



# FINAL PROJECT EVALUATION

## DPA Integrated Community Development Project in Chikreng District, Siem Reap Province

July 2019 – June 2022



**Manos Unidas and Development and Peace**

Commissioned by:

**Development and Partnership in Action (DPA)  
Phnom Penh, Cambodia.**

Consultant/Reviewer

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May this document help the next phase of planning and implementation for the betterment of the community, specifically farmers and women.

Thank you.

## List of Abbreviation

AC	: Agriculture Cooperative
AG	: Agriculture Group
CCA	: Climate Change Adaptation
CCWC	: Commune Committee for Women and Children
CGFP	: Commune Gender Focal Person
CIP	: Commune Investment Plan
CWRMC	: Community Water Resource Management Committee
DPA	: Development and Partnership in Action
DRR CAP	: Disaster Risk Reduction Community Action Plan
DRR	: Disaster Risk Reduction
DWRMC	: District Water Resource Management Committee
EWS	: Early Warning System
FGD	: Focus Group Discussion
GBV	: Gender-Based Violence
ICD	: Integrated Community Development
ICDSR	: Integrated Community Development in Siem Reap Province
KII	: Key Informant Interview
NGO	: Non-Governmental Organisation
PDAFF	: Provincial Department of Agriculture, Forestry and Fisheries
PG	: Producer Group
VDMT	: Village Disaster Management Team
WUC	: Water User Group

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## Executive Summary

Development and Partnership in Action (DPA) is currently implementing a project, 'DPA's Integrated Community Development Project in Chikreng District, Siem Reap Province' under a partnership with Manus Unidas between July 2019 – June 2022. The project aimed at (1) increasing food security through increased appropriate agricultural and livestock production techniques; (2) increasing capacity to add value to and market of agricultural products; (3) increasing the resources to adapt to the impacts of climate change; and (4) the active involvement in promoting and protecting the rights of women.

The key results of the evaluation findings are highlighted as follows:

### **Relevant**

DPA's ICDSR work for the poor and vulnerable community in the 27 villages of four communes in Chikreng district, Siem Reap province, is very relevant. In facilitating positive impact and change the live and economic situation of the target communities. The set of project strategies and plans were complementary in achieving the project's overall objective and specific objectives and the impact on the target groups.

The project needs to use planned project inputs such as appropriate agricultural training techniques, including resilient agriculture training, irrigation system and gender-based violence, as a relevant strategic approach. There are significant changes resulting from the project intervention over the target communities' economic status, food security, DRR/CCA capacity, and gender equity.

### **Effectiveness**

The overall attainment of project results is assessed to be highly achieving the planned overall objective and specific objectives. The project implementation strategies and approaches proposed by the project provide the ultimate benefit to the target communities, such as poor households, small-scale farmers (rice, vegetable, and chicken), and specifically married couples who experienced domestic violence.

The project enhanced the farmer's knowledge and skills, increasing agriculture production (establishment of producer group), improved food security, diversified sources of livelihood incomes of the farmers and their family.

### **Efficiency**

The groups encouraged voluntary savings from members that served as a pool of revolving funds for small loans for livelihoods and emergency needs of members. As a result, members continued

to patronize because loans helped them, reducing their dependency on high-interest loans from private moneylenders.

Agriculture and livelihood support to married couples provided double benefits to the beneficiaries.

The project facilitating and enabling factors in the current phase of project implementation as results of methods and processes are efficient and sustainable and result in significant benefits to target households.

## **Impact**

The significant changes of the project were improved agriculture production and productivity of the community members in some target villages regarding rice crop, vegetable growing, and animal husbandry. The improved economic condition of small farmer beneficiary families reflected access to sustainable livelihoods and control of their family income.

Most of the farmers of vegetable growers adopted a minimum of two techniques for vegetable gardening. The numbers of techniques adopted were quite varied across the target village. Several techniques were adopted for vegetable growing by the farmers, and the number of households that applied natural practices has notably increased.

The community people increasingly make decisions collectively and in solidarity. This is the general observation and feedback gathered from the field data collection after meeting many respondents in the visited villages.

The strengthening of the formed of ACs relied on the level of participation and volunteerism from its members and an enabling democratic decision-making process. When members are confident to participate in analysing their common issues, planning, and deciding on alternative solutions, AC is high in self-sustaining and self-managing.

The cases of domestic violence were reported to have decreased gradually in the villages as most of the villager's gained knowledge and understanding from the awareness-raising sessions on these topics over the past three years. The communication between husband and wife improved. They believed that both men and women had equal rights. Men now encourage and motivate women to participate in community activities and not just be confined to household work. Women are more involved now in decision-making in the families and community work. Since men have reduced their drinking habits, they spend more time helping with household and farming tasks. Men and women give mutual respect to each other and share tasks both in farming and household.



## **Sustainability**

The positive changes observed in the lives of the project beneficiaries in the visited villages are progressing, and the volatile situation around will be challenging for the extent of sustainability of the impact achieved. Therefore, the situation and the gains must be critically assessed, consolidated, and strategically planned to sustain the impact.

Promoting enabling and sustainable mechanisms should be a priority of the implementing team for the next project cycle. The initially planned strategy to strengthen the ACs, PGs and farmers across the 27 villages is a relevant mechanism for the sustainability of the impact of the target groups even after the project phase out.

The following are a set of suggestions aimed to help inform DPA to improve project implementation and for future project interventions. The project may wish to consider to:

- Strengthening partnership with government stakeholders
- Promoting community organising and participation
- Training Volunteer Community Facilitators or ‘Community Specialists’
- Capacity development for farmers and community groups
- Develop and provide more educational material packages for agriculture techniques
- Promoting renewable energy as a measure of climate change mitigation and adaptation
- The promotion of using the solar panel
- The promotion of rainwater harvesting technology
- Support for small-scale irrigation
- Improved monitoring and closely followed up with the trained farmer
- Conducting more awareness raising on gender-based violence and women's rights
- Conduct pre and post-test to all training and awareness-raising events
- Define a clear project beneficiary selection criterion and break down the inputs that support each criterion

## 1. Introduction

Development and Partnership in Action (DPA) is currently implementing a project, ‘DPA’s Integrated Community Development Project in Chikreng District, Siem Reap Province’ under a partnership with Manus Unidas between July 2019 – June 2022. The project aimed at (1) increasing food security through increased appropriate agricultural and livestock production techniques; (2) increasing capacity to add value to and market of agricultural products; (3) increasing the resources to adapt to the impacts of climate change; and (4) the active involvement in promoting and protecting the rights of women.

The ICDSR project aimed to benefit people in 27 villages of four communes in Siem Reap province, including Spean Tnaoth, Lvaeng Ruessei, Kampong Kdei and Chikreng. DPA designed numerous activities, key inputs, and partnerships with many relevant stakeholders, community-based organisations, NGOs, government, and local authorities in Siem Reap province to achieve the project goal and objectives. Below are the core project components:

- **Agriculture:** The ICDSR team strengthened the capacity of 240 existing rice Agricultural Group (AG) members, 120 existing non-AC vegetable group members, and 120 existing chicken group members who still lack knowledge of applying appropriate agriculture techniques in 16 existing villages. Alongside, ICD Siem Reap (ICDSR) team will work with elders, village chief and key farmers of 11 new villages to conduct village meetings to form new 88 AGs consisting of 440 farmers (264 or 60% females). These include 44 rice AGs with 220 farmers (110 females), 22 vegetable groups with 110 farmers (88 females), and 22 chicken groups for 110 Women Headed Households and Poor households (66 females). In addition, the team built the capacity of new non-AC producer group members on agriculture techniques for members of those groups. The training topics include lowland rice resilient growing techniques, composting, vegetable resilient growing techniques, chicken rearing techniques and chicken rearing calendar, value chain of rice and chicken productions and marketing and support material, crop seeds and chicks to them for practice to improve food security and income.
- **Agricultural Cooperative (AC):** In collaboration with the Provincial Department of Agriculture, Forestry and Fisheries (PDAFF), the team worked to organise village meetings to access potential resources of villages, provide awareness of the usefulness of AC establishment and support the establishment process of three ACs in three villages aiming to produce rice and chicken and collective sales of those products; capacitate in cooperative management, value chains and marketing for board members and technical support, support the development of business plans and operation the plans; and capacitate AC members known as, AC Producer Group (PG) Members in producing rice and chicken rearing techniques, and support the AC PGs to produce group production plans. Alongside, DPA will support necessary materials and equipment and working capital assistance to the three ACs to increase the agricultural products and collective sales to buyers at a fair price.

- **Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA):** The team worked to facilitate and organise village meetings to select 77 members of 11 new Village Disaster Management Teams (VDMT). Each VDMT consist of seven members, including 30% being females). Furthermore, the team collaborated with DPA central to conduct training on DRR and Commune Base CCA concept for climate change and disaster management, VDMTs and community people in 11 new villages. In addition, the team will support VDMT and community people to develop and review Village-level DRR Community Action Plans (DRR CAP) in 27 villages and incorporate their activities of DRR CAPs into Commune Investment Plan (CIP) annually.
- **Water Resource Management:** the team organised training and meetings to strengthen the water resources management committee and water user groups in terms of water resource management, deliver water without internal conflict and maintain a small irrigation system with water user group members toward ownership. The team also supported 11 new open wells for low-income families to increase nutrition through vegetable growing and chicken rearing.
- **Promoting and protecting the right of women:** In collaboration with Commune Committee for Women and Children (CCWC), the team will organise village meetings to select 22 new Community Gender Focal Points (CGFP) in 11 new villages and train them on gender and domestic violence prevention, women in leadership and support gender network meetings at commune level in the order they can facilitate village meetings and discuss with villagers on the women issues and proposed solution for improving the situation of women in agriculture and in livelihoods in 27 villages. Furthermore, the team will organise a village meeting to select ten new married couples in five new villages, providing capacity and support inputs to 20 married couples (10 existing and ten new) to implement Gender Road Map for domestic violence prevention and improving their livelihoods. In addition, the team support people to participate in International Women's Day at Commune or District Level that the Government or NGOs will organise in those places. As a result, the women would have more chances to voice their concerns, build confidence, and share their Women's Day knowledge with their families, neighbouring villagers, and interest groups. In addition, the team contributed financial support to organise the event, if needed.

## 2. Evaluation Objectives

This evaluation aims to assess the project interventions' outcome, impact, relevance, effectiveness, and efficiency on target beneficiaries and communities. In addition, the best practice and lessons learned from the implementation need to be captured, and recommendations for future development will be provided. Following are the objectives of the evaluation:

- To assess and score the project's achievement of its anticipated outcomes and outputs as set out in the project Logframe;

- To assess the relevance, efficiency, effectiveness, impact and sustainability of the project outcomes and outputs;
- To assess the extent to which the project integrated community development into its new design and implementation, promoted gender equality and women’s empowerment, and was able to meet the assessed initially needs of the communities;
- To provide information on what worked well, what did not, and why; and
- To provide recommendations and lessons learnt for improvement for the upcoming project design.

The following are the evaluation questions investigated during the evaluation process:

<b>Evaluation Criteria</b>	<b>Evaluation Questions</b>
<b>Relevance</b>	<ol style="list-style-type: none"> <li>1. To what extent are the objectives of the project still valid?</li> <li>2. Are the activities and outputs of the project consistent with the overall goal and the attainment of its objectives?</li> </ol>
<b>Effectiveness</b>	<ol style="list-style-type: none"> <li>1. To what extent were the objectives achieved/are likely to be achieved?</li> <li>2. What were the significant factors influencing the achievement or non-achievement of the objectives?</li> </ol>
<b>Efficiency</b>	<ol style="list-style-type: none"> <li>1. How efficiently were resources used? Could anything have been done differently to maximise the available resources better to meet project objectives?</li> </ol>
<b>Impact</b>	<ol style="list-style-type: none"> <li>1. To the extent to which the project has contributed to its longer-term goal?</li> <li>2. What intervention has caused broader effects and changes?</li> </ol>
<b>Sustainability</b>	<ol style="list-style-type: none"> <li>1. Are the interventions’ positive effects likely to continue after development support is withdrawn?</li> <li>2. Is the enabling environment within which the project operates supportive of its continuity?</li> </ol>

### **3. Evaluation methodology**

#### **3.1. Background review**

To help develop a survey questionnaire, and guiding questions, triangulate findings and further expound on information collected from the individual interviews, the key documents reviewed included the approved project proposal, project progress report, project annual report, and roles and responsibilities of tutors, teachers, and coordinators.

## 3.2. Methods for data collection

### *Document review*

After reviewing the TOR, information gaps were determined, and the scope of other data collection methods was refined accordingly. In addition, a document review was undertaken to gain more in-depth information and understanding of the beneficiary's situation in the target areas, specifically in the target province, and relevant government policies and plans regarding young women and girls. The desk review also reviewed DPA, NGOs/CSOs and other development partner programmes and initiatives targeting project participants, farmer associations, young women, girls, and youth. This provided reliable information to support the development of research tools, including sample size, survey questionnaire development and key questions, and support the results of the evaluation findings.

### *Household Survey*

The Consultant developed the survey questionnaire based on the indicators stated in the Project Result Framework. The Consultant finalised the questionnaire in consultation with the DPA team.

Using a sample size calculator, the sample calculation is based on random sampling from the target population who directly engaged with the project intervention in the four communes in Chikreng district, Siem Reap province ([www.raosoft.com](http://www.raosoft.com)). The sample size was calculated with the following parameters: margin of error of 0.05, Confidence Level of 0.95 and design effect of 1.0. The survey appointment with communities and stakeholders was made with the assistance of the DPA's ICDSR project team in the target areas. The length of the interviews will be decided after finalising the questionnaire and pilot test; however, it is expected to take between 35 to 45 minutes per respondent.

Stratified random sampling was employed in the evaluation study, which involves the division of a population into a small sub-group. The sub-group is formed based on members' shared attributes or characteristics such as AG, AC, Water User Group (WUG) and CGFP. This sampling method allows the Consultant to obtain a sample population that best represents the entire population being studied, so each possible sample is equally likely to occur (Please refer to table 1).

To reduce the ecological footprint and paper consumption, the survey interview was conducted using electronic devices, tablet-based data collection, and KoBo Collect. The tablet would allow the Consultant to analyse statistical measurements, such as frequency and cross-tabulation, quickly. The quantitative data will be based on the automatic generation of the tablet-based analysis. For quantitative data analysis, comparison and validation of the data with the project relevant data includes monitoring reports, annual reports, and project indicators.

*Table 1: Sample size of target beneficiaries*

<b>N</b>	<b>Sub-Group</b>	<b>Sample size</b>	<b>Percent</b>
1	Rice member	81	23,75
2	Vegetable member	24	7,04
3	Chicken member	91	26,69
4	AC member	55	16,13
5	VDMT member	8	2,35
6	WUG	10	2,93
7	CGFP	1	0,29
	<b>Total</b>	<b>341</b>	<b>100</b>

*Note: Each of the strata will have at least 50% of females represented in the sample size*

The participatory approach was employed to gather qualitative data, including Focus Group Discussion (FGD), key informant interview (KII), Staff Reflection, and Most Significant Change (MSC) were employed to validate and verify information gathered for the evaluation and other secondary data collected related, such as government intervention, policies and plans and other project initiatives relevant for Agriculture Group, AC, water user group, CCWC, CGFP, stakeholders, project staffs, and local authorities which engaged in the project.

The purposive sampling method was adopted to choose participants for interviews. It is consistent with a qualitative evaluation design that aims to construct an in-depth understanding of the outcome and impact of the project. Project direct beneficiaries were selected for the interview. The evaluation focused on the effect project on target communities and individuals; therefore, the sample selection did not include the non-target group. The evaluation participants were the ones who had direct involvement with the project to share in-depth information related to project implementation by DPA.

#### *Focus Group Discussion (FGD)*

FGD will enable stakeholders to provide feedback on the impact of the project intervention, discuss their experiences through involvement in the project, and reflect on changes they have experienced or observed in others. In addition, the FGDs will enable the Consultant to validate the information from the secondary data collected from the desk review, including reports, survey reports, and activities conducted by the project and generate additional recommendations for further project interventions addressing the ICD project. The participatory techniques used to generate feedback, considering gender and age differences. FGD guides will be developed in consultation with the DPA team. Each FGD will be 1.5-to-2-hour long. Table 2 indicates the number and types of FGD (Please refer to Appendix B for details).

**Table 2. Type and number of FGD**

<b>Sub-Group</b>	<b>Number of FGD</b>
AG (rice, vegetable and chicken) group and AC	2 Group, 19 people
VDMT and WUG	1 (15 people)
CGFP and married couples	1 (12) people)

**Key informant interview (KII)**

KII conducted in-person meetings with local authorities, ICDSR project staff, AC, AG, PG, NGO, and relevant government stakeholders. Different interview questions were developed in consultation with the DPA team, targeting the different stakeholder groups. The final list of individuals/target groups for interviews in the target province was discussed and selected in consultation with DPA staff.

