Climate Smart Irrigated Agriculture Project

Annual Report—2024

For improving the productivity and climate resilience of agriculture in the climatically most vulnerable areas of eleven districts in Sri Lanka through increased adaptation of climate-resilient agricultural practices and technologies, improved agricultural productivity, and increased access to markets in targeted smallholder farming communities.

Climate Smart Irrigated Agriculture Project
Ministry of Agriculture, Livestock, Lands and Irrigation
Funded by the World Bank

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Acronyms

ASC	Agrarian Service Center
AW&D	Alternative Wetting and Drying
AWPB	Annual Work Plan and Budget
CERC	Contingent Emergency Response Component
CMC	Cascade Management Committee
CSA	Climate Smart Agriculture
CSIAP	Climate Smart Irrigated Agriculture Project
DSD	Divisional Secretariat Division
EP	Eastern Province
ESSR	Environmental Safeguard Screening Reports
FBS	Farmer Business School
FO	Farmer Organization
FPG	Farmer Producer Group
FTS	Farmer Training School
GND	Grama Niladhari Division
GOSL	Government of Sri Lanka
ICT	Information Communication Technology
IEC	Information, Education and Communication
KPI	Key Performance Indicator
MIS	Management Information System
NCP	North-Central Province
NP	Northern Province
NWP	North-Western Province
NSC	National Steering Committee
O&M	Operation and Maintenance
P	Progress
PA	Producer Association
PID	Provincial Irrigation Department
PMU	Project Management Unit
PS	Producer Society
SP	Sourthen Province
T	Target/s
UP	Uva Province
WUE	Water Use Efficiency

1. Basic Information of the Project

Name of the Project	Climate Smart Irrigated Agriculture Project (CSIAP)
Implementing Agency	Ministry of Agriculture
Funding Agency	International Development Agency (IDA)
Source of Fund & Amount – Original (US$)	The World Bank Total – US$ 140 Mn (IDA Credit- US$ 125 Mn, GoSL 10 Mn & Community Contribution 5 Mn)
Source of Fund & Amount – Revised (US$)	The World Bank Total – US$ 125 Mn (IDA Credit- US$ 110 Mn, GoSL 10 Mn & Community Contribution 5 Mn)
Total Project Budget – Based on Designed Exchange Rate	LKR 18,000 Mn (US$ 1= 180 LKR)
Total Project Budget – (present)	Rs. 37,014 Mn. (breakdown is given in the page under financial information)
Date of Loan Effectiveness	07th March 2019
Date of the Loan Agreement Signed	11th April 2019
Year of Implementation	2024
Project Duration	2019 - 2025
Date of Project Closing	31 December 2025
Total Expenditure as of 30 December 2024 (USD Calculated based on IUFR rate i.e., 1 USD =Rs.300)	Rs. 24,115.14 Mn (Cumulative) *(USD 82 Mn.)* Rs. 6008.82Mn (Annual- 2024)
Project Direct Beneficiaries	70,000 Farm Families (App.)
Total Targeted Project Beneficiaries	470,000 Individuals
Area to be Covered	375,000 ha
Project Locations	**Province** / **Districts** / **ASCs/GNDs** Northern / Killinochchi, Mullaithivu / 07 / 34 Eastern / Trincomalee, Batticaloa, Ampara / 12 / 66 North Central / Aniuradhapura, Polonnaruwa / 10 / 33 North-Western / Kurunegala, Puttalam / 11 / 75 Southern / Hambanthota / 04 / 22 Uva / Monaragala / 03 / 28
Project Director (PD)	Mr. S M Saman Bandulasena
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2. Executive Summary

Climate Smart Irrigated Agriculture Project (CSIAP) is implemented by the Project Implementation Unit (PMU) established under the Ministry of Agriculture with the financial support of the World Bank. The project has initially been planned for a period starting from year 2019 to end by June 2024. The project implementation period has been changed to with reallocation of withhold USD 25 million by 18 months, thus changing the ending date on 31 December 2025.

The original targeted estimated cost for the project was USD 140 Mn. But in different stages of implementation, there were some revision to the project cost and, at an initial stage, USD 15 Mn. had been cancelled and the project cost was reduced to USD 125 Mn. Again USD 25 Mn. was withhold and project cost was USD 100 Mn. But, an extension for the project was granted for further 18 months from 30 June 2024 to end by 31 December 2025, reallocating USD 25 Mn. again, to the project. Accordingly, the present project cost is USD 125 Mn.

The achieved results under the Project Development Objective of the project as of the end 2024 is given in the updated results framework annexed hereto as the ***Annexure –1***, which indicates the achievement of outcome and output indicators of the project. The cumulative physical progress as of end 2024 shows 76% out of the yearend cumulative target of 80%. The annual financial allocation for 2024 was Rs. 11,800 Mn. But the project had to advance Rs.1520 Mn. for the settlement of bills on 2023 implementation work thus having the annual allocation of Rs. 10,280 Mn. for the year 2024. Out of the allocated amount project could expend only Rs.6008.02mn. showing the annual financial progress as 58%. Cumulative financial progress is Rs. 24,115.14 Mn., out of the allocation of Rs.35,514 Mn (without community contribution), thus showing a cumulative progress of 68%. In addition, the project has the community contribution of Rs. Mn. 1291 as of end 2024.

Under the Agriculture Production and Marketing component, total number of project beneficiaries who were provided with agriculture assets or services up to the end of 2024 is 66039. Over 90,000 farmer beneficiaries participated in Climate Smart Agriculture (CSA) related trainings. The number of lead farmers trained in Thirappane Farmer Training School (FTS) has been increased up to 2163 from 97 programs, covering 1274 males and 889 females, showing 40% of women participation. In promoting Agri business and marketing activities, 159 trainers (113 AIs and 46 AFs) were trained, for the purpose of giving trainings to the selected 22,000 farmers. The trainings are continuing and 7047 farmers have completed training while 6365 are in the training under different stage of modules. The project targeted to complete 75kms of agri-roads for easy access to main roads for famers to transport their agriculture products and, 57 kms lengths of roads have now been rehabilitated. 1149 agro-wells have

been rehabilitated and farmers engaged in cultivation under the agro-wells mainly focusing on vegetables, green chilies, onion and OFC. Under the Institutional development of the project, 572 Producer Societies (PSs) and 45 Producer Associations (PAs) have been formed. The project supports the PAs to make market linkages with recognized marketing entrepreneurs to sell their agriculture products thus supporting them to improve their bargaining power.

Rehabilitation of irrigation schemes shows a better progress by completing 451 irrigation systems out of the agreed 476 systems for rehabilitation. With the project extension with additional fund of USD 25 Mn., 179 additional irrigation systems have been identified for rehabilitation, that are due to be completed by end of 2025. Procurement process is being going on at the reporting period. For better operation and maintenance and the sustainability of the project interventions, the project supports formation of Cascade Management Committees (CMCs), Preparation and implementation of Cascade Management Plans (CMP), Strengthening of Farmer Organization on better water management and cascade management and Strengthening of Producer Associations and Producer societies. Accordingly, 61 CMCs have been formed and awareness and trainings on importance of CMCs and preparation of CMPs were conducted by the IDCB unit of the project. Cascade Management Plans are developed based on the information gathered through cascade profiles prepared by conducting transect walks covering six project provinces with the participation of relevant stakeholders. Up to the end of 2024, 29 plans have been developed. First round trainings for Farmer Organizations on Water Management in 11 project districts have been completed at the end of 2024 and more trainings have been planned for 2025.

Environment and Social Safeguard activities are in progress. At the end of 2024, 279 screening reports (175 + 104 newly identified tanks) have been produced for all project interventions. With the target of catchment area management, a tree planting program is being conducted and around 18,000 trees were planted as to re-forestation, agri-forestation, establishment of wind barriers, Kattakaduwa development and compensated tree planting. Grievance Redress Mechanism is being implemented where 279 grievances have been reported and 263 have been resolved, while 8 are pending for resolving. Establishment of crop protection seasonal electric fences was introduced and at the end of 2024, around 700kms. length of fences has been erected on requirements.

Information, Educational and Communication (ICE) is an on-going activity and 2172 ICE programs have been conducted out of planned 2176 programs. Project web updating is being carried out continuously covering all project interventions. Five social media links are being maintained to publish project activities. A Management Information System has been established and data feeding to the system is being carried out by the respective subject matter teams.

Under the Monitoring and Evaluation(M&E) of the project, monitoring visits have been conducted in each province by the M&E team. Field observations and best practices in the provinces have accordingly been reported and shared with the Specialists team for necessary attention. Subject Specialists are conducting regular meetings with the respective provincial staff on their subject areas and monitor the progress. Online and physical participated sessions for relevant officers were conducted on filed monitoring and reporting, data collection and analyzing, writing success storing as one-page document, using kobo toolbox for data collection, use of mobile application for data feeding etc.

For the smooth functioning of the project, regular implementation support missions are conducted and up to end of 2024, 12 such missions have been conducted. During the year two successful supervision missions were conducted to measure the performance and guide on implementation gaps. In addition, monthly progress review meetings headed by the Secretary MoA have been conducted and furthermore, Provincial and National Steering Committee Meetings were conducted to discuss on the project progress and the policy level matters. The project has been identified under satisfactorily implemented project, at the DPMM project evaluations. Regular reporting to Ministry, Treasury (DPMM) and World Bank have been completed on monthly, quarterly and annual basis.

3. Project Background

The Climate Smart Irrigated Agriculture Project (CSIAP) is implemented by the Ministry of Agriculture under the World bank credit facility. The revised total project investment is USD 125 million, which includes the Government of Sri Lanka (GOSL) funded USD 10 million, and the beneficiary contributed USD 5 million.

The Project Development Objective (PDO) of the CSIAP is to improve the productivity and climate resilience of smallholder agriculture in the climatically most vulnerable areas of eleven districts in Sri Lanka. This objective will be achieved through increased adaptation of climate-resilient agricultural practices and technologies, improved agricultural productivity, and increased access to markets in targeted smallholder farming communities. The Increase in water productivity at the farm level, increase in the agricultural productivity of crops, increase of the catchment area with water conservation practices, and increase in crop diversification practices are other specific objectives of the project. Achievement of the project objective will also achieve the Sustainable Development Goal 13 (SDG-13) and its targets that is "*take urgent action to combat climate change and its impacts*".

The project beneficiaries will be over 470,000 smallholder farmers who have below 2 ha. of farmlands in 11 hotspot areas with 375,000 ha. in 11 administrative districts namely Kilinochchi, Mullaitivu, (NP) Anuradhapura, Polonnaruwa, (NCP) Puttalam, Kurunegala, (NWP), Trincomalee, Batticaloa, Ampara, (EP) Hambantota(SP) and Monaragala (UVA) districts.

Project interventions are implemented through three project components namely (a) Improving agriculture productivity by promoting climate-smart farming and developing marketing and market infrastructures with value chains (b) stabilizing water for agriculture through rehabilitation of catchments, tanks, and water infrastructures, and (c) project management, monitoring, and evaluation to ensure achieving the PDO. The project management is structured to obtain support from Provincial Chief Secretaries, Provincial Departments of Irrigation, Provincial Departments of Agriculture, and Assistant Commissioners of the Department of Agrarian Services operated at the Regional Level. The implementation of project activities at the district level is supported by District Administrations and Divisional Secretariat Divisions (DSDs) and village level by Grama Niladhari Divisions (GNDs). At the project design phase, it has been identified 'Hotspot Areas' that are most vulnerable to climate events. These areas are subjected to the increased frequency and severity of climate events. The initially planned 961 tanks for rehabilitation during the tenure of the project period, has been changed to 476 tanks with then available project fund of USD 100 Mn, that had to be completed by end June 2024. With the implementation period was extended up to end December 2025 with additional fund of USD 25 Mn. additional 179 irrigation systems were identified for rehabilitation thus increasing the number of tanks up to 655.

