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Report of the endline study

Reducing vulnerability in the Lao People's Democratic Republic: Advancing Social Protection and Labour Rights and Entitlements in the Coffee and Tea sectors (SOLAR)

SOLAR: Report of the endline study

July 2024

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Abbreviations

ARC	Agriculture Research Centre of Southern Laos
ASDSP	Association to Support the Development of Peasant Societies
CLEAN	Creating Linkages for Expanded Agricultural Networks Project
CPC	Bolaven Plateau Coffee Producers Cooperative
CSOs	Civil society organizations
FGDs	Focus group discussion
FTU	Federation of Trade Unions
GALS	Gender Action Learning System
GAP	Good Agricultural Practices
KII	key informant interview
LCA	Lao Coffee Association
LFTU	Lao Federation of Trade Unions
LNCCI	Lao National Chamber of Commerce and Industry
LSSO	Lao Social Security Organization
MHP	Maeying Huamjai Phattana
NSSF	National Social Security Fund
OSH	occupational safety and health
PTSE	Phan-Thin Social Enterprise
SSO	Social Security Office
TOT	training of trainers

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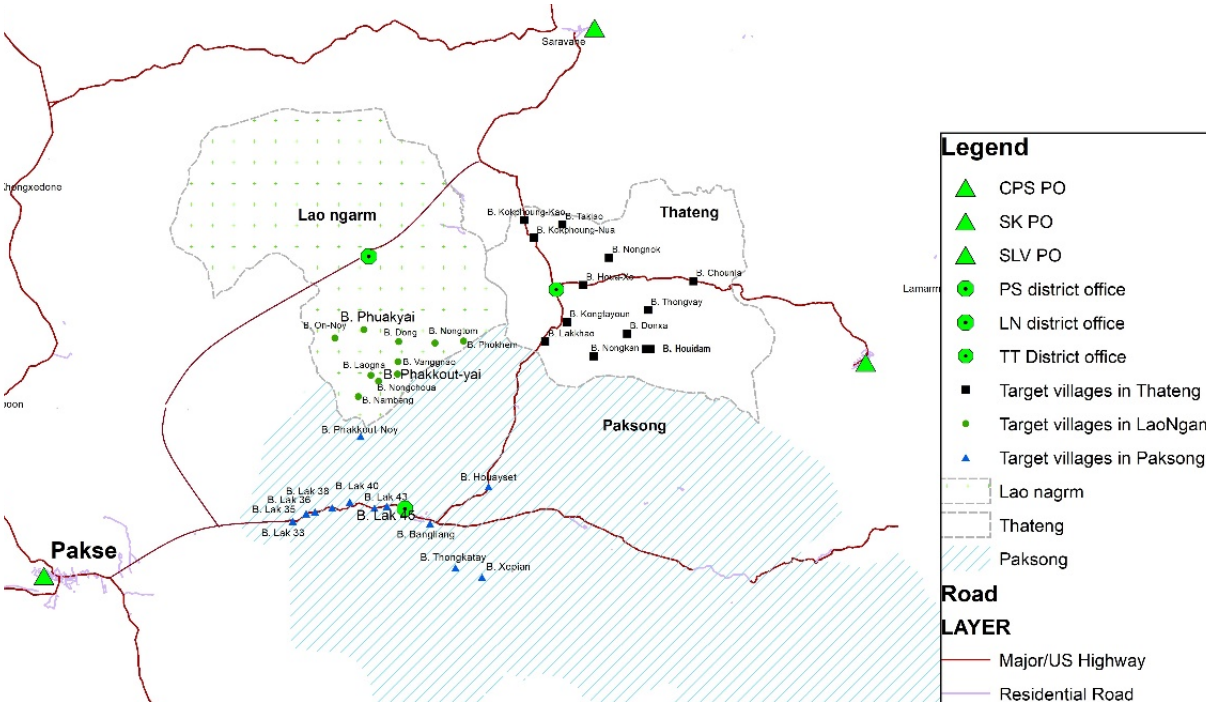
1. Introduction

1.1. Background

The Reducing Vulnerability in the Lao People's Democratic Republic: Advancing Social Protection and Labour Rights and Entitlements in the Coffee and Tea Sectors (SOLAR) project is an initiative funded by the European Union and implemented by the ILO and Oxfam in partnership with the Lao Social Security Organization (LSSO), Lao Federation of Trade Unions (LFTU), Lao National Chamber of Commerce and Industry (LNCCI) and civil society organizations (CSOs).

The project aims to realize the labour rights of workers – particularly informal workers[1] and women workers – in the coffee and tea sectors of the Bolaven Plateau region of the Lao People's Democratic Republic, directly reaching at least 400 workers in 34 target villages. The Bolaven Plateau consists of three districts – namely, Paksong District, Champasak Province; Laongam District, Salavan Province; and Thateng District, Sekong Province. This region is known for its production and export of high-quality coffee as well as tea.

Figure 1. SOLAR Project target villages on the Bolaven Plateau



Specifically, the project aims to improve access to the National Social Security Fund (NSSF) and to occupational safety and health (OSH) provisions for farmers and workers in this region. The implementation of project activities involved third parties – both government and non-government organizations, such as the LSSO, the LFTU, the Lao Coffee Association (LCA), the Agriculture Research

[1] The term "informal workers" in this report refers to all workers outside of formal enterprises officially registered with the Ministry of Industry and Commerce of the Lao People's Democratic Republic.

Centre of Southern Laos (ARC), the Paksong Tea Promotion Association, the Association to Support the Development of Peasant Societies (ASDSP), Maeying Huamjai Phattana (MHP), and Phan-Thin Social Enterprise (PTSE).

The endline study for the SOLAR project was carried out from May to June 2024 in the project's target villages. The study consisted of a literature review; surveys, key informant interviews (KIIs) and focus group discussion (FGDs) in the target districts to collect data directly from workers; and analysis of the data. The endline study aims to measure progress and impact against baseline values, as well as to provide inputs to the final project evaluation (a separate ongoing assignment). The endline data collection mirrors the baseline survey conducted in 2022, using similar tools and respondents whenever possible. It focuses on project indicators, the resolution of gaps and barriers faced by beneficiaries, changes experienced due to project interventions, and qualitative data on power and gender relations to support findings.

The study findings will inform the design and sustainability of interventions promoting labour rights and social protection in the Lao agricultural sector beyond the project duration. These findings will be used by the ILO, Oxfam, the European Union, project partners and other stakeholders.

The specific objectives of the endline study are as follows:

1. Measure progress towards project outcomes and outputs by collecting data on key indicators, contributing to the final evaluation.
2. Assess the impact of interventions on resolving labour rights issues, including access to social protection and OSH.
3. Evaluate changes in gender and power dynamics within target groups.
4. Gather feedback on service delivery, particularly social security, from project target areas.

1.2. Project activities and implementing agencies

For the endline study, we conceptually categorized project activities into four groups:

- promotion of social security awareness and registration;
- occupational safety and health;
- gender equality and women's empowerment; and
- formation and strengthening of worker groups.

Raising awareness of social security and mobile services are primarily handled by the LSSO and its branch offices (provincial and district SSOs). The LSSO's activities include conducting social security campaigns and piloting mobile services, including an incentive programme,[2] in target villages in every district. Additionally, provincial and district SSO staff are invited to social security promotion sessions held during project activities organized by CSOs, where the staff not only promote social security but also sometimes register interested workers.

[2] The "Incentive Programme" is a pilot to enhance mobile services by offering a small incentive to local representatives (such as group leaders and village chiefs) for facilitating social security registration. The programme provides 200,000 kip for every ten registrations.

The Agriculture Research Centre of Southern Laos (ARC), with support from the Lao Coffee Association (LCA), is responsible for conducting OSH training of trainers, village-level campaigns, and coaching and monitoring of local trainers. Maeying Huamjai Phattana (MHP) carries out a similar set of activities to promote gender equality and empower women, with the Gender Action Learning System (GALS) primarily used for this purpose. Local stakeholders, including provincial and district Federations of Trade Unions (FTUs) in each target province and district, as well as CSOs such as the Phan-Thin Social Enterprise (PTSE) and the Association to Support the Development of Peasant Societies (ASDPS), as well as village authorities, are trained by the ARC and MHP on OSH and GALS, respectively. Once trained, these individuals are expected to serve as trainers to conduct further trainings at the village level. In addition to OSH and GALS training, FTUs and CSOs are also responsible for: facilitating the formation of tea and coffee farmer groups; conducting needs assessments; and strengthening existing farmer groups in target villages.

See the summary of project activities in Annex 4.

1.3. Methodology

The study proposal and data collection tools for the endline study were developed based on secondary data (documents and records) and reviewed by the project team before being finalized. Minor revisions were made to the tools and the target group based on the results of the pre-test and actual coordination arrangements. The findings were drafted into a report and will be validated by key project stakeholders before finalization.

Primary data for this study was collected from a representative sample within the study sites. Qualitative data were collected through key informant interviews (KII) and focus group discussions (FGDs); while quantitative data were gathered using a tablet survey administered through KoboToolbox. The data collection team comprised a project coordinator from Oxfam, a national consultant, two enumerators, and provincial and district FTU officers (see Annex 1 for details). Field surveys were conducted in June 2024, covering three geographical areas across the Bolaven Plateau (see Annex 2 for the mission agenda).

1.3.1. Key informant interviews

A consultant-led data collection team engaged with 22 respondents (including 5 females) who were leaders and officers from 13 stakeholder organizations involved in the project. These organizations included provincial and district FTU offices, Social Security Organizations (SSOs), the Lao Coffee Association, the Agriculture Research Centre of Southern Laos, and the Paksong Tea Cooperative. They served as local implementing agencies, indirect beneficiaries and project focal points.

The team conducted one-hour meetings, and followed an interview guide to discuss each organization's responsibilities within the project and their observations on its impacts. This included examining the effects of their activities on the project as a whole (see Annex 3 for a list of the key informants).

1.3.2. Village selection

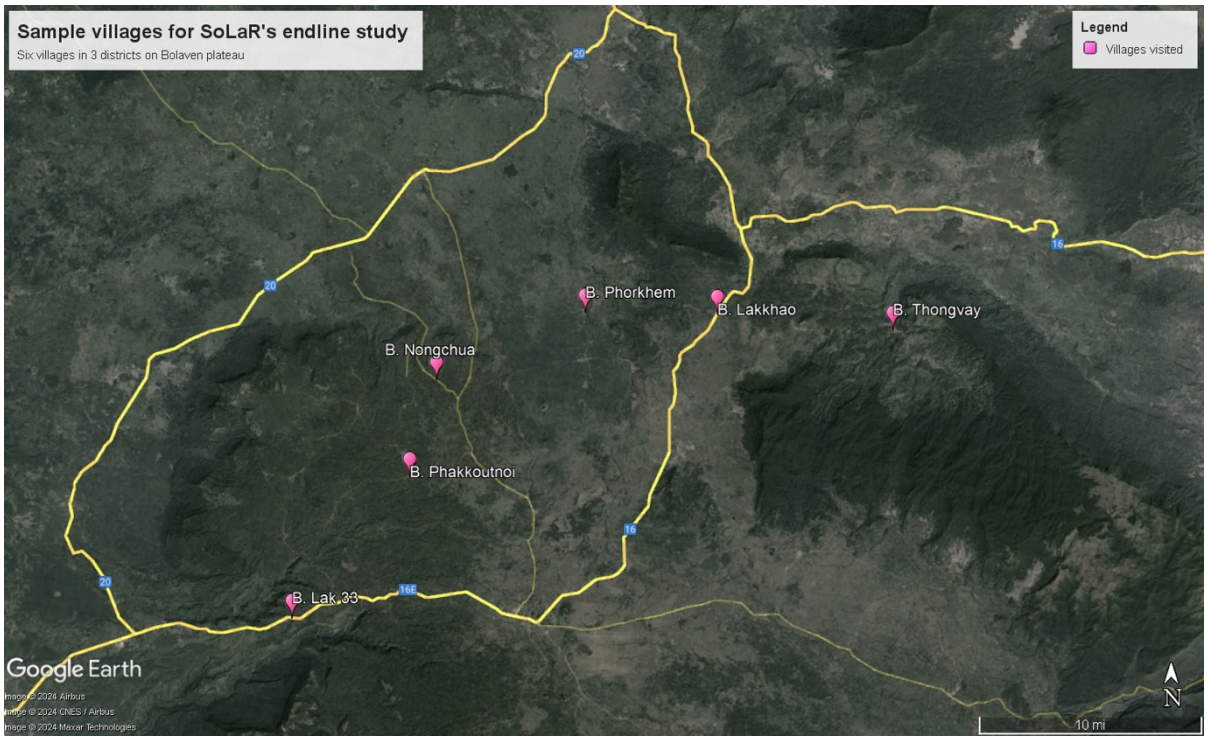
The SOLAR project on the Bolaven Plateau encompasses 34 villages across three provinces: 12 in Paksong (Champasak), 12 in Thateng (Sekong), and 10 in Laongam (Salavan). Some villages are

conveniently located near main roads, while others are located in more remote areas and require travel on less developed roads.

Time and budget constraints limited the survey team's ability to collect primary data from all of the target villages. To address this challenge, we used village accessibility as a criterion for selecting representative villages for conducting the farmer survey and FGDs. Two villages were selected in each district: one easily accessible village and one remote village.