**Table 3. Type and number of KII**

<b>Stakeholders</b>	<b>Number of KII</b>
Local authorities in 4 communes (district official, PDA)	5
DPA ICDSR project staff members (Field staff and mid-level management staff)	4

**Most Significant Change (MSC)**

MSC was conducted to collect and document, focusing mainly on higher-level project results such as outcomes and impact on different project target groups. This method allowed participants to explore changes in themselves due to their participation in the project interventions. There were three MSCs have been documented. In addition, MSC question guides were designed as part of the inception report.

**Table 4. Summary of data collection methods**

<b>Target population</b>	<b>Participant</b>	<b>Methodology</b>
Household survey	Rice member	A structured interview (face-to-face interview, 30-40 minutes per person)
	Vegetable member	
	Chicken member	
	AC member	
	VDMT member	
	WUG	
	Married couples	
	CGFP	

Focus Group Discussion	AG (rice, vegetable and chicken) group and AC	Semi-structured interview with guiding questions
	VDMT and WUG	
	CGFP and married couples	
Key Informant Interview	Local authorities, project staff and stakeholders	Semi-structured interview with guiding questions
Most Significant Change	Project beneficiaries	Semi-structured interview with guiding questions

**3.3. Data analysis and management**

The consultant team supervised the quantitative and qualitative data collection. For the household survey, to ensure the data quality, all completed questionnaires in KoBo Collect will be cleaned, and enumerators were given feedback by the Consultant each day after returning from the field and/or before leaving a village site.

Since the data collection was conducted using KoBo Collect (tablet device), the software would analyse statistical measurements such as frequency and disaggregation. KoBo Collect data is then converted to SPSS for further analysis based on the structured questionnaire, project objective and logframe, with MS Excel for subsequent processing.

The analysis of qualitative data was based on evaluation objectives and interview questions. The information from different participatory techniques and stakeholder groups was assessed for common recurring themes, triangulated using NVivo and reviewed against desk review. Quotes from FGDs/KIIs were used to illustrate the findings. Information from the qualitative methods will provide in-depth information and additional evidence to support findings and results from the desk review and quantitative methods—the analysis disaggregated by gender and geographical location as much as possible.

The enumerator undertook the fieldwork from June 7-12, 2022, in Chikreng district, Siem Reap province, Cambodia (Appendix B).

**3.4. Ethical considerations and child protection**

To ensure that child rights and child protection are considered during the consultancy, the consultant team adhere to DPA Child Protection Policy and standards through a review session with all team members before fieldwork. During fieldwork, consent was sought from all participants, especially children (girls/boys) and young women/men and parents, as necessary, before their engagement, with the confidentiality and voluntary participation stressed. The consultant held separate FGDs with girls and boys groups for this consultancy. In addition, the team was introduced to participants by DPA staff to build trust and ensure confidence in the consultative process.



## Quality Assurance

The Consultant is committed to the transparent, high-quality operation of the assignment. Accordingly, the Consultant communicated regularly with DPA focal persons, especially during critical stages such as inception meetings, document review and development training contents, and any issue that occurred in an evolving system development context. These communications are aimed to keep all stakeholders informed of progress at different phases and address challenges as they arise.

The Lead Consultant is responsible for ensuring the integrity of the data collection process, installing systematic checks on accuracy, consistency, reliability and validity of the collected data through triangulation and follow-up meetings as needed. The Lead Consultant conducted a daily debriefing with the team as part of this process. The lead Consultant played a significant role in ensuring that the evaluation report addresses all evaluation objectives and provides sufficient evidence for all findings and a basis for all recommendations.

The lead Consultant does not foresee any potential conflict of interest among the evaluation team members concerning this evaluation.

## Ethical considerations

The guiding principles of this external evaluation include a participatory approach with stakeholders, respecting the rights of stakeholders, demonstrating gender sensitivity and inclusiveness and ethical integrity in reporting data collected. Of key importance is to respect people's right to provide information in confidence and make people aware of the scope and limits of confidentiality. It entails ensuring the safety and confidentiality of participants and information, respecting participants' decisions and choices, ensuring participants are not harmed during the process, and making available sources of help available. The following measures will be undertaken:

- **Safety and Training:** The consultant team members held a half-day review session on the key documents above to ensure the fundamental ethical principles, including safety, informed consent, confidentiality and privacy of responses, voluntary nature of participation as well as recognising potential signs of stress or behaviours that might occur during interviews. Appropriate responses were discussed, including asking if the participant wished to stop the interview.
- **Informed consent and confidentiality:** All people interviewed were informed of the purpose of the external evaluation, the confidentiality of their responses and the use of the information for the final evaluation report. All participants were asked for their verbal consent prior to administering the interviews, informed that their participation was voluntary, and the freedom to stop the interview or not answer questions without repercussions. No names or pictures will be used in the report.

- **Gender sensitivity:** To ensure gender sensitivity, project implementers and other key stakeholders were interviewed separately, considering their gender and positions of authority. Individuals were interviewed in a private setting away from others to limit outside disturbances and will not be pressured for answers.
- **The reporting integrity:** Only the lead Consultant has access to the KII and FGD interview notes. Names and positions of people interviewed will not be included.

### **3.5. Coordination**

All necessary coordination and communication with participating respondents across the planned activities were arranged in consultation with DPA focal persons and relevant partners, including needed logistics.

The Consultant would require coordination and communication support from the DPA focal person / ICDSR Project Team to facilitate the field data collection process, including respondent appointment and guiding the enumerators through the field data collection process.

## 4. Findings

The current three-year phase of the ICDSR project of DPA continued the work with the poor communities in Siem Reap province in 2017. The project targeted expanding to 27 villages in four communes in Chikreng district, Siem Reap province. The target beneficiaries were the most vulnerable poor and small-scale farmer households in the target villages.

The respondents during the household survey and in FGD in the visited villages had a good recall of the support DPA ICD project back in 2017 in their villages. The DPA team in Siem Reap has built good coordination and rapport with the local authorities and local government authorities throughout the target areas, from provincial to district down to communes and villages.

### 4.1. Demographic information

There are 341 community members who participated in the household survey. Table 5 illustrates the gender of respondents in the household survey, 259 (75.95%) were female and 82 (24.05%) were male. Table 6 shows the age group of respondents who participated in the household survey. 97 respondents were between 40-49 years old, 92 respondents were between 30-39 years old, 82 respondents were from 50 to 59 years old, 49 respondents were over 60 years old, and 21 respondents were 20-29 years old. Please refer to Appendix B for a list of respondents.

Table 5: Gender of respondents who participated in the household survey

N	Gender	#Respondent	Per cent
1	Female	259	75.95
2	Male	82	24.05
	Total	341	100

Table 6. Age range of respondents participated in the household survey

N	Age range	#Respondent	Percent
1	20-29	21	6
2	30-39	92	27
3	40-49	97	28
4	50-59	82	24
5	More than 60	49	14
	Total	341	100

Table 7 depicts the respondents who participated in the household reported their marital/relationship status; namely, married (292), widow (30), single (12), widower (4), and divorced (3). In addition, 135 respondents reported having children between 1 and 2; 129 respondents reported having children between 3 and 4; 56 respondents reported having more than five children, and 21 respondents reported that they do not have any children yet (Table 8).

Table 7: Relationship status of respondents participated in the household survey

N	Marital status	#Respondent	Percent
1	Divorced	3	0,88
2	Married	292	85,63

Table 8: Number of children of the respondent participated in the household survey

N	Number of children	#Respondent	Percent
1	1-2 children	135	39,59

3	Single	12	3,52
4	Widow	30	8,80
5	Widower	4	1,17
	Total	341	100

2	3-4 children	129	37,83
3	Don't have	21	6,16
4	More than 5 children	56	16,42
	Total	341	100

The majority of respondents finished some primary school grades 1-5 (189), no school (67) and some secondary school grades 7-9 (41) (Please refer to Table 9 for detail). Most of the respondent's primary education do farming as the primary occupation, such as rice farming, vegetable gardening, and chicken raising (310). Table 10 shows the detail of the main occupation of respondents. In addition, 184 respondents participated in the project before 2019, 127 respondents participated in the project after 2019, and 30 respondents do not remember which year they participated in the project (Table 11).

265 respondents reported they did not hold the ID poor card, and 76 respondents reported having the ID poor card (Table 12). Table 13 illustrates the disability of the respondents. The majority of respondents did not have any disability (331).

Table 9: Level of education of respondent participated in the household interview

N	Level of education	#Respondent	Percent
1	Completed 6 grade	29	8,50
2	Completed high school 12th grade	1	0,29
3	Completed literacy class	1	0,29
4	No school	67	19,65
5	Some high school 10-12	13	3,81
6	Some primary school (grade 1-5)	189	55,43
7	Some secondary school (grade 7-9)	41	12,02
	Total	341	100

Table 10: Main occupation of respondents participated in the household survey

N	Main occupation	#Respondent	Percent
1	Construction worker	2	0,59
2	Farming (rice, vegetable, chicken raising)	310	90,91
3	Government social service provider	1	0,29
4	Housewife	5	1,47
5	Not working at this time	6	1,76
6	Pig raising	15	4,40
7	Trader/seller	2	0,59
	Total	341	100

Table 11: Year that respondents engaged with the project

N	Year joins with DPA ICDSR	#Respondent	Percent
1	After 2019	127	37,24
2	Before 2019	184	53,96
3	Do not remember	30	8,80
	Total	341	100

Table 12: ID Poor card of respondents who participated in the household survey

N	ID Poor	#Respondent	Percent
1	No	265	77,71
2	Yes	76	22,29
	Total	341	100

Table 13: Disabilities of respondents participated in the household survey

N	Disability	#Respondent	Percent
1	No	331	97,07
2	Yes	10	2,93
	Total	341	100

The participants during the FGD in the community visit had a good recall of the support of DPA since they started work in 2017 in their villages. DPA has good coordination and rapport with the local government authorities throughout the target areas, from provincial to district down to communes and villages.

## 4.2. Assessment of project desire outcomes

### Assessment of outcomes

Table 14. The overall level of achievement of outcome and output indicators

OUTCOME INDICATOR	TARGET ACHIEVEMENT
1: 1,253 poor and vulnerable beneficiaries (861 females) have food secure all months of the year (derived from three sources – rice, vegetable, and chickens).	Achieved  95% of the target indicators were achieved during the project implementation period. The provision of agriculture training, inputs support, irrigation support, and the role of VDMT in managing water resources played an essential role in building farmers' capacity in rice production, vegetable cultivation, and chicken raising. This contributed to improving project beneficiaries' farming capacity, diversified sources of income and improved food security for individual households for more than eight months.

<p>2: 991 poor and vulnerable beneficiaries (670 females) gained more income from the sale of agricultural products (surplus rice, vegetable and chicken rearing) from increasing yields and capacity on value chain and market strategies.</p>	<p>Achieved</p> <p>100% of target beneficiaries increased their production yield, such as rice, vegetable and chicken, by applying the techniques received from the project. With additional training skills provided to beneficiaries on the agriculture value chain and marketing strategies (market-oriented product planning, forming collective sell, match-making workshop), the farmers can access to market and secure their products price through AC business provision, buying and selling group.</p>
<p>3: 1,048 poor and vulnerable beneficiaries (712 females) have reduced require external assistance following flooding or drought.</p>	<p>Achieved</p> <p>The majority of project beneficiaries have improved their capacity regarding climate-resilient agriculture practice and response to the climate-related disaster in their communities. In the target villages, the VDMT group worked closely with the project staff and local authorities to keep up-to-date information about climate-related disaster and shared it with the community through the EWS. Furthermore, VDMT acted as a focal point to solve water-related conflicts and water resource management for its members by communicating directly with local authorities or the Department of Water Resources to request allocation from the main water reservoir.</p>
<p>4: 1,488 women and 731 men state there is increased influence of women in the community and the home.</p>	<p>Achieved</p> <p>100% of women in the target areas have increased their understanding of relevant gender topics. Both women and men understood that they had equal rights. There are 76% of the proportion of women participated in the survey. This figure reflected women's empowerment, women's participation in decision-making processes, and women's participation in social and development work in the community.</p>

## Assessment of outputs

Output indicators	Key achievements
<b>Outcome 1</b>	
578 rice AG members (285 females) with twice yearly planting of rice (dry and wet season rice on the same rice field).	Achieved  100% of rice AG has successfully been planted twice yearly in rainy and dry seasons. Thanks for providing an irrigation system during the project period, such as the rehabilitation and construction of the canal in the target villages.
700 rice AG members (433 females) increased rice yield by at least 1.8 tonnes per hectare (for wet season) at the project end.	Achieved  The project's appropriate agriculture training positively impacted 100% of rice AG members, inputs support, and irrigation support. As a result, all AG rice members increased rice production between 2-3 tons per hectare.
357 rice AG members (216 females) increased rice yield by at least 3 tonnes per hectare (for dry season) at the project end.	Achieved  The training provision positively impacted 100% of rice AG members, inputs support, irrigation provision, and follow-up from the project. Therefore, 357 rice AG members can produce rice yields between 2-5 tons per hectare in the dry season.
70 Rice AG members (44 females) adopted rice cultivation using SRI techniques.	Partly achieved  Rice AG members have learned the appropriate rice farming technique, specifically SRI practice. However, most farmers did not apply the technique for reasons such as time and lack of labour in the communities. On the other hand, most rice AC members preferred to apply direct broadcasting because it saved time and was not labour intensive.
262 vegetable AG members (190 females) have enough vegetables for eating for at least 7 months.	Achieved  100% of vegetable farmers have improved their vegetable cultivation skills. Also, with the project's inputs and support, all vegetable farmers have enhanced their food security status. All vegetable tables could produce vegetables for household consumption for more than eight months.
192 existing AGs with 960 members (676 females) in 16 villages with providing technical coaching and mentoring on rice, vegetable, and chickens rearing.	Achieved  100% of AG members have received technical support during the project period. The project also conducts regular follow-up visits to measure the

	progress and provide solutions if they encounter any problems.
88 new AGs with 440 new members (264 females) formed in 11 new villages, trained, and supported inputs to practice agricultural activities (rice, vegetable and chickens rearing).	Achieved  100% of AG members in 11 villages have trained on the appropriate agriculture techniques and provided support for the farmers to start their livelihood activities. The agriculture inputs such as seeds and chick are sufficient for the target group to generate income to support their household and improve food security.
945 (633 females) AG members applied organic fertilizer and pesticides into their rice and vegetables.	Achieved  100% of AG members strictly applied organic fertiliser and pest control for their vegetable cultivation. Thanks to the training provided by the project, particularly the organic fertiliser application are beneficial to change the behaviour of farmers towards organic practice. Furthermore, the close follow-up from the project is a contributing factor to this achievement.
<b>Outcome 2</b>	
Three Agricultural Cooperatives (ACs) with 120 members (72 females) in 3 villages are registered and legally recognised by the Ministry of Agriculture, Forestry and Fisheries.	Achieved  100% of ACs have registered with PDAFF. The community, DPA and PDAFF worked together to make this possible. Three ACs have successfully registered with PDAFF, and the ACs have a clear management structure and proper office building.
120 out of 120 AC members stated they have benefited financially since joining the AC (added value products, higher prices for products, access to further field markets).	Achieved  100% of AC members have enjoyed the benefits they gained by participating with AC businesses. The ACs purchase agricultural products and sell them collectively to the buyer so that they negotiate for an acceptable price for their products.
60 out of 120 AC members can access working capital for agricultural activities.	Achieved  100% of AC members gained access to working capital from the project to expand their agriculture activities, such as purchasing organic fertiliser and providing loans to members.
24 AC leaders (at least 9 females) trained in governance and management, value chain and marketing strategies.	Achieved  100% of AC leaders received soft skills training from the project regarding governance, management, value chain, and market strategies. The AC leaders have increased their capacity in



	these skillsets; specifically, the value chain and marketing strategies, because they can produce and implement their plan
The three ACs with 120 AC members have business plans for buying and collective selling of agricultural product.	Achieved  100% of AC have developed buying and selling plans for their business. Notably the plan for buying and selling agriculture products in the target areas. Thanks to the soft skills training supported by the project in the early stage of AC formation.
991 AG and AC members (670 females) increased the capacity on value chain and marketing strategies of their agricultural products.	Almost achieved  90% of the AG and AC members have learned and improved their capacity on the agriculture value chain and marketing strategies for agricultural products. The capacity building provided by the project and close follow-up and consultation meetings with the groups contributed to the enhancement of group capacity.
<b>Outcome 3</b>	
11 village disaster management teams (VDMTs) comprise of 77 members (22 females) established in 11 new villages and fully trained on related DRR and CCA topics (7 VDMT members per village).	Achieved  100% of VDMT members have a good understanding of the concept of DRR/CCA. Especially the knowledge of resilient agriculture production is an asset for the group and community. Furthermore, VDMT member has the capacity to address climate-related threats by spreading information about climate-related disaster to community members because the early warning system in the villages functions very well.
70% of community prioritise suggested activities in the village-level CAP incorporated into the annual Government Commune Investment plans (CIP).	Achieved  100% of village-level DRR-CAP has successfully integrated into the government CIP for further investment or supported by other NGOs or government institutions interested in the CAP. The community proposed many priority activities, such as increased animal vaccination campaigns, water hygiene and sanitation, pest management, tertiary canals, and the request for resilient rice and vegetable seeds.
50 % of community prioritise suggested activities incorporated in the CIP were signed off and in place after the District Investment Plan Workshop.	Achieved  All community priority activities suggested were integrated with CIP and signed off in the District Investment Plan.