4. Project Components

The project is planned to be implemented under four main components.

Component 1: Agriculture Production and Marketing

This component aims to improve agriculture productivity and diversification through adopting Climate-Smart Agriculture (CSA) practices and improved on-farm water management. This component consists of the following two sub-components.

Sub-Component 1.1: Climate-Smart Agriculture & Water Technology

This subcomponent will support the adoption of CSA and will focus on demonstrating the effectiveness of CSA practices in farmers' fields through Farmer Business Schools (FBSs). Further is supported for leveraging information and communication technology and supporting the uptake of CSA practices by establishing Farmer Producer Groups (FPGs).

Sub-Component 1.2: Marketing

This subcomponent aims to strengthen the links between FPGs, and the agriculture commodity markets by upgrading and/or rehabilitating critical market infrastructure. Moreover, it's supporting farmers to access markets and develop sustainable links to agribusinesses. The common infrastructure for agri-commodity marketing (markets, storage, and access roads) and the construction and/or upgrading of Common Service Centers.

Component 2: Water for Agriculture

The objectives of this component are to facilitate the planning for water and other infrastructure necessary to support climate-resilient irrigated agriculture, the construction of the planned infrastructure, and the co-management of this infrastructure by central/provincial governments and the local community. This component has the following two subcomponents.

Sub-Component 2.1: Rehabilitation of Irrigation Systems

This subcomponent is financed to rehabilitate the irrigation systems based on plans derived from hydrologic modeling accounting for projected climate change in the project areas. This subcomponent assists in the rehabilitation of irrigation systems based on plans derived from hydrologic modeling accounting for projected climate change in the project areas. Moreover, the development of mini-watersheds within the hotspot areas (about 4,000 ha), including tank cascade systems, stand-alone irrigation systems, rain-fed agriculture systems, and local administrative levels.

Sub-Component 2.2: Operation and Maintenance of Irrigation Systems

This subcomponent aims to ensure the sustainable Operation and Maintenance (O&M) of tank systems at the individual tank level and system wide. The establishment of Cascade

Management Committees (CMCs) for each of the cascades of minor irrigation tanks within the watershed-based boundary of the hotspot areas is the major activity of this sub-component.

Component 3: Project Management (Finance – US$ 5.7 Mn)

This component aims to ensure the quality of overall project management while ensuring smooth coordination of activity implementation by various agencies and strategic partners at national and sub-national levels. For Information, Education, and Communication (ICE) campaigns, conducting of all project Monitoring and Evaluation activities and Safeguard activities are conducted under this component.

Component 4: Contingent Emergency Response (US$ 15 Mn)

Contingent Emergency Response Component (CERC) is allowed for the rapid reallocation of project proceeds in the event of a natural disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact. In response to the Covid-19 pandemic, USD 15 million from CSIAP was put into 'CERC pool'. This component is supported agriculture production and ensures food security during the pandemic. Accordingly, the finance of this component is given to the supply of seeds.

5. Project Beneficiaries

The primary project beneficiaries will be over 470,000 smallholder farmers in hotspot areas (375,000 ha) in 11 administrative districts spread across six provinces in the dry zone of Sri Lanka. Smallholder farmers consist of small farmers (1.0–2.0 ha of farmland) and marginal farmers (less than 1.0 ha). They will gain knowledge and technology transfer and access to infrastructure assets to enhance climate resilience in farming resulting in increased revenue from crop diversification and participation in emerging value chains. Many technical and managerial staff of the participating agencies will benefit through training and capacity-building activities. The project will also promote the participation of youth and women in all key project interventions to ensure that they would benefit from the project activities. These districts have been selected based on its climatically vulnerable hot spot areas through a rigorous data-based approach, which was a collaborative exercise between the Sri Lanka Unit of the World Food Program (WFP) housed in the Ministry of Disaster Management, the International Water Management Institute (IWMI) and the Department of Agrarian Development.

6. Project Outcomes

Five (05) outcome level Key Performance Indicators (KPIs) have been set up at the project design phase to assess the Project Development Objective.

- KPI 1: Cropping Intensity (%)
- KPI 2: Share of non-paddy crops in the command area (Crop Diversification) (%)
- KPI 3: Area under improved Climate Smart Agricylture (CSA) practices (ha)
- KPI 4: Direct project beneficiaries (total number)
- KPI 5: Direct project beneficiaries (female number)

7. Project Implementation

The Project is implemented for over six years (2019-2025). The overall project implementation is the responsibility of the Ministry of Agriculture with the implementation support of PMU. The participating departments will carry out the project activities within their mandates, but coordinated by provincial DPD offices, with district units established at the Department of Agriculture (DoA)/Provincial Irrigation Department (PID)/Assistant Commissioner Agrarian Development (ACAD) offices and 47 divisional units established at Agrarian Service Centres (ASCs). At provincial level, project implementation is carried out by the provincial level project management units established in six provinces. The entire project implementation is under the supervision and management of the Project Management Unit (PMU), the entity that takes the overall responsibility of implementing the project to achieve its desired objectives as planned which is under the purview of Ministry of Agriculture. Project implementation is carried out under the policy guidance and directives of the National Steering Committee (NSC), which comprises of senior officials of major stakeholder agencies including the private sector and the beneficiary communities and having conducted regular meetings. Project implementation is also observed and supervised through the World Bank implementation support and review missions that are conducted in regular basis.

8. Project Performances

8.1 Achievement of Key Performance Indicators

At the end of 2024, the project has come up with achieving the set up targets of key performance indicators set up for project development objective, as to the below given table-1. In addition, the Annexure-1 gives the whole picture of achievement of results framework with key performance indicators and the intermediate results indicators.

Table 1: Achievement of Key Performance Indicators

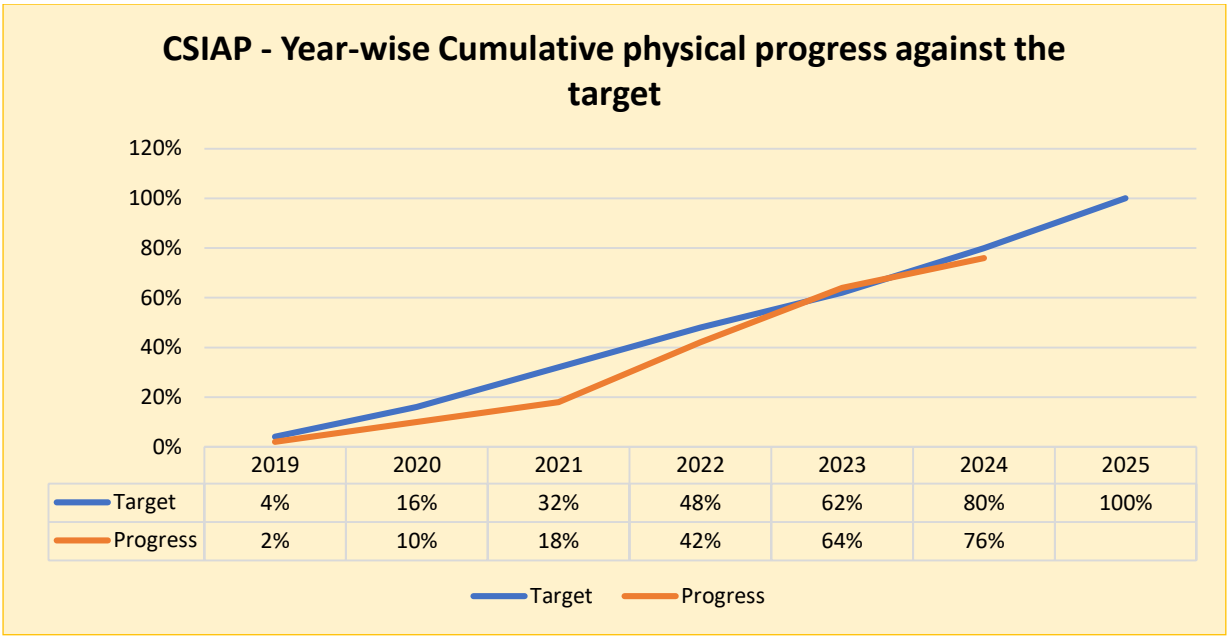
PDO Level Indicator	End Project Target	As of end of 2024
Cropping intensity (%)	150%	148%
Share of non-paddy crops in the command area (Crop-diversification) (%)	50%	43.0%
Area under improved CSA practices (ha)	50,000	49,000
Direct project beneficiaries (Total No.)	470,000	365,471
Direct project beneficiaries (Female No.)	150,000	160,807

8.2 Year-wise progress against the target from 2019 to 2024

In 2019, project mainly engaged in institutional development, recruitment of key staff and designing the project activities. The project progress affected severely once the staring of its implementation during the year 2020 – 2021, due to the Covid-19 pandemic situation, shortage of fuel, high fuel prices, and price hikes of goods etc., which are beyond the control.

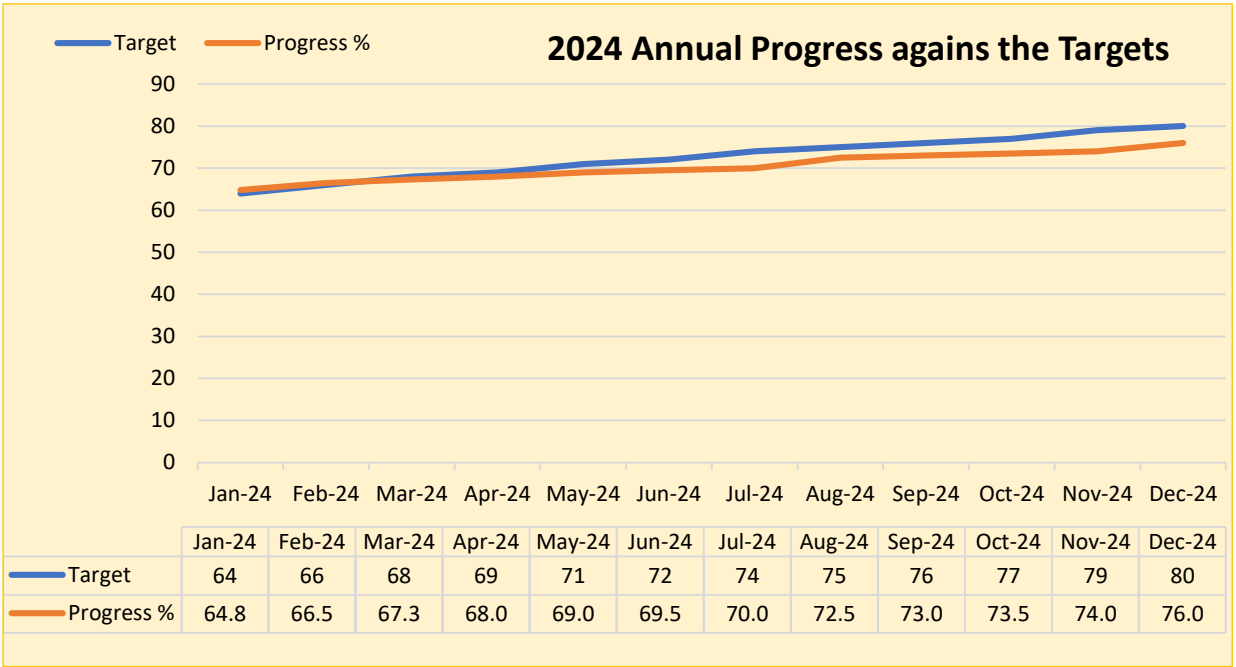
But after 2022, the progress started increasing gradually as shown in the below given graph. Year 2023 illustrated a remarkable good progress with expediting the tank rehabilitation in parallel to implementing more activities under CSA practices. In 2024, compared to the 2023, there seems a decline of progress, because of the unpredictable bad weather conditions, that affected severely for the construction work and the seasonal cultivation. But, the project could avoid some such disasters in cultivation because the beneficiaries used to practice climate smart practices such as agronomical improvements in many areas.