In Paksong District, Ban Lak 33 and Ban Phakkoutnoi were chosen. Ban Lak 33 is the only village among the six selected that is populated by tea farmers. The remaining villages – Ban Lakkhao and Ban Thongvay in Thateng District and Ban Nongchua and Ban Phorkhem in Laongam District – are all populated by coffee farmers (see the map below). It is important to note that Paksong is the only district on the Bolaven Plateau with a high concentration of commercial tea farmers.

Figure 2. Locations of surveyed villages



1.3.3. Farmer survey

Sample size and selection of farmers

At the village level, the sample size was calculated based on the total number of households and the assumption that 50 per cent of households in each village are tea and coffee farmers.[3] The estimated sample size was then divided into two groups: project participants and non-participants. Project

[3] This assumption is based on 2022 baseline survey data. In Ban Dong, Laongam District, the survey found that 50 per cent of households rely on coffee farming, while the rest grow other crops or are engaged in non-farm jobs.

participants were selected randomly from a registration sheet provided by the project team. Non-participants were those who resided in the same village but did not participate in any project activities.

However, the baseline study in 2022 faced challenges in conducting surveys of tea and coffee farmers in all of the target villages. Attempts were made to invite farmers to a gathering point in each district, but due to several reasons, such as weather and limited coordination, this did not take place as envisioned. Consequently, data was only collected from farmers in 9 out of 34 villages.

Nevertheless, this endline study aimed to capture as much data as possible from the farmers surveyed in 2022. The study revisited the list of tea and coffee farmers that participated in the 2022 survey in three villages – Ban Lak 33, Ban Lakkhao, and Ban Nongchua – and invited these farmers to participate in the endline survey in addition to the groups of participants and non-participants mentioned above. Instead of inviting farmers to a meeting place in the district prefecture (as done in the 2022 baseline), the endline study team travelled to each selected village and asked farmers to meet in a community location, like a temple or village office.

Farmer survey in Ban Thongvay, Thateng District, Sekong Province

Survey form

The survey form consisted of four sections: basic personal and household information of the farmer, organization and employment, social security, and occupational safety and health. The survey included a total of 33 questions, most of which were closed-ended. The online form utilized skip logic. With support from the project team, enumerators administered the survey, which typically took 15–20 minutes to complete.

Respondents

The survey team was able to collect household and personal data from 288 tea and coffee farmers (58 per cent female). Of these farmers, 23 had also participated in the baseline study. Overall, 55 per cent of the surveyed farmers participated in project activities at least once. The average age of the survey respondents is 44 (youngest: 16, oldest: 80). Among the survey participants, the respondents skewed younger in the villages of Thongvay and Lakkhao; while Lak 33 had a higher proportion of older respondents.

Table 1. Number of surveyed farmers and share of female respondents

District	Village	Participants		Non-participants		Total		
		No.	Female (%)	No.	Female (%)	No.	Female (%)	Average age (years)
Paksong	Phakkoutnoi	23	43%	21	57%	44	50%	44
	Lak 33	23	57%	23	70%	46	63%	51
Thateng	Thongvay	23	48%	22	41%	45	44%	38
	Lakkhao	19	68%	21	67%	40	68%	40
Laongam	Nongchua	36	64%	25	64%	61	64%	45
	Phorkhem	26	46%	26	65%	52	56%	45
Total		**150**	**55%**	**138**	**61%**	**288**	**58%**	**44**

Source: Farmer survey in six villages

1.3.4. Focus group discussions

Selection of farmers

Project participants for the FGDs were selected at random from the list of project participants, avoiding duplication with those invited to participate in the farmer survey. Both organized farmers (that is, members of production groups/cooperatives) and independent farmers were included in the FGDs. Separate discussions were held with male and female groups to ensure a comfortable environment for participation. Therefore, each gender group consisted of a mix of project participants and non-participants, as well as both members of production groups and independent farmers.

Female FGD in Ban Thongvay, Thateng District, Sekong Province

Discussion guide

National consultants facilitated both the male and female FGDs. Each discussion consisted of five sessions:

1. Self-introduction;
2. Awareness and access to social security;
3. OSH in tea and coffee farms;
4. Gender equality and women's empowerment; and
5. Worker organization and collective action among tea and coffee farmers.

The discussions lasted 45–60 minutes.

Respondents

The team conducted in-depth discussions with 12 groups of male and female farmers, with a total of 79 participants (38 female). Group sizes ranged from five to eight people. Each group included at least one member of a tea or coffee production group, except for in Ban Thongvay, where no such groups exist.

Table 2. Number, sex and coffee/tea production group membership status of farmers in FGDs

District	Village	FGD participants			No. of FGD participants that were coffee/tea production group members		
		Female	Male	Total	Female	Male	Total
Paksong	Phakkoutnoi	5	8	13	1	3	4
	Lak 33	8	6	14	5	3	8
Thateng	Thongvay	7	7	14	–	–	–
	Lakkhao	7	7	14	3	2	5
Laongam	Nongchua	5	5	10	4	5	9
	Phorkhem	6	8	14	3	5	8
Total		**38**	**41**	**79**	**16**	**18**	**34**

– = nil.
Source: FGDs in six villages.

1.4. Learning from experience: Improving endline data collection

This endline study employs similar data collection methods as those used in the 2022 baseline survey – that is, a mixture of quantitative and qualitative data collection through key informant interviews, focus group discussions and farmer surveys.

The endline study also encountered the same coordination challenges faced in the 2022 baseline survey. In the two Paksong villages (Phakkoutnoi and Lak 33), farmers were not pre-selected for interviews. At the village level, the survey team worked closely with the village head to find project participants available for interviews on the day and walked around the village to meet with respondents at their doorsteps. With the kind support of the project coordinator and provincial focal points, coordination and survey arrangements went smoother for the remaining villages.

In the 2022 baseline survey, the study team could not collect information from tea and coffee farmers in all of the target villages. Only 9 out of 34 villages were surveyed. The surveyed farmers were not randomly selected, and more importantly, project participants had not yet been identified. Therefore, performing "Difference in Differences" analysis became impossible for this endline study. Therefore, in order to capture the project's impact, the study team compared data between participants and non-participants and supplemented this with additional information on changes derived from analysing data from the 23 farmers who participated in both the baseline and endline surveys.

The baseline survey, conducted in July 2022 during the rainy season, presented challenges in accessing some target villages. Learning from this experience, the endline study used four-wheel drive vehicles.

The online survey was not successful during the baseline survey due to limited farmer access to smartphones/internet and their relatively low education levels. This endline survey recruited two

enumerators and used KoboToolbox, which can function offline and is a useful tool for interviewing farmers.

Additionally, the number of mission days was shorter compared to the baseline survey period due to the team being split into two groups working in parallel.

1.5. Limitations

Due to logistical and resource constraints, this endline study focuses on assessing project impacts in target villages at the project site and among stakeholders across the three districts on the Bolaven Plateau. It provides only limited evidence on impacts of the project from interventions beyond the grassroots level, which is assumed will be assessed and documented in the final evaluation.

This endline study, which employed primary data collected using the same approach as the baseline study, facilitates the assessment of project impact in relation to labour rights (including social security and OSH), gender equality and farmer group development. While all this data can confirm project impacts at the grassroots level, not all of it is suitable for quantifying the specific indicators in the logframe.

A specific limitation is related to the rapid increase in chemical use compared to the time when the baseline study was conducted, which raises concerns about the accuracy of the self-reported illness/injury survey in regard to its ability to fully capture the incidence of OSH issues among tea and coffee farmers. This is particularly true for illnesses and injuries caused by chemicals. Some chemical-related illnesses/injuries produce delayed effects that may not be readily noticeable by farmers during the survey period, but that will manifest at a later date. Biological or laboratory tests would be necessary to provide more concrete and timely information.

2. Findings

2.1. Socio-economic conditions of surveyed farmers

As discussed in the previous chapter, the limitations of the baseline data included the small sample size and the use of non-randomly selected samples. To address these issues for the endline survey, we were able to obtain a larger, randomly sampled endline dataset derived from 288 farmers. The 2024 survey also achieved greater representation of female and young farmers, with 58 per cent of respondents being female and the average respondent age being 44 years.

The demographic characteristics of the surveyed farmers in both surveys are relatively similar. The average household size is five people, with three to four members being of working age. The proportion of farming households with persons with disabilities is slightly higher in the 2024 dataset compared to the 2022 one (13 per cent versus 11 per cent).

Table 3. Demographic characteristics of surveyed farmers in baseline and endline survey

	Unit	2022 baseline	2024 endline
Observations	Persons	91	288
Female respondents	% of total	43%	58%
Average age of respondents	Years	47	44
Demographic characteristics			
Household size	Persons	5	5
– Below 15	Persons	1.2	1.5
– 15 to 24	Persons	1.3	1.0
– 25 to 65	Persons	2.6	2.4
– 65 and older	Persons	0.3	0.3
Household with person(s) with disabilities	% of total	11%	13%

Source: SOLAR Project's farmer surveys in 2022 and 2024.

In the 2024 survey, 8 per cent of respondents were tea farmers, while 92 per cent were coffee farmers. Nearly all respondents (92 per cent) rely on tea and coffee sales for their livelihood. Among the surveyed farmers, 31 per cent reported being a member of a tea or coffee production group.

Over half of the surveyed farmers reported a labour shortage and the need to hire outside workers, particularly during the harvesting season. The tea and coffee production processes are lengthy. Before selling, 60 per cent of farmers process their products through steps like rolling, drying or fermenting. Only 6 per cent add further value by roasting their products, and about 2 per cent package them for sale.

Table 4. Surveyed farmers and their engagement in production processes in the endline survey

	All samples	Tea	Coffee	Tea and coffee
Tea farmers	1%			
Coffee farmers	92%			
Tea and coffee farmers	7%			
Tea or coffee sales are major income for household	92%	33%	92%	94%
Member of a production group	31%	–	29%	57%
Hired external workers last harvest	91%	100%	90%	95%
Farmer engagement in production process				
Nursery	89%	67%	89%	89%
Planting	100%	67%	100%	100%
Caring for crops	100%	100%	100%	100%
Harvesting tea or coffee	97%	100%	97%	100%
Processing (rolling/drying/fermenting)	60%	67%	61%	63%
Roasting (if applicable)	6%	67%	4%	26%
Packaging	2%	–	2%	–

– = nil; n/a = not applicable.
Source: SOLAR Project's farmer survey in 2024.

The fact that the baseline and endline surveys have different sample sizes and sampling methods prevents us from capturing changes in farmer behaviours from 2022 to 2024 using the entire dataset. What follows seeks to address this limitation by considering only the 22 participant farmers who participated in both the 2022 baseline survey and the 2024 endline survey (hereafter referred to as the "tracked group").[4]

Endline survey data shows that two out of the five tracked group farmers who were engaged in tea farming in 2022 had subsequently abandoned tea cultivation and left their tea production group. The income of the tracked group households seems to be slightly more diversified than it was in 2022, as

[4] As noted in section 1.3.3. above, 23 farmers participated in both surveys, but one of these farmers did not participate in the project. The responses of this lone non-participant farmer are not considered as part of the "tracked group".

the number of households relying solely on tea and coffee sales has decreased (91 per cent in 2022 versus 86 per cent in 2024). Conversely, a greater number of tracked group farmers now need to hire external workers for tea and coffee production (32 per cent in 2022 versus 55 per cent in 2024). It can be assumed that this investment is for expanding their coffee gardens in response to higher coffee prices.[5] Finally, larger numbers of farmers in the tracked group are adding value to their tea and coffee products by processing, roasting and packaging their own crops (table 5).

Table 5. Selected data from tracked group

	Tracked group	
	2022	**2024**
No. of observations		
– Paksong district	6	6
– Thateng district	2	2
-–Laongam district	14	14
Total	**22**	**22**
Tea farmer	23%	14%
Coffee farmer	95%	95%
Tea or coffee sales are major income source for household	91%	86%
Being a member of a production group	64%	55%
Hired external workers last harvest	32%	55%
Household engagement in production process		
Nursery	77%	100%
Planting	82%	100%
Caring for crops	82%	100%
Harvesting tea or coffee	86%	100%
Processing (rolling/drying/fermenting)	45%	77%
Roasting (if applicable)	14%	18%

[5] The price of a kilogram of red cherry coffee beans rapidly increased from approximately 7,000–10,000 kip in September 2023 to 13,000–14,000 kip in November 2023 (Source: Lao Coffee Association).

Packaging	9%	18%

Source: SOLAR Project's farmer surveys in 2022 and 2024.

2.2. Social security

2.2.1. Project's impacts on social security awareness

The endline survey in 2024 found that the proportion of target farmers aware of social security is significantly higher than during the baseline survey in 2022 (39 per cent versus 10 per cent).

1. For the 22 farmers in the tracked group, awareness of social security has improved significantly from participating in project activities. The share of tracked group farmers who know basic information increased from 14 per cent to 55 per cent, and the share who fully understand social security increased from 0 per cent to 36 per cent.
2. Participation in project activities also influenced the level of awareness among tea and coffee farmers. Project participants are apparently more aware of social security compared to non-participants (see disaggregated data by district in Annex 5).
3. In terms of gender, 35 out of every 100 female farmers knew basic information or fully understood social security, while the number is higher among male farmers (44 out of every 100). The same pattern holds true for the difference in awareness of social security among female and male participants (60 per cent versus 72 per cent). This disparity may result from various factors, including the education gap between genders.