630 (409 females) AG members grow crops resilient to flood and/or drought.	<p>Achieved</p> <p>100% of AG members utilised their knowledge of the resilient agriculture technique. AG members applied adaptation techniques, namely, seed selection that is tolerant to drought and floods and water management. Training provided by the project is efficient and contributes to these successes.</p>
467HHs in 16 villages have access to water from 110 open wells for growing vegetables and animals rearing.	<p>Achieved</p> <p>100% of the target group fully access the small-scale irrigation scheme supported by the project.</p>
21 existing community water resource management committees (CWRMC) improved their capacity in managing and mobilization resource for maintenance of the community irrigation system.	<p>Achieved</p> <p>100% of CWRMC members enhanced their capacity to address water-related conflicts and allocate water resources for the community members. CWRMC is the leader in water management because they were the ones who facilitated community movement towards requesting water from the main reservoir and mobilised resources for the maintenance of the irrigation system in the target villages.</p>
<b>Outcome 4</b>	
60% of community women leaders increased level of confidence and valued.	<p>Achieved</p> <p>All women community leaders participating in the project have increased their confidence to participate in group discussion, decision-making process and gender equality. In addition, the provision of gender training by using the gender roadmap contributed to the positive change.</p>
85% of target households stated the spouse jointly made decision-making.	<p>Achieved</p> <p>Married couples received training related to gender and women empowerment; gender roadmap training was one of the positive impacts of changing the behaviour and mindset of the married couple. After the training and much awareness raising on gender in the target communities, both men and women understand their rights, and they always discuss each other before making any decision.</p>
14 married couples whose implement Gender Road Map to improve livelihoods and to harmonise (GRM) of the family reported that their livelihoods improved and stopping made domestic violence.	<p>Achieved</p> <p>100% of married couples have no domestic violence happening in the family; also, they improve food security and income from the provision of livelihood support from the project.</p>

<p>22 (11 females) new community gender focal persons (CGFPs) in 11 new villages established and trained on related women rights, women in leadership, and facilitation skills.</p>	<p>Achieved</p> <p>100% of CGFP successfully provided relevant gender training topics to married couples in the target community. As a result, married couples reduced domestic violence cases, improved conversation, and both men and women understood their rights.</p>
<p>32 (20 females) existing community gender focal persons (CGFPs) in 16 villages improved performance of their role and responsibilities as CGFPs.</p> <p>3 women issues raised and incorporated into CIP with the help of CGFPs.</p>	<p>Achieved</p> <p>100% of CGFPs have successfully enhanced their roles and responsibility to address gender-related issues. CGFP worked collaboratively with the project and local authorities to integrate gender and women issues in the CIP.</p>

**4.3. Agriculture and livelihood development**

According to a household survey conducted with the target respondent, all respondents confirmed that they had received appropriate agriculture techniques and livelihood development from the project. Figure 1 illustrates the percentage of respondents who received at least one training topic by the ICDSR project in the past three years. The data are shown as percentages.

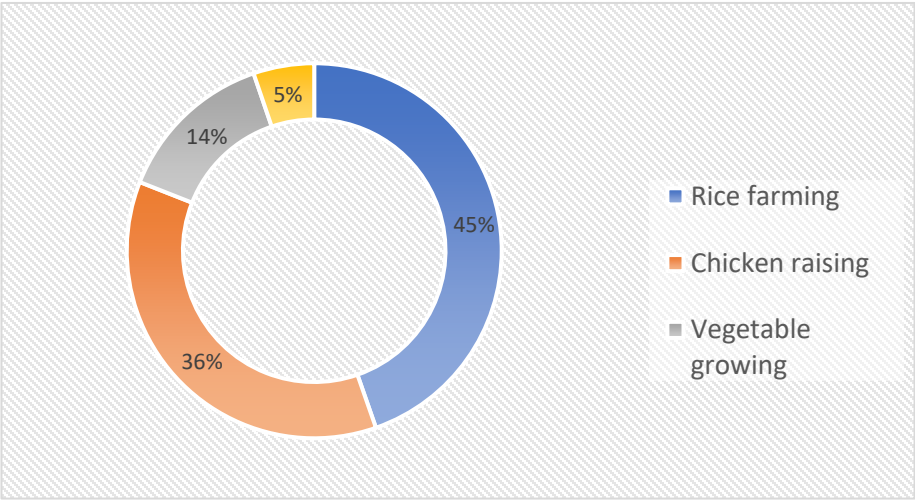


Figure 1. Agriculture and livelihood training supported by the project

Appropriate rice farming technique was one of the respondents' most attractive topics, representing 45% (230), whilst the other training subject followed by chicken raising 36% (187), vegetable gardening 14% (71), and small businesses 5% (27). Overall, it is clear that each of the training topics provided by the project has a clear favourite which varies depending on the farmer's livelihood and interests. However, the small businesses topic was consistently amongst the least popular topics.

This bar chart in Figure 2 clearly illustrates different types of appropriate agriculture training techniques supported by the project between 2019-2022. In general, it is apparent that the target beneficiary's maximum type of training topic went to chicken feed making while the minimum went to mulching technique. The data are shown as percentages.

It can be noticed in the chart; that farmers have learned a lot from the chicken feed making approximately 46.63% of respondents chose this topic which comprised the highest figure in this chart. Vegetable and rice seed selection knowledge was roughly 2%, slightly less than chicken feed making; fertiliser making took the third place in the chart. The only mulching technique, around 3%, was the less likely technique the respondents had learned from the project, which was the lowest figure in the chart. Figure 2 shows the details of different agriculture training techniques received from the project.

In fine, it is relatively apparent in the chart that respondents who received appropriate agriculture training techniques from the project between 2019 to 2022 showed their maximum topics learned from the project like ‘chicken feed making’ while they showed less knowledge gained in ‘mulching’ topic.

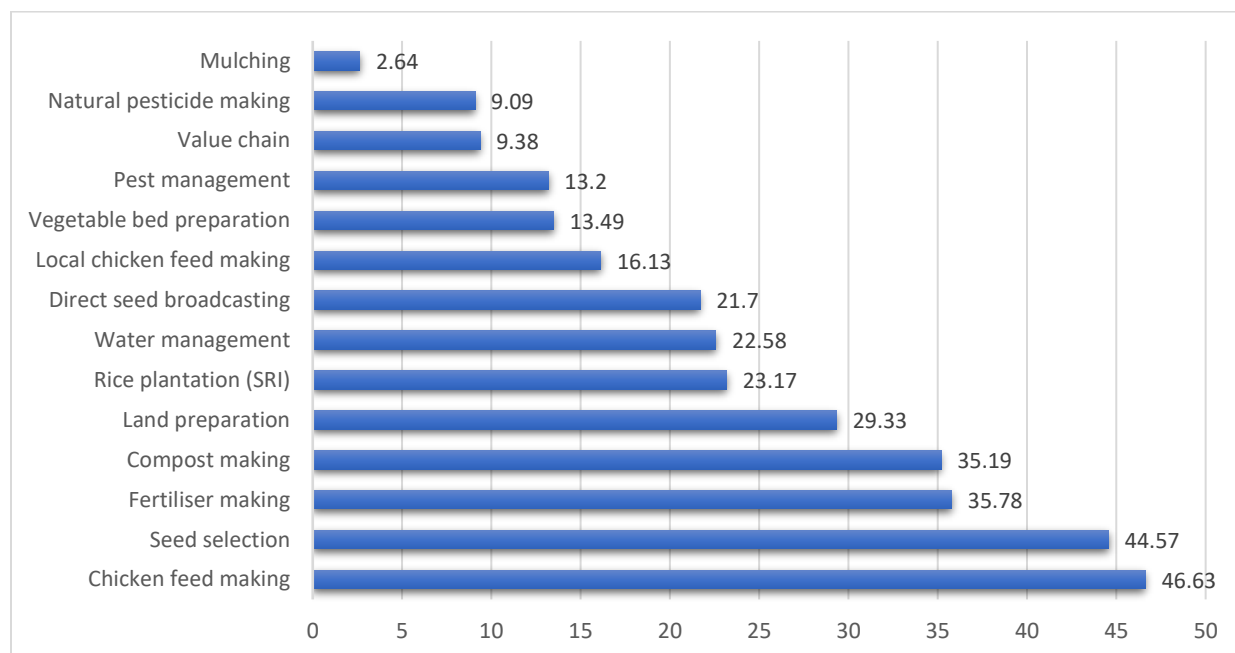


Figure 2: Types of agriculture training techniques received from the project

The vast majority of the respondents, 91.2% (311), pointed out that they have the confidence to apply the knowledge and technique gained from the training in their daily livelihood activities, such as rice farming, vegetable gardening, and chicken raising. Many encouraging factors make the farmers confident enough to apply the gained knowledge and skills in their daily livelihood.

Figure 3 shows the positive factors. The bar chart depicts six motivating factors that built the farmer's confidence to utilise the appropriate agriculture techniques over the past three years. Receiving sufficient technical training was the most influential factor during the entire period, representing 63.93% of the overall choice made by respondents. The proportion followed by received regular technical assistance from the project was 41.64%; having housing land around the house, 40.15%; having handout/IEC materials at home, 34.02%; having a functioning PG/AC committee to provide support to members, 14.66%; and receiving revolving fund to start-up livelihood 13.78%.

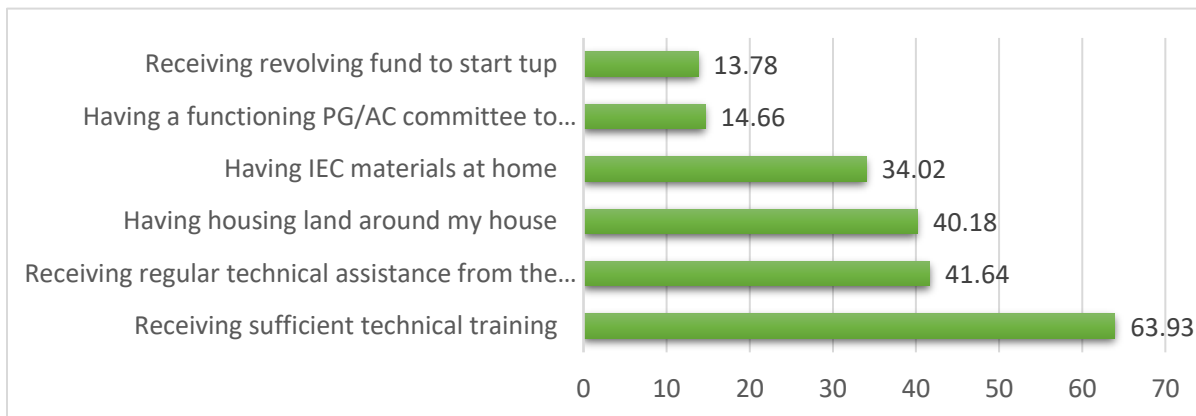


Figure 3. The factor that makes respondents have confidence to apply the gained knowledge

However, 8.8% (30) of the respondents did not have enough confidence to utilise their skills gained from the project. There are a few challenges for the respondent. As shown in figure 4, the bar chart illustrates many reasons or challenges that constrain respondents from applying the gained knowledge. 4.11% of respondents stated that they did not receive sufficient training support from the project.

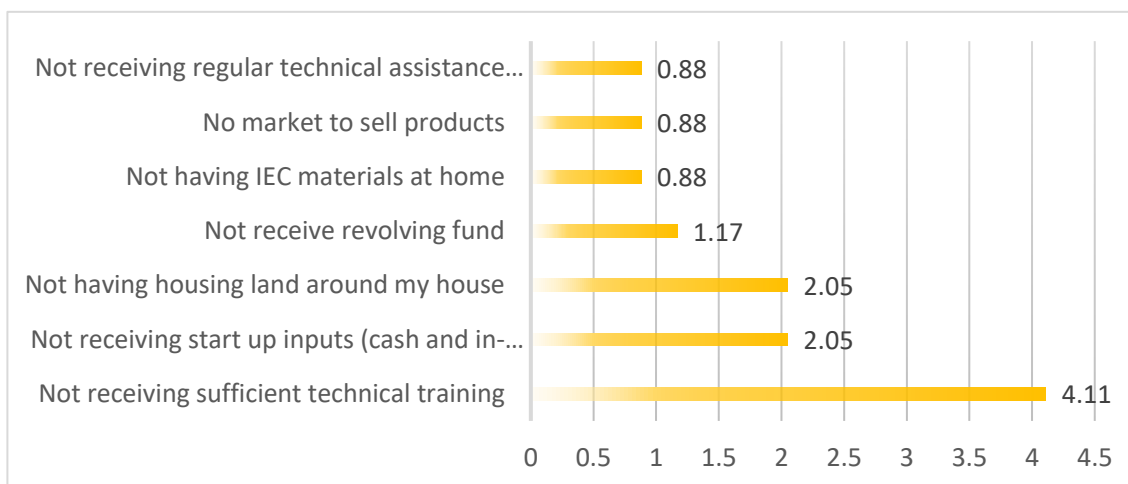


Figure 4. The factor that did not make respondents have the confidence to apply the gained knowledge

The figure followed by not receiving start-up input (in-kind or cash) and not having housing land around the house 2.05%; not receiving revolving funds 1.17%; not having handout/IEC materials at home, no market to sell products and not to receive regular technical assistance from the project shared 0.88% each.

More than half of the respondent, 53.1% participated in the household survey, stated that the current support from the project (training and inputs) were sufficient to improve their capacity and responded to their needs; namely, improved agriculture production (rice/vegetable yield), get materials support for making fence and construction of the chicken house. In contrast, 46.9% of the respondents considered the current support from the project is still limited for their livelihood improvement.

*Table 15. More support is needed from the project*

<b>Additional support needed from the project</b>	<b>Percentage</b>
Chicken raising	50.44
Rice seed support	48.39
Material supported	29.03
Vegetable seed	25.81
Other (irrigation support, incubation machine, chicken feed slicing machine)	18.77
The small amount of money supported	14.37

Table 15 gives information about the additional support needed from the project beneficiaries in the target areas to enhance their agriculture and livelihood development, specifically, food security.

Figure 5 illustrates the household survey results in which respondents received support from the ICDSR project in the past three years about their confidence in applying the gained knowledge from resilient agriculture and development in their daily agriculture activities, namely rice farming, vegetable growing and chicken raising. Respondents mentioned three confidence levels in their answers: Good, moderate and low.

From the pie chart, it is clear that the majority of respondents have moderate confidence in applying their knowledge in their farming, representing 53% (181) of the overall responses. Furthermore, 32% (108) of respondents identified themselves as having the confidence to utilise skills and knowledge gained from the course. While the rest, 15% (52), still has limited capacity to apply in their farming activities.

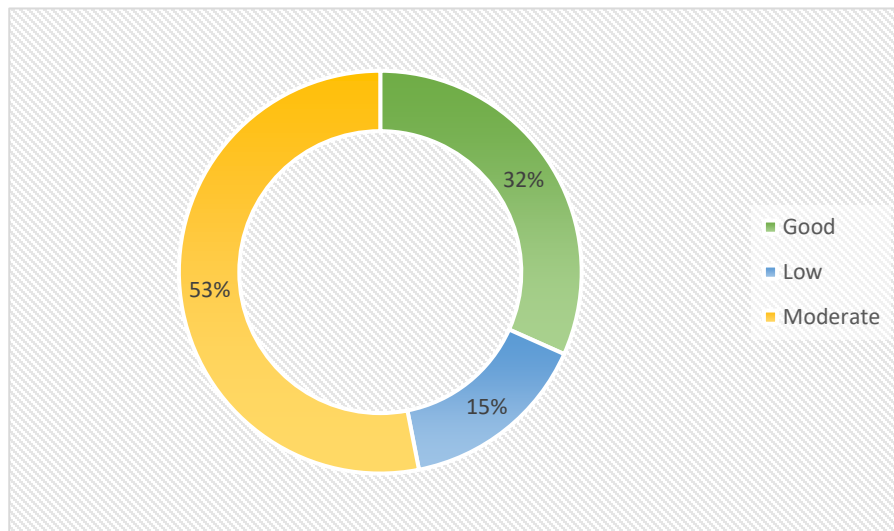


Figure 5. Level of confidence that respondents have in applying to their farm (rice, vegetable and chicken)

These were the agriculture and livelihood development skills that the target farmers learned from the project as below:

- Appropriate rice plantation techniques – direct seed broadcasting, compost and fertiliser making from natural ingredients, seed selection, soil preparation, water management, and applying fertiliser through different rice growth stages.
- Appropriate vegetable growing techniques – compost and bio-pesticide making, pest management, soil preparation, seed selection, vegetable bed preparation, mulching technique, and water management, such as drip line.
- Chicken rearing techniques – proper chicken house preparation, hygiene, chick selection, vaccine making, and chicken feed from local ingredients.