The graph below shows the year-wise achievement of the project activities from 2019 to end December 2024.



Graph 1: Annual cumulative progress against the targets

8.3 Progress Achieved in the year 2024



Graph 2: 2024 - Annual progress against the target

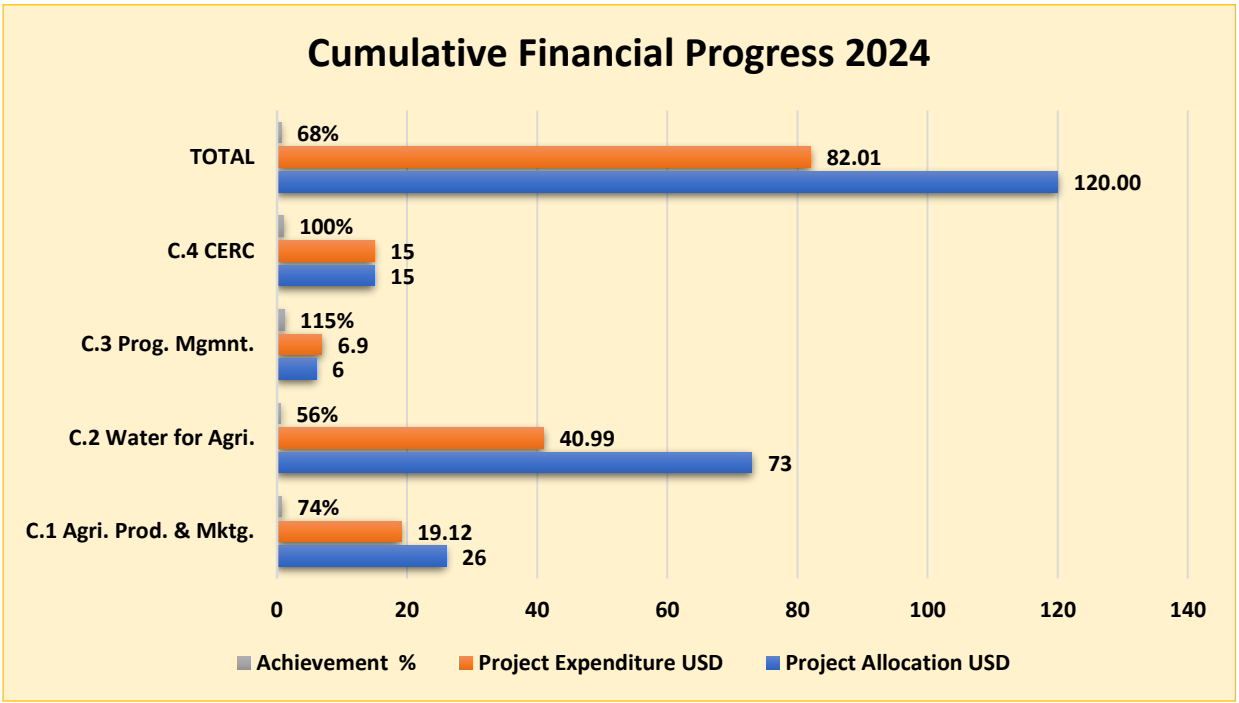
8.4 Financial Progress

8.4.1 Cumulative Financial Progress as of end 2024

The cumulative financial progress of the project as of end 2024 is illustrated in the below table. Accordingly, financial achievement was 68%. In identification of new 179 irrigation systems for rehabilitation and, other agricultural activities, project expects to spend the balance funds during the year 2025, and according the action plan for 2025 will be prepared.

Table 2: Cumulative Financial progress as of year end 2024

Cumulative Financial Progress of the Project as end of 2024					
Component	**Allocation**		**Expenditure**		**Achieve-ment**
	USD Mn.	**LKR Mn.**	**USD Mn.**	**LKR Mn.**	
1 Agriculture Production & Marketing	26	7,800.00	19.12	5,736.13	74%
2 Water for Agriculture	73	21,900.00	40.99	12,295.81	56%
3 Program Management	6	1,800.00	6.90	2,068.13	115%
4 Contingent Emergency Response	15	4,014.00	15.00	4,014.27	100%
Total -Without Community Contribution	**120**	**35,514.00**	**82.01**	**24,115.14**	68%
Community Contribution	5	1,500.00			
Total - With Community Contribution	**125**	**37,014.00**			



Graph 3: Cumulative financial progress of the project - end 2024

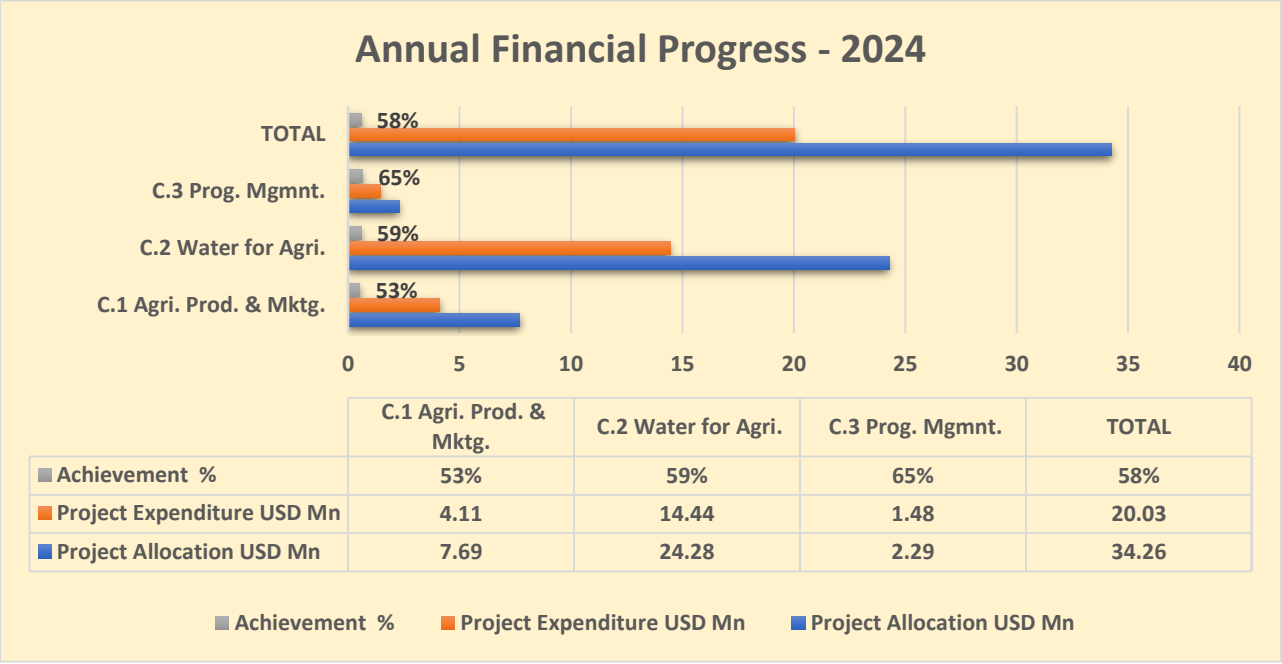
8.4.2 Annual Financial Progress for the year 2024

The annual financial progress of the project showed as 58% while the year-end cumulative financial progress is 68%. The project was able to spend only Rs. 6008.82 Mn. (USD 20.03 Mn.) out of the annual revised allocation of Rs. 10,280 Mn. (USD 34.27 Mn.). The unpredictable bad weather conditions, that affected severely for the construction work and the delays in settlement of final bills of the completed construction works caused to the less achievement in finance during the year. The table below shows the financial achievement during the year 2024, as given by the Financial Unit of the project.

Table 3: Annual Financial progress 2024

Annual Financial Progress of the Project at the end of 2024 (USD 1 = Rs 300)					
Component	**Allocation**		**Expenditure**		**Achieve-ment**
	USD Mn.	**LKR Mn.**	**USD Mn.**	**LKR Mn.**	
1 Agriculture Production & Marketing	7.69	2,307.67	4.11	1232.56	53%
2 Water for Agriculture	24.28	7,284.62	14.44	4331.26	59%
3 Program Management	2.29	687.71	1.48	445.00	65%
4 Contingent Emergency Response	0	0	0.00	0	
Total -Without Community Contribution	**34.26**	**10,280**	20.03	6008.82	58.5%

Source: Finance Division progress report.



Graph 4: Annual Financial Progress - 2024

8.4.3 Community Contribution

The Total Project Cost involves the beneficiary contribution as a part of the cost. It distributes for component 1 and component two initially as 1:4. Basically, beneficiary contribution means forgo or opportunity cost of the farmers who engage in the project-related activities. It is also said that community contribution is the scope of participation for common people in decision making in management, supervision of many development activities.

The project portion of the total cost for beneficiary contribution is USD 5 Mn. As to the local currency it is calculated to Rs. Mn. 1500. (USD 1 = Rs. 300). The CSIAP considers the categories of participation for Survey and studies (Ex: Baseline, PRA, Engineering, Hydrological, Social, Gender, and Environmental Assessment, etc.), participation for ICE &ICT campaign (awareness), active participation of beneficiaries to the meetings, (E.g.: beneficiary selection for the subproject implementation), contribution for the Social Audit Committees, active participation in the training programs (CSA Practices, CSA technology, FTS, FBS, IPM, Water Management, gender mainstreaming, HEC, etc.), Shramadhana activities related to cascade and infrastructure development and management, contribution for in kind of materials for the project development activities etc. In addition, beneficiary contribution is collected as 20% - 25% for agriculture inputs such as seeds and materials, equipment such as sprinklers, electric pumps, solar pumps etc. that are directly provided to the beneficiaries. For providing support for rehabilitation of agro-wells 50% contribution has to bear by the beneficiary.

The calculated contribution as of end 2024 is given in the below table.

Table 4: Community Contribution as of end 2024

Province	2023	2024	Total
EP	257.65	96.29	353.94
NP	50.52	145.09	195.61
NCP	277.00	68.65	345.65
NWP	109.70	63.44	173.14
SP	71.87	39.75	111.62
UP	58.83	42.01	100.84
PMU	10.54	0	10.54
Total	**836.11**	**455.23**	**1291.34**

Source: Finance Division report.

8.5 Progress of Component-1: Agriculture Production and Marketing

Agriculture production and Marketing Component implements in two sub-components as described above under the paragraph of project components, as Agriculture Production and Agriculture Marketing.