Table 6. Awareness of social security among surveyed farmers

			2024						Tracked group	
							Participant			
	2022	2024	P	Non-P	Female	Male	Female	Male	2022	2024
Observations	91	288	150	138	166	122	82	68	22	22
Attended social security promotional activities	20%	50%	95%	1%	46%	55%	93%	99%	18%	95%
Awareness										
Heard name only	62%	39%	31%	48%	40%	37%	38%	22%	59%	9%
Know basic information	10%	33%	55%	9%	30%	38%	49%	63%	14%	55%

Fully understand	–	6%	10%	1%	5%	6%	11%	9%	–	36%
Never heard	29%	23%	4%	43%	25%	20%	2%	6%	27%	–

P = Participant; Non-P = Non-participant; – = nil.
Source: SOLAR Project's farmer surveys in 2022 and 2024

Awareness of social security among non-participants is found to be primarily spread by relatives who participated in SOLAR project activities (53 per cent of those aware of social security). Social media (12 per cent)[6], relatives who have a social security card (11 per cent), and other development projects (4 per cent) also play a role.

District-wise, the ability to disseminate social security information to the community was relatively higher among project participants in Laongam and Thateng. In the four target villages in these districts, between 38 per cent and 100 per cent of surveyed non-participants who know about social security reported hearing information from project participants.

Table 7. Sources of social security-related information among non-participants who are aware of social security, by village

Source	All six villages	Paksong District		Thateng District		Laongam District	
		Phakkout noi	Lak33	Thongvay	Lakkhao	Nongchua	Phorkhem
Relative who has social security card	11%	36%	–	10%	23%	–	–
Relative who joined SOLAR activities	53%	18%	29%	60%	38%	100%	44%
Social media	12%	27%	29%	10%	23%	–	–
Other development project	4%	18%	14%	–	–	–	–
Other sources	29%	18%	71%	20%	23%	–	56%
Observations	**79**	**11**	**7**	**10**	**13**	**17**	**18**

–= nil.
Source: SOLAR Project's farmer survey in 2024.

[6] During the project period, SOLAR also launched numerous awareness-raising activities through social media platforms like YouTube and Facebook. This endline study could not disaggregate this information source to assess the project's impact among the general public.

2.2.2. Project's impacts on social security accessibility of farmers

Accessing social security among target farmers can be categorized into two forms:

1. insured persons who are fully benefiting from any scheme of social security; or
2. beneficiaries (spouses and children of insured persons) who are partially benefiting from any scheme.

For government social security schemes, a social security card is issued to all insured persons and their dependents, including spouses and children. For voluntary schemes, a social security card is issued only to those who enrol, and the names of dependent beneficiaries are recorded in the LSSO database.

By participating in project activities, respondents and their households tended to have better access to social security, with 14 per cent coverage found among participants, compared to only 7 per cent for the non-participant group. Growth in social security coverage was particularly strong among tracked group of households, which showed an increase from 5 per cent in 2022 to 32 per cent in 2024.

More importantly, seven to eight out of every ten insured participants are in the voluntary scheme that SOLAR has promoted. Data also suggests that female participants see more value from social security and have decided to enrol at a higher rate (15 per cent, versus just 6 per cent of male participants). This aligns with the findings of a 2021 Oxfam study, which saw that female low-income informal workers were more likely to be interested in enrolling in social security compared to their male counterparts.[7]

As a female coffee farmer participating in an FGD in Ban Nongchua on 8 June 2024 stated:

> *"My mom is the head of the Lao Women's Union in this village. She signed up for social security after they came around with the mobile unit. Her decision was made after hearing information twice from project activities and then her cousin who's already in it confirmed everything. I think my mom did it for herself and our family."*

[7] For more, see Oxfam, *Promoting Informal Workers' Access to the Lao Social Security Fund*, 2021.

Table 8. Access to social security among surveyed farmers

			2024						Tracked group	
							Participant			
	2022	2024	P	Non-P	Female	Male	Female	Male	2022	2024
Observations	91	288	150	138	166	122	82	68	22	22
Households with at least one social security card	5%	10%	14%	7%	n/a	n/a	n/a	n/a	5%	32%
Respondents with active social security card	1%	8%	11%	4%	10%	4%	15%	6%	–	27%
Respondents with active social security card										
Observations	n/a	22	16	6	17	5	12	4	n/a	7
–Government scheme	n/a	27%	13%	67%	29%	20%	8%	25%	n/a	29%
–Enterprise scheme	n/a	14%	13%	17%	6%	40%	8%	25%	n/a	–
–Voluntary scheme	n/a	59%	75%	17%	65%	40%	83%	50%	n/a	71%

P = Participant; Non-P = Non-participant; – = nil; n/a = not available.
Source: SOLAR Project's farmer surveys in 2022 and 2024.

2.2.3. Differential impacts on social security awareness and enrolment

The findings indicate that SOLAR project activities have varying impacts on farmers across different groups and age ranges. A majority of participants (66 per cent) reported a better understanding of social security, and 39 per cent shared this information with their family members. Notably, 8 out of every 100 participants decided to enrol in social security, with a higher enrolment rate observed among members of production groups (15 per cent) and individuals between the ages of 14 and 60 (9 per cent). While those above 60 are ineligible to enrol themselves, this age group still demonstrates a positive influence, with 33 per cent stating that they influenced their family members to get insured, compared to only 8 per cent in the other age group.

A male coffee farmer participating in an FGD in Ban Lakkhao on 7 June 2024 stated:

> "*Within our CPC production group, we meet regularly and exchange information. This helps us understand social security and its benefits quite well. We agreed as a group to use money from*

our mutual fund to pay for social security for one year. We've already informed the Provincial Social Security Office, but they haven't come to enrol us yet."

Table 9. Social security-related outcomes after participating in project activities

Outcome	All six villages	Production group		Age	
		Members	Non-members	14–60	Above 60
My family and I have better understanding of social security	66%	79%	57%	68%	57%
I decided to join NSSF	8%	15%	3%	9%	–
I shared information on social security with my family members	39%	46%	33%	39%	33%
I shared information on social security with my relative network and workers	9%	15%	4%	9%	5%
My relative network or workers decided to join NSSF	11%	16%	8%	8%	33%
Other benefits	22%	21%	23%	23%	19%
Nothing	13%	5%	19%	13%	14%
Observations	**140**	**61**	**79**	**119**	**21**

– = nil.
Source: SOLAR Project's farmer survey in 2024.

2.2.4. Attribution and satisfaction

Before SOLAR started implementing social security-related activities, the baseline study had found that only a small proportion of tea and coffee farmers on the Bolaven Plateau had attended such promotional activities. These previous activities included:

- A social security dissemination meeting organized by Oxfam and an ILO-supported project during 2017–21 for members of the Paksong Tea Promotion Association and coffee farmers in Thateng District's Ban Lakkhao village.
- An event conducted by the provincial SSO for CPC members in Ban Dong village, Laongam District, in April 2022.

SOLAR is the only project that has worked on social security campaigns and mobile services in this area throughout the 2022–24 period. Therefore, it can be clearly claimed that the outcomes mentioned above have resulted from the SOLAR project's intervention.

The endline survey team also included a question for those familiar with social security and able to assess the services provided. Project participants and insured individuals provided higher satisfaction scores in regard to social security services compared to non-participants and the uninsured. On a scale of 1 to 5 (1 = least satisfied, 5 = most satisfied), insured individuals tended to provide much higher satisfaction scores (average score of 4.5) compared to the uninsured (average score of 3.1). This suggests that access to social security information is crucial. We did not observe any significant difference in satisfaction levels between male and female project participants.

Table 10. Satisfaction on social security services in target area

	All sample	Participants versus non-participants		Participants by sex		Social security enrolment	
		P	Non-P	Female	Male	Yes	No
No. of people who know about social security (all levels of awareness)	222	144	78	80	64	22	200
Share of farmers who can assess SSO's services	44%	50%	33%	49%	51%	82%	40%
Average satisfaction score concerning SSO services (scale 1 to 5)	3.32	3.64	2.46	3.64	3.63	4.50	3.10

P = Participants; Non-P = Non-participants.
Source: SOLAR Project's farmer survey in 2024

2.2.5. Opportunities and challenges

Project fosters organizational development

Implementing social security activities within the SOLAR project benefits not only the targeted tea and coffee farmers and the responsible agencies in these villages, but also other project stakeholders and surrounding communities. SOLAR promotional activities followed up by mobile service delivery and incentive programmes at the project sites resulted in a rapid increase in the number of insured individuals across target districts.

Table 11. Number of insured persons under voluntary scheme in target districts

	Paksong	Thateng	Laongam
Accumulated number up to July 2022	19	–	10
Number reached during 2024 mobile service	92	82	181

– = nil.
Source: SOLAR Project's KIIs in 2022 and 2024

In addition to increased enrolment, the project has fostered organizational development in several ways:

- Expanding coordination networks with other relevant organizations (for example, FTUs and Agriculture, Industry and Commerce departments) and local communities.
- Building the capacity of social security officers to communicate effectively with farmers.
- Providing opportunities for these officers to explain healthcare services.
- Providing financial and in-kind support to the social security offices, such as training and transfer of equipment.

An officer in the Paksong District SSO stated during an interview on 4 June 2024:

> *"In Ban Houiset, mobile service was quite lively. Ten farmers came to sign up. To complete the application process, our team of five people did not have lunch that day."*

An officer in the Champasak provincial SSO stated during an interview on 3 June 2024:

> *"Our mission in the villages went well due to kind support from project stakeholders in coordinating with village heads for us. For us, the Q&A period can be quite time-consuming in terms of making villagers understand. They ask basic questions such as how to calculate death benefits and retirement salary."*

Support and sustainability

Supportive guidance from provincial/district leaders and the selection of tea and coffee as economically promising sectors further contributed to these successes. Additionally, the LSSO initiated the transfer of equipment for operating mobile services to the provincial SSO. This ensures continued integration of mobile service delivery into the regular operations of provincial and district SSOs.

Stakeholder views and recommendations

Other stakeholders (such as FTUs, LCA and ARC) and farmers share similar positive views on the project's achievements. However, they suggest improvements:

- Shortening the gap between information dissemination and registration periods.
- Conducting outreach activities during the appropriate season, especially considering coffee farmers' schedules.

Stakeholders also raised concerns about:

- The low quality of healthcare services.
- Past experiences with some collapsed private life insurance funds, leading to distrust.
- The low and unstable income of some tea and coffee farmers due to pest infestations.

A male coffee farmer participating in an FGD in Ban Thongvay on 6 June 2024 stated:

"Three or four years ago, there was a mutual fund for life insurance promoted in our village. They charged 20,000 kip per month. After a while, the fund disappeared. People who enrolled cannot get their money back."

A female coffee farmer participating in an FGD in Ban Nongchua on 8 June 2024 stated:

"I am really interested in signing up for social security, but our economic condition doesn't allow us to do so. Coffee farming households in this village are impacted by coffee pests. Our family got one ton of red cherries last year, but this season we only got 50 kilograms."

Long-term solutions

All parties agree that raising awareness and increasing access to social security for farmers is a long-term process. Applying multiple approaches is worthwhile, such as:

- Exploring registering group members with the NSSF through the use of mutual funds held by the group.
- Replicating the incentive pilot programme for utilizing village authorities (village heads, women's unions and youth unions) as focal points or models for promoting social security.

Expanding outreach

Farmers participating in FGDs suggested the need for more promotional activities within their villages followed by mobile service delivery to reach a broader audience. Currently, outreach seems limited compared to the total village population.

An officer in the Laongam District FTU stated during an interview on 7 June 2024:

"For organizing the campaign, farmers in some target villages understand very well, while others do not. Not only about social security, but OSH information should also be more widely disseminated and in deeper ways."

2.3. Occupational safety and health

2.3.1. Changes to farmers' access to OSH information and their workplace safety

Overall, the number of tea and coffee farmers with access to information about OSH has increased from 29 per cent of surveyed farmers in 2022 to 40 per cent in 2024. Improved access to OSH information also holds true for farmers in the tracked group and across genders. As a result, the average number of workplace accidents/illnesses per person sharply decreased from nearly four incidences per year in 2022 to only once per year in 2024.

A gender gap in access to OSH information was still found in the endline survey, with only 37 per cent of female respondents having joined OSH-related activities, versus 44 per cent of male respondents. Even so, the average number of workplace injuries per year among female respondents was actually slightly lower compared to males (0.5 versus 0.6 incidences per year).

Survey respondents who did not participate in the project were much less likely to access OSH information from elsewhere – just 4 per cent versus 73 per cent of project participants. However, the sample survey found a slightly smaller average number of injuries per year among non-participants

(0.5 incidences per year) compared to those who participated in project activities (0.6 incidences per year). This result makes it unclear whether one can draw any conclusions concerning the project's impacts on workplace safety among tea and coffee farmers in the target areas. Two limitations likely contributed to this result: first, the inability to isolate the impact of SOLAR from interventions by other organizations/projects (as discussed in section 2.3.3). Second, the reliance on self-reported injury data, which may underestimate the incidence of chemical-related injuries (as discussed in section 2.3.4).

Table 12. Farmers' access to OSH information and incidents

			Tracked group		2022		2024		2024	
	2022	2024	2022	2024	Female	Male	Female	Male	Participant	Non-participant
Observation	91	288	22	22	39	52	166	122	150	138
Joined OSH-related activities	29%	40%	41%	86%	21%	35%	37%	44%	73%	4%
Average number of times injured in the last 12 months	3.9	0.6	1.5	1.0	4.5	3	0.5	0.6	0.6	0.5
No workplace injury	30%	76%	64%	59%	18%	38%	75%	78%	72%	81%

n/a = not available.
Source: SOLAR Project's farmer surveys in 2022 and 2024.