In conclusion, since moderate confidence was the most common level, it is clear that most target beneficiaries could utilise their agriculture skillsets in their on-farm activities to enhance their farming profit. In the future, the farmers expect to increase their confidence level, and more farmers can apply their agriculture skillset into practice.

In the next three years, the respondents need more support from the project to strengthen their capacity and improve agriculture production. Firstly, 50.44% of the respondents stated that they would like further support on chicken raising techniques, such as proper chicken house preparation, disease control, traditional vaccine and chicken feed making from natural ingredients. Secondly, 48.39% of the respondents' answers further addressed that they expect to get support for more rice seeds. This is because the current rice seed is enough for the growing season; however, it is insufficient for rice farming if the farmers are medium agrarian. Thirdly, material support, 29.03% indicated that they would like to get more inputs to support agriculture production. Lastly,

vegetable seeds, 25.81% of respondents confirmed that they need different varieties of vegetable seeds to start up or expand their vegetable gardening (Please refer to Table 15 for details).

When asked about their household income status after participating in the project, most respondents believed their household income had increased compared to the past years. For example, 79% (268) of the respondents indicated that their income increased during the past three years, 17% (58) said their income was not increased, and the rest 4% (15) do not know whether it increased or decreased.

Notwithstanding the respondents' answers on the increased income, further questions about their saving status were asked. According to the household survey result, 77.7% (265) of the respondents stated they had increased their savings by receiving assistance from the project. They save both with the saving group and individually. While 18.8% (64) of respondents said there was no savings increase, the remaining 3.5% (12) answered as do not know.

#### **4.4. Community empowerment and group formation**

The varying causes of poverty of the poor community people, particularly the smallholder farmers, need solutions at individual and family levels. However, some more significant issues and problems of individuals and families need solidarities among them to analyse better their problems and agree on working together for the best solutions.

##### **4.4.1. Agriculture Cooperative**

The target communities in the target areas, such as Chikreng, Spean Tnaoth and Lvaeng Ruessei communes, started initiatives to scale up their groups from an informal association to a formal registered AC, with facilitating and support from DPA. There was much preparatory planning for the formation of the group. There was also to prepare for the registration with the Provincial Department of Agriculture, Forestry, and Fisheries (PDAFF). Membership in the AC by the individual member will be voluntary, as there are requirements to comply, like the member's capital share and others. Generally, four main business components are operated under the AC: credit, supply, marketing, information and education. The management committee or the leadership of AC comprises the board of directors, board of auditors, manager and supervisory committee.

The respondents were asked, 'do you know the leadership structure of the AC?' most of the respondents, 74% (252) able to tell the AC leadership structure: chairperson, vice-chairperson, cashier/secretary, and members. At the same time, the rest, 26% (89), do not know the structure of the AC.

AC typically requires a monthly meeting to share the work progress and update information with its members. However, Table 16 shows the proportion of household interviews conducted with the AC members, 58.97% (201) of respondents did not acknowledge the AC meeting during the past



years. 29.91% (102) get the information that AC organised a meeting between 3-4 times per month; 10.85% (37) of respondents said that only 1-2 meetings per month; and the rest 0.29 (1) indicated that AC did not organise any meeting with its member.

Table 16: Number of meeting AC organised per month.

No.	How often does AC organise meetings per month?	Percent
1	1-2 time	10,85
2	3-4 time	29,91
3	Do not know	58,97
4	Never have meeting	0,29
	Total	100

Regarding the agenda of the AC meeting, 36.95% of respondents did not know the meeting agenda in advance, and the rest, 63.05%, said they usually received the meeting agenda before the meeting started. Some of the discussion topics included: saving, income-generating activities, establishing a marketing plan, and domestic violence against women and girls topic.

AC's end goal was to support its members in terms of coordination, marketing, and mentoring support to strengthen farmers and market links. Furthermore, the AC would act as the farmers' and members' central marketing and a business arm. This provided lots of optimism to AC members and community people as a whole, hoping to have better support for market opportunities for their farm products and receive a reasonable price and better income for the household.

Table 17 depicts the proportion of skills training ACs received from the project between 2019 and 2022. The respondents were likely to receive more than three skills training supported by the project. Financial management skills were among the respondents' highest proportion of skills, 27.86%. The lowest skills training respondents gained from the training was business plan development, 15.54%. Concerning value chain and marketing strategies; training on good governance and transparency; training on Cooperative Law; and fund mobilisation shared the proportion of 19.35%, 18.18%, 17.01%, 16.72% and 15.54%, respectively.

Table 17. Training that AC received from the project

No.	Training AC received from the project	Percentage
1	Financial management	27,86
2	Training on role and responsibilities and task	24,93
3	Value chain and marketing strategies	19,35
4	Training on good governance and transparency	18,18
5	Training on Cooperative Law	17,01
6	Fund mobilisation	16,72
7	Business plan development	15,54

To further support ACs and make the ACs well-function during project implementation and after the project phase out, the ICDSR project provided additional support to the AC for both skills development and infrastructure development. The household survey result reveals that 28% of the project supported the construction of the ACs office buildings; 24.63% supported transportation for transporting agriculture products; 23.75% supported ACs to organise annual reflection meetings/workshop; 22.87% supported the linkage or building network between AC; and 20.5% of the project supported on AC registration (please refer to Table 18 for details).

Table 18. List of additional support that AC received from the project.

No.	Support that AC received from ICDSR Project	Percentage
1	Supported the construction of office building	28.15
2	Supported on transportation	24.63
3	Support AC to organise annual reflection workshop	23.75
4	Support linkage of your AC with other's AC	22.87
5	Supported registering AC with PDAFF	20.53
6	Supported on transportation	18.18
7	Supported working capital assistance for running the administration	16.72

With these supports, the ACs can coordinate and facilitate between buyers and suppliers of agriculture products and inputs for its members and communities. As a result, the AC member can access more agriculture supplies and markets at a reasonable cost.

During the discussion, the PDAFF official and AC members confirmed that the primary goal of establishing and registering the ACs was to reduce the cost from buying agriculture inputs (crops, seed, chick and fertiliser) by increasing their scale economies. People formed the group to have a collective voice to negotiate with medium and large-scale suppliers. Similarly, the more agriculture producers combine their efforts with the cooperative, the cheaper the total cost of production becomes. The traders (farmers) united under a cooperative could compete in an open market with medium and large-scale buyers in a fair way.

*“When they come together as a group, it is easy for them (AC) to negotiate for suppliers (depot) to purchase necessary agriculture inputs from a reasonable price, then resale it to members with also a reasonable price.”* KII with PDAFF Official.

*“In the harvest season, our group (AC) always purchase rice crops from our members at a good price, and then we have a network to sell the crops to market in town.”* FGD with a female AC Cashier in O’Kraom village.

According to the discussion with key DPA staff, PDAFF, Office of Agriculture, and AC leaders, they emphasized that the start-up capital of ACs was most get supported by DPA’s ICDSR project. In addition, the respondents addressed that two actors engaged in the AC business. Firstly, DPA

provided financial support with the forming process, networking, and business capital and facilitated the AC registration. Secondly, PDAFF is responsible for providing technical support regarding legal documentation, leadership capacity, agricultural techniques, marketing and business management, and operational monitoring.

The PDAFF official further indicated that they also provided AC with market assistance by organising market linkage between traders and producers (farmers) to meet and discuss to bargain for prices to prepare for production, remarkably reducing exploitation of prices from the intermediaries. Furthermore, the AC businesses depend on the private sector or commercial companies, significantly impacting AC development concerning business partners (supply inputs, credit, and contract farming).

*“Through my experienced and observation that involved with AC business, a few private companies contacted AC to supply paddy rice for the company; however, they did not reach the final agreement because there both parties did have a formal contract farming agreement. So the company left without purchasing rice from the AC at the end of the day.”*  
KII with a female Deputy Office of Agriculture in the Chikreng district.

#### **4.4.2. Agriculture Productions**

##### **4.4.2.1. Rice production**

The household survey results strongly engaged the target farmers in rice growing activities. As a result, there was a significant increase in growing rice in the dry season. With the provision of canal rehabilitation and/or new construction in 27 villages, communities have more engaged in dry season crops. Based on the discussion with the rice producer group, the households in target villages have remarkably increased rice growth by 70% in the dry season. Resulting from the provision of irrigation and appropriate agriculture training supported.

The pie chart in Figure 6 clearly illustrates the respondent’s livelihood activities in different categories. Overall, it is apparent that the majority share of livelihood activities goes to rice farming while the minimum goes to small business operations.

As seen in the chart, nearly half of the proportion of livelihood activities/income was from rice farming, representing 45% (153). In comparison, chicken raising activity was the second largest proportion, 36% (122) of the total responses. The alternative sources of livelihood activities were vegetable farming and small business operation, accounting for 15% (51) and 5% (15), respectively.

In fine, it is clear from the chart that the household considered or gave more importance to rice farming and chicken raising than any other livelihood activities.

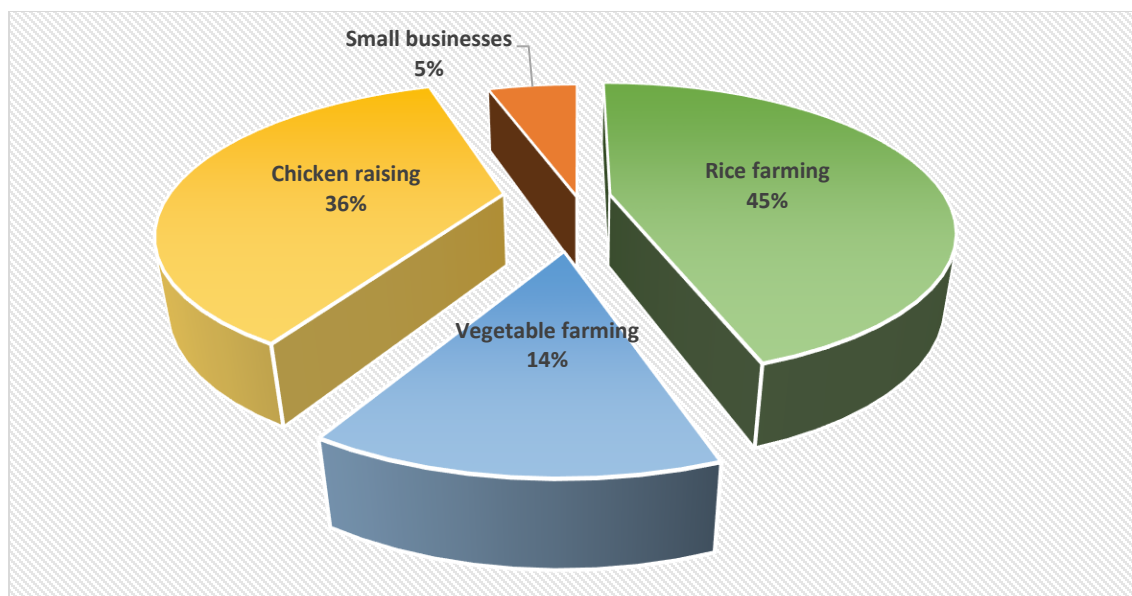


Figure 6 Proportion of households engaged in livelihood activities

Concerning the technology adoption and behavioural change in rice farming, the rate of techniques adopted by the rice farmers is as high as 90% (307) because most of the respondents engaged in rice farming have adopted at least three techniques or resilient technique techniques introduced by the project. In contrast, a small proportion of respondents still apply the conventional practices, 10% (34).

*“The appropriate agriculture skills I learned from the project were beneficial in my daily farming. Moreover, I put the knowledge learned from the course into practice, such as direct seed broadcasting and applied fertiliser through different rice growth stages. As a result, I noticed a significant increase in rice yield, approximately 2-4 tons per hectare. Not to mention, there was enough water for farming all year round, so I can do farming at least twice per dry season.”* Group discussion with rice producer in Kbal Kduoch village.

According to the interview with project staff and rice farmers, the ICDSR project, in collaboration with the District of Agriculture to equip rice farmers with the appropriate rice farming techniques (resilient to climate change); such as rice plantation techniques, compost and fertiliser making, rice seed selection (tolerate to drought and generate yield quickly), soil preparation, direct broadcasting technique, applying fertiliser through different stages of rice growing, pest management, and water management in the rice field.

The results further indicated that the vast majority of respondents were categorised into the high improvement group. Regarding the economic value of rice production, the amount of added profits was acceptable per household engaged in rice production.

*“At first, I did not have much confidence that yield would increase. However, following the techniques learned from DPA made it eye-opening for me. The yield increased double*

*compared to the past. Also, the price of rice was high. My income from selling rice this season is approximately 4,000,000. Riels.” Interview with a female rice farmer in Kbal Kduoch village.*

Based on the discussion with respondents in the visited villages, the change in weather patterns posed a severe threat to agriculture activities, specifically rice farming—for instance, the increase in dry spell duration in the dry season. In addition, the respondents reported that in the past two years, there was an incident of drought in the villages. As a result, most of the rice crop was destroyed.

Figure 7 illustrates the appropriate rice farming technique provided by the project in the project sites between the years 2019 and 2022. According to the chart, there were upward trends in knowledge gained by the respondents. The Rice plantation technique was among the top three-technique learned during this period, 54%. Rice seed selection shared the second largest proportion of knowledge gained, 49%, followed by Water Management, 48%.

To sum up, all the respondents have learned the new or appropriate rice farming techniques to enhance rice production yield, reduce operation cost, water management, and pest management in their rice field. Moreover, this technique would enable the rice farmer to address climate-related issues in the areas.

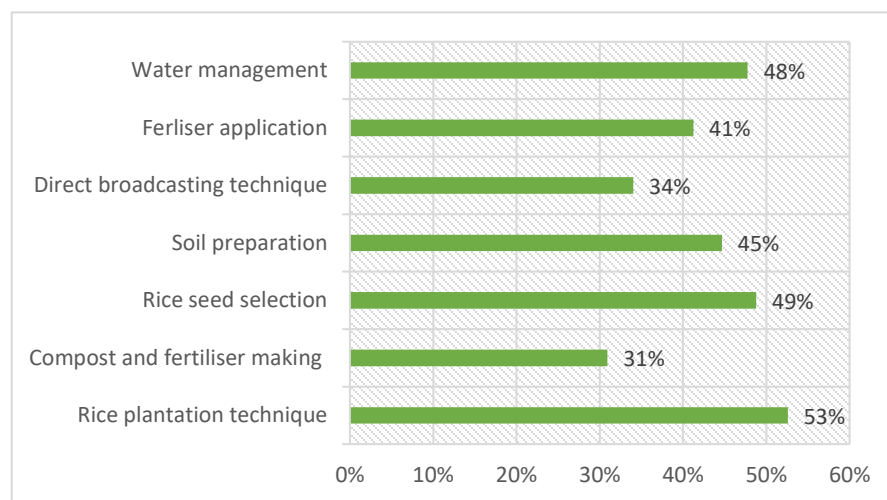


Figure 7. Rice farming technique received by ICDSR project

Intending to share knowledge and lesson learned from their farming, farmers came together a few times per month or as frequent as required to discuss and share the best practices and their experience from applying the learned rice technique from the project; such as the way of improving production quality by using good quality seeds, collective selling for a better price, and sharing of the problem encountered.

*“To improve the intercommunication with the other farmers, I normally shared my farming experience to grow rice that adapts the climate change, such as limited fertiliser and water management to the other farmers”.* Focus Group Discuss with a male rice farmer in Lvaeng Ruessei commune.

The interview with DPA staff member indicated that the DPA rice farming techniques model provides a platform for small and medium-scale farmers to learn more about farming and diversified agriculture. The training provided by the project not only gives farmers the update-to-date technique, but also enables farmers to come together to learn and discuss about their experience, lessons learned, and problems encountered so that they can use this opportunity to solve their problems in the future. Based on DPA, the agriculture innovation would enhance the production capacity of the farmers, resulting in high production yield and contribute to improving the household economic condition – household conditions and nutrition in the project sites.

