive/compensation for literacy training students

Barbed wire will be awarded to students as an incentive for regular class attendance and as compensation for time taken away from family chores and activities. Approximately 2 meters of barbed wire (valued at kip 2,700 / Euro 0.30 per 2 m) will be provided to students for each hour of class attendance and successful completion of each module. Teachers will be requested to adhere to strict policies of class attendance recording. The project will provide required forms for attendance keeping. Students will be awarded barbed wire on successful completion of each module as outlined in the table below.

| Successful completion of final exam | Approximate hours of class attendance* | Attendance rate | Barbed wire award      | Barbed wire value   |
|-------------------------------------|--|-----------------|------------------------|---------------------|
| Required                            | 45-50                                  | 90-100%         | 100 m (two 50 m rolls) | €15.00 / kip136,000 |
| Required                            | 38-44                                  | 75-89%          | 70 m (one 70 m roll)   | €10.50 / kip 95,000 |
| N/A                                 | less than 38                           | Under 75%       | No award               | No award            |

\* Number of hours of class attendance may be adjusted depending on module length

### Stipend for literacy training teachers

Teachers will be paid 10,000 kip for each hour of class instruction with a maximum number of hours of instruction per module set at 50 hours. Teacher stipend cost for providing instruction for three modules in the 10 piloted villages is presented below.

| Number of teachers | Unit cost                            | # of hours of class instruction/module* | Number of modules | Total cost (kip) | Total cost (Euro)** |
|--------------------|--------------------------------------|---|-------------------|------------------|---------------------|
| 10                 | 10,000 kip/hour of class instruction | 50                                      | 3                 | 15,000,000       | 1,655.08            |

\* Number of hours of class instruction may be adjusted depending on module length

\*\* Euro conversion rate - 1 € = 9063 kip

### Literacy training student cost

The total number of literacy training participants in the 10 pilot villages is 200 (~ 20 students per village). The approximate student costs for completion of three literacy training modules is presented below.

| Item              | Number of students | Unit cost        | Number of modules | Total cost (kip)  | Total cost (Euro)* |
|-------------------|--------------------|------------------|-------------------|-------------------|--------------------|
| Student books     | 200                | 20,000 kip       | 3                 | 12,000,000        | 1,324.06           |
| Pens/pencils      | 200                | 10,000 kip       | 3                 | 6,000,000         | 662.03             |
| Barbed wire award | 200                | 100 m at €0.15/m | 3                 | 8,1567,000        | 9,000.00           |
| <b>Total</b>      |                    |                  |                   | <b>99,567,000</b> | <b>10,986.09</b>   |

\* Euro conversion rate – 1 € = 9063 kip

### Literacy training teacher cost

The approximate teacher costs for instruction of three literacy training modules in 10 pilot villages is presented below.

| Item                    | Number of teachers | Unit cost          | Number of modules | Total cost (kip)  | Total cost (Euro)* |
|-------------------------|--------------------|--------------------|-------------------|-------------------|--------------------|
| Teacher books           | 10                 | 30,000 kip         | 3                 | 900,000           | 99.30              |
| Pens/pencils            | 10                 | 10,000 kip         | 3                 | 300,000           | 33.10              |
| Attendance record books | 10                 | 10,000 kip         | 3                 | 300,000           | 33.10              |
| Stipend                 | 10                 | 500,000 kip/module | 3                 | 15,000,000        | 1,655.08           |
| <b>Total</b>            |                    |                    |                   | <b>16,500,000</b> | <b>1,820.58</b>    |

\* Euro conversion rate - 1 € = 9063 kip

### Literacy training total cost

The total cost to pilot the Lao literacy training activity in 10 villages is approximately 16,000 € (summarized below).

| Item         | Total cost (kip)   | Total cost (Euro)* |
|--------------|--------------------|--------------------|
| TOT trainers | 13,977,600         | 1,542.26           |
| TOT teachers | 15,484,650         | 1,708.56           |
| Student cost | 99,567,000         | 10,986.09          |
| Teacher cost | 16,500,000         | 1,820.58           |
| <b>Total</b> | <b>145,529,250</b> | <b>16,057.49</b>   |

\* Euro conversion rate - 1 € = 9063 kip