2.3.2. Changing causes of workplace injuries

Between 2022 and 2024, the most commonly cited causes of workplace injuries among male and female farmers shifted. Previously, animal bites (primarily from snakes) and insect stings (mainly from ants) were the most frequent causes. Now, injuries from hand tools (knives and hoes) used for clearing grass are the most common.

The decline in animal- and insect-related injuries likely stems from the increased use of chemical pesticides in coffee gardens. Labour shortages on the Bolaven Plateau have become increasingly severe. Farmers can no longer afford the higher labour costs associated with hiring external workers for grass clearing, forcing them to do it themselves. These are the major factors contributing to the increased risk of injuries from hand tools and chemical fertilizers.

Among male farmers, injuries caused by machinery, particularly grass clearing machines, may be linked to the gendered division of labour within families. Traditionally, heavy tasks like grass clearing with machinery and carrying chemical spray tanks are assigned to men. In recent years, the use of grass/weed clearing machines and the use of chemical products have significantly increased on the

Bolaven Plateau due to in-kind assistance programmes for machines (CLEAN project) and the promotion of Good Agricultural Practices (GAP) by private companies and development projects.

Chemical tanks containing pesticides or used for weed-burning are typically heavy (around 20 litres), making them a task generally designated to men rather than women. As noted above, male survey respondents were more likely than women to have participated in OSH-related activities (44 per cent compared to 37 per cent), which suggest that male farmers are likely more equipped to protect themselves from poisoning. However, female farmers who work around these chemicals in the tea and coffee gardens without proper protection and who lack access to information can be more susceptible to negative health impacts from inhaling or touching these products.

Table 13. Causes of workplace injuries, as per the 2022 and 2024 surveys

Cause of workplace injury			Tracked group		2022		2024	
	2022	2024	2022	2024	Female	Male	Female	Male
Machinery and vehicles	23%	18%	13%	11%	26%	21%	6%	35%
Tools, such as knives	14%	58%	50%	67%	23%	8%	57%	58%
Chemical products, such as pesticides	9%	9%	–	11%	5%	12%	11%	6%
Animals and insects	51%	12%	75%	33%	51%	50%	9%	16%
Lifting or carrying heavy loads	38%	18%	100%	33%	44%	35%	15%	23%
Trees and branches	7%	8%	–	–	13%	2%	6%	10%
Dust and heat exposure	n/a	–	n/a	–	n/a	n/a	–	–
Others	n/a	13%	n/a	22%	n/a	n/a	17%	6%

– = nil; n/a = not available.
Source: SOLAR Project's farmer surveys in 2022 and 2024

2.3.3. Project impacts and attribution

Intervention design and project activities for OSH

The design for promoting OSH differs slightly from the project design for promoting social security. The LSSO already has well-trained human resources at provincial and some district offices (for example, in Paksong and Laongam). By contrast, OSH master trainers are embedded in the Agriculture Research Centre of the Southern Laos (ARC) located in Paksong District. These master trainers were themselves trained under the former VZF Project (2019–22).

The project initiated OSH activities by organizing a training of trainers (TOT). Participants primarily included officers from the provincial and district levels of the LFTU, CSOs such as Phan-Thin and ASDSP,

CPC, ILO, Oxfam and village authorities. At the village level, OSH training came in two forms: (i) one-day training sessions organized by ARC master trainers in each target village; and (ii) village campaigns led by trained individuals from CSOs, FTUs, Paksong Tea Cooperative or group leaders who felt confident in their knowledge.

Under the SOLAR project, the OSH master trainers adapted the VZF training manual for OSH in coffee gardens into simpler formats according to the needs of villagers. They also conducted a risk assessment on OSH in tea gardens and incorporated it into a training and coaching manual/programme for tea farmers.

Early signs of success and observations from monitoring visits

The FTU office in Laongam District reported that one of their officers became an OSH trainer and has used their knowledge to provide OSH training to workers in enterprises like rubber processing and cassava factories within their district. Both the TOT trainees and the ARC master trainers are benefiting from this activity. ARC master trainers gained a greater connection with project stakeholders and improved their training skills and experiences. The trainers added that they used some lessons from this work to train farmers in other development projects, such as one supported by the Government of the Republic of Korea.

According to the LCA and ARC, they witnessed some behavioural changes during their random visits to the homes of people trained by the project. ARC master trainers were particularly impressed by trainees from Phan-Thin, who demonstrated effective lesson delivery skills during farmer training sessions. In addition, they also saw a ten-page poster set for distributing information posted in common areas like village offices.

An officer at the Laongam District FTU said at an interview on 7 June 2024:

> *"Training on preventing workplace accidents and first aid before, we used only lessons from the book. By joining the SOLAR OSH training, our officers have many real-life examples to use in the training sessions organized for workers."*

Understanding project impact

A female ARC master trainer estimated that 70 per cent of her students follow her safety instructions. Behaviours like separating garbage or using protective equipment while spraying chemicals are more likely to change within a short timeframe compared to things like lifting posture, which requires more time and potential changes in work practices.

Based on the endline study, it is understood that improving the OSH practices of tea and coffee farmers in the target area requires time due to the influence of various factors. These include both supply side factors (such as the availability of trained personnel) and demand side factors (such as farmers' willingness to adopt new practices). This understanding helps explain why the project's impact on OSH at the community level remains unclear.

A leader at the Lao Coffee Association said in an interview on 3 June 2024:

> "*We randomly checked in the warehouse of a trainee in Ban Phakkoutnoi, and found that gasoline tanks and chemical sacks that used to be stored together with coffee had been removed after training."*

A master trainer at ARC said in an interview on 4 June 2024:

> *"Translating lessons on OSH from training into practice depends on various factors, for example, income and access to protective equipment, education, gender, and ethnicity that relate to division of labour."*

A male coffee farmer participating in an FGD in Ban Phakkoutnoi on 4 June 2024 stated:

> "*Yes, we did join the OSH training organized by the project. I went there with the village party secretary and understood that he would organize training in our village upon our return. Unfortunately, he passed away months ago and nobody continued this task.*"

A female coffee farmer participating in an FGD in Ban Phakkoutnoi on 4 June 2024 stated:

> "*I also joined the OSH training. At home, I educate my children to be careful and wear protective equipment while spraying pesticides, but they don't follow my instructions. I'm not so worried about external workers hired for spraying chemicals because it's their profession, and they seem to protect themselves very well.*"

Additional notes on project effectiveness

The analysis comparing access to OSH information and injury incidents between participants and non-participants does not provide a clear picture of the project's impact. Further investigation revealed that the type of OSH activity seems to matter. While a higher percentage of participants reported joining the OSH campaign (93 per cent), only 20 per cent reported participating in OSH training and demonstrations. Notably, OSH training and demonstrations appear to be more effective, as they are associated with a lower number of injuries per year.

Table 14. Participants in SOLAR project's OSH activities

Participants in	% of total	No. of times injured in last 12 months		
		Average	Minimum	Maximum
OSH campaign	93%	0.55	–	4
OSH training	21%	0.25	–	2
OSH demonstration	20%	0.39	–	3
Other related activities	8%	n/a	n/a	n/a
All participants	**100%**	**0.62**	**–**	**10**

– = nil; n/a = not available.
Source: SOLAR Project's farmer survey in 2024

The benefits of OSH-related project activities appear to be concentrated among project participants and their families. Notably, 66 per cent of participants reported a better understanding of OSH principles. Interestingly, female participants showed a slightly higher knowledge absorption rate

compared to male participants. This might be because women tend to be more effective at disseminating OSH information within the family unit. Conversely, male participants seem to have derived greater benefits in terms of reduced injuries. This could be linked to the fact that male family members are often assigned tasks that are considered more physically demanding and inherently riskier.

Table 15. OSH-related outcomes after participating project activities, by sex

Outcome	All sample	Participants	
		Female	Male
My family members and I gained a better understanding of safety and health practices at work and at home	65.5%	67.7%	62.9%
My family members and I experienced fewer workplace injuries	45%	40%	50%
I shared the information I learned with my family members	35%	35%	35%
I shared the information I learned with my workers and/or relative network	11%	15%	7%
My workers experienced fewer workplace injuries	22%	24%	19%
Other outcomes	21%	25%	15%
No outcome	11%	11%	11%
Observations	**116**	**62**	**54**

Source: SOLAR project's farmer survey in 2024.

Project impacts on OSH appear limited in reaching the wider target community (that is, impacts were concentrated among those who directly participated in training), and the spill-over effect (where knowledge or practices is spread to those not directly involved) may be limited. Examining non-project participants with no reported workplace injuries/illnesses in the past year, only 14 per cent had gained OSH knowledge from SOLAR participants. The majority attributed their OSH awareness to accumulated experience.

Table 16. Non-participants' explanations for not suffering any injuries in the last 12 months

Non-participants' explanation for zero injuries in last 12 months	All sample	Paksong		Thateng		Laongam	
		PKN (R)	Lak33	TV (R)	LK	NC	PK (R)
Knowledge extended from SOLAR	14%	16%	5%	27%	11%	29%	4%
Social media	3%	4%	–	7%	–	5%	4%
Knowledge extended from another project	2%	4%	–	–	5%	–	4%
Other sources including their accumulated experiences	80%	76%	95%	67%	84%	67%	88%
Observations	**125**	**25**	**21**	**15**	**19**	**21**	**24**

Note: (R) refers to "remote". – = nil.
Source: SOLAR Project's farmer survey in 2024.

Potential influence of overlapping activities

Furthermore, it is important to consider the activities of provincial and district Agriculture and Forestry Offices, which also promote safe and clean agricultural practices in the area. Reviewing baseline information, it was found that other organizations implemented activities during the SOLAR project period, including the CLEAN project (2019–23), the KOICA-funded integrated rural development project (2021–25), and the CPC. The observed OSH outcomes might also be attributed to their efforts.

A male farmer in his seventies, a member of CPC in Ban Lakkhao, said in an FGD on 7 June 2024 that:

> *"Many people in this village have a certain level of awareness about OSH. In the last few years, many development projects have come to provide us with training. My cooperative also invited ARC to train us. In Thateng, there are some villages such as Lakkhao, Kokphoungtai, Donxa, and Houiset targeted by a KOICA agriculture project and are also trained on safety at the workplace."*

A male farmer in Ban Nongchua said in an FGD on 7 June 2024 that:

> "*The CLEAN project also implemented activities in our village. Among others, they provided 70 households with grass-clearing machines and trained us on how to use the machines, and how to make bio-fertilizers and bio-pesticides.*"

2.3.4. Chemical use: Balancing productivity with health and sustainability

The baseline study in 2022 had identified the use of chemicals throughout the tea and coffee farm production process (seeding/nursery, care and harvest) on the plateau. However, the endline study conducted this year reveals a concerning increase in the severity and prevalence of negative impacts associated with this chemical use.

According to respondents, the factors influencing this rise in chemical use are diverse but share a common goal: reducing costs and increasing productivity. Governments, through provincial and district agriculture offices, along with the private sector, promote clean agriculture and proper chemical use following GAP for improved yields.

The spread of aphids in coffee trees poses the most significant challenge, leading many farmers to resort to chemical pesticides, though not without drawbacks. It was found that a private company established coffee production groups in many villages in the target areas. These groups provide farmers with several benefits, such as: fertilizers on credit; technical support for increased yield, including training on coffee tree shaping and proper use of chemical pesticides; a ban on the use of chemical grass burners; and attractive and up-to-date pricing information. However, it is important to note that farmers are responsible for purchasing their own protective clothing.

The pursuit of high yields dominates coffee production in most study villages. However, some farmers have experienced negative consequences from chemical use and have chosen to stop using them entirely, except for those in Katou villages like Thongvay.

The close proximity of farms that are using chemicals and those not using chemicals means that farmers who decline to use chemicals can still find that they – and their crops – are being exposed to the chemical agents used by their neighbours, which can lead to conflict. This issue is particularly serious in villages known for organic coffee production (Lakkhao, Nongchua, Phorkhem), because these chemical agents could potentially contaminate organic products, negatively impacting their trade or leading to order cancellations.

The SOLAR project stakeholders, in collaboration with the provincial and district Agriculture Offices in Laongam, are currently assisting the coffee group in Nongchua with a pilot programme using bio-pesticides as an alternative solution. This initiative will be discussed in more detail in section 2.5 below on group strengthening.

The following conclusion was drawn in a male FGD in Ban Nongchua on 8 June 2024:

> *"If we don't use [chemical pesticides], other people in the village will still use it, and we will still be impacted. Changing behaviours, especially regarding the use of chemical pesticides, is not an easy thing to do because it is associated with economic benefits. We don't have a clear solution to solve this problem yet. It's true that Somxay Company suggested using chemical pesticides and wearing protective clothing, but farmers have to pay for the clothes themselves. The side effects on non-chemical users who walk past the sprayed area and breathe the contaminated air will likely increase. Injuries caused by grass clearing machines can be reduced through training."*

Table 17. Farmers' behaviours in relation to the use of chemicals in the six target villages

District	Village	Existence of organic coffee production group?	Existence of high-yield production groups/plantations?	Independent farmers opposed to chemicals?
Paksong	Phakkoutnoi	No	Yes	Yes
	Lak 33	Yes	Large plantation near this village	Yes (many died of liver disease)

District	Village	Existence of organic coffee production group?	Existence of high-yield production groups/plantations?	Independent farmers opposed to chemicals?
Thateng	Thongvay	No	Majority of coffee farmers in the village use chemicals	Unlikely
	Lakkhao	Yes	Unlikely	Yes
Laongam	Nongchua	Yes	Yes	Yes
	Phorkhem	Yes	Yes	Yes

Source: SOLAR Project's FGDs in 2024

The 2024 worker survey revealed that 9 out of every 100 farmers reported workplace injuries related to chemical exposure. Of these cases, 71 per cent experienced irritation (skin and eye problems, coughing, sneezing, nausea, vomiting) and 43 per cent suffered acute poisoning (headaches, dizziness, muscle weakness and difficulty breathing).