#### **4.4.2.2. Chicken production**

The FGD discussion with the chicken producer group shared the changes they made in their chicken raising knowledge after training. Most respondents indicated that before they received the appropriate chicken raising technique, they did not have a proper chicken house set up or do hygiene inside the chicken house and did not know the proper way to make chicken feed. However, after learning from training on chicken raising in 2019, they reconstructed the chicken house, set up a fence to protect tiny chicks, a way to keep the chick warm (day and night) and disease prevention by making the traditional vaccine, chick selection; good feeding practices to three-week ages chicks; and cleaning the chicken houses by spraying bacterial such as slacked lime for disinfection. One of the female chicken raisers shared that from the initial 20 heads of chicken in 2019 from the support of the project, she now raised 50 heads of chickens. Not to mention, she generated ongoing income from selling chicken to the local market and buyer group. Thanks to the appropriate chicken rearing techniques given by the project.

*“The project taught me the chicken raising technique, such as making food, making a good chicken house and making the traditional vaccine for chicks. The chicken raising calendar was one of the most effective methods I learned from the training. I followed these methods, and I can reduce the risk of chicken diseases or die and given high profit in return.”* FGD with a male chicken raiser in Kbal Kduoch village.

The bar charts in Figure 8 clearly illustrate the agriculture producer group income generated by each group per month. As data suggested, the majority of respondents do not know the exact income their groups generated per month. Less than 20% (68) of each group believed that their group generated more than 2 million Riel per month; less than 35% (119) of each group believed that their group generated less than 2 million Riel per month.

A discussion of the chicken producer group in the villages visited with chicken raising activity reported that seasonal diseases caused livestock deaths in the past years. When asked where they got support when diseases occur, most respondents stated that from the private or the government veterinary service. However, because of the long distance from the village, it was often too late when support arrived. Therefore, sometimes they do not bother to seek support, as they know the support will come late.

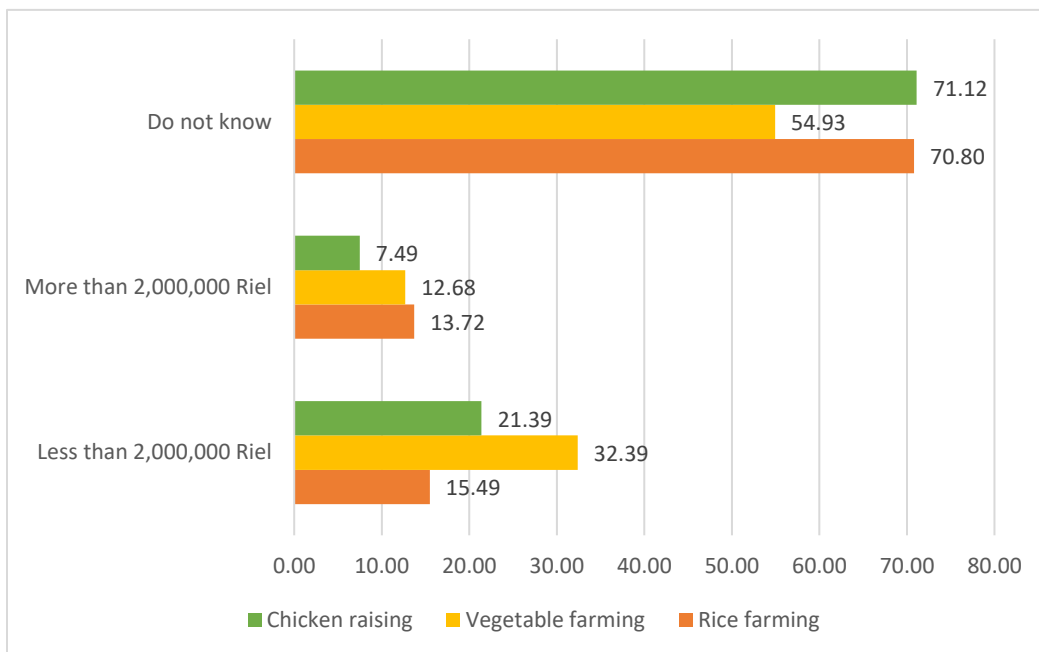


Figure 8. Income generated by each producer group per month.

Referring to the project data, part of the livestock raising training was using vaccination for chickens. A discussion with chicken farmers indicated they were far from needed resources with the limited access to needed resources (vaccine) and timely agriculture extension services in case their chicken becomes sick. During the training for chicken raising, participants were taught the use of natural medicine and vaccination for chicken diseases, but the chicken farmers still found them ineffective.

#### 4.4.2.3. Vegetable production

According to the project data and household interview results, most respondents stated that they received inputs from the project, such as vegetable seeds and materials for vegetable gardening, to establish their small-scale vegetable gardening. In addition, the families could set up gardening equipment and supplies such as nets, seeds, and water dispensers from the project support. With the introduction of vegetable gardening, the household slowly realised the benefits of the vegetable garden in the surrounding premises of their house. This approach was sustainable and an option to keep the household food secure with easy access to fresh and nutritious food devoid of chemicals.

*“The project taught to use organic compost made with natural ingredients as fertiliser, rather than chemical fertilisers. Since then, I utilised knowledge gained from the course in my vegetable garden, resulting in a good result for my vegetable.”* FGD with a female vegetable grower in Banlangk village.

During the field data collection and home visit at the household site, most respondents said they were satisfied and happy to have a vegetable garden around their house because they had easy access to food during the difficult or lousy weather since they had the vegetable in their backyard.

*“Since I received support from the project on vegetable cultivation, my family can diversify sources of income to support the family. The vegetable crops I grow are enough for my family's consumption for at least eight months. Besides consumption, I can see surplus to the market.”* FGD with a female vegetable grower in Balangk village.

During another home visit, the mother proudly showed her garden beside their home. The garden was diversified, being planted with vegetables, herbs, and fruit trees. Cucumber, long bean, spinach, eggplant, and morning glory were vegetables. The herbs were lemon grass and others. The fruit trees were banana, jack fruit, and mango. The water source was just beside the garden, too. Looking around the neighbourhood, two more houses had similar backyard gardens and the fence around them. Walking around the villages, more backyards and premises could be seen without any productive crops, vegetables, and fruit trees.

## **4.5. Water Resource Management**

### **4.5.1. Village Disaster Management Team**

Based on the household survey conducted with the target beneficiaries, more than half of the respondents were not a member of VDMT; however, they knew about the roles and responsibilities, not this group. Figure 9 depicts the percentage of respondents who can describe the VDMT group concerning DRR/CCA. It can be clearly seen that most of the respondents understood the roles and responsibilities of the group and their importance.

About 22.58% of respondents identified VDMT roles as facilitating DRR communication action plans; 21.99% of respondents told that to liaise with CCDM; 19.94% facilitated training on DRR/CCA techniques, such as growing resilient crops and tree planting; 17.89% of respondents said that the group worked to strengthen activities related to DRR and CCA by identifying priorities activities and requested commune council to incorporate DRR/CCA activities into the government's Commune Investment Plan (CIP). Please refer to Figure 5 for details.

In summary, it is clear that the VDMT plays a crucial role in conducting awareness raising, providing relevant knowledge on DRR/CCA, and bringing the concerns to the commune council by incorporating them to the CIP for further action; namely, the increase of animal vaccination campaign; hygiene, sanitation and environment campaigns, pest control on rice and vegetable,



support to construct open wells, construct more family ponds, construct new tertiary canals; and requested rice resilient rice seeds in case of drought and flood damaged rice crop.

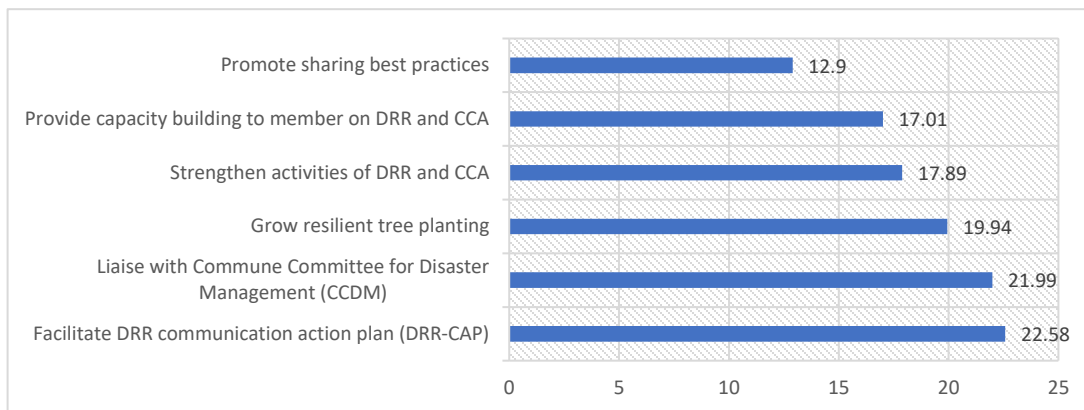


Figure 9. Roles and responsibilities of VDMT identified by respondents

Referring to training provided by the project, VDMT received several training regarding DRR/CCA to strengthen the team's capacity to respond to climate-induced disasters such as drought and flood. Many DRR/CCA training topics were given to VDMT: identify hazards, vulnerability, the capacity of the community, the way to reduce disaster risk, the impact of climate change and the way to adapt and mitigate climate change. Table 18 shows details topics of training received by VDMT.

Table 19. Training received by VDMT

No	Value	Percentage
1	Training on concept and practice of DRR	32.55
2	Facilitation skills	20.23
3	Resource mobilisation	17.3
4	Climate-Smart Agriculture	12.32

Figure 10 presents data on the household survey respondents who participated with VDMT or WUG groups. Again, a glance at the charts reveals that growing crops resilient to drought and flood was the highest choice/topic learned by the respondents between 2019 and 2022.

According to the illustration, the highest resilient agriculture training topics provided to the target beneficiaries was on growing rice crops resilient to drought and flood, around 68.04%. The second largest proportion was growing vegetables resilient to floods and drought, roughly 31.96%. At the same time, vegetable bed preparation has the lowest proportion of respondents who responded, around 9.09% (Please refer to Figure 9 for details).

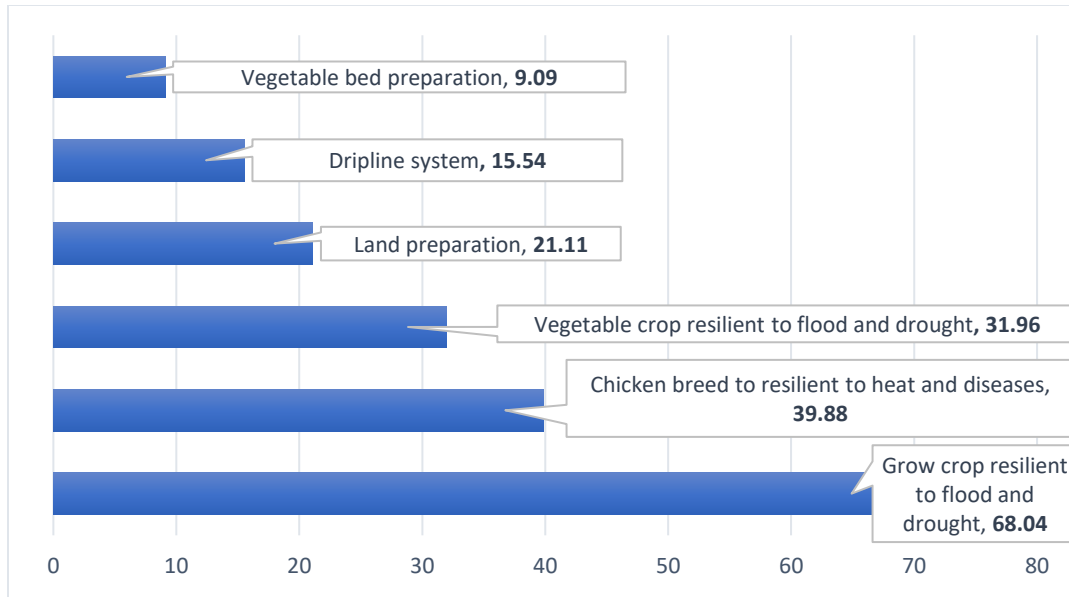


Figure 10. Resilient agriculture and livelihood training provided by the project

#### 4.5.1.1. Access to climate change and disaster information

Regarding the FGD with VDMT and its members, there is needed to improve the measures for the early warning and response time. The respondents suggested that the coordinating work at the local level can be improved. The engagement from all levels of local authorities (village/commune/district) is essential for an effective early warning system and response to the climate-induced disaster.

There are four practical elements of EWS (1) risk knowledge, (2) monitoring and warning service, (3) dissemination and communication (4) response capability. Regarding the third element, dissemination and communication, VDMT has worked closely and collaboratively with the local authorities in their target communities to get the latest climate or meteorology information so that VDMT can communicate and pass the climate information or disaster information to their villagers on by different available means; namely alert message sometimes spread by loudspeaker, telephone communication, social media platform (Facebook messenger or Telegram), or mouth-to-mouth to ensure that the everybody in the villages is reached. As shown in Figure 11, the latest climate-related information from the government specialist's institutions in climate change and disaster management is down to the villagers.

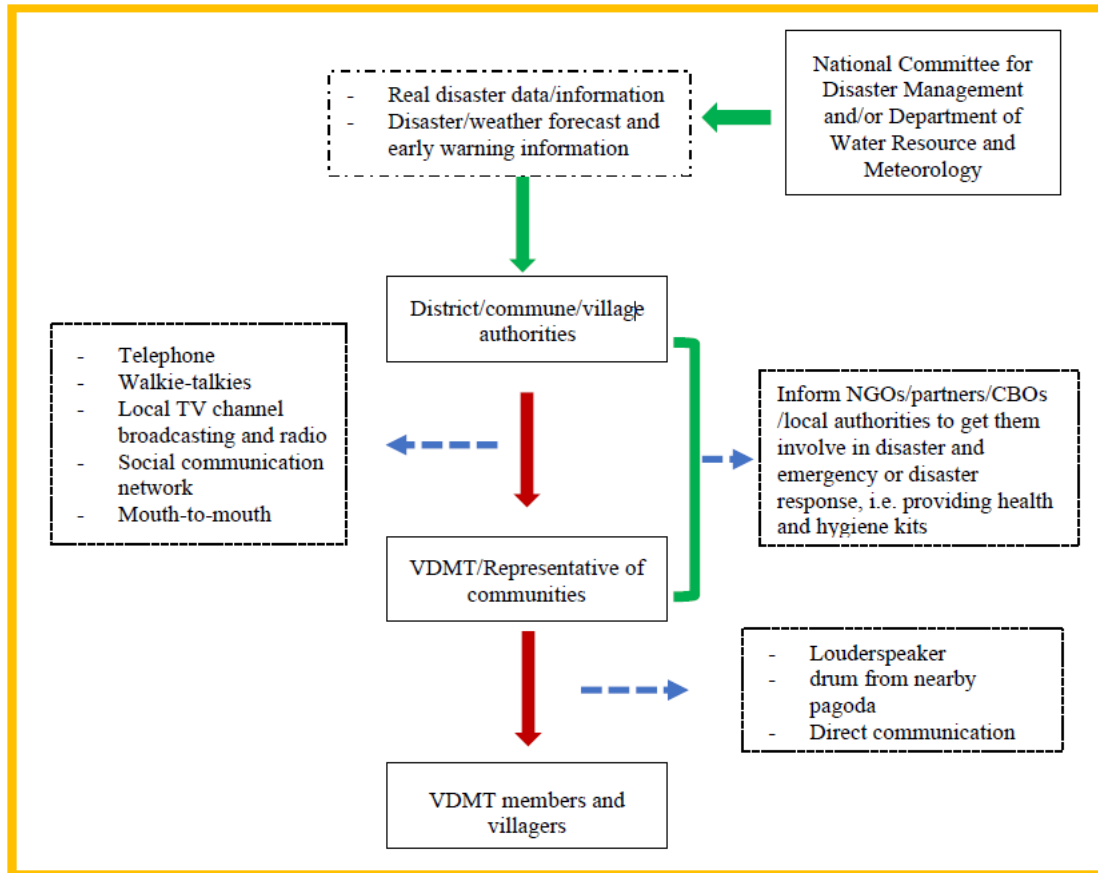


Figure 11. Early Warning System information flow and channel. Source: Author's own elaboration

As a result, rural communities in the target areas have improved the EWS capacity and access to climate information and appear to have a better prepared to cope with climate hazards and climate-induced disasters (drought, floods, flash floods, storms) because people have better access and transparent information flow concerning climate information and weather forecast.

*“With the clear information about the disaster or clear disaster warning from local authorities or VDMT, my neighbour and I have enough time to prepare and respond to disaster because we can prepare some emergency items such as firewood, drinking water and food.”* FGD with male VDMT member in Kor village.

#### 4.5.1.2. Community Water Resource Management Committee

The pie chart in Figure 12 illustrates the existing sources of irrigation in the target communities, which use primarily for agriculture purposes. Given the percentages of sources of water used by the respondent, it can be seen that canals were the primary source of irrigation for the communities.