8.5.1 Agriculture Production

Agriculture Production sub component focuses on CSA training, adopting CSA practices and technology, youth development program, seasonal cultivation (Yala, Maha and Inter-season) using CSA practices, crop production, diversity, cropping intensity, home garden development etc. Each of these activities are described separately.

8.5.1.1 Climate Smart Agriculture (CSA) Training

It is crucial to provide farmers with training and knowledge about CSA practices and the benefits since they have been practicing their own traditional practices for cultivation and also it is not easy to change their minds with their own attitudes. However, the extension services and education programs conducted by the project would help to disseminate information and build the capacity of farmers on CSA practices. Community-based adaptation has been promoted through capacity building programs and it encourages farmers to work collectively at the community level to share knowledge, resources, and experiences in adapting to climate change. Training programs should be interactive, practical, and tailored to the specific needs of the target audience and the local context. It's essential to provide ongoing support, resources, and access to information to ensure the successful adoption of climate-smart agricultural practices and the project is being implemented to fulfill that requirement.

CSA related training also plays a crucial role in equipping farmers and agricultural stakeholders with the necessary knowledge and skills to adopt sustainable and climate-resilient practices. By promoting these practices, training contributes to building agricultural systems that can adopt to climate change while minimizing environmental impacts. CSA practices normally refer to agricultural techniques and approaches that aim to enhance productivity, increase resilience to climate change, and reduce greenhouse gas emissions. CSA related training focuses on educating farmers, agricultural professionals, and stakeholders about these practices and how to implement them effectively. Under this intervention, basically the conservation agricultural practices are promoted. Conservation agriculture promotes minimal soil disturbance, permanent soil cover, and crop rotation. It aims to improve soil health, reduce erosion, and enhance water conservation. Training provides guidance on implementing these practices effectively. Moreover, the project is targeted to give technical skills on efficient water management which is crucial for sustainable agriculture. Training focuses on techniques such as drip irrigation, rainwater harvesting, and water-efficient crop selection to reduce water usage

and increase productivity. As an extension of that training, the project is promoting soil fertility management training. This training provides knowledge on soil testing, nutrient management, organic fertilizers, and soil conservation techniques to improve soil fertility, nutrient cycling, and carbon sequestration. Also, climate-resilient crop management trainings are promoted by the project to focus on identifying climate-resilient crop varieties, suitable livestock breeds, and management practices that can withstand climate variability and extreme weather events. Recently, an Integrated Pest Management (IPM) plan was developed by the project and in future training related to IPM is planned to be conducted in every ASC. This training will cover the awareness of combining multiple pest control approaches to minimize pesticide use and environmental impact. Trainings cover pest identification, biological control, crop rotation, and cultural practices to manage pests effectively. The project provides agroforestry related training, and this involves integrating trees, crops, and/or livestock on the same land, providing multiple benefits such as carbon sequestration, soil conservation, and diversified income streams. Trainings cover tree selection, planting techniques, and management practices.

There are two specific types of training on CSA that need to be conducted to fulfill the training requirement of the project. Farmer field schools provide hands-on training and knowledge-sharing platforms where farmers learn from experts and exchange experiences with peers. These schools cover a range of CSA practices, empowering farmers to implement sustainable and climate-resilient techniques. This requirement is fulfilled by the training conducted at Thirappane Farmer Training School (FTS) and skills in policy & finance is given by the Farmer Business School (FBS) conducted under the sub-component 1.2. The policy and financial related trainings are more focused on policy frameworks, financial mechanisms, and incentives available for supporting CSA practices. Participants gain insights into accessing funds, subsidies, and other support systems for implementing climate-smart agricultural approaches. Accordingly, 2,957 training programs have been conducted with the participation of 91,335 beneficiaries. The provincial wise training programs conducted with the number of participants are given in the table below.

Table 5: Provincial wise CSA trainings with participation

Province	No. of Programs Conducted			No. of farmers Participated		
	As of end 2023	In 2024	As of end 2024	As of end 2023	In 2024	As of end 2024
EP	236	134	370	8,328	3386	11,714
NP	264	92	356	6,371	2219	8,590
NCP	1,053	100	1153	33,161	4096	37,257
NWP	351	29	380	13,997	1052	15,049
SP	213	38	251	4,725	729	5,454
UP	353	94	447	10,969	2302	13,271
Total	**2,470**	**487**	**2957**	**77,551**	**13784**	**91,335**

(Source of information: Progress Report from CSA Unit as of end December 2024)

Plate 1: CSA related trainings on compost in NCP

Plate 2: Training on Seasonal cultivation - NWP

8.5.1.2 Thirappane Farmer Training School (FTS)

Farmer Training School established at Thirappane commenced functioning in January 2023, which has been planned mainly to train Agriculture Instructors (AIs) attached to the Department of Agriculture and Provincial Departments of Agriculture and Lead Farmers from the Farmer Organizations on CSA practices. This is the first ever such training school established in the South Asia region.

With the establishment of FTS, the initial training plan was to conduct 72 training sessions (25 trainees per session) for 1800 farmers and officers to completed by mid June 2024. But with the extension of project implementation period, the target was changed to 3500 beneficiaries to train in around 140 programs. Subsequently, the project aims to impart their knowledge and skills on CSA practices to village-level potential farmers to respond to the adverse climate impacts in their villages. In addition, the project mobilizes trained lead farmers to organize training activities and disseminate knowledge on CSA practices among peer groups. The gained knowledge at the trainings can be shared at community level meeting such as Farmer Organization (FO) meetings, and other filled level gatherings and at their field work. Out of the planned programs of 140 programs for the entire project period 97 programs (69%) have been completed by giving trainings for 2163 lead farmers (1274 males and 889 females) as trainers. Out of the total participation for trainings, 41% is female. At the training both theoretical and practical training is given to the trainee farmer leaders by emphasizing the importance of CSA related trainings. At the end of trainings, it is expected these trained farmers will share the knowledge and experiences gained from the trainings with the peer farming groups in their villages. Basic training evaluation has been carried out by the M&E Unit of CSIAP and further post evaluation study will be done in future.

The table below illustrates the provincial wise training programs conducted from the beginning to the end of the year 2024.

Table 6: Trainings conducted Thirappane FTS up to end December 2023

Province	No. of Programs Conducted	Participants	Male	Female
EP	22	494	275	219
NP	16	356	213	143
NCP	16	346	209	137
NWP	24	513	325	188
SP	7	199	106	93
UP	7	167	88	79
Other/ ToTs	4	88	58	30
TOTAL	97	2163	1274	889

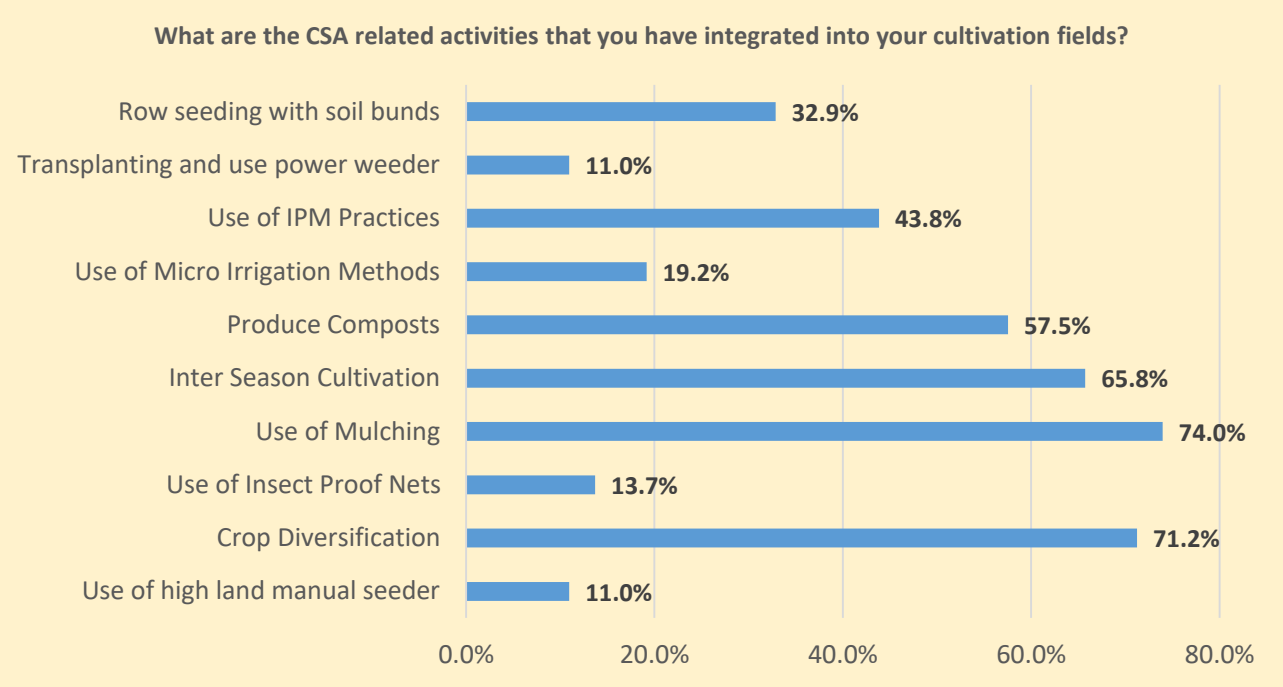
(Source of information: Progress Report from FTS Thirappane as of end December)

Plate 3: Practical Training at FTS Thirappane

8.5.1.3 Evaluation on Farmer Training School Trainings

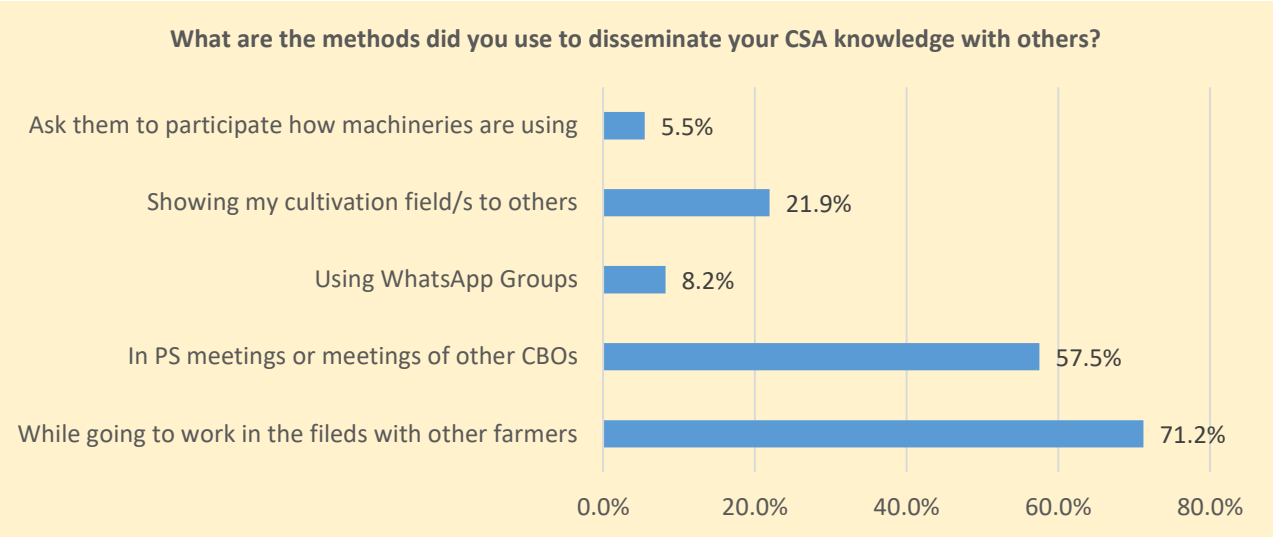
Under the periodical evaluation conducted by the M&E Unit, responded questions under FTS trainings have been analyzed as follows.