Based on the in-depth information gathered through FGDs, the reported proportion of impacted individuals seems comparatively low and might be difficult to interpret definitively. It is important to remember that simply wearing proper protective clothing does not guarantee complete safety from chemical poisoning. In addition, some inhaled chemicals can accumulate in the body and lead to chronic health issues that may not manifest immediately.

A male coffee farmer participating in an FGD in Ban Thongvay on 6 June 2024 stated:

> "*To clear the grass on two hectares, I need to spend two to three months by hand tools, but it takes me only 10 to 20 days using chemicals. A major reason for me to use a grass burner is because I want to save time and labour. However, there are some health impacts. Once, after spraying chemicals in my garden, I got so sick (most likely from poisoning) that I didn't want to eat anything for four days.*"

2.3.5. Opportunities and challenges

For OSH training in general, there is a consensus among respondents that this intervention is relevant to the needs of tea and coffee farmers on the Bolaven Plateau, and there is still a huge demand for this kind of training among non-project participants in current target villages and other non-targeted villages within the three provinces of the plateau.

Reducing chemical use through the promotion of GAP can minimize risks, but some chemicals still pose potential harm. The LCA and some interviewed CPC farmers perceived organic farming as the best and most sustainable strategy for tea and coffee production on the Bolaven Plateau.

The ARC said that reducing chemical use and promoting organic farming is not the responsibility of a single organization, but requires cooperation and support from line agencies. The SOLAR project has been working to reduce the negative impacts from chemical use and cooperating with provincial and district Agriculture Offices to pilot bio-pesticides in target villages in Laongam District. Based on their experience, ARC master trainers assessed that farmers in production groups or cooperatives are easier

to engage compared to independent farmers because they change their behaviour more quickly after training.

In addition to the need for increasing outreach for OSH training, some knowledge gaps need to be eliminated. For example, there is a misunderstanding among farmers that chemical pesticide is less harmful compared to grass burners. According to ARC master trainers, all chemicals (pesticides, fertilizers and grass burners) are harmful to people exposed to them, but the effects are just different. Impacts from some chemicals (like grass burners) can be seen immediately, and some (like pesticides) may accumulate in the body and lead to chronic organ disease.

Farmers in almost all studied villages seem to lack proper knowledge about how to take care of themselves after exposure to chemicals. Most of them believe that eating or drinking sour fruits or some commercial drink will help cleanse their body from poisoning.

Tensions between coffee producers who use chemicals and those who do not use chemicals are rising in many of the studied villages, including Nongchua (Laongam District). A female FGD held in Nongchua on 8 June 2024 revealed an agreement among participants to address this issue. Chemical users must now maintain a buffer zone of at least one line of coffee trees between their plots and those of non-users. Additionally, a small canal with "no water" signage will be used to demarcate the separation.

A leader at LCA, interviewed on 3 June 2024, stated that:

> *"The health and safety of farmers will become increasingly important in the ASEAN coffee trade. They added that coffee buyers are already praising and trusting producers who demonstrate a commitment to farmers' well-being. In the future, ensuring farmer health and safety may even become a crucial requirement for accessing certain export markets."*

A male coffee farmer who is a CPC member in Ban Lakkhao said in an FGD on 7 June 2024:

> *"Whether we go for organic farming or GAP, training for farmers is definitely an option. But in my opinion, the best approach would be for buyers to make it a condition with regular monitoring and auditing. Lao farmers, well, we know how to do things, but let's just say discipline is not our strong suit."*

Results of discussion in Phorkhem's male FGD on 9 June 2024:

> "*We need to protect ourselves while using chemical pesticides and find an alternative way to cope with aphid and grass issues. We heard that a Japanese farm in our district uses plastic to cover the land to reduce grass, but that seems to be costly. For bio-pesticides, we learned how to make one that effectively gets rid of the white aphid, but it is not widely used among farmers even though raw materials for making this bio-pesticide are available locally."*

2.4. Women's empowerment and gender equality

Promotion of gender equality is considered a cross-cutting element for SOLAR. The project aimed to maintain participation from female farmers, and this strategy yielded quite satisfactory outcomes on social security and OSH.

Gender-related training was provided to stakeholders, including both activity implementers and some of the farmers who directly benefited from the project. The training covered topics such as gender-responsive social protection and OSH, women's leadership, and the Gender Action Learning System (GALS).[8]

1. For the GALS technique, the MHP first conducted a TOT with a test phase, followed by monitoring and coaching for the trainees. These trainees, who came from the provincial and district FTUs, CSOs and some target villages, then organized training and campaigns in selected villages. PTSE trainers led activities in Laongam District, the provincial FTU led activities in Thateng District, and ASDPS led activities in Paksong District (details in Annex 4).
2. Farmers in five out of the six studied villages (Lak 33, Lakkhao, Thongvay, Nongchua, and Phorkhem) were also invited to participate in the GALS training. The field mission team also had the opportunity to speak with some of these participants.

2.4.1. Training of trainers

Local FTU offices whose officers participated in the GALS TOT reported being very impressed with the GALS training exercise. At least three FTU GALS trainers are now available in each district (one from the provincial office and two from district offices). The Sekong FTU proudly reported that they were able to develop the capacity of two female GALS trainers in Ban Houidam, Thateng District. These trainers are now assessed as having sufficient skills to provide GALS training to villagers. In addition to the project target group, FTU officers in Paksong reported having the opportunity to conduct a one-week GALS training for the Jhai Coffee Cooperative.

The Salavan Provincial FTU told the interview team on 7 June 2024 that:

> *"One of our strategies in GALS training is to train village authorities and leaders first. This equips them to serve as village trainers or role models."*

[8] GALS is a community-driven empowerment methodology promoted by Oxfam. It focuses on helping vulnerable people, particularly women, achieve greater agency and challenging gender inequality. GALS relies on a set of visual tools to guide a community-led process. Here are some examples of the tools used:

- Vision Journey: This tool helps communities visualize their desired future state regarding gender equality and improved livelihoods.
- Gender Balance Tree: This diagram allows participants to analyse the factors that contribute to or hinder gender balance within their community.
- Empowerment Map: This tool focuses on identifying and discussing the resources, skills and knowledge needed to achieve the goals outlined in the Vision Journey.
- Coffee Challenge Action Tree (for Livelihood Projects): This specific tool is used in livelihood-focused projects to map out challenges related to a particular income-generating activity (for example, coffee production) and to brainstorm solutions to overcome them, considering gender aspects.

The Sekong Provincial FTU told the interview team on 5 June 2024 that:

> *"We have two outstanding GALS trainers in Ban Houidam. One is a member of the village authority board and the other is from the village Lao Women's Union. We identified their potential after training them two or three times, so we sent them to participate in MHP activities organized in Paksong. Later, MHP conducted a follow-up visit to the village and witnessed these trainers delivering the training in the Katou language, which significantly improved participants' understanding of the content."*

2.4.2. Impacts at the community level

Women and men's access to social security and OSH

As discussed in previous sections, the SOLAR project's activities seem to have played an important role in increasing access to social security and OSH information from 2022 to 2024. Additionally, gender gaps in accessing this information were also narrowed, with the gender information gap for social security reducing from 12 per cent in 2022 to 9 per cent in 2024, and the gender information gap for OSH reducing from 13 per cent in 2022 to 7 per cent in 2024 (see table 18).

However, access to information translated into different results for the different sexes. Female farmers were found to be highly responsive to social security activities, with a higher proportion of female participants registering with the NSSF compared to males (10 per cent versus 4 per cent). The project's impact on female farmers' decision to join the NSSF is very clear.

Regarding OSH, farmers' workplace safety was found to have improved from 2022 to 2024. The level of safety disparity between male and female farmers became less pronounced. In 2022 women farmers were 20 percentage points more likely to have sustained an injury in the previous year than men farmers. In 2024 this gap had reduced to just 3 percentage points. Additionally, the share of farmers who experienced an injury in the previous year saw a sharp decline for both women and men.

However, the study was unable to find evidence of the project's impact in practical terms for non-participants, who seemed to be slightly more likely than participants to have been injury-free (78 per cent versus 74 per cent) during the preceding year. While reducing gender gaps in these aspects is a positive step[9], it does not necessarily equate to overall improved gender equality in occupational safety and health in all target villages.

[9] That is, reducing the gender gap in OSH training activity attendance from 13 percentage points to 7 percentage points; reducing the gap in being injury free over the preceding year from 20 percentage points to 3 percentage points; and reducing the gender gap in average number of injuries per year from 1 to 0.1 incidences.

Table 18. Gender Gaps in Accessing Social Security and OSH

	2022			2024			2024 Female		
	Female (F)	**Male (M)**	**Gap (M–F)**	**Female (F)**	**Male (M)**	**Gap (M–F)**	**Participant (P)**	**Non-participant (NP)**	**Project impact (P–NP)**
Observations	39	52		166	122		82	83	
Social security									
Attended social security promotional activities	13%	25%	12%	46%	55%	9%	92%	–	92%
Understanding of social security									
– Heard name only	62%	69%		40%	37%		38%	43%	
– Know basic information	8%	12%		30%	38%		49%	11%	
– Fully understand	–	–		5%	6%		11%	–	
– Never heard	41%	19%		25%	20%		2%	46%	
Enrolled in NSSF	**–**	**–**	**–**	**10%**	**4%**	**-6%**	**15%**	**6%**	**9%**
OSH									
Attended OSH training activities	21%	34%	13%	37%	44%	7%	74%	1%	73%
No injury at workplace	18%	38%	20%	75%	78%	3%	74%	78%	-4%
Number of incidences	4	3	1	0.54	0.64	0.1	0.57	0.51	0.06

– = nil.

Source: SOLAR Project's farmer surveys in 2022 and 2024

Women's leadership and participation

Low numbers and low activity levels among female leaders were identified in the 2022 baseline study. For this endline study, improved women's leadership and participation in the target communities are the most frequently cited outstanding outcomes of this project element, particularly among trained farmers and female leaders in participating villages.

Provincial GALS trainers observed that, after training, female participants became more active in project activities, asking questions and raising their voices at public events. In many villages (Lak 35 of Paksong, Houidam of Thateng, Oannoi, Houikong and Nongtom of Laongam), women were elected as group leaders. Additionally, in several CPC villages in Laongam, female farmers began to be appointed to work as coffee auditors during the harvesting season (a task traditionally performed by men due to night shifts).

Evidence clearly shows how the project empowered and motivated female participants and leadership at the project site, influencing community leaders. However, creating lasting impacts at the community level is a slow process compared to outreach efforts. Therefore, implementers of other project activities (social security and OSH campaigns) still observed that many female participants remaining quiet and reserved, with limited noticeable changes in their leadership.

An officer at the provincial SSO shared with the team during interview in Champasak on 3 June 2024:

> *"We did not observe many actively participating females during our campaign. We received some questions only from those who hold leadership positions, such as group leaders or deputy village heads. It appeared some of them were asking questions on behalf of their constituents. Female farmers in general seem hesitant to express their ideas publicly."*

Gender equality

The baseline study revealed that villages on the Bolaven Plateau exhibit varying levels of gender equality, influenced by their socioeconomic context and development level. Gender issues are more prevalent in underdeveloped villages, particularly those in remote areas with non-Lao-Tai-speaking populations.

This endline study categorizes project sites into two distinct village groups: better-off and worse-off. Villages with proximity to main or paved roads are considered better-off. These villages typically have improved access to basic social services, greater income opportunities and a more balanced dynamic regarding domestic power between men and women. Consequently, gender equality differed between these two village groups at the commencement of SOLAR project activities. Additionally, the implementation of gender-related interventions appears to have varied across target villages. This inconsistency presents challenges in capturing the project's impact on gender-related issues.

However, the field mission confirmed the persistence of gender inequality in the remoter villages of Phakkoutnoi and Thongvay, hindering women's access to social security and well-being. Conversely, we observed a greater degree of gender equality across various aspects in the other target villages (Lak 33, Lakkhao, Nongchua and Phorkhem).