Nearly half of the respondents indicated that ‘canal’ was the primary source of irrigation system in the communities for rice farming and family consumption purposes than any other sources – approximately 38%. However, about half that number, 23%, stated that ‘wells’ was also the

primary water source for both purposes. Community ponds and rainwater were the next most popular choice/source of water used in the areas, representing 19% and 18%, respectively. In contrast, the other 2% identified ‘river’ and ‘lake’ (0.29%) as the primary irrigation source.

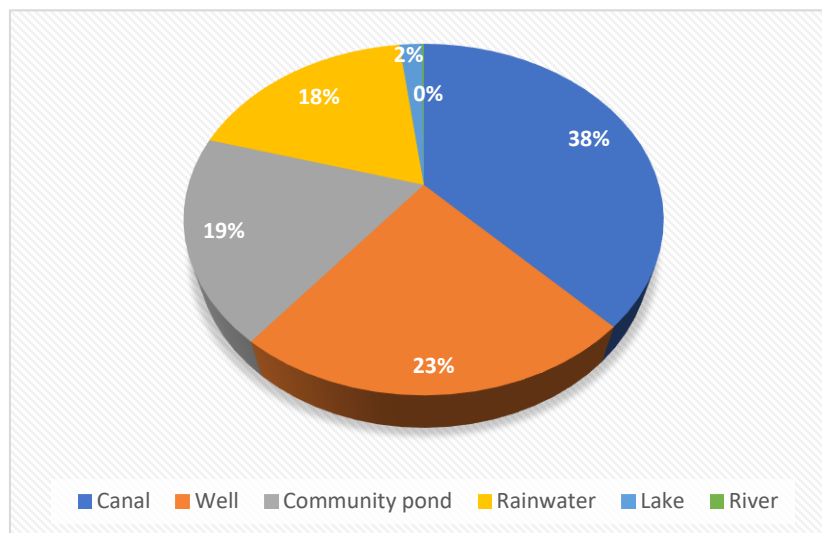


Figure 12. Source of irrigation in the target villages

A discussion with Community Water Resource Management Committee (CWRMC) and WUG indicated that the groups play a crucial role in facilitating water delivery from the primary source, such as the Mkak water reservoir dam and rehabilitated and constructed canal supported by the project to the farmers in the target locations. Rice farmers were the ones who benefited most from the irrigation system. According to the project data, there were approximately 27 villages in which CWRMC worked to allocate water resources for them.

*“I remember one of the DPA staff asked me about the water resource in my village. Was there sufficient water during the dry season? I simply replied that there was not enough water in my village. If there were a water shortage from the upstream, my village would not have enough water for rice plantation.”* FGD with a female WUG in Kor village.

The vast majority of the FGD respondents further addressed that the CWRMC work collaboratively with the local authorities, such as the village chief, commune councillor, district governor and district CWRMC, to improve the coordination work of water distribution to the rice field of individual or rice farmer producer group. A discussion with CWRMC members reported that the group contacted relevant authorities to open the water gate from upstream then two or three CWRMC members in the target villages monitored water flow downstream for water distribution. Therefore, since the group formed, there has been no conflict related to water distribution in the village. Not to mention, most of the individual farmer and rice producer groups had a good yield and proper rice plantation plan based on the watergate opening schedule (Mid-July to August and from September to December). Therefore, ultimately, there has been no incident of water shortage for farming in the target location.

*“They (CWRMC) always visited the canal sites whenever water opened from the main sources. They would be monitored closely on the water flow to ensure that the water was not flowed to destroy the rice field of other farmers that already had enough water.”* FDG with a male WUG member in Kor village.

*“Since the support from ICDSR project on the irrigation system and agriculture technique, there was enough water for my rice cropping. I also applied the knowledge from the course in my farming. Then, it turned out that I increased the rice yield from a ton per hectare to 3-5 tons per hectare.”* FGD with a female rice farmer in O’Kraom village.

During a group discussion, more than half of the respondents reported the community water shortage situation before the project intervention. Although most of the rice fields suffered from drought at that time, there was no water from upstream because the community did not have a representative or a group to facilitate water distribution from the upstream. As a result, most rice crops were destroyed across the villages during this drought.

Moreover, the respondents confirmed that CWRMC work to ensure that the irrigation system in the target villages has a proper maintenance schedule for the irrigation infrastructure, including preparation for the irrigation calendar, estimated water needed per crop cycle, and planned to request water from the DWRMC. Concerning maintenance fees, individual farmers and producer groups who benefit from it were the ones who shared the contribution.

*“The farmers always contributed to the group when the rehabilitation of existing canal or construction of a new canal affected the villagers' land. In addition, they resolved any conflict from water usage if occurred during the water distribution.”* FGD with a female WUG member in Kor village.

Concerning the DRR/CCA knowledge, the vast majority of the households received training on concepts of CCA/DRR that covered the topics of general CCA concepts, root causes of climate change, impacts of climate change, and coping strategies to deal with climate change. In addition, about 80% of the household reported receiving training on resilient agriculture techniques, including rice crop, vegetable growing, and animal raising. The majority recalled the topics on general CCA/DRR concepts, causes, impact, and mechanism, accounting for over 70% of the households. In general, about more than half of the households were assessed with a moderate score or above. However, knowledge levels were still moderate, requiring further strengthening.

#### **4.6. Promoting and protecting women's rights**

Gender equality and gender equity play a pivotal role in women’s empowerment. The attitude of beating wife/intimate partners by their male counterpart signify acceptance by the communities of the society because of the women’s lower status and gender norms that give the power to men the right to use physical force against women, which is violence of women’s human rights. According

to the UN, gender-based violence is defined as any act that results in or likely results in physical, sexual, emotional, or psychological harm or suffering among women or girls, whether happening in public or private life.

The result from the household survey reveals that more than half of the respondents observed that there was still a case of domestic violence occurring in the commune, 66.9% (219) in the past years. However, when asked ‘do you report the case of violence when you observed it in the last 12 months?’, 45.2% (154) of respondents never said because of some reasons, such as personal security or considered it a personal issue. 37.2% (127) of respondents indicated that they usually reported it one or two times. The figure followed by 11.1% (38) stated that they reported it three or more times when they saw or observed the case of violence; 6.5% (22) stated that they never observed any violence in their community.

Figure 13 shows whom the respondent reported to when there was a case of domestic violence they saw, observed or experienced? According to the charts, the top three common persons or institutions to report were village chief/local authorities, 76.83%; local police, 27.86%; and village security guard, 26.69% (please refer to figure 12 for details).

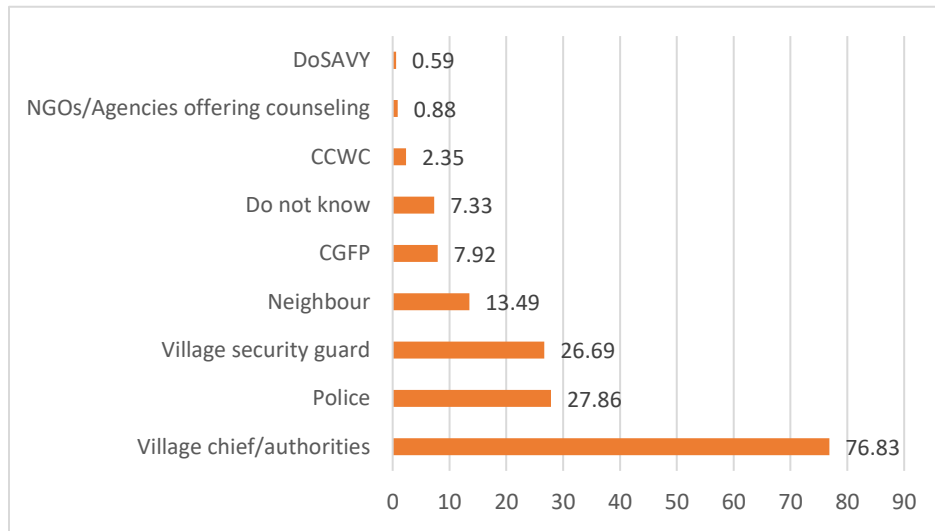


Figure 13. Person or institution to report to in case of domestic violence

The group discussion with married couples confirmed that the first contact person for reporting the cases of domestic violence was the local authorities, such as the village chief or village police. The respondents often told the neighbour also in case of domestic violence. Most of the respondents further addressed that if a case of physical or sexual violence happens in the family, the village police would directly contact the reporter (victim or villagers) or report it to the village chief for further support and intervention.

*“I always shared domestic violence law with the villagers, particularly married couples. If there is domestic violence in the family, we will use the domestic violence law to solve*

*the problem. However, it is difficult to prevent violence because men get drunk and commit violence against their partners.” FGD with CGFP in O’Leur village.*

In a discussion with a married couple on domestic violence, they described the situation before at home as follows:

*“Men are always drunk, in drinking party. Then, when they come home, they hit the wife.” FGD with a married couple in O’Leur village.*

*“During meal-time, sometimes men hit their wife when they are not served well.” FGD with a married couple in O’Leur village.*

*“When children do not want to eat, the father usually forces them to eat, hit them, so they eat their food.” FGD with a married couple in O’Leur village.*

*“An incident was shared that when the child returned home from school, the father was drunk and hit the child and broke glasses.” FGD with a married couple in O’Leur village.*

Thanks to relevant gender and women empowerment training courses provided by the project, such as gender and sex, gender stereotype, gender roles, gender equality and gender equity, women's rights, violence prevention and victim protection laws, role and responsibility of CGFP to collect report on domestic violence or rap cases, liaise and report the domestic/rape cases to government institutions (CCWC, police and local authorities) for intervention; also to provide awareness to villagers on safeguarding. The interviews with married couples further confirmed that since the project intervention raised awareness among married couples on women's rights and domestic violence, many married couples were reduced and/or stopped wife/intimate partner beating behaviour.

*“The women shared that reducing domestic violence over time is not easy. Nevertheless, slowly men are changing, and men have reduced their drinking.” FGD with CGFP in O’Leur village.*

Table 20. Suggestions from respondents on making a community safe and accessible from violence

No.	What would make you feel safer from violence in your commune/village, home or school?	Percentage
1	Reduce alcohol consumption/selling in the village	62.76
2	More dissemination of prevention of VAWG messages in the community	56.01
3	Reduce gambling in the village	55.72
4	More skilled GBV service providers in the villages	46.04
5	More counselling/intervention with men	21.99
6	More direct intervention with households experiencing violence	19.35
7	Stop drugs	4.4

Cultural attitudes significantly impact women's lives, and harmful gender norms still exist in society. Men and women readily accept some detrimental behaviour because they accept the harmful gender norm, such as men being superior to women.

According to Table 19, there was a list of suggestions from the target communities on making their community safe and free from domestic violence. Overall, it can be observed that the more frequent suggestion was to reduce alcohol consumption or sell in the village, representing 62.76% of responses chosen by participants. Furthermore, conducting more dissemination of prevention of violence against women and girls messages in the community was the second largest proportion, 56.01% of responses selected by participants. The other suggestion was to reduce gambling in the village, representing 55.72%. Finally, the other features include having someone with a more skilled Gender-Based Violence service provider in the village, around 46.04% (please refer to Table 19 for details).

Table 21. Attitude towards wife beating

No.	Is a husband/intimate partner justified To hit his wife following reasons?	Yes	No	Do not know	Uncomfortable to respond
1	If meal is not prepared on time/burnt	7.3	88	1.8	2.9
2	If she argues with him	8.8	84.5	3.8	2.9
3	If she neglects the children	9.7	85.9	1.2	3.2
4	If she goes out without telling him	8.8	84.8	3.5	2.9
5	If she refuses to have sex	6.2	89.7	2.9	2.9
6	If she asks to wear a condom	5.9	87.4	3.8	2.9

The statement in Table 20 illustrates the behaviour towards wife beating. All the respondents, both men and women, were included in the responses.

The proportions of all respondents who believe that a wife's beating cannot make justified if she refuses to have sex, if the meal is not prepared on time/burnt if she asks to wear a condom are the highest, at 89.7 per cent (306), 88 per cent (300) and 85.9 per cent (293), respectively. In addition, eight in ten women believe that beating cannot justify if she neglects the children, 85.9 per cent (293); if she goes out without telling him, 84.8 per cent (289); and if she argues with him, 84.5 per cent (288). In general, it can be seen that the vast majority of respondents understood women's rights and gender equity which reduced the case of domestic violence against women.

The discussion with CGFP and a married couple during the field data collection found that they were satisfied to share that they helped together to facilitate awareness-raising in the community on domestic violence to the family who experienced it. CGFPs are essential in reducing and preventing domestic violence in communities. CGFPs disseminated gender and development



concepts, safeguarding, collected cases of domestic violence, reported cases of violence to concerned institutions, encouraged women, and victims, to report to local authorities for intervention, shared good cases of a married couple practising gender road map; women empowerment, and helped improved communication between the couples.

The interview with married couples indicated that both men and women have an increased understanding of gender, women's rights and women empowerment. They also feel the negative economic, health, and social reputation impact different types of violence. By understanding the consequences of domestic violence, men tended to stop violence in their families.

*“I feel ashamed of violence in my family, so we do not want to go anywhere after I committed violence. Currently, I stop using violence in my family, and we live peacefully together and improve our communication by reducing bad words with each other.”* Group discussion with the married couple in O’Leur village.

#### **4.7. Challenges**

##### **AC related challenges**

The current ACs in three villages face everyday challenges, including the inefficient capacity of the management committee, lack of capital for business operation (buying and selling group), difficulty accessing a loan from a Micro-Finance Institution or bank, illiteracy, and sporadic participation.

Concerning the inefficient capacity of the management committee or leadership of AC structure, there was a limited capacity of human resources among the ACs: (1) limited leadership and limited bookkeeping and financial management. No proper records of expenses were mentioned during the discussion with respondents. (2) Lack of communication skills is also a critical factor for the ACs, which could lead to missing out on communication or networking with the external actor, such as private sectors and government stakeholders. (3) members had limited awareness of the functioning. Many members found it challenging to understand the AC’s role and responsibilities.

Two actors currently support the ACs regarding the governance system in the target villages: the government and DPA. Generally, the government, PDAFF, provided support to enhance the AC's functionality and business scope. On the other hand, DPA provided a number of supports such as capacity building, management, capital marking and agricultural skills. The support from both actors positively impacted the AC development and operation; however, the governance system is more or less influenced by these two actors.

There is limited dissemination of the benefit of joining as an AC member. Specifically, the farmers living in AC areas did not get much information about the AC benefits and its business operations and did not understand what the AC was for. Similarly, several respondents elaborated that they hesitated to join the AC because of the mistrust among members; also failure cases from

experience. In addition, the value of shares was a constraint for farmers to take part with the ACs, particularly the poor farmers.

Business operation challenges. There is reported positive progress on the AC's business operation. However, the ACs faced limited capital for their business operation, such as limited credit capital, lack of adequate farmland or warehouse, limited quality of agriculture products, limited planning capacity (development of business plan), and lack of networking for the external stakeholders.

Lack of marketing assistance pushed farmers to stop accessing more markets and getting better output prices.

### **Agriculture technique-related challenges**

The respondents raised several problems they encountered concerning their practices on rice crop growing. The most commonly raised concern reported by about 20% (68) of the respondents was the poor access to irrigation facilities, drought and high pest attack. Several respondents reported poor techniques as being a challenge, respectively. It is noted that most farmers depend heavily on natural conditions to irrigate their crop production.

Nearly half of vegetable growers reported pest attacks as the most common problem in growing vegetables. In addition, access to irrigation and poor techniques adopted were challenging. Half of the vegetable growers highlighted insufficient labour or time and poor market access. The findings inform the project to focus more on vegetable growing techniques to minimize pest attacks and accessibility to irrigation facilities in target villages.

The respondents raised several problems they encountered concerning their chicken rearing. According to the discussion by the chicken producer group, the most commonly raised concern reported by more than half of chicken-raising respondents was the high rate of animal disease and death. Lack of techniques was seen as a significant concern also. Shortage of capital, poor market demand, and lack of labour for chicken rearing were also considered a hurdle by the minority.

The market price of agriculture products is also challenging for farmers, particular rice farmers/producers. Low prices for paddy rice were one of the farmers' constraints, leaving some small-scale farmers struggling to recoup costs. In the past years, paddy rice prices were too low to cover the cost of cultivation, such as fertiliser.

### **Project implementation-related challenges**

Based on the discussion of the project beneficiaries, several farmers expressed their concerns and disappointment with farmers' selection bias. Furthermore, they elaborated that some real poor farmers did not receive support from the project or were invited to participate in the project intervention.

The target farmers did not receive fair project inputs, such as rice seeds, vegetable seeds, small chicks and other materials. This may result from a lack of project dissemination regarding which types of beneficiaries received which inputs support from the project.