A question on CSA related interventions the farmers integrated in their field in given in the below figure. It illustrates that Use of Mulching, crop diversification, Inter-season cultivation and compost production are the prioritized interventions the majority of farmers were in practice.



Graph 5: Use of the knowledge & experience gained from FTS Training

Under the question of methods used by farmers to disseminate the gained knowledge illustrates as follows.



Graph 6: FTS training knowledge sharing methods

8.5.1.4 Achievement of CSA Technologies and Practices

Promoting Climate Smart Agriculture technologies and practices is another key area under the sub-component 1.1 - Agriculture production. Farmers have been given awareness and trainings on CSA technologies and practices along with the other assistance by providing required equipment, seeds etc.

that are to be practiced by them in their cultivation fields. The below table illustrates the extent (ha) covered (cumulatively) under the identified key six CSA practices and number of beneficiaries (cumulative) engaged in. Project target of covering 50,000 is covered (100%) at the end of 2024.

Table 7: Achievement on CSA practices

Climate Smart Agriculture Practices	Target Ext (ha)	Extent covered as of end 2023 (ha)	Extent covered as of end 2024 (ha)	Beneficiaries (Nos) 2023	Beneficiaries (Nos) 2024
(1) Crop Diversification	6500	4940.50	7222.50	3904	7133
(2) Micro Irrigation	1000	612.22	714.92	3298	3867
(3) Seed Production	3000	2103.33	2863.13	7675	10652
(4) Inter Season Cultivation	5000	4263.10	5263.18	13043	15483
(5) CS Home Garden Development	7000	6603.90	6603.90	66039	66039
(6) Agronomic Interventions	27500	25449.74	27,394.04	70872	79289
Total	50000	**43972.79**	**50,061.67**	**66039**	**66039**

Source: CSA progress report as of end December 2024

8.5.1.5 Micro-Irrigation

Micro irrigation is an advanced irrigation method that delivers water directly to the roots of plants in small, frequent, and precise amounts. In micro irrigation systems, water is delivered at or near the plant's root zone, minimizing evaporation, runoff, and water wastage. This targeted approach ensures that water reaches the plants' roots efficiently, providing them with the necessary moisture for optimal growth while conserving water resources. CSIAP is promoted mainly **Sprinkler and Drip Irrigation** techniques and **rain hose** cultivation methods under this CSA practice to build resilient against the climate changes in hot-spot areas. These irrigation methodologies can save significant amounts of water compared to traditional irrigation methods. By providing water directly to the plant roots, micro irrigation ensures consistent moisture levels, reducing stress on plants and promoting healthier growth and higher crop yields. Micro irrigation focuses water delivery on the desired plants, minimizing moisture availability to weeds. This can help suppress weed growth and reduce the need for herbicides. The slow and controlled water application of micro irrigation reduces the potential for soil erosion compared to flood irrigation methods.

Micro-irrigation aligns with CSA principles for several reasons such as Water efficiency, Reduced greenhouse gas emissions, Adaptation to climate change, Improved crop resilience and Enhanced food security. Micro-irrigation systems are designed to deliver water directly to the root zone of plants

with minimal wastage. This approach helps conserve water resources, which is essential in the face of changing climate patterns and increasing water scarcity. Moreover, micro-irrigation can provide a more reliable source of water, allowing farmers to adapt to changing and uncertain weather conditions. It's important to note that Climate-Smart Agriculture encompasses a range of practices and strategies designed to help agriculture become more sustainable and resilient in the face of climate challenges. Micro-irrigation is just one component of CSA practices promoted by the project, but it plays a significant role in addressing the environmental and climate-related aspects of agriculture.

Plate 4: Use of Drip Irrigation system and Sprinklers in NP

The project provided Sprinkler Irrigation units, Drip Irrigation units, Micro-jet irrigation units, and Rain Hose for 2950 farmer beneficiaries and they have cultivated 566 ha. under micro irrigation. The table shows the project achievement (land extend in ha.) on micro- irrigation practices, according to the available information.

Table 8: Land extent (in ha.) cultivated under Micro- Irrigation

Province	2019-2022 Sep	2022 Oct - 2023 Mar	2023 Apr - Dec	Total Extent (Ha)	Total Beneficiary coverage	Micro irrigation units provided
EP	56	8	54.2	**118.2**	502	1. Sprinkler irrigation units(1/4 ac), Drip irrigation units (1/4ac),3.Micro jet irrigation units(1/2ac), Sprinkler units(1/2ac), Sprinkler 1 ac units, Rain hose
NP	65	30	75.3	**170.3**	753	
NCP	24	25	98.8	**147.8**	840	
NWP	12	10	72.4	**94.4**	569	
SP	16.02	12.2	51.5	**79.72**	512	
UP	21.8	8	74.7	**104.5**	691	
Total	**194.82**	**93.2**	**426.9**	**714.92**	**3867**	

Source: CSA progress report as of end December 2024

8.5.1.6 Crop Diversification

Crop diversification is a practice of growing a variety of crops within a particular area or farming system instead of relying on a single crop. It involves the deliberate cultivation of different types of plants with varying growth habits, nutritional requirements, and market value. Crop diversification aims to enhance agricultural sustainability, reduce risks, and improve overall farm resilience. It is more important for mitigation of risks, by growing multiple crops, where farmers can reduce their vulnerability to various risks such as pests, diseases, adverse weather conditions, and market fluctuations. Also, different crops have varied nutrient requirements and root structures, leading to improved soil health. crop rotation, a form of diversification, can break pest and disease cycles, prevent soil nutrient depletion, and enhance soil structure and fertility. It is also a good alternative for the management of pests and diseases. Further, crop diversification allows farmers to tap into multiple markets and target diverse consumer demands. This Good Agricultural Practice is a key CSA practice implemented by the CSIAP to increase the climate resilience among its beneficiaries. The different crops have varying tolerance levels to environmental conditions such as temperature, rainfall, and soil types.

Table 9: Crop Diversification - Provincial-wise Achievements

Province	2019-22	2022/23 Maha (Oct-Mar)	2023 Yala (up to Sep)	2023/ 24 Maha (to Dec)	2023 Yala (up to Sep)	2024/ 25 Maha (to Dec)	Total Ext. (ha)	Total Beneficiary coverage
EP	110	67	80	189	323	215	984	1481
NP	90	53	325	10	104	415	997	860
NCP	1020	180	460	230	400	210	2500	2225
NWP	61	466	244	132	80	150	1133	1094
SP	96	400	181	0	30	50	757	553
UP	107	120	150	169	155	150	851	920
Total	**1484**	**1286**	**1440**	**730**	**1092**	**1190**	**4940**	**3904**

Source: CSA progress report as of end December 2024

There are several advantages that could be achieved by practicing the diversification of crops as a Climate Smart Agriculture practice, such as;

- Crops build resilience to climate variability: This can help farmers adapt to changing and often unpredictable climate conditions, including shifts in temperature, precipitation patterns, and the incidence of extreme weather events.

- It reduces the risk of crop failure: By planting a mix of crops, farmers reduce their reliance on a single crop or crop variety.

- Soil health and nutrient management: Healthy soils are better equipped to withstand climate stressors where different crops have varying nutrient requirements and root structures, which can help maintain soil structure, prevent erosion, and reduce the need for chemical fertilizers.

- Farmers are secure in economic sustainability: Especially, the smallholder farmers are more financially stable when they have a mix of crops to sell, reducing their vulnerability to price fluctuations in a single commodity.

Overall, crop diversification is a strategy that enhances the resilience and sustainability of agricultural systems in the face of climate change and variability. By planting a wider variety of crops, smallholder farmers in the selected hotspot areas can better adapt to the evolving challenges presented by shifts in climate and weather patterns recently highlighted in Sri Lanka.

Plate 5 ground nut cultivation under Maize:

8.5.1.7 Inter-Season Cultivation

Inter-season crop cultivation is a practice of growing crops during the off-season or in between the main cropping seasons, Yala and Maha. As a tropical country Sri Lanka has a favorable climate that allows for the cultivation of a variety of crops throughout the year, and inter-season cropping takes advantage of this to maximize agricultural productivity. Moreover, the inter-season cultivation aligns with objectives of climate smart agriculture by utilizing the available growing periods efficiently and adapting to changing climatic conditions. Inter-season cultivation allows farmers to make optimal use of land, water, and other resources throughout the year. By cultivating crops during off-seasons or inter-seasons, farmers can maximize the productivity of their agricultural land and minimize resource wastage. Also, Inter-season crops can help farmers adapt to changing climatic patterns and mitigate climate-related risks. This enhances resilience to water scarcity and ensures continued agricultural production. Further, inter-season cultivation contributes to crop diversification, which reduces the

vulnerability of farmers to single-crop failure or climate-related risks. Growing different crops during different seasons helps spread the risks associated with pests, diseases, and extreme weather events, thereby safeguarding farmers' livelihoods.

Achievement of the project under inter-season cultivation at provincial level is given in the below tables. Table 9 illustrates the cultivated extent in the inter-season, the yield produced and the beneficiaries involved, while Table-10 shows the crop-wise achievement.

Table 10 : Provincial wise Inter-season cultivation progress end 2024

Province	Extent (ha) as to end 2023	Extent (ha) as to end 2024	Production (Mt) as to end 2023	Production (Mt) as to end 2024	Beneficiaries (No.) as to end 2023	Beneficiaries (No.) as to end 2024
EP	554.2	707.4	447.45	678.25	1264	1539
NP	520	604.9	305.6	436.6	1344	1604
NCP	927	1167	806	1006	4052	5032
NWP	444.6	606.6	117.9	184.26	1308	1778
SP	98	178	0	80	245	400
UP	1719.3	1999.3	1339.2	1665.6	4830	5130
Total	**4263.1**	**5263.2**	**3016.15**	**4050.71**	**13043**	**15483**

Source: CSA progress report as of end December 2024

Table 11: crop-wise achievement of inter-season cultivation

Crop	Ext(ha) as of end 2023	Ext(ha) as of end 2024	Production (Mt) as of end 2023	Production (Mt) as of end 2024
Green gram	2719	3682	1762	2690
Cowpea	1169	1199	534	588
Black gram	62	62	72	72
Finger Millet	07	07	03	03
Sesame	122	122	98	98
Red onion	11	18	28	80
Ground nut	74	74	101	101
Sun-hemp	99	99	419	419
Total	**4263**	**5263**	**3016**	**4051**

Source: CSA progress report as of end December 2024

The project uses short-aged OFC varieties to cultivate during the Inter-Seasons. Accordingly, cultivated land extent was 5263ha. with the production of 4051Mt. from which the major Main crops cultivated were Green Gram and Cowpea. Green Gram and Cowpea are the key attentive crops farmers used to cultivate in inter-seasons.