A female farmer who participated in the social security campaign shared the following with the team during an FGD in Ban Phakkoutnoi on 4 June 2024:

> *“Yes, I did join the campaign and learned about the benefits of social security. I discussed this with my husband, but he didn't seem to agree with enrolment. So, I gave up on the idea because I didn't want to argue with him.”*

A 21-year-old female farmer shared the following during an FGD facilitated by the team in Ban Thongvay on 6 June 2024:

> *"A few months ago, I had a miscarriage while clearing weeds in my cassava field. I was six months pregnant. We rushed to the district hospital without health insurance, which resulted in out-of-pocket expenses exceeding 1 million kip. When I returned home to recover the next day, I was extremely tired and asked my husband to cook rice, but he refused, claiming to have a headache."*

A middle-aged man said during an FGD in Ban Nongchua on 8 June 2024:

> *"Gender equality is a commonly held concept in our village. If my wife is busy, I will help her with her tasks. And if she gets sick, I always let her rest."*

A conclusion from the male FGD in Ban Phorkhem on 9 June 2024 regarding gender issues:

> *"Generally speaking, men and women in our village seem to be more equal after these past three or four years, thanks to the health centre and other development projects. Wives can now participate in activities traditionally done by their husbands. Recently, they have become more active compared to us, even organizing themselves into groups to exchange labour for weeding each other's gardens."*

Table 19. A summary of gender-related issues in the six studied villages

District	Village	Distance from district prefecture (km)	Division of labour	Decision-making	Women’s leadership	Gender-related intervention
Paksong	Phakkoutnoi	23	Traditional (female = household chores and light work)	Male	LWU, school deputy director, youth union	No
	Lak 33	17	Flexible	Shared decision	Village authority, youth union, LWU	Yes
Thateng	Thongvay	22.3	Traditional (female = household chores and light work)	Male	LWU	Yes

District	Village	Distance from district prefecture (km)	Division of labour	Decision-making	Women's leadership	Gender-related intervention
	Lakkhao	6	Flexible	Shared decision	Village authority, group leaders, audit, accountant, LWU	Several times, CPC training included
Laongam	Nongchua	22	Flexible	Shared decision	Village authority, group leaders, LWU	Several times
	Phorkhem	25	Flexible	Shared decision	Village authority, group leaders, LWU	Several times

Source: SOLAR Project's FGDs in 2024

2.4.3. Opportunities and challenges

The evaluation found that the project's intervention design and selection of participating villages did not fully meet the needs for reducing gender inequality in the target districts. Additionally, not all target villages benefited fully from the TOT.

To enhance outreach in disadvantaged villages, Sekong FTU suggested expanding the number of training participants, especially by including women who are not in leadership positions. The study team further suggests developing a clearer plan for disseminating information or training villagers after the TOT programme.

The baseline study revealed that the Lao Women's Union (LWU) is an existing mandatory institution that promotes gender equality in the region. In this endline study, FTU representatives in all studied provinces reported that inviting LWU representatives to participate in their village-level gender-related training proved very effective.

The Sekong FTU highlighted time limitations as a barrier to utilizing all available GALS tools during training sessions for farmers. Local trainers (provincial and district) addressed this by selecting a subset of tools most relevant to the context. Extending training sessions beyond two or three days risks participant dropout due to competing priorities. To address these challenges, the GALS training manual could be revised to better suit the realities of target communities on the Bolaven Plateau, potentially by offering shorter modules or prioritizing essential tools.

While gender-balanced participation – that is, equal numbers of male and female participants – was achieved in each training, most participants were not couples. The Oxfam coordinator and Sekong FTU suggested that including couples in GALS training could significantly improve the programme's

effectiveness. This approach can foster joint learning and collaborative decision-making within households, potentially leading to more sustainable results.

The Salavan Provincial FTU shared the following with the team during an interview on 6 June 2024:

> *"For the training in Ban Dong, we used a tool that facilitated discussion about likes and dislikes. We observed male and female participants openly sharing their thoughts. However, we were not successful in bringing couples into the GALS training, as we had planned."*

A female farmer said during an FGD held in Ban Lakkhao on 7 June 2024:

> *"When we have an argument, it is okay if he is in a good mood. But when he is drunk, things are different. I am the one who backs down because it is embarrassing in front of our neighbours. It would be good if couples could attend the training together. Men don't always listen to their wives, but they might listen if other people say the same thing."*

2.5. Empowering farmers through group formation and development

2.5.1. Project interventions, impacts and attributions

This section discusses the promotion of collective action among tea and coffee farmers through group formation. This is an ongoing approach by the FTUs and their development partners to formalize informal workers. Formalization allows these workers greater access to social protection and the realization of their labour rights.

An FTU Worker Group typically has a structured organization. Members elect a board of management, and the group operates under regulations established in accordance with the law. A communal fund provides soft loans or welfare benefits to members. In advanced groups, members meet regularly for labour and technical exchange, engage in collective marketing, and participate in other collective activities for mutual benefit.

Under the SOLAR project, provincial and district FTUs collaborated with responsible CSOs (Phan-Thin and ASDPS) to support groups of tea and coffee farmers. This support included facilitating group establishment and formalization (that is, obtaining official approval), building the capacity of group leaders, conducting needs assessments, and helping groups find solutions to address those needs.

The 2022 baseline study found that at least one group (tea, coffee or other cash crop farmers) existed in 25 out of 34 target villages. This endline study focused specifically on how the project supported tea and coffee farmer groups. FTU officers reported that the SOLAR project led to the establishment of three new production groups and the upgrade of one existing group to a cooperative in Paksong. In Thateng, ten new coffee farmer groups were formed, and the capacity of two existing groups was strengthened. In Laongam, the project helped establish five new production groups. Furthermore, local FTUs and responsible CSOs worked closely with existing groups like the Paksong Tea Cooperative and CPC to build their capacity through various types of training and support, including group management, collective bargaining, and employment contracts.

Within a short period, some outstanding outcomes emerged in each district due to SOLAR's initiatives and encouragement:

1. A tea production group encompassing six villages in Paksong was formally upgraded to form the Paksong Tea Cooperative in November 2023. The cooperative was equipped by project with machinery for processing tea products in its cooperative factory and branches. The cooperative currently collects tea leaves from members, processes them and sells them to private companies and shops at an agreed-upon price (more information about collective contracts is in Annex 6).
2. A needs assessment conducted in January 2024 with existing coffee groups in Laongam identified demand for support in registering for a formal certificate from the Government, addressing coffee pests (aphids) and reducing chemical use, and overcoming labour shortages. In response, the Provincial FTU and Phan-Thin coordinated with the provincial and district Agriculture Offices to provide training on integrated pest prevention approaches (conducted in April 2024), to pilot the use of bio-pesticides in Nongchua (ongoing), and to facilitate the registration process and documentation.

Table 20. Tea and coffee production groups in target districts as of June 2024

		Paksong	**Thateng**	**Laongam**
SOLAR-supported tea and coffee groups	– Newly established	3	10	5
	– Improved	1	2	–
Tea and coffee production groups established in each target village by other organizations/ projects/private companies and that are still active		1. Somxay Company 2. CPC 3. CLEAN Project 4. KOICA Project 5. Paksong Tea Cooperative 6. Paksong Tea and Coffee Promotion Association	1. CPC 2. CLEAN Project 3. KOICA Project	1. Somxay Company 2. CPC 3. CLEAN Project 4. KOICA Project

– = nil.
Source: SOLAR Project's KIIs in 2022 and 2024

An important consideration for this section is the difficulty in isolating the specific effects of the SOLAR project. Several organizations, including CLEAN (2019–23), KOICA (2021–25), and CPC (ongoing), have provided similar types of support (training and farming equipment) within the target villages. This overlap makes it challenging to definitively attribute any achievements solely to the SOLAR project intervention. For example, during interviews, a respondent shared the success story of the Coffee Production Group of Ban Oannoi in Laongam. This group has five member households. It secured a

deal in March 2023 to sell 9,600 kg of coffee parchment to a Vietnamese trader at a price of 85,000 kip per kg, which is 54 per cent higher than the normal purchasing price. Although Ban Oannoi is a SOLAR target village, we cannot claim this achievement as a direct project impact. Secondary data reveals that the group was established under the CLEAN project and formalized by the Agriculture Office in July 2022. Additionally, the coffee sales deal predates their participation in SOLAR's project activities, which included training on group formation (March 2023) and collective bargaining (May 2023).

2.5.2. Challenges for both organized and independent tea and coffee farmers

Unlike the baseline study, this endline study collects detailed information about the types of farmer groups. Here, we categorize them into two groups: those with collective marketing and those without. Generally, members of groups with collective marketing benefit from linkages to markets offering guaranteed prices (like the case of the CPC) or premium prices (like Somxay Company and the Paksong Tea Cooperative). These groups also have access to market price information.

Among tea farmers in Paksong, nearly half belong to a group or cooperative. Despite the known benefits of membership, joining a group may not be seen as worthwhile for all tea farmers, possibly due to more complex factors.

Quote from the President of Paksong Tea Cooperative, 5 June 2024:

> *"Among 116 members of the Paksong Tea and Coffee Promotion Association, about 87 have joined the Paksong Tea Cooperative. The rest are still hesitant to join and purchase shares because they want to be sure it's worthwhile. We haven't received our official stamp yet and deals with buying companies are conducted informally through verbal agreements. We still need guidance and support from the Government regarding contracting issues. Through the number of orders, we see a high demand for our tea products, but currently lack sufficient equipment. In addition, some trade deals haven't been successful during price negotiations. We are still young and need to build more capacity and negotiation power."*

Table 21. Group membership among surveyed tea and coffee farmers as of June 2024

	Paksong	Thateng	Laongam	Total
All sample	90	85	113	288
Tea farmers	22	–	–	22
Coffee farmers	86	85	112	283
Tea farmers				
– Group with collective marketing (Paksong Tea Cooperative, private company)	45%	n/a	n/a	45%
– Group without collective marketing	5%	n/a	n/a	5%
– Independent	50%	n/a	n/a	50%

Coffee farmers				
– Group with collective marketing (CPC, Somxay Company)	10%	8%	44%	23%
– Group without collective marketing (some coffee associations, CLEAN Project, KOICA Project)	–	4%	10%	5%
– Independent	90%	89%	46%	72%

– = nil; n/a = not applicable.
Source: SOLAR Project's farmer survey in 2024

For coffee farmers, nearly 90 per cent of survey respondents in Paksong and Thateng do not belong to any production group. Conversely, more than half of the studied farmers in Laongam are members of a production group. This data suggests that coffee farmers in Laongam are more likely to be organized compared to farmers in the other two districts.

What factors deter farmers from joining groups?

The reasons why farmers remain independent and why existing groups struggle to expand their membership can vary depending on the characteristics of both the farmers and the production groups themselves. For example, membership in the CPC requires passing an organic agriculture examination (assessing soil quality and farming practices), contributing labour to cooperative parchment production, and participating in cooperative activities. These strict requirements are not suitable for every farmer. Even for groups selling coffee cherries to Somxay Company, farmers need to pass an initial assessment and follow technical guidance, particularly regarding the use of chemical fertilizers and pesticides for high yield. Households that are averse to the use of chemicals may choose not to pursue this type of membership.

On the other hand, independent farmers also face challenges, particularly due to fluctuating coffee prices, a lack of access to price information and many other barriers. This disadvantage puts them at a significant negotiating disadvantage with buyers and middlemen.

A female independent tea and coffee farmer in Ban Lak 33 shared the following in an FGD on 5 June 2024:

> *"Prices offered by the Paksong Tea Cooperative are still not stable, but it's good that we're allowed to sell to whomever offers better prices. For coffee, the prices for red cherries are good this year, so I don't need to join a group and produce parchment. In groups, the quality standards are very high, for example, the parchment must be white (mine is yellow). I can't follow that rule."*

A female independent coffee farmer in Lakkhao spoke at an FGD on 7 June 2024:

> *"We know the buying price at the Paksong warehouse is much higher than what local buyers offer us. However, we can't go there to sell our red cherries because transportation and taxes from Thateng to Paksong are very expensive."*

A male CPC member in Ban Lakkhao expressed the following about the current situation at an FGD on 7 June 2024:

> *"There are many coffee farmer groups in our village. Eleven households belong to the CPC, and nearly 90 belong to a group that follows GAP. The second group doesn't have collective marketing [they sell independently], but does have a mutual fund. In the CPC, we sell red cherries to the cooperative and work together to process the parchment. We get good prices. However, recently, many external agents have come to our village to collect coffee and offer higher prices. This makes it difficult for our group to collect the expected volume. We see that more people want to be independent due to the increasing prices. Additionally, factors like labour shortages, the cassava boom, and young people pursuing higher education are also causing people to abandon coffee farming, start using chemicals again, and leave the group."*

3. Conclusions and recommendations

3.1. Conclusions

This endline study analysed both qualitative and quantitative data collected through KIIs with 13 local stakeholders/implementers, 12 FGDs, and a survey of 288 people in six villages across three districts on the Bolaven Platea conducted from 3 to 9 June 2024. Using selected data and information, we examined the changes among direct beneficiaries from 2022 to 2024 (before and after project interventions), as well as the impacts on indirect beneficiaries/intermediaries associated with emerging opportunities and challenges related to project outcomes and outputs. The study focused on resolving labour rights issues faced by tea and coffee farmers on the plateau in relation to social security, OSH, gender equality and collective bargaining. We employed both before-and-after comparisons and a comparison between participants and non-participants to isolate project impacts and to discuss the project's attributes in each aspect.

Overall, the SOLAR project's interventions – including campaigns, training sessions and mobile services – significantly improved tea and coffee farmers' access to social security and OSH in the target area.

3.1.1. Social security

- The share of people who participated in social security promotional activities increased from 20 per cent in 2022 to 50 per cent in 2024 among the entire survey sample, and from 18 per cent in 2022 to 95 per cent in 2024 among the tracked group.
- Project participants were more likely to have an understanding of social security compared to non-participants (65 per cent versus 10 per cent).
- Social security membership increased from 1 per cent during the baseline survey to 8 per cent in the endline survey, and from 0 per cent to 27 per cent among the tracked group. Project impact is further supported by the higher social security coverage rate among participants (11 per cent) compared to non-participants (4 per cent).
- While male farmers generally have better access to and understanding of social security, female farmers were ultimately more responsive to project interventions. Notably, 15 out of every 100 female participants registered with the NSSF, compared to only 6 out of every 100 male participants.
- Project activities also had spillover effects within communities. Participants shared information with family, relatives and other workers, leading to 33 per cent of participants aged above 60 successfully encouraging their relatives and other workers to join the NSSF even though they themselves were ineligible due to age.
- Implementing project activities benefited SSOs and their local officers in many ways. The project increased social security outreach, a mandatory task for SSOs. It also built their skills and experience in communicating with farmers, a different demographic from their usual clientele. Additionally, the project expanded their coordination network with local authorities and CSOs.
- The project's success with mobile social security services provides promising evidence for SSOs to invest in expanding such services in rural areas.