A few farmers raised their concerns over farmer selection for the exposure visits, and they firmly believe that most of the farmers who participated in the visits were the leaders of some groups, such as AC or PG, ordinary farmers or members did not invite for the visits. However, this may result from the limited information shared with the project beneficiaries and the objectives of the visits to the public.

The current three-year project cycle expects to end at the end of June 2022; however, many respondents indicated that they joined the project in the past two months (April 2022) by the time of field data collection.

The Household economic condition of the married couple is challenging. Most of the married couples were poor and did not have a stable source of income to support their family. A married couple indicated that they received limited inputs support, such as vegetable seed and chicken from the project; also, their household environment is unsuitable for these activities (flooded during the rainy season). So it is; therefore, the household cannot use this knowledge and inputs given by the project.

## **5. Conclusion**

### **5.1. Relevance**

DPA's ICDSR work for the poor and vulnerable community in the 27 villages of four communes in Chikreng district, Siem Reap province, is very relevant, though faced with many challenges as described in the above section, in facilitating positive impact and change the live and economic situation of the target communities. The set of project strategies and plans were complementary in achieving the project's overall objective and specific objectives and the impact on the target groups. There were setbacks, though, in the delivery of planned inputs and activities, which slightly negatively affected the achievement of the desired outputs and outcomes of the project. In addition, timely operational and continuous technical assistance to adjust approaches to recheck implementation challenges need attention.

The project needs to use planned project inputs such as appropriate agricultural training techniques, including resilient agriculture training, irrigation system and gender-based violence, as a relevant strategic approach. This is also a way to achieve a vibrant AC, PG, CWRMC and WUG community group that is people-managed and self-sustaining. This group, particularly AC and PG, set a coordinative mechanism to support small-scale farmers in upscaling their production and market linkage to different potential buyers for the lasting benefits of the small farmers and communities as a whole.

Despite the setbacks, there are significant changes resulting from the project intervention over the target communities' economic status, food security, DRR/CCA capacity, and gender equity. In addition, it provides positive thought and optimism for the farmers who belong to or are members of any group. Specifically, AC/PG and CWRMC continue strengthening the group spirit and solidarity through the community groups they started.

DPA and the partner communities in the Chikreng district should continue to engage in critical assessment and context analysis of the situation around the target communities and the country. This will assist the project planner/designer identify and ensure relevance in the project intervention approaches. In the context of target communities, the current issues are the agriculture market, domestic violence, out-migration, health and sanitation, access to safe and clean water, and climate change. The communities' opinion is that they continue to build positive changes in their family economy and on the collective actions in the group to have a better life.

### **5.2. Effectiveness**

The overall attainment of project results is assessed to be highly achieving the planned overall objective and specific objectives. However, there were setbacks in the project implementation which constrained the project from the full achievement of the desired results, as already discussed the abovementioned sections.

Regardless of these setbacks, the project implementation strategies and approaches proposed by the project provide the ultimate benefit to the target communities, such as poor households, small-scale farmers (rice, vegetable, and chicken), and specifically married couples who experienced domestic violence.

The access to the appropriate training techniques (including resilient to climate change) on rice farming, vegetable cultivation and chicken rearing, with support of inputs to start-up application on their farms such as rice seeds, vegetable seeds, chicks, and relevant materials; hence, enhanced the farmer's knowledge and skills, increasing agriculture production (establishment of producer group), improved food security, diversified sources of livelihood incomes of the farmers and their family.

Moreover, the establishment of vegetable cultivation provides food security and easy access to safe varieties of vegetables and nutritious meals for the target households all year round, particularly during the difficult season. Therefore, vegetable cultivation should be promoted to more target farmers for a more significant community impact.

The access to new and appropriate knowledge on chicken rearing improved the farmer's traditional way of raising chicken. It diversified their livelihoods by allowing them to raise chickens in their backyard. It secured nutritious meals with meat protein for the family. From the surplus, they can sell it to the market or to the chicken producer group to get more income.

The provision of irrigation system support, namely rehabilitation of existing canal, construction of the new canal, and construction of community ponds, and wells, benefited the target farmers and communities as a whole by providing them with water for farming all year round. Thus, it allowed farmers to plant during the dry, hot and wet seasons and sustain farm production and income.

Establishing CWRMC and WUGs is the right approach to address water scarcity in the communities by avoiding conflict-related water distribution. The group well-managed water resource in the community. They worked closely with the members and relevant authorities to distribute and water resource allocation through the different timeframes of the growing season.

For greater effectiveness and sustaining these positive impacts, regular follow-ups, visits and direct coaching to the target farmers should be a priority for the next phase.

### **5.3. Efficiency**

The project built on the initial efforts of the DPA ICD project started in 2016 in mostly the same coverage of the current 27 villages in the Chikreng district. The project's first phase was implemented between July 2016 and June 2018, covering 16 villages. The project's second phase started from July 2019 to June 2022, with the coverage of 27 villages in the abovementioned district. The project followed the gains of the early initiatives on mobilising and organising with CWRMC, WUG and farmer group, its membership and activities. Facilitating and enabling factors

in the current phase of project implementation as results of methods and processes are efficient and sustainable and result in significant benefits to target households.

The groups encouraged voluntary savings from members that served as a pool of revolving funds for small loans for livelihoods and emergency needs of members. As a result, members continued to patronize because loans helped them, reducing their dependency on high-interest loans from private moneylenders.

Agriculture and livelihood support to married couples provided double benefits to the beneficiaries. Firstly, the gender equity and gender-related training given to married couples contributed to reducing, preventing, and stopping domestic violence in the household and the community in the long run. Secondly, the livelihood supported provides the household with livelihood incomes to support the family. It is firmly believed that when they are busy with their livelihood activities, there is less chance that the family has domestic violence.

Rehabilitation of the existing canal, construction of the new canal, and construction of community ponds and wells provided increased productivity for rice farming and small-scale farmers' vegetable cultivation.

## **5.4. Impact**

### **Increased agriculture production and food security**

The significant changes of the project were improved agriculture production and productivity of the community members in some target villages regarding rice crop, vegetable growing, and animal husbandry. In addition, with high modifications on training and support models during project implementation, vegetable production in the households has significantly improved for the target households in respect to improved resilient technique adoption, increased engagement in the activities, and improved economic status. The changes were highly attributed to the training provisions, availability of irrigation facilities, growing experiences, and market feasibility.

The improved economic condition of small farmer beneficiary families reflected access to sustainable livelihoods and control of their family income. They increased food production in their farms and backyard gardens through integrated, diversified farming combining vegetables and chicken raising. They acquired food security for the family by bringing safe, fresh, and quality food to the table for family members.

Most of the farmers of vegetable growers adopted a minimum of two techniques for vegetable gardening. The numbers of techniques adopted were quite varied across the target village. Several techniques were adopted for vegetable growing by the farmers, and the number of households that applied natural practices has notably increased. Half of the vegetable growers highly applied land preparation, natural or organic fertiliser making and seed selection, followed by resilient

techniques. A relatively higher proportion of the trained farmers applied organic practices and resilient techniques.

### **Agriculture Cooperative**

After the project intervention, people discuss and exchange ideas to solve the common problem in the villages. As a result, the community people increasingly make decisions collectively and in solidarity. This is the general observation and feedback gathered from the field data collection after meeting many respondents in the visited villages.

The strengthening of the formed of ACs relied on the level of participation and volunteerism from its members and an enabling democratic decision-making process. When members are confident to participate in analysing their common issues, planning, and deciding on alternative solutions, AC is high in self-sustaining and self-managing.

Based on the relationship provided by the AC in visited villages, members have received many benefits from many different stakeholders; particularly the support from the ICDSR project to adopt new sustainable farming techniques. The vast majority of AC members were firmly convinced that without being a part of the AC or the project, they would not have begun sustainable farming, nor could they receive such benefit. Two kinds of relationships are identified within AC: direct and indirect.

Firstly, the direct relationship, AC members worked collaboratively with local authorities to build the members' capacity and strengthen their group. Therefore, this good relationship would enhance the group or community's food security, knowledge development and financial support. Secondly, the indirect relationship between AC/PG and consumers is also found in the evaluation. Agriculture product information is vital for PG. When AC transported their product to sell in the market, they always shared the information they get from the market to its member, such as customer feedback, preferences, and market price, in monthly meetings.

### **Water Resource Management and Village Disaster Management Team**

Establishing community groups at the grassroots levels such as CWRMC, WUG, VDMT, and institutional arrangement of adaptation initiatives has resulted in tangible achievements and progression through several components. Firstly, asset-based. The irrigation system support from the project and inputs distribution from the target communities are the major components to ensure project success and address the community's needs. The CWRMC was responsible for supplying and managing water resources to ensure water governance and management of the irrigation systems. The creation of CWRMC responded to communities' needs, addressing water resource management and water competition between households due to increased water scarcity in the areas. Hence, there is no more conflict regarding water distribution among WUG members.

Secondly, access to information and translating information into knowledge and collection actions. The groups can develop DRR CAP. The development of DRR CAP included a number of DRR information such as the history of disaster, communities' vulnerability and capacity, communities' needs and action forwards to cope and adapt to climate change and disaster. Additionally, VDTM is considered a crucial asset and social capital, contributing to hastening the success of rural communities' ability to deal with the negative impact of climate change and preparedness for climate-induced disasters. The group plays an essential role in mobilising local resources and facilitating DRR/CCA activities by incorporating DRR CAP into the government CIP each year to raise the priority needs based on the village-level DRR CAP. The current practice of this group would lead to building up the human resource and social bond capital to produce a sustainable resource for the community.

### **Gender equality**

Compared to the recent past, there is a general observation of the growing participation of women in various communities visited at different levels of engagement, which provides more optimism. Before, women had less power to negotiate. Now, women and men discuss and decide together.

As women engage more in group and community interactions, they quickly analyse and realise as they have seen and heard common issues from other women and stories of their families struggles. Together, they can compare with and get empathy from fellow women. This opens up the feeling to discuss, start to work together, help each other, and actively participate in groups. The feelings of belongingness and empathy had been unleashed. These were observed and evident in the faces and smiles of the women met in the field visits.

During FGD, some women were comfortable and had strong voices during discussions in mixed groups. Nevertheless, unfortunately, some women initially had difficulty starting active engagement in group discussions. This could be linked to the stigma and cultural labelling of having low education and being illiterate.

Nevertheless, facilitating the discussion in more participatory and enabling processes, the women initially took time to start but were able to share productively as men or even better than men. They could not express or write their ideas fast enough in words, but through engaging facilitation, they started to draw and even wrote short words and phrases to describe what they drew. The women articulated their ideas well through plenary discussions with men on even sensitive discussions on gender behaviour and relations.

This is an area to further analyse and explore for program and field staff to find better and more participatory processes of working with women to have meaningful and greater participation in discussions and decision making. Women should continuously be allowed to reinvent, have a head start to improve their capacity and break the cultural silence.



The cases of domestic violence were reported to have decreased gradually in the villages as most villagers gained knowledge and understanding from the awareness-raising sessions on these topics over the past three years. The communication between husband and wife improved. They believed that both men and women had equal rights. Men now encourage and motivate women to participate in community activities and not just be confined to household work. Women are more involved now in decision-making in the families and community work. Since men have reduced their drinking habits, they spend more time helping with household and farming tasks. Men and women give mutual respect to each other and share tasks both in farming and the household.

### **5.5. Sustainability**

The positive changes observed in the lives of the project beneficiaries in the visited villages are progressing, and the volatile situation around will be challenging for the extent of sustainability of the impact achieved. Therefore, the situation and the gains must be critically assessed, consolidated, and strategically planned to sustain the impact.

Promoting enabling and sustainable mechanisms should prioritise the implementing team for the next project cycle. The initially planned strategy to strengthen the ACs, PGs and farmers across the 27 villages is a relevant mechanism for the sustainability of the impact of the target groups even after the project phase out. There are no straight and quick methods and solutions; however, the aim is to continuously facilitate enabling and innovative processes, reflect, and make better adaptations of alternative solutions.

The project's next phase should consider reviewing current gains and impact and strategically plan for which sustainability mechanisms should be set in place and supported. In addition, more focused strategic capacity development efforts should be considered.

The priority of mechanism and facilitating processes to support is strengthening AC, PG, CWRMC, WUG and community groups in collaborative ways for more substantial self-managed community groups given the volatile situation and challenges around the target communities and country.

## 6. Recommendation

The following are suggestions to help inform DPA to improve project implementation and for future project interventions. The project may wish to consider to:

- ***Strengthening partnership with government stakeholders.*** The PDAFF should organise an annual strategy planning workshop with the AC leaders or some key members to strengthen the capacities of the AC management committee concerning management, leadership, and business initiatives. The project should collaborate with PDAFF to provide capacity building to the AC management committee through training or workshop on the abovementioned topics. Hiring an external trainer or looking for an experienced trainer from PDAFF to provide such training would be an asset. After the training/workshop, the project work with AC leaders needs to develop a Plan of Action for the committee to follow strictly; close monitoring or joint monitoring with PDAFF to ensure the proper implementation of AC's Plan of Action. In addition, the project should work collaboratively with key government stakeholders, such as PDAFF, to promote the AC businesses by setting standard agriculture market prices and providing budgetary support to ACs. Looking for the opportunity where there is business network gathering and business networking with private sectors so that AC could have a chance to promote their business and network for medium and large-scale buyers. Both PDAFF and DPA should be looking for the Contract Farming opportunity with private companies to ensure reasonable market prices for AC businesses, particularly rice production.
- ***Promoting community organising and participation.*** Aim for functioning self-managed and self-reliant community groups. A sustainable feature is for group members to reach a level where they can understand and analyse their realities and the root causes of their problems, find solutions, and take the lead in actions. Engage everyone in the group for meaningful participation in various stages of activities of the groups so that they can be active in consensus decision making. There is no short-cut process; this may take time, but if the process enables more effective capacity development. A strong functioning community group and its members will gain better participation in the AC/PG/VDMT/CWRMC, local democratic processes, and negotiating with local authorities at all levels. Partnership with the community by identifying potential leaders in the community. (1) Discuss with each community to identify individuals who form the community's ideas and would undertake leadership roles in the communities or groups. (2) The community should empower through active interaction with the other community members to develop an action plan for their group (AC/PG/VDMT/CWRMC) goal and objectives. (3) Community leaders should then be trained by the project to build their capacity to participate effectively. (4) Engage community members in planning in all stages of group formation or project planning.
- ***Training Volunteer Community Facilitators or 'Community Specialists'.*** For sustainability, consider in the next phase of intervention the training of volunteer

community facilitators or “community specialists.” Select a pool of committed farmers leaders, such as rice farmers, vegetable growers, chicken raisers, women leaders, CWRMC and other groups willing to be trained and have the heart to work with the target communities. An example is training volunteer community animal technicians, at least one or two in each village where there are livestock growers; a village crop or vegetable technician. The concept is to train them, and they will teach others. They form a pool of local experts in the community.

- ***Capacity development for farmers and community groups.*** Plan innovative capacity development training for target groups through regular follow-up visits to the farm and coaching. Direct coaching is considered an acceptable and effective mechanism for building people’s capacity. Start to build on or transform some key people; coach them so they can coach and transform other people.
- ***Develop and provide more educational material packages for agriculture techniques.*** Develop simple IEC materials on agriculture technologies that are user-friendly to small-scale farmers, limited educated people or illiteracy. The project should communicate with relevant stakeholders to get IEC material regarding agriculture techniques, for instance, PDAFF for the most update-to-date published IEC materials on the crop calendar. Alternatively, with the support of DPA graphic designers or communication personnel, develop DPA’s content of IEC materials which could reflect the training content by the organisation.
- ***Promoting renewable energy as a measure of climate change mitigation and adaptation, such as using solar panels.*** For example, the project may wish to consider using clean energy in their agriculture activities by using a solar water pump. The energy comes straight from the sun, lowering the operation cost (gasoline, maintenance cost) and its environmental footprint. Solar water pump systems, pumping water from streams, such as canals, community ponds and wells and providing irrigation water. The project should consider promoting the benefits and sufficiency of the energy generated from the solar panel for household uses. Additionally, a solar panel produces sufficient energy for household needs. It also can reduce the cost of electricity bills. It converts energy from the sun into DC electricity, which is then sent to a controller and down to the mouth of the pump. Solar water pumps replace traditional electric or diesel pumps because they are inexpensive, have less maintenance, have no running costs after the initial investment, and run on the power from the sun. The solar water pump system has many components, including a solar panel, water pump motor, inverter, pipes, water tank, and pump controllers. Engineer Without Border is an active NGO in Cambodia that specialises in supporting the construction/installation of solar water pumps and rainwater harvesting systems.
- ***Support for small-scale irrigation and promotion of rainwater harvesting technology.*** Rainwater harvesting the promotion of rainwater harvesting technology at the community level is considered the community-adaptation response and a sustainable solution in rural

areas to deal with water scarcity. This example of resourcefulness should inspire the targeted communities and Cambodia to change their behaviour on water conservation. Furthermore, provide support for small-scale irrigation systems for small farmers, i.e., solar water pumps, rainwater harvesting technology and pipelines for water to go to the farm. Options for varied types of small-scale irrigation technologies should be offered. In addition, the package for proper care and maintenance of water support facilities should be promoted to water users. A rainwater harvesting system at the house with approximately 1000 litres can be held in the water storage tank. The purpose of the rainwater collection tank is to supply household consumption and small-scale agriculture activities such as chicken raising and vegetable cultivation. The tank will locate next to the house with a connection with a gutter to collect rainwater during raining season. However, during the dry season, the tank will be filled by pumping water from the existing water sources in the villages.