Sri Lanka experiences a southwest monsoon (Yala) from May to August and a northeast monsoon (Maha) from October to January. Inter-season cultivation may involve adapting to variations in temperature, humidity, and rainfall during transitional periods. The selection of suitable crops for the Inter-Season should be more resilient to changes in weather patterns or may have shorter growth cycles, allowing for quicker harvests. Moreover, proper water management is crucial for inter-season cultivation, and it should consider the use of irrigation systems to ensure a consistent water supply for crops. The preparation of soil adequately before planting is mandatory too in inter-season cultivation. This may involve practices such as plowing, harrowing, and adding organic matter to improve soil fertility and the proper soil preparation promotes good root development and overall plant growth. Therefore, the use of good agricultural practices in inter-season is required for soil and moisture conservation. Furthermore, the practice of crop rotation to prevent soil depletion and control pests and diseases could be done during the inter-season cultivation. Alternating the types of crops planted in a specific area can help maintain soil health and reduce the risk of pests and diseases that target specific plants. Finally, understanding market trends and consumer preferences can help farmers make informed decisions about what crops to cultivate during this short-term inter-season period. For that the project is expected to make collaboration with agricultural extension services and research institutions which can provide valuable support and information for successful inter-season farming in Sri Lanka.

8.5.1.8 Climate Smart Agronomic Practices

Agronomic interventions can be combined and tailored to local conditions, cropping systems, and farm types to enhance agricultural sustainability, mitigate climate change impacts, improve farmers' resilience to climate variability, enhance agricultural productivity, promote resilience to climate change, and reduce greenhouse gas emissions. There are key activities implemented in the field such as agronomic interventions by the project and some of the agronomic interventions are listed below.

- Use of mulching
- Use short age varieties
- Promote AW&D technology
- Parachute planting
- Row seeding
- Use mechanized trans-planters
- Apply organic manure (solid /liquid)
- Cultivate in ridges and furrows
- High tech Agriculture (Insect proof nets, Rain shelters, Poly tunnels,)
- IPM practices
- Use of farm machinery (Highland seeders and Backpack inter cultivators etc.)
- Timely cultivation

The land extent of agronomic interventions involved by the farmers at provincial level are given in the table below:

Table 12: Land extent and beneficiary involvement in agronomical interventions

Province	Extent (ha) cultivated as of end 2023	Extent (ha) cultivated as of end 2024	Beneficiary numbers as of end 2023	Beneficiary numbers as of end 2024
EP	4248	4476	11204	12569
NP	2618	2694	8889	9634
NCP	11617	12693	32427	37134
NWP	2848	3127	9235	9913
SP	1560	1613	4221	4528
UP	2559	2791	4896	5511
Total	**25450**	**27394**	**70872**	**79289**

Source: CSA unit progress report 2024

Plate 6: Farmers use agronomic practices at cultivation

Table 13: Extents of lands under Agronomic interventions in the field

Intervention type	2019-2022 Sept	2022/23 Maha	2023 Yala (up to Sept.)	2023/24 Maha (Up to Feb)	2024 Yala (up to Sep)	2024/25 Maha (up to Dec)	Total
	Ext (ha)	Ext (ha)	Ext (ha)	Ext (ha)	Ext (ha)	Ext ha)	Ext (Ha)
For Paddy crop							
Cultivate short age varieties		3404.7	113.6	194.0	217.0	213.0	**4142.3**
Parachute planting		26.6	52.0	93.0	113.0	185.7	**470.3**
Row seeding		3284.4	75.4	33.0	20.0	50.2	**3463.0**
Use mechanized Transplants		139.0	39.2	76.7	91.0	109.5	**455.4**
Use AW&D technology		0	5.5	5.0	121.0	124.0	**255.5**
Laser leveling						8.0	**8.0**
Use IPM practices		12.8	65.6	56.0	202.0	28.7	**365.1**
For OFC cultivation							
Use IPM practices			78	463	434.2	17	**992.2**
Total	**10976.1**	**6867.5**	**429.3**	**920.7**	**1198.2**	**736.1**	**21127.90**
Insect proof nets (1/4ac units) (Nos)		40.0 (500)	41.8 (523)	64.1 (641)	141.2 (1412)	163.2 (1632)	**163.2 (1632)**
Poly mulch (1/4 ac units) (Nos)			2.7 (27)	12.8 (110)	56 (710)	99.3 (993)	**99.3 (993)**
Rain shelters (600 sq. ft) (Nos)			0	0.1 (20)	2.74 (33)	3.3 (33)	**3.3 (33)**
Poly tunnels (1000 sq. ft or more) (Nos)			0	0	0.05 (6)	0.05 (6)	**0.05 (6)**
O/manure application for Paddy			146.6		227.0	143.0	**516.6**
O/manure application for OFC		3935.2	423.5	75.2	1157.0	785.0	**6375.9**
Drought tolerant crops cultivation			730.0	794.0	1373.5	735.0	**3632.5**
TOTAL	**10976.15**	**10842.74**	**1773.95**	**1866.9**	**1198.2**	**736.1**	**27394.04**

8.5.1.9 Climate Smart Seed Production

Under the seed production program, CSIAP was able to assist in producing seeds from 2019 to 2023 Yala Season. The below table describes the total extent cultivated to produce seeds by type of crops and received yield (Mt). Compared to the initial stages of the project (from 2019 to 2022), the project could be able to give more assistance on seed production where it shows 12% annual increase of Climate Smart seed production in 2023. Accordingly, the project could be able to produce 3,436 Mt. seeds cumulatively from 2019. Climate-smart seed production is a crucial aspect of sustainable agriculture that addresses the challenges posed by climate change. Climate-smart seeds are developed to be more resilient and adaptable to changing climatic conditions. This includes tolerance to heat, drought, floods, and other extreme weather events, which are becoming more frequent and intense

due to climate change. By selecting and breeding seeds that can withstand climate challenges, farmers are more likely to achieve better yields and maintain or improve overall productivity. Climate-smart seed production also considers the conservation of genetic diversity. Maintaining a diverse pool of seeds helps ensure that crops can continue to evolve and adapt to changing conditions, contributing to long-term food security. Moreover, climate-smart seeds may carry traits that provide resistance or tolerance to specific pests and diseases, reducing the need for chemical interventions and promoting environmentally friendly farming practices. As climate change poses challenges to global food production, the development and adoption of climate-smart seeds are essential for ensuring food security on a global scale. These seeds contribute to building a more sustainable and resilient agricultural system in the selected hot-spot areas of the project.

Plate 7: Inter-season red onion cultivation for seed production - NP

The project assisted 10,652 beneficiaries to produce CS seeds and up to end of 2024, 2863ha was cover by producing 4665 Mt. of seeds. The project could be able to establish a few marketing links for these selected crops and it was also affected for popularizing this seed production programme among the farmers. Paddy, ground nuts, green gram, cowpea and black gram are the major seed produced crops. Provincial wise details with extent covered, production and number benefitted are given in the below table.

Table 14; Province wise seed production as of end 2024

Province	Extent (ha) as of end	Production (Mt)	Beneficiary No.
NCP	1065.8	2214.8	4776
NP	558.1	494.4	1380
EP	466.1	564.4	1115
SP	139.3	140.7	830
NWP	347.8	368.6	1977
UP	286.0	882.0	574
Total	**2863.1**	**4664.9**	**10652**

Source : CSA progress report as of end December 2024

The crops that were promoted for seed production are given in the table below.

Table 15: Seed production progress with extent as of end 2024

#	Crop	Extent (ha) as of end 2024	Production (Mt) as of end 2024
1.	Paddy	731.0	2693.8
2.	Big Onion	6.7	2.8
3.	Green Gram	489.9	316.3
4.	Black Gram	410.3	316.1
5.	Soya	25.0	45.0
6.	Cowpea	454.2	367.9
7.	Ground Nuts	715.9	873.0
8.	Red Onion	10.1	30.0
9.	Finger Millet	20.0	20.0
10.	Total	2863.1	4664.9

Source: CSA progress as of end December 2024

8.5.1.10 Youth Development Programme

Engaging youth in climate-smart agriculture practices is crucial as they represent the future stewards of the environment and agricultural systems. Normally, the youth bring fresh perspectives, creativity, and innovation to the agriculture sector. In the face of climate change, new and adaptive approaches are needed, and the enthusiasm and creativity of young farmers can drive the development and adoption of innovative climate-smart practices.

Youth are often more educated and have access to information through formal education and digital channels. Educating and raising awareness among youth about climate change and sustainable agriculture practices can lead to informed decision-making and the adoption of environmentally friendly farming methods. The initial project plans did not have a youth development activity in its action plan. When implementing the other agricultural programs, the project was able to identify the importance of the engaging of youth in sustainable farming practices which can lead to the development of agribusinesses focused on climate resilience, contributing to economic growth and creation of new job opportunities for the youths in climate affected marginal areas.

The promotion of agriculture among youth farmers is vital for food security, economic development, sustainability, knowledge transfer, innovation, and personal growth. Encouraging young people to pursue careers in agriculture can help build a resilient and prosperous agricultural sector for the future. Accordingly, CSIAP introduced a new strategy to promote seed production program among Youths which is associated with this main activity.

Table 16: Youth Development Program with Demo Plots established

Province	Number of youth selected	No of Demonstration established			Extent covered (Ha)
		Target	Progress	Achievement(%)	
EP	26	26	26	100.00	12.5
NP	34	34	34	100.00	27.2
NCP	29	29	12	41.38	29
NWP	71	71	71	100.00	11
SP	17	17	17	100.00	1.7
UP	16	16	14	87.50	1.6
Total	**193**	**193**	**174**	**90.16**	**83**

Source: CSA progress report December 2024

Agriculture plays a vital role in ensuring food security for a growing global population. By encouraging youth farmers to engage in agriculture, we can enhance agricultural productivity and increase food production to meet the rising demand for nutritious and sustainable food. Also, the project is expected that youth farmers can bring fresh perspectives and innovative ideas to the agricultural sector, leading to the adoption of more sustainable farming practices. So, the project is given more input for selected youths than a regular beneficiary. Hence, inputs such as seeds & planting materials, micro-irrigation systems, insect proof nets, knowledge on technology & marketing and other required trainings have been provided by the project.

8.5.1.11 Climate Smart Home Gardens Development

This activity involves implementing sustainable and environmentally friendly practices to mitigate and adapt to climate change while creating a productive and nutrition-rich home garden in all households in selected hotspot areas. CSIAP promotes efficient water management in such home gardens which is essential to minimize water evaporation and promote soil moisture retention. Healthy soil is crucial for plant growth and resilience. Climate smart gardening focuses on improving soil fertility and structure through techniques such as composting, organic mulching, and using natural fertilizers. Healthy soil retains moisture better, reduces erosion, and supports diverse microbial life. Accordingly, compost production activity was promoted and among selected beneficiaries parallel to this activity. Composting garden waste and using it as organic fertilizer, repurposing materials for garden structures, and recycling containers and packaging are some practices that can minimize waste and promote sustainability. In this activity, the climate-appropriate plants were selected based on the type of agro-ecological zones of hotspot areas. Choosing plant species that are well-adapted to the local climate is crucial in a climate smart home garden. Opting for drought-tolerant plants, native species, and varieties that can withstand temperature fluctuations or extreme weather events helps ensure the long-term success and resilience of the garden. The inputs related to this activity were distributed among all

beneficiaries in some provinces and some have reduced the targets due to better management of the field implementation. The below table shows the number of beneficiaries for home garden and for rest of the interventions.

The concept behind this activity was to establish a home garden with practicing good agricultural practices, promoting organic manure, environment management for soil and moisture conservation, increasing of nutrition intake and changing farmers on self-sufficient vegetable production. Accordingly, the project provided inputs which are sufficient to develop a home garden with 0.1 ha. Based on that assumption, the total extent (ha) under this activity can be computed as 6,603 ha. And the below table shows the expected production of different types of vegetables and number of eggs from the backyard poultry.