3.1.2. Occupational safety and health

- Campaigns and training successfully increased OSH outreach to tea and coffee farmers, from 29 per cent in the 2022 baseline survey to 40 per cent in the 2024 endline survey (all samples), with successful outreach growing from 41 per cent to 86 per cent among the tracked group. The average number of injuries per year dropped from four in 2022 to one in 2024.
- Although men still have better access to OSH information, the improvement seen among female farmers was larger.
- While 73 per cent of project participants reported getting OSH related information during the study period, the rate was only 4 per cent for non-participants.
- Despite the improved OSH knowledge of project participants, the average number of injuries over the previous 12 months did not show a significant difference between project participants (0.6 incidents) and non-participants (0.5 incidents). Additionally, the proportion of farmers who received no injuries in the previous 12 months was relatively high among non-participants (81 per cent versus 72 per cent of participant farmers).
- A deeper analysis of participants revealed that OSH training and demonstrations were effective in reducing workplace injuries. However, the number of participants who received these interventions might be too small compared to those who only participated in OSH campaigns, which may have been less effective.
- Based on interviews with non-project participants, their workplace safety knowledge largely came from accumulated experience, including participation in previous development projects. Combining this information with the baseline and endline study data, we can conclude that the significant reduction in workplace injuries likely resulted from combined efforts of various development projects and organizations, such as CLEAN Project, KOICA Project and CPC, which also operate on the plateau in similar target villages.
- Another observed change is the shift in the cause of workplace injuries, which has become more complex. While animal- and insect-related injuries declined, injuries caused by hand tools and chemicals increased. This increase in chemical use is likely due to factors like the commercialization of coffee production, the spread of coffee disease, and the rising cost of weeding due to labour shortages.
- On an institutional level, implementing OSH activities helped develop and/or sustain the skills and experience of ARC master trainers, develop training manuals, and develop the capacity of stakeholders (local FTUs and CSOs) to deliver OSH training in the future.

3.1.3. Gender equality

- The project successfully developed GALS trainers embedded within local organizations (provincial and district FTUs and village authorities). This is evident not only in the increased number of trainers but also in the active participation of female beneficiaries in public events and meetings.

- The project demonstrably reduced gender gaps in accessing social security and OSH information. Project interventions also highlighted the different risk profiles of male and female workers due to the division of labour within households, with men more exposed to chemical use.
- Project activities not only empowered female farmers to participate in the project but also directly and indirectly influenced communities to provide leadership opportunities for women. This will allow women to play a more significant role in community and group development, ultimately benefiting themselves and other female farmers.
- Despite positive changes at the institutional and leadership levels, gender inequality persists in some target villages, particularly those in remote areas populated by ethnic minorities. Addressing this issue will likely require additional time and effort.

3.1.4. Group formation and strengthening

- The project made significant progress in forming 18 new farmer groups and strengthening 3 existing ones in the target villages. With support from provincial and district FTUs and responsible CSOs, new groups were established and formalized. These newly established groups are currently in the process of obtaining formal documentation, and it can take time for the group leaders and systems to become fully functional.
- Two key outcomes stand out from this project element. First, the project assisted a tea production association in Paksong to formalize themselves as a tea cooperative in November 2023. The project provided capacity-building for cooperative leaders and members, along with in-kind support. As a result, the cooperative is now functioning and gradually developing. Second, activity implementers worked closely with existing production groups in Laongam (such as production groups under the CPC) to assess their needs and identify solutions. Local FTUs and responsible CSOs, in cooperation with relevant government agencies, effectively addressed the need for facilitation of the formalization process (with the Agriculture Office) and for reducing the impact of chemical use in the region.
- Additionally, training on group management and collective bargaining was provided to group leaders in late 2023 to mid-2024. However, the impacts of these interventions will likely be observed in the next harvesting season.

3.1.5. Indicators in project logframe

The SOLAR project management team, in consultation with implementing partners, has regularly updated the project logframe throughout the project duration. The latest version, dated 28 June 2024, consists of 14 indicators for one overall objective, two specific objectives, and five outputs along with their baseline, current and target values. These indicators are designed to be measured primarily using quantitative data.

Since this endline study relies on primary data collected from representative groups of beneficiaries and stakeholders who provided both quantitative and qualitative information on the positive impacts of the SOLAR project on the Bolaven Plateau, it cannot be used to fully verify all 14 logframe indicator values. Some of the data collected for this endline study is not suitable for quantifying the specific indicators in the logframe for two main reasons:

(i) The project indicators were designed to measure grassroots level impacts as well as policy and overall implementation level impacts, while the endline survey data is mainly from the grassroots level.

(ii) The endline study can only confirm the methodology used by the project team and implementing partners to calculate the current values of the indicators.

For a more complete picture, some proxy indicators can be calculated to verify the Overall Objective and Specific Objectives 1 and 2 (see Annex 8). These proxy indicators utilized the qualitative data collected alongside any available quantitative data relevant to these specific objectives.

3.2. Recommendations

1. Overall, the endline study agrees with the interviewed representatives that the project period seems to be too short for its full impact to be realized. The activities for promotion of social security organized in the last quarter of 2023 have resulted in an 8 per cent enrolment rate by the time of the endline study (roughly six to seven months later). Even with sufficient information, some farmers are not yet ready to enrol. They may prefer to observe the benefits their neighbours ("role models") receive from the programme before enrolling themselves.
2. The other three project elements – OSH, gender equality and collective bargaining – also require more time and effort to achieve significant changes at the community and household levels. Currently, the process is just starting, with local trainers developed and a working system established.
3. The study suggests that project impacts can have spillover effects throughout the community through project participation. For certain elements, such as social security, access to information is a key driver for enrolment. However, for other elements, such as OSH and gender equality, simply having access to information does not translate to behaviour change. The target group needs to participate in project interventions such as training and coaching.
4. In the case of a project extension, the focus should be on designing clear exit strategies for each element. This could involve engaging more local authorities whose mandates align with the element's goals. For example, Agriculture Officers could be involved in group formation, and the Lao Women's Union could be involved in gender-related development work.
5. SOLAR is an integrated development project with various elements and implementing agencies. Field missions and village visits are said to be conducted at least two or three times per month. According to a production group leader, this frequency can be fatiguing for farmers. While achieving some project impacts takes time, finding solutions to improve this can help maintain farmer participation in the long run.

3.2.1. Social security

6. Promoting access to social security will be more effective if mobile social security services are efficient, as observed by LSSO management. This would also allow replication of the service in other districts and provinces. Building the capacity of district SSOs remains crucial so they can take responsibility for the mobile service and incentive programme in the future.

7. Linking social security with communal funds developed within farmer groups or associations is a possibility, but it is a sensitive process. These funds are mutually owned and expenditures require approval from member meetings.

3.2.2. Occupational safety and health

8. Promoting OSH among tea and coffee farmers requires not only expanding training and coaching outreach but also more investment and cooperation in reducing chemical use on the Bolaven Plateau. According to ARC master trainers and some interviewed farmers, tea and coffee farmers often cultivate other crops alongside their main product. Even if they do not use chemicals in their tea and coffee gardens, they may still use them on other crops. Additionally, farmers who do not use chemicals themselves are still often exposed to them via the air and water sources. The project may need to collaborate with more advanced national or international agricultural research and development organizations to explore environmentally friendly bio-solutions. Pilot projects could be conducted with organic-oriented farms (like the production groups under CPC). At a larger scale, it may also be possible to build cooperation with other government departments to establish organic agriculture zones for piloting these solutions.

3.2.3. Gender equality

9. GALS is a valuable technique praised by local FTUs participants in the TOT programme. To broaden its impact on the community, however, localized versions of manuals or guidelines may be needed. These could be tailored to communities with different levels of gender equality, such as "better off" and "worse off" villages as observed in the sample populations. For example, better-off villages might require a more advanced level of empowerment training, while worse-off villages might require training that focuses on balancing power dynamics within the domestic sphere.
10. To improve the efficiency of the GALS training programme in the community, training organizers may consider placing more emphasis on participant selection. As suggested by Oxfam and the Sekong FTU, this could involve including couples and household members, rather than focusing solely on achieving a balanced number of men and women. This approach has the potential to foster joint learning and collaborative decision-making within households, potentially leading to more sustainable results.
11. The evidence found in this study regarding how production groups under the CPC promotes female auditors at their warehouses suggests a need to focus more on gender issues and working conditions for women in tea and coffee production groups and cooperatives. This area was not covered in detail in the current study, but introducing GALS techniques in these groups of informal workers could yield interesting results. Documenting the situation before and after such an intervention would provide valuable lessons for the future.

3.2.4. Farmer groups

12. For local FTUs to develop farmer groups/cooperatives with strong collective bargaining power, the experience of the CPC can provide valuable lessons. For example, members of production groups under CPC do not have to sell all their red cherries to the cooperative, but they do need to maintain their commitment to contribute a certain amount. This allows the CPC village facilitator to accurately estimate the production that can be supplied to the cooperative for processing. Due to labour shortages and high market prices for red cherries, some CPC members in Ban Phorkhem have chosen to temporarily stop contributing to the cooperative to avoid creating distress for their members.
13. The most significant challenge faced by independent coffee farmers is lack of access to coffee price information. Therefore, farmer groups that can provide such information would be more attractive to these independent farmers, as this knowledge would empower them to negotiate more effectively with middlemen.

3.2.5. Expanding project interventions

In addition to the vulnerable tea and coffee subsectors, interview respondents suggested various target groups for expansion in different districts on the plateau where decent work deficits prevail. See details on who suggested what in Annex 7.

Paksong

- Self-employed farmers growing bananas, vegetables and passion fruits are more likely to be exposed to chemicals during cultivation and therefore could benefit from SOLAR interventions.
- Non-fulltime plantation workers are likely to not be covered by social security and could benefit as well.
- A district Labour Protection Committee (formerly the Tripartite Committee) already exists, but does not function well. Building their capacity could be helpful.

Thateng

- Farmers in subsectors like cassava and rubber were the most cited as being even more vulnerable than tea and coffee farmers. Workers in rubber processing plantations are mostly unprotected.

Laongam

- The suggestions were varied, but included recommendations to expand the project to cover durian, vegetable (cabbage), rubber and cassava farmers. Workers in cassava factories are also prone to decent work deficits.
- One comment suggested developing more sustainable cropping models, as chemical use has become overwhelming.

Annex 1. Data collection team

	Coordination team		**Team 1**		**Team 2**	
Member	Provincial FTU	1	Enumerator	2	Consultant	1
	District FTU	1			Oxfam	1
	Village authority	2				
	Total	**4**		**2**		**2**
	Champasak 1. Mr Somxay, Provincial FTU 2. Mr Saly, Paksong FTU 3. Mr Khamphai Keoboupha, B. Phakkoutnoi 4. Mr Sivone Onsybountheung, B. Phakkoutnoi 5. Mr Buakeo Bounseuth, B. Lak33 Sekong 1. Ms Lasamy, Provincial FTU 2. Mr Vannalom, Thateng FTU 3. Mr Nouixay Akingkeo, B. Thongvay 4. Mr Khamtan Inthilath, B. Lakkhao 5. Ms Chonemany, B. Lakkhao Laongam 1. Ms Sida, Provincial FTU 2. Ms Thiddalom, Laongam FTU 3. Mr Odd Xayavong, B. Nongchua 4. Mr Toyh Sila Singnantha, B. Nongchua 5. Mr Sithong Phetlangsy, B. Phorkhem 6. Mr Samlet Kommadam, B. Phokhem		1. Ms Suntisouk 2. Ms Dalavone		1. Ms Chansathith 2. Mr Sungkey	
Responsibility	Support Team 1. Make appointment and follow up with farmers.		Interview tea and coffee farmers		KII, FGD, and support Team 1	

Annex 2. Mission agenda

Date	Time and activities			
2 June 2024	Travel from Vientiane to Pakse			
3 June 2024 (Monday)	10.00–11.00	Interview CPS FTU		
	11.00–12.00	Interview CPS SSO		
	12.00–13.00	Lunch		
	13.00–14.00	Interview LCA		
	14.00–15.00	Travel from Pakse to Paksong		
	15.00–16.00	Interview Paksong FTU		
	16.00–17.00	Pre–test questionnaire with 3 coffee farmers near the city		
4 June 2024 (Tuesday)	**Team 1**		**Team2**	
	8.00–16.00	Survey 42 coffee farmers in B. Phakkoutnoi	8.00–12.00	FGD 2 groups (8M, 8F) in Phakkoutnoi
			13.30–14.30	Interview ARC
			15.00–16.00	Interview Paksong SSO
5 June 2024 (Wed)	8.00–16.00	Survey 45 tea and coffee farmers in B. Lak33	8.00–11.00	FGD 2 groups (8M, 8F) in Lak33
			11.00–12.00	Interview Tea Association
			12.00–13.30	Paksong → Lamam
			13.30–14.30	Interview Sekong FTU
			14.30–15.30	Interview Sekong SSO
		Travel to Thateng		Lamam → Thateng
6 June 2024 (Thu)	8.00–9.00	Interview Thateng FTU	8.00–9.00	Interview Thateng FTU
	10.00–16.00	Survey 44 coffee farmers in B. Thongvay	10.00–12.00	FGD 2 groups (8M, 8F) in Thongvay
			12.00–13.30	Thateng → Salavan
			13.30–14.30	Interview Salavan FTU