- ***Improved monitoring and followed up with the trained farmer.*** The project team should follow up closely with the trained farmers on the agriculture techniques (rice, vegetable and chicken) to ensure that the farmers adopt the technique gained from the course. (1) Develop a monitoring (field monitoring tool) tool to monitor the progress of individual beneficiary/farmer and focus on the training content they learn during the course. (2) Set up a project monitoring schedule to visit direct beneficiaries to follow up on their progress and perhaps provide recommendations in case they encounter any challenge when applying theory into practice, probably monthly monitoring visits (according to project resources). (3) Develop a proper monitoring system to collect and store project data, such as monitoring data, so the project team can access it when needed.
- ***Develop a project monitoring and evaluation system for the team.*** To measure the project progress or achievement, DPA or ICDSR project team should consider developing a project-level monitoring and evaluation system. M and E system would allow the project and the organisation to ensure greater accountability and transparency; improve project performance; effective resource allocation; promote learning and data-driven decision making; systematic and professional management of the project/organisation. The following steps are the suggestions for the DPA: (1) develop a logical framework with project goal, objectives, outcome, outputs, and activities for the whole project cycle/plan. (2) Create a project monitoring and evaluation plan/matrix for the project level so the project can identify who is responsible for which activities. (3) Develop operational monitoring. It involves day-to-day operations and is carried out and supervised by middle management at the project level. (4) Develop a performance monitoring which looks beyond day-to-day activities to examine the outcome and overall impact of the project. (5) Develop a project Indicator Performance Tracking Table/Matrix, which can help the project team improve project performance, meet report requirements, and measure project output and outcome indicators against planned targets.

- **Conducting more awareness raising on gender-based violence and women's rights.** The project may wish to campaign for gender equity and women's rights in the target areas to reach more audiences. More investment in IEC materials for targeted prevention and response message on violence at the beginning of the project is warranted. Conduct more outreach events more often, building different messages into the activities for continuous learning and keeping the messages of prevention in conversation within the communities targeted. There are many different channels to conduct awareness raising to a broad audience in the community, including (a) communication initiatives which aim to disseminate key messages, involving mass communication and social media such as (Radio, TV, and Facebook) and (b) organising public events (information booths) to convey the message to a specific group of audience, such as young people and married couples (c) community-based initiatives in a local context to mobilise communities and empower women to promote community dialogue on domestic violence, gender-based violence prevention and gender equality (workshop, public meeting, commune meeting) (d) print IEC materials and share to the communities, such as leaflet, brochure, and poster (e) work collaboratively with the other NGOs that work on the gender and violence prevention to get support and joint in the national event such as the Orange Day, which generally celebrates on 25 of November.
- **Conduct pre and post-test to all training and awareness-raising events.** The project should consider conducting pre and post-tests of all training topics to measure the knowledge gained from the training. For awareness-raising events, in case there are more than 50 participants, for instance, randomly selecting participants to do pre and post-test would also be an excellent way to measure their knowledge over time. Develop a pretest and post-test questionnaire covering all the training content (topics). The tests would enable the project team to evaluate the training course regarding the knowledge improvement of each participant. Identical tests are used for pretest and posttest to compare scores before and after the training. Producing a training report for each training is another essential project element. The results or data of the tests should keep in the proper filling system. It will help the team to keep track of training information. The content of the training report varies; however, there are the most common ones: introduction, methodology used, results of training, training evaluation, and concluding remarks.
- **Define a clear project beneficiary selection criterion and break down the inputs that support each criterion.** The project may wish to re-define the project selection criterion and types of support they expect to receive with future projects. (1) The importance of project information dissemination is often underestimated. In reality, it is a crucial step in project implementation as it is the first-way potential beneficiaries could be filtered. The information contents and the channel used to communicate it must encourage the eligible beneficiary (beneficiary selection criterion) and discourage unsuitable ones. It is a suggestion to brief a local reference person such as a community leader, village chief or commune chief on the project information. (2) There are many sub-groups of project

beneficiaries to support inputs such as rice, chicken and vegetable. Break-down of inputs distribution to different criteria of project beneficiaries (3) Ensure the equal amount of input support to beneficiaries (4) provide clear project information to project beneficiaries regarding technical and inputs support to ensure misunderstanding from the target group. For instance, beneficiary A might receive more inputs than beneficiary B because beneficiary B will select to become a chicken producer group.

## Appendix A: Compilation of Impact Stories from the Field

### Stories of change from the field

O’Kraom village, Spean Thnaot commune, Chikreng district,  
Siem Reap province, Cambodia

## FARMER STRUGGLER

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*Domain of change: Changes in the ability of people in on-farm activities, productive and sustainable livelihoods*

### Introduction to self

I am Srun Phary. I am 41 years old, a rice farmer who lives in O’Kraom village, Spean Thnaot Commune, Chikreng District, Siem Reap province. Besides doing farming, I am doing voluntary work with my community. Currently, I serve the Agriculture Cooperative as vice-chairperson in this commune.

### Situation

Before participating in the DPA’s Integrated Community Development Project in Siem Reap province, I did not realise the importance of applying the appropriate agriculture technique in my rice farming. I also did not understand the essentials of social and development work. Farming is the primary source of income in my family. My husband often migrates to work in the city as a daily construction worker after harvest to generate more income to support the family and my children's education. However, it is still not enough.

My family and the community faced challenges of a lack of proper rice production techniques and irrigation systems for rice farming in the dry season. Therefore, it was challenging for me to generate income from rice farming. However, after I got the information from the local authorities about the benefit of the project, I decided to join the project and AC in my Spean Thnaot Commune.

### Participation

I have attended various training with the DPA’s project since 2019 in agriculture skills such as rice farming, chicken raising, and vegetable gardening. I wanted to improve the livelihood income of my family. Therefore, I was interested in improving my rice farming skills the most.

I gained many valuable skills in rice farming in training, such as soil preparation, seed selection, pest management, use of fertiliser in different stages of rice growth, and compost making using natural ingredients. After the training, I applied these relevant skills I acquired in rice farming.

### Most Significant Change

With the rice seed supported by DPA’s ICDSR project, I expanded my rice farming activity. By applying the rice farming skills and with the irrigation system supported by the project, I can see that my rice farming result is entirely different. Before, I practised conventional farming techniques and always dealt with insect attacks, soil degradation, and low yield ( a hectare of land

can generate roughly 1.5 tonnes). Nevertheless, I can now increase the rice yields and reduce the operational cost due to using organic composts as fertilisers.

The enhancement of rice yield (a hectare of land can generate 3-5 tons) in my rice farming led to the better economic condition of my family. Firstly, my husband does not feel worried about migrating to work in the city as a daily construction worker so that he can stay home and support me more such as household chores. Secondly, I used the income from rice farming to meet my family's daily food consumption, expand rice farming by buying more agrarian, and share more savings in the saving group. As a result, we could cover expenses for my children's education needs without worries, such as clothes, books, pencils and pens; also cover the medical bill in my household.

Aside from rice farming, I have diversified my sources of income by raising chicken. Selling chicken provided my family with sufficient income and food throughout the year. My family eats three meals a day and has varieties of food intake.

### **Contribution of the project**

The DPA ICDSR project supported various training on rice farming, vegetable gardening, and chicken raising. They also give start-up inputs to help support the farmers, such as rice seeds which tolerate droughts and floods. Furthermore, the seed requires roughly 85 days to harvest.

Thanks to DPA for making all this happen and to the resource person from the project who gave the practical skills and experience during the training sessions. I appreciated the support from the DPA's ICDSR project, which provided me with the skills, inputs support and irrigation system in my commune.

### **Learning and recommendation**

Provide market support for the agricultural products of the low-income families in my village. My community people and I expect support from DPA to establish a secure market linkage with the private sector to increase our agriculture products market. Moreover, AC capital support would significantly expand AC businesses, resulting in supporting its members.

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<i>Storyteller:</i>	<i>Srun Phary, ICDSR farmer beneficiary</i>
<i>Location:</i>	<i>O'Kraom village, Spean Tnaoth commune, Chikreng district, Siem Reap province</i>
<i>Recording the story:</i>	<i>Leang Heng, enumerator</i>
<i>Date of recording:</i>	<i>8 June 2022</i>
<i>Translator (Khmer to English)</i>	<i>Pou Sokvisal</i>



## **NEW HOPE, NEW LIFE**

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*Domain of change: Changes in the gender equality and empowerment of women*

### **Introduction to self**

My name is Kang Nat. My family has five members: a parent, a nephew, and two daughters. I live in O'Ta Ream village, Chikreng commune, Chikreng district, Siem Reap province. I do many livelihood activities to support my family income; however, the primary livelihood is Prahok making.

### **Situation**

Before I participated in the ICDSR project, my family's condition was terrible. There is no happiness in the family. My husband always commits violence against my daughters and me after returning from the field. He said bad words, broke dishes, turned overcooked food, and hit other family members and me. In addition, my husband drinks alcohol a lot. Whenever I know, he is coming back from the field, I always take my children out of the house because I do not want him to hit my children.

In 2019, the village chief and project staff invited me to attend a community meeting that disseminated the ICDSR project information. Women empowerment and prevention of domestic violence were among the other benefits of the project that attracted me. This was an exciting thing to do. With the encouragement and motivation from the DPA staff and the community, my husband and I decided to participate and learn from the project.

### **Participation**

I was initially interested in the women's empowerment and prevention of domestic violence activity. My family could learn new knowledge and how to resolve family conflict by reducing inappropriate words and understanding the power balance and other essential gender topics.

We participated in training supported by DPA. As a result, I gained new and improved knowledge on gender, domestic violence, environmental protection, agricultural skills (rice farming, vegetable growing and chicken raising), and child abuse.

### **Most Significant Change**

My husband and I gained knowledge from the training. It has completely turned around my family situation concerning domestic violence. He clearly understands women's and children's rights, and he stopped drinking alcohol now. The number of domestic violence has been reduced in our village because most of the villagers gained knowledge and understanding of the topics over the past three years. The communication between husband and wife also has improved so far. They believe that both men and women have equal rights. I should encourage and motivate women to participate in any development activities and income-generating activities, not just do the household chores. My husband always engages me in decision-making in his family and community work. Since my husband reduced his drinking habit and spent most of his time helping with income-generating activities and household chores, my family is free from domestic violence. My husband and I respect each other and share tasks in farming and the household.

### **Contribution of the project**

The DPA ICDSR project gave my family to participate in many meetings and be involved in development work in the community, mainly through women empowerment and domestic violence reduction and

prevention activities. In addition, the training supported by DPA enabled my family to share the experience and lessons learnt on women's rights and domestic violence.

### **Learning and recommendation**

DPA's staff should do more dissemination work to share the importance and advantages of project information to more target communities. Furthermore, DPA should work to conduct outreach activities or conduct commune campaigns to raise awareness of gender and domestic violence.

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<i>Storyteller:</i>	<i>Kang Nat, ICDSR farmer beneficiary</i>
<i>Location:</i>	<i>O'Kraom village, Spean Tnaoth commune, Chikreng district, Siem Reap province</i>
<i>Recording the story:</i>	<i>Pichr Sopheaknyta, enumerator</i>
<i>Date of recording:</i>	<i>8 June 2022</i>
<i>Translator (Khmer to English)</i>	<i>Pou Sokvisal</i>

## WATER IS EVERYTHING

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*Domain of change: Changes in water resource management*

### Introduction to self

My name is Ou Kem Chean. My family has four members: a daughter, a son and a grandkid. I do many income-generating activities to support the family income, such as farming and vegetable growing. I live in Beng village, Chikreng community, Chikreng district, Siem Reap province.

### Situation

Farming is the primary source of income in my family. I also worked as village chief to provide some administrative support to the community. After receiving information about the ICDSR project from the DPA staff, I decided to participate in the project in Beng village.

### Participation

I attended several trainings in 2019 in agriculture skills such as rice farming, chicken raising, vegetable gardening, pest management, and compost making. I wanted to improve the livelihood income of my family. Therefore, I was interested in improving my farming skills the most.

I got many valuable skills in rice farming: seed selection, soil preparation, pest control, and compost making using natural ingredients. After the training, I applied the relevant skills I acquired in my farming.

### Most Significant Change

With the rice seed support from DPA ICDSR project, I expanded my rice farming activity. I used the given seed and my saving to purchase rice seed and farming materials to support my farming. Before, I practised the conventional farming technique, and I always dealt with insect attacks, soil degradation, and low yield, and I did not tolerate drought. However, currently, I can increase the rice yields (3-5 ton per hectare) and reduce the operational cost due to using organic compost as fertiliser and knowing how to apply fertiliser through different stages of rice growth.

The improved yield in my rice farming led to the better economic condition of my family. I used the income to meet my family's food consumption, expand rice farming production, and share some more savings with the saving group for future use. My family could now cover the expenses of my children's education.

### Contribution of the project

The DPA ICDSR Project supported various agricultural skills training on rice farming, vegetable gardening and chicken raising. They also give start-up rice seeds to help support rice farming. More importantly, the irrigation support from the project is essential to this improvement. Without irrigation support, the whole community, including me, can do nothing. The project rehabilitated the existing canal and constructed a new one to address the community's priority needs.

Forming a CWRMC and WUG are crucial for a farmer in my community. The group always support the community by negotiating or requesting the authorities from the commune up to relevant provincial authorities such as the Department of Water Resource Management for water allocation to the drought areas. The water management committee provided a functional water allocation and utilisation among the community members. It is, therefore, no conflict has occurred since the creation of the Water User Group.

## Learning and recommendation

The group expects soft-skill training on resource mobilisation, communication, and negotiation skills to improve the committee work regarding water requests from the authorities and water allocation among the community members.

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<i>Storyteller:</i>	<i>Oun Lypanha Chesda, ICDSR farmer beneficiary</i>
<i>Location:</i>	<i>O'Kraom village, Spean Tnaoth commune, Chikreng district, Siem Reap province</i>
<i>Recording the story:</i>	<i>Pichr Sopheaknyta, enumerator</i>
<i>Date of recording:</i>	<i>8 June 2022</i>
<i>Translator (Khmer to English)</i>	<i>Pou Sokvisal</i>

## Appendix B: List of respondents

### Household survey

N	Sub-Group	Sample size	Location (Village)
1	Rice member	81	Balangk, Beng, Kampong Snor Keut, Kbal Kduoch, L'vea, O'Kraom, O'Leur, Ta Nguon, Ta Peam
2	Vegetable member	24	
3	Chicken member	91	
4	AC member	55	
5	VDMT member	8	
6	WUG	10	
7	CGFP	1	
	<b>Total</b>	<b>341</b>	

### Focus Group Discussion

No	Target Group	Location	Number of respondents
1	Rice producer, vegetable producer and chicken producer	Kbal Kduoch and Balangk village in Lvaeng Ruessei commune, Chikreng district, Siem Reap province	19
2	VDMT and WUG	Kor village, Chikreng commune, Chikreng district, Siem Reap province	15
3	Married couple and CGFP	O'Leu village, Spean Thnaot commune, Chikreng district, Siem Reap province	12

### Key Informant Interview and Reflection Technique

No	Institution	Location
1	Beng commune	Chikreng district, Siem Reap province
2	Office of Agriculture	Chikreng district, Siem Reap province
3	Office of Agriculture	Chikreng district, Siem Reap province
4	Kampong Kdei commune	Kampong Kei commune, Siem Reap province
5	Department of Agriculture, Forestry, and Fisheries	Siem Reap Town, Siem Reap province
6	DPA ICD Project Staff	Chikreng district, Siem Reap province

7	DPA ICD Project Staff	Chikreng district, Siem Reap province
8	DPA ICD Project Staff	Phnom Penh
9	DPA ICD Project Staff	Phnom Penh

**Appendix C: Household survey questionnaire**  
**Appendix D: Guiding question for Focus Group Discussion**  
**Appendix E: Guiding question for Key Informant Interview**  
**Appendix F: Guiding question for Reflection technique**  
**Appendix G: Guiding question for Most Significant Change**  
**Appendix H: Evaluation Term of Reference**