Table 17: Home Garden Development at provincial wise

Province	No of Home Gardens developed	Ext covered (ha)
EP	12,500	1,250.0
NP	8,000	800.0
NCP	7,477	747.7
NWP	15,762	1,576.2
SP	2,800	280.0
UP	19,500	1,950.0
Total	**66039**	**6603.9**

Table 18: Recorded outputs from the CS Home Garden Development Program

Type of Vegetable	Received Yield	Remarks
Vegetable production (Mt)	1,166	The computed yield of short-term vegetables other than leafy vegetables and tuber crops
Tuber crops production (Mt)	1,818	Normally the yield of tuber crops is recorded after 8-12 months. This yield is being recorded at the reporting time. the progress will be increased further.
Leafy vegetables production (Mt)	284	The local community were encouraged to engage in more production
Fruits production (Mt)	1134	As mentioned under tuber crops, the yield of fruits is being recorded and will continue for the next few years since most of distributed fruit crops are annual crops.
Eggs (Nos)	2,428,572	Production is from EP, NP, NCP, NWP and UP since the poultry chicks have been provided to these provinces.

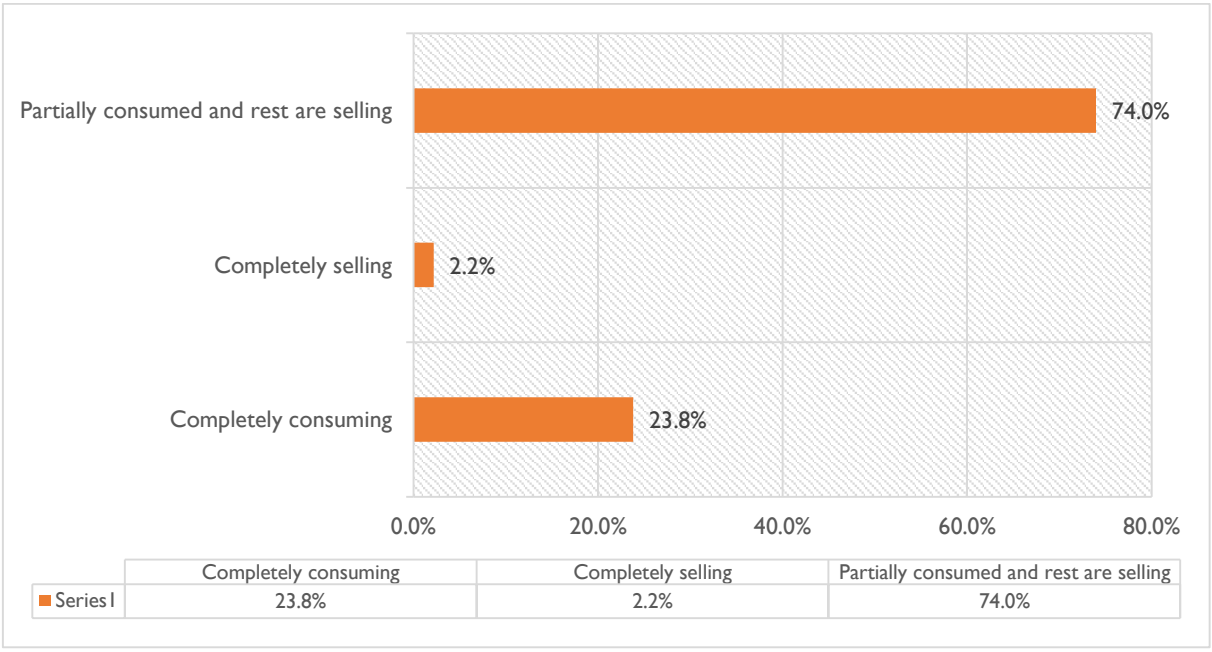
Source: CSA monthly Report as of end 2024

Plate 8: A successful female beneficiary established a Vegetable selling stole in North-Western province

8.5.1.11.1 Nutrition analysis on home garden program

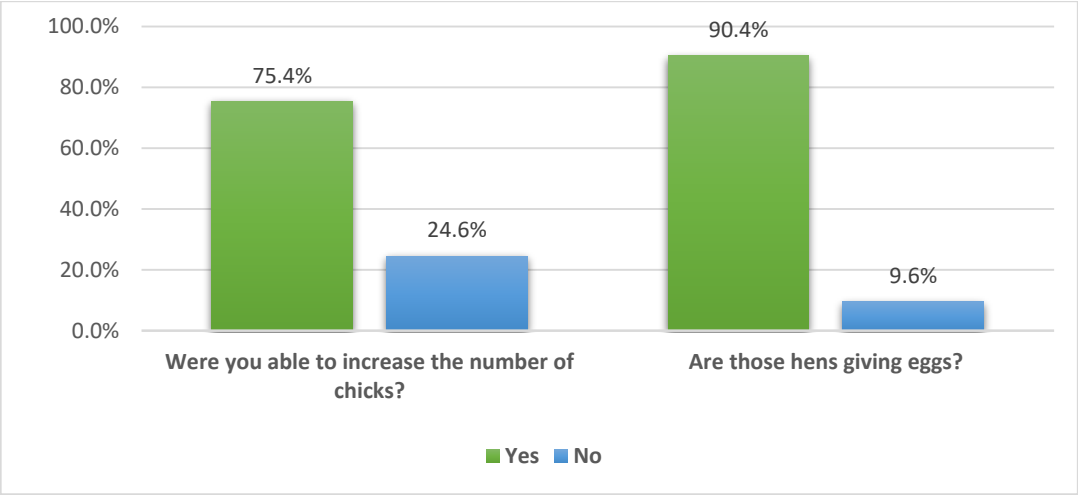
Nutrition analysis has been conducted, under the periodical evaluation on poultry chick distribution and the results shows as follows.

a) A question on whether the house hold received poultry chicks from the project only 33% responded as "Yes".
b) Accordingly, 83% had responded the household consumes the eggs received. 15% had responded that only the children of the household consume the product.
c) Consumption level had been analyzed as follows: It showed that only 2% at marketing purposes.



Graph 7: Poultry farming under home garden program – consumption level

d) Status of inputs distribution



Graph 8: Poultry farming status under home garden program

8.5.1.12 Organic Fertilizer Production Program

Organic fertilizer production program is being implemented in individual, small and medium level units and both solid and liquid fertilizer production was promoted. Mainly solid compost fertilizer production is being done in all the provinces by total cumulative production is of around 40,700 Mt. Provincial wise achievement is shown in the below table.

Table 19: Progress of the solid compost production by provinces

	Target	Progress
EP	5190	3740
NP	2540	1332
NCP	14810	15425
NWP	10000	9930
SP	8460	6900
UP	4000	2552
total	45000	39879

Source: CSA progress end 2024

Compost plays a crucial role in climate-smart agriculture practices by contributing to soil health, reducing greenhouse gas emissions, and promoting sustainable farming. Compost is a rich source of organic matter, providing essential nutrients for plant growth. By improving soil fertility, compost enhances the overall productivity of agricultural systems. Healthy soils contribute to increased crop yields and support climate-smart practices by promoting sustainable intensification. Compost fosters a diverse and healthy soil microbiome. The microbial activity in compost-amended soils contributes

to nutrient cycling, disease suppression, and overall soil ecosystem health. A thriving soil microbial community supports plant growth and resilience, contributing to climate-smart agricultural systems.

Plate 9: Compost Production training in NCP

8.5.1.13 Usage of Farm Machineries Agriculture Equipment at the Field

Plate 10: Use of Agriculture Equipment at the Field

Introduction of machinery in agriculture is essential for implementing climate-smart practices as it brings several benefits that contribute to sustainability, efficiency, and resilience in the face of climate change. Machinery enables precision farming practices, allowing farmers to optimize the use of resources such as water, fertilizers, and pesticides. This precision helps reduce waste and environmental impact, contributing to climate-smart agriculture. Moreover, the machinery plays a key role in conservation tillage practices, such as no-till or reduced tillage. These practices help sequester carbon in the soil, improve water retention, and reduce soil erosion, contributing to climate-smart agriculture. In the meantime, machinery allows for timely planting and harvesting, critical factors in adapting to climate variability. With unpredictable weather patterns, having the ability to plant and harvest crops at the right time is essential for maximizing yields and minimizing risks.

8.5.1.14 Solar Pump Establishment

Solar pumps are systems that employ solar energy to move water from a source, such as a well or surface water body, to a desired destination. It is an innovative and sustainable

technology that is accumulating popularity in the agricultural sector. With the increased demand for food production and the aim to limit energy costs and environmental damage, solar pumps are becoming a practical alternative to conventional pumps Establishment of Solar water pumps are sustainable and use for renewable energy. produce harmful pollutants which keeps the air and soil of the farmland clean. Long term benefits are received by the farmers since the solar pumps are the cheaper option for irrigation. Other key plus points for farmers are there are no ongoing fuel costs, long pump lifetimes and low labor and maintenance costs. The project started solar pump establishment from 2023, under the agro-well cultivation and at the end of the year 204 solar pumps have been established covering 189 ha. The below table shows the progress as of end 2024.

Table 20: Solar water pump distribution progress

Province	No. of Solar units planned	No. of Solar Pumps procured	No. of Pumps installed	Establishment progress		
				No. of Farmers	Cultivation Extent (Ha)	Production (MT)
SP	58	38	38	38	35	230
NWP	45	45	45	45	30	20
NP	50	50	50	50	40	40
EP	25	25	25	25	50	150
UP	33	33	28	28	30	275
NCP	62	62	46	46	45	490
Total	**273**	**253**	**232**	**232**	**230**	**1205**

Plate 11: Cultivation under solar pump establishment in NP

8.5.2 Rehabilitation of Agriculture Infrastructure

8.5.2.1 Agri Roads

The agri-roads are specifically designed to connect rural areas with urban centers, marketplaces, and transportation networks. These roads provide a means for farmers to transport their agricultural products from rural areas to urban markets or processing facilities. This transportation infrastructure is essential for connecting agricultural producers with consumers, ensuring a steady flow of goods to meet market demand. Moreover, they improve farmers' access to markets, allowing them to sell their produce and products more efficiently. Reduced transportation time and costs contribute to better market opportunities for farmers, leading to improved income and economic growth in rural communities.

Rehabilitation of Agri-roads are mainly focused on beneficiary satisfaction and development of agricultural marketing. The village level farmers face the problem of poor access to the main roads to market their agriculture products and the market links with outside business entrepreneurs cannot be established. Hence such farmers are discouraged from engaging in agricultural activities. Accordingly, this limited infrastructure activity has been introduced for such critical areas in the six provinces. The project initially has identified 50 kms lengths of agri-roads to rehabilitate and considering the demand, it was decided to increase the set target by additional 25 kms and the current target is 75kms. At the end of 2024, it was reported that 57 kms (76%) have been rehabilitated. The below table shows the identified lengths of roads (in kms) to be rehabilitated and the progress achieved as of the end of 2024.