Date	Time and activities			
			14.30–15.30	Interview Salavan SSO Salavan → Thateng
7 June 2024 (Friday)	8.00–16.00	Survey 38 coffee farmers in B. Lakkhao Travel to Laongam	8.00–11.00 11.00–12.00 13.30–14.30 14.30–15.30	FGD 2 groups (8M, 8F) in Lakkhao Thateng → Laongam Interview Laongam FTU ~~Interview Laongam SSO~~ (Unmet)
8 June 2024 (Saturday)	8.00–16.00	Survey 65 coffee farmers in B. Nongchua	8.00–16.00	FGD 2 groups (8M, 9F) in Nongchua. Join Team 1 after that.
9 June 2024 (Sunday)	8.00–16.00	Survey 52 coffee farmers B. Phorkhem Laongam→ Pakse	8.00–16.00	FGD 2 groups (8M, 8F) in Phorkhem. Join Team 1 after that. Laongam→ Pakse
10 June 2024		Pakse to Vientiane		Pakse to Vientiane

Annex 3. Key informant interview respondents

K1.1 Province	K1.2 District	K1.3 Organization	K1.4 Name and position of respondents	Male	Female	Total
Champasak	Pakse	PFTU	1. Mr Sonesavanh, President 2. Mr Somxay, Vice President 3. Mr Vongnakhone, Labour Protection Section	3	–	3
	Pakse	PSSO	1. Ms Thadsanaphone Chanthasone, Dep. Director 2. Mr SengAloun Sihalad, Management Committee Member 3. Mr Toulakhom, Enterprise Scheme 4. Mr Anoukone, Voluntary Scheme	3	1	4
	Pakse	LCA	1. Mr Sengchanh, President	1	–	1
	Paksong	DFTU	1. Mr Saly, President	1	–	1
	Paksong	ARC	1. Ms Souliphone, Trainer 2. Mr Sivixay, Trainer	1	1	2
	Paksong	DSSO	1. Mr Outhai Phansaphangthong, Technical Officer	1	–	1
	Paksong	Paksong Tea Cooperative (formerly Association)	1. Mr Sengthong, President	1	–	1
Sekong	Lamam	PFTU	1. Mr Khampha Xayaseng, President 2. Ms Latsamy Sengsanga, Labour Protection	1	1	2
	Lamam	DSSO	1. Mr Phoumy, Director	1	–	1
	Thateng	DFTU	1. Mr Sounthone, President 2. Mr Vannalom, Vice President 3. Mr Sisouk, Vice President	3	–	3

Salavan	Salavan	PFTU	1. Ms Sida, Labour Protection	–	1	1
	Salavan	PSSO	1. Mr Khamsouk Phommatham	1	–	1
	Laongam	DFTU	1. Ms Souphy, President	–	1	1
Total				**17**	**5**	**22**

– = nil.

Annex 4. Summary of project activities by date, implementer, theme and beneficiaries, as of May 2024

Activity date	Implementer	Theme	Stakeholders	Farmers/workers	CPS Paksong (12 V)	SLV Laognam (10 V)	SK Thateng (12 V)
Jan-23	Oxfam	Gender-responsive social protection	16 (5F)				
Feb-23	PTSE	SP TOT	17 (8F)			X	
Aug-23	PTSE	SS WS	42 (40F)			D, VY, NC, LY, PK	
May-23	ASDSP	SP – minimum wage		45			LK-20, KTY-25
Mar-23	MHP	G-SP and OSH	33 (17F)				
Jul-23	MHP	GALS training	24 (14F)				
	Trainers	GALS test		52 (21F)			
Feb-24	MHP	GALS monitoring & coaching	60 (28F)		L33-1, 36-1, 38-1, 43-2, 45-2, TA-3	Laoya-32, Dong-2, nongchua-2, phuak-1	houidam-19, LK-1,KTY-2, KPN-2, TV-2
Aug-23	PTSE	GALS TOT	15 (11F)			X	
	PTSE	GALS campaign		220 (119F)		X	
Jan-Feb 24	PTSE/LFTU	GALS training		55 (24F)	L33	ON, PK, NT, VY, D, LY, NB,NC	HD, KPN-T, CL, TK, NK, TV, NN, HS
Sep-23	ASDPS	GALS training		46 (16F)			Kongtayoun (20p), Lakkhao (19p)
Feb-24	ASDPS	GALS training		36 (19F)	L33,35,36,40,43,45 (4-6p/village)		
Apr-24	ASDPS	Women leadership		22			LK-12,KTY-11
Q4 2022	ARC	OSH awareness-raising		24 villages	X		X
Q4 2023	ARC	OSH campaign		15 villages	X		

Q1 2024	ARC	OSH campaign	501 (217F)		X	X
Aug-23	ASDPS/PTSE	OSH training	7 villages		LY, D, NB, NC	LK-26, KTY-20
Feb-24	LFTU	OSH training	40 (8F)	L36, 45, 43, 40, BL, HS		
Mar-24		OSH training	46 (18F)			Villages not identified
Mar-23	LFTU	Group formation	4 villages		Phokhem, Oannoi	
Q1 2024	LFTU	Group formation	12 groups	L33, 43, 45	1	10
Nov -Dec 23	ASDPS/PTSE	CBA training	90 (40F)	L33,35,36,40,43,45 (4-5p/v)	LY, NB, PK, NC, D, PK	LK-20, KTY-15
Feb-24	LFTU	Employment contract training	30 (6F)	BL, l35, 40, 43, 45		
Mar-24	LFTU	CB training	52 (16)	TKT, BL, L33, 35, 36, 43, 45, 40		All
Dec-23	PTSE	Group related WS	37 (17F)		NC, PK, LY, NB, VY, D	
Q4 2023	LSSO	NSSF promotion	34 villages	X	X	X
Q1 2024	LSSO	NSSF mobile service	15 villages	X	X	X
Nov-Dec 23	PSSO	NSSF promotion	36 enterprises	X	X	X

Source: Project quarterly reports, summarized by author as of May 2024.

Annex 5. Awareness of social security by district (percentage)

	Paksong		Thateng		Laongam	
	P	Non-P	P	Non-P	P	Non-P
Heard name only	35%	34%	31%	49%	27%	59%
Know basic information	48%	7%	62%	7%	56%	12%
Fully understand	7%	2%	5%	–	16%	–
Never heard	11%	57%	2%	44%	–	29%
No. of observations	46	44	42	43	62	51

– = nil; P = Participant; Non-P = Non-participant.

Annex 6. Collective contracts

Through the interviews, it was found that there are two types of collective contracts for workers: (1) collective employment contracts and (2) collective bargaining agreements.

1. Collective employment contracts

Provincial FTUs reported facilitating collective employment contracts for workers in formal enterprises. The first condition for workers in an enterprise to be able to sign a collective employment contract with their employer is the establishment of a Worker Representative Unit (local FTU) elected by the workers within enterprises with at least ten members.

According to the Sekong FTU, the development of collective employment contracts for enterprise workers is mostly based on the employment contracts of individual workers or enterprise human resources regulations. After reviewing those documents, the FTU consults with worker representatives about their requirements or any points or conditions that they think are unfair. With those proposals in hand, the FTU and worker representatives will open informal negotiations with the employer to reach an agreement before finalizing and signing the contract (employer and two worker representatives).

In Paksong, this kind of negotiation was made for three companies: Agrodec (Malaysian vegetable company with 200 workers), Paksong Highland (Thai coffee plantation, only office workers), and Sepien-Senamnoi hydropower dam (20 workers). In Thateng, the local FTU supported workers to sign collective employment contracts at the Houilamphanmai hydropower dam (41 workers) and in the Ban Pakthon group of rubber tappers. In Laongam, many collective contracts have been developed and signed, including, for example, at an electricity company, a water supply company, commercial banks, the Sanaxay company, the Shimura company and so on.

2. Collective bargaining agreements

Although training on collective bargaining was organized for farmer groups in the project area since the last quarter of 2023, not many project-supported groups have reached the stage of signing a formal contract with their buyers. The field mission, however, found two collective contracts/transactions:

1. The Paksong Tea Cooperative signed an informal contract with two companies and three or four shops for supplying tea products. The contract mentions the agreed price, but does not specify the volume. It is called an “informal contract” because the Cooperative has only received an operating license from the Provincial Agriculture Department, but has not yet registered at the Department of Industry and Commerce and has no official stamp. Since the Cooperative is still young and underdeveloped, members can freely sell any amount to the Cooperative, as they are informed regularly about buying prices.
2. According to the head of the production group under the CPC in Ban Nongchua, the CPC headquarters and the Nongchua production group have an agreement on the annual production quota per production year. The Nongchua group also has contracts with individual members concerning the volume of red cherries they will contribute. There are two rounds of estimation that the village CPC will need to check and report to the CPC headquarters. Normally, the production volume will be adjusted after the second round of estimation and taken as the final figure. Coffee prices will be announced annually. During harvesting, farmers who deliver red cherries to the miller will receive a written receipt signed by the receiver, the supplier and an auditor.

Annex 7. Agricultural subsectors where workers are more vulnerable or face decent work deficits according to various stakeholders, by district

Suggested by	District		
	Paksong	**Thateng**	**Laongam**
LCA	Banana, vegetables, passion fruit	–	–
ARC	–	Cassava, rubber processing	–
Paksong Tea Cooperative	Pepper group (established this year)	–	–
SSO	Plantation workers	Cassava	–
PFTU	Plantation workers	Rubber processing plantation	Cabbage, durian
DFTU	Vegetables	Cassava, rubber processing	Rubber processing, cassava, vegetables

– = No subsectors cited for this district.

Annex 8. Proxy indicators in project log-frame

Results chain	Log-frame indicator (version 3 March 2024)	Tracked group				All samples in endline study (2024)				
		Proxy indicator	Baseline study (2022)	Endline study (2024)	EL–BL	Proxy indicator		Participants	Non-participants	P–NP
Overall objective: Workers, particularly informal workers and women, in the Lao coffee and tea sectors have improved access to social protection coverage and occupational safety and health, realizing their respective labour rights.	**I1.** Number of additional workers in three districts of Bolaven Plateau registered with LSSO.	P1.1. Increased percentage of tea and coffee farmers with active social security cards	–	27%	+27%	P1.2 Higher percentage of tea and coffee farmers with social security cards among project participants	Both sexes	11%	4%	+7%
							Female	15%	6%	+9%
							Male	6%	2%	+4%
	I2. Number of additional people in target districts of Bolaven Plateau with increased understanding of NSSF, OSH and gender issues.	P2.1 Increased percentage of tea and coffee farmers with understanding of social security (basic and advanced)	10%	39%	+29%	P2.2 Higher percentage of tea and coffee farmers with understanding of social security (both basic & advanced levels) among project participants	Both sexes	65%	10%	+55%
							Female	60%	11%	+49%
							Male	72%	7%	+65%
		P3.1 Increased percentage of tea and coffee farmers with access to OSH information	41%	86%	+45%	P3.2 Higher percentage of tea and coffee farmers with access to OSH information among project participants	Both sexes	73%	4%	+69%
							Female	74%	1%	+73%
							Male	72%	9%	+63%
		All samples								
		P4. Decrease in gender gap in tea and coffee farmer attendance at social security promotional activities	Male: 25% Female: 13% Gap: 12%	Male: 55% Female: 46% Gap: 9%	-3%					

		P5. Decrease in gender gap in tea and coffee farmer attendance at OSH training activities	Male: 34% Female: 21% Gap: 13%	Male: 44% Female: 37% Gap: 7%	-6%					

	Administrative data developed by project					Studies			
Results chain	**Log-frame Indicator**	**Baseline**	**Current value**	**Target (Endline)**	**Source**	**Proxy indicator**	**Baseline study (2022)**	**Endline study (2024)**	**Source**
Specific objective 1. Extended and improved social protection and OSH delivery system and services at district level for women and men workers in the coffee and tea sectors.	**I3.** Number of improvements in service delivery implemented or piloted at the district level.	– (July 2022)	3	3	Project monitoring reports	P6. Number of social security mobile service systems piloted and ready for replication bringing service to unserved areas on the Bolaven Plateau.	–	3	Interview of provincial and district SSOs
						P7. Number of OSH training manuals reviewed and updated to address risks associated with current tea and coffee production and processing practices, including chemical use and mechanization.	–	1	Interview of ARC master trainer
						P8. Number of local authorities on the Bolaven Plateau trained and confident to deliver OSH training to farmers using updated manuals with real-life examples, complementing ARC.	–	1	Interview of provincial and district FTUs
Specific objective 2. Women and men workers in the coffee and tea sectors in three contiguous districts of the Bolaven Plateau of Lao PDR are organized and empowered to promote and protect their labour rights.	**I4.** Number of organized groups in three districts of Bolaven Plateau.	51 (July 2022)	72	70	LFTU, LCA & TA records	P9. Number of tea farmer production groups on the Bolaven Plateau upgraded, formalized and operational in terms of collective bargaining.	–	1	Interview of Paksong Tea Cooperative
						P10. Number of new tea and coffee farmer groups established on the Bolaven Plateau.	–	At least 18	Provided by project team
						P11. Number of tea and coffee farmer groups on the Bolaven Plateau strengthened or improved between 2022 and 2024.	–	At least 3	Provided by project team

– = nil; n/a = not applicable; Lao PDR = Lao People's Democratic Republic

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