Table 21: Progress of the rehabilitation of agri-roads by provinces

Province	Target (Length in Kms)	Length completed (Kms)	Progress %
EP	13	6.19	48%
NP	18	15.95	89%
NCP	16	14.00	88%
NWP	10	4.36	44%
SP	12	10.00	83%
UP	06	6.52	100%
Total	**75**	**57.02**	**76%**

The agri-roads are specifically designed to connect rural areas with urban centers, marketplaces, and transportation networks. These roads provide a means for farmers to transport their agricultural products from rural areas to urban markets or processing facilities. This transportation infrastructure is essential for connecting agricultural producers with consumers, ensuring a steady flow of goods to meet market demand. Moreover, they improve farmers' access to markets, allowing them to sell their produce and products more efficiently. Reduced transportation time and costs contribute to better

market opportunities for farmers, leading to improved income and economic growth in rural communities.

Plate 12: Rehabilitated agri-roads in Southern Province

8.5.2.2 Agro-Wells

Agro wells that are to be rehabilitated have been identified in six project provinces in supporting to increase cultivation extent by cultivating abandoned lands and growing different varieties and more crops. The project target is to rehabilitate 1458 agro-wells and at the end of the year 2024, 1149 agro-wells have been rehabilitated, achieving 79% of progress. The table below illustrates the progress of agro-well rehabilitation.

Table 22: Progress of the rehabilitation of agro-wells by provinces

Province	Agro-wells (Nos)		
	Target	Completed	Progress
EP	355	339	95%
NP	275	129	47%
NCP	647	510	79%
NWP	79	69	87%
SP	63	63	100%
UP	39	39	100%
Total	1458	1149	79%

These rehabilitated agro-wells provide a reliable and efficient water source for agricultural activities, contributing to sustainable water management, increased resilience to climate variability, and improved productivity. Normally, agro-wells enhance water availability for agricultural purposes, providing a reliable source of water for irrigation. This is particularly important in regions with irregular rainfall patterns and seasonal water scarcity, allowing farmers to maintain consistent crop production throughout the year. Therefore, this intervention has been identified as a key impactful intervention which is being implemented under the CSIAP financials. Moreover, during periods of drought or water scarcity, agro-wells can help mitigate the impact on crops by providing supplemental irrigation. This is

crucial for ensuring the survival and productivity of crops in the face of changing climate conditions. Agro-wells enable farmers to plan and manage their cropping calendars more effectively with access to reliable water, then they can optimize crop cycles to align with favorable weather conditions.

Plate 13: Groundnut cultivation Under the rehabilitated agro-well - NP

8.5.2.3 Providing of Tarpaulin Sheets

At the beginning of the project, the construction of drying floors for trying and threshing the harvest was identified as a key activity which can be implemented under the marketing sub-component of the project. However, to complete this activity the project must be allocated a significant budgetary allocation and the return on investment is also not at a significant margin. Therefore, the implementation of this activity was cancelled and introduced the distribution of Tarpaulin for selected members of producer societies. The following table shows the progress of providing tarpaulin by the end of year 2024.

Table 23: Providing Tarpaulin for Producer Societies

Province	Target (No.)	Progress (No.)	Achieved
EP	1,200	1,200	100%
NP	250	250	100%
NCP	186	186	100%
NWP	606	606	100%
SP	325	255	78%
UP	110	75	68%
Total	**2,677**	**2,572**	96%

Plate 14: Use of Tarpaulin by Farmer in a village Ampalaperumal in NP

The use of tarpaulin in drying agricultural harvest is a common and practical method employed by farmers to protect crops from adverse weather conditions and facilitate efficient drying. Tarpaulins provide a waterproof covering that protects harvested crops from rainfall during the drying process. Also, the tarpaulins act as a barrier, preventing rainwater from reaching the crops while it enables farmers to create a controlled environment for drying. Tarpaulins are lightweight and portable, making them easy to set up and move as needed. So, farmers can quickly deploy tarpaulins to protect crops when unexpected weather changes occur, providing flexibility in response to changing conditions. CSIAP is providing 10 tarpaulins for a Producer Society and the members of the society are using them on a sharing basis in harvesting season.

8.5.2.4 Establishment of Marketing Linkages

The following table summarizes the marketing linkages introduced as a project intervention. Market linkages are established with Producer Associations.

Table 24: Marketing Linkages established by the project

Province	No. of Market Linkages developed	Details of Market Linkages	
		Buyer	**Crop**
NCP	5	Maliban, C W Mackie Golden Food	Soya Maize Jumbo Peanut
EP	5	David Gram , Munchi(CBL) Govt farm K.Aru, Prima, Batalagoda Agro, Siyambalanduva wholesale	Ground nut. Maize, vegetable
NWP	14	S.R. Bio food (Pvt) Ltd. , CBL /Plenty food (pvt) Ltd. Achira fresh fruit supplier, Dole Lanka (pvt) Ltd. Economic Centre-Thambuththegama, Wasantha Exporter, Cargills, DOA, A.G. Gamini Ankumbura	Banana, Jumbo Peanut, Maize, Passion fruit, Mango, Papaya, Ni Miris, Pumpkin,vegetable, Paddy, pulses , Brinjal
UP	4	Plenty Foods Golden Foods DOA Seed CW Mackie	GG Gingerly,GN Jumbo Peanut
SP	1	Cargills	GG

8.5.2.5 Farm Business School Training

Farm Business School (FBS) training is given for the selected farmer groups in each of the six provinces. For these farmer training, initially, the project conducted Training of Trainers (ToT) programs for 113 Agriculture Instructors (AI) and 46 CSIAP Agriculture Facilitators. Those trained AIs are now conducting training for the selected farmer groups. For FBS training 22600 farmers have been identified and AIs have now started conducting training. The progress of the FBS trainings conducted are given in the table below.

Table 25: Farm Business School Training Progress

Province	ToTs (AIs & AFs trained)	Target No. of Farmers	Farmer Groups	Farmers at training	Training completed
EP	38	5760	192	330	1770
NP	26	3420	114	149	789
NCP	25	3840	128	3586	336
NWP	48	6000	200	420	3780
SP	10	1920	64	1100	69
UP	12	1680	56	780	303
Total	**159**	**22620**	**754**	**6365**	**7047**

Source; CSA/Mktg. 2024 oct

For completion of the FBS training, the Farmers have to complete 12 modules. At the end of 2023 it has been reported that 7047 farmers have completed the training by covering all 12 modules. There are 6365 farmers are under training in different level of completion of modules.


Plate 15: FBS Training sessions by AIs.

8.5.2.6 Establishment of Sales Outlets for excess Home Garden Products

Plate 16 : sales outlet established

There are around 102 sales outlets established on the side of roads for selling excess home gardening products. Project has given some items such as plastic tables, plastic chairs, Plastic crates, weighing scales supporting the farmers to improve their sales outlets. Home gardening production is high in Maha season and majority of the products are organic and free from agro-chemicals. Consumers prefer to buy these fresh, organic & cheap Agri-products. Daily sales and the income from these outlets are varied but, it has been reported that, daily average sales from an outlet is around 75 – 100kg with an average daily income of about Rs.15,000 – 20,000.

8.6 Progress of Component 2 – Water for Agriculture

8.6.1 Rehabilitation of Irrigation Systems

Project Component – 2 is for rehabilitation of irrigation systems. The activities which are implemented under this component mainly focus on the planning for water and other infrastructure necessary to support climate-resilient irrigated agriculture, construction of the planned infrastructure, and co-management of this infrastructure by central/provincial governments and the local community.

With the extension of project implementation period with reallocation of USD 25Mn., the number of tanks were increased for rehabilitation with the purpose of completing the entire cascade system. Accordingly, 179 additional tanks have been identified for rehabilitation thus increasing the project target to 655 tanks. The initial actions for this activity such as basic studies, procurement procedures, estimating etc. had completed in the year 2024. The bid invitation and relevant procurement process has been planned for the first quarter of 2025. The water management and monitoring part is being carried out to ensure the sustainability of this major task.

8.6.1.1 Tank Rehabilitation- Phase I

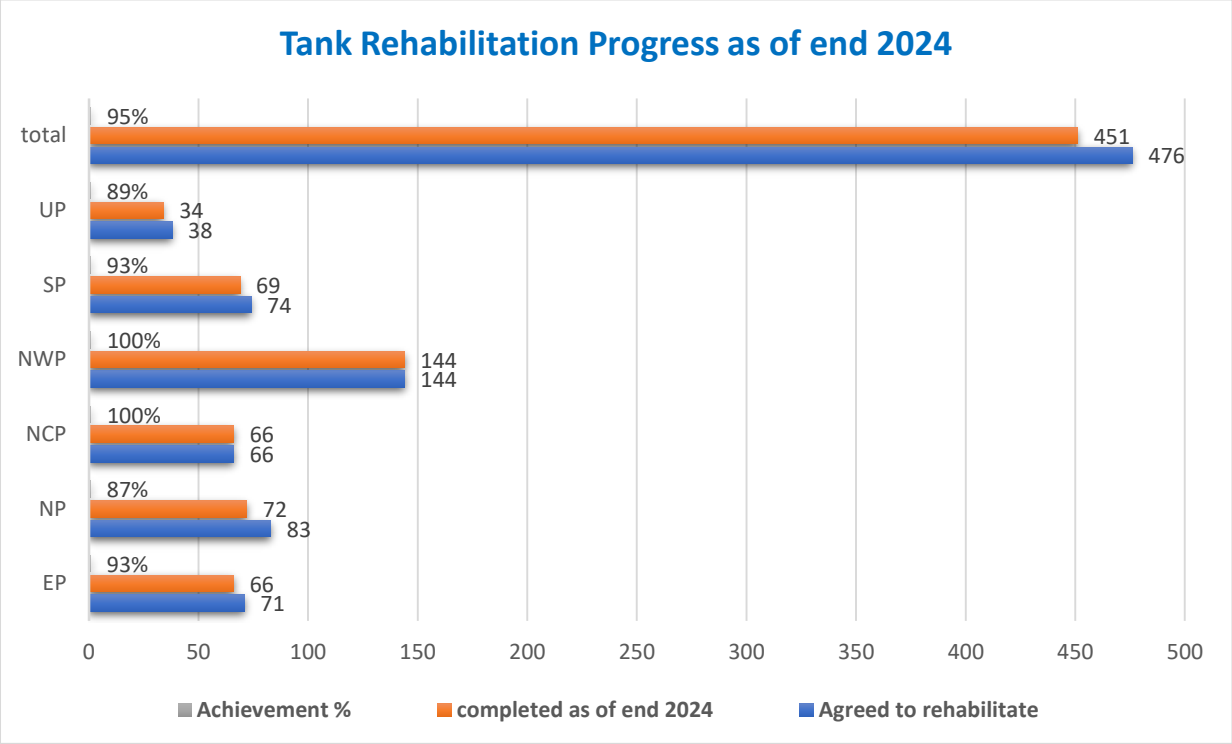
The Sub-component 2.1 is for rehabilitation of irrigation systems. At the planning stage of the project, 971 tanks have been identified and agreed to rehabilitate. However, with the restructuring of the project, the fund cancellation has been activated by the funding organization. With this revision, the project has identified 476 tanks for rehabilitation under 71 cascades. As of year end 2024, it was reported that, 451 tanks have been rehabilitated. The below table shows the progress.

Table 26: Rehabilitation of phase-1 tanks - progress as of end 2024

Province	***Target***	***<50%***	***>50%***	**completed**	**Handed over**
EP	*71*	*1*	4	66	29
NP	*83*	*0*	11	72	40
NCP	*66*	*0*	0	66	60
NWP	*144*	*0*	0	144	138
SP	*74*	*0*	5	69	40
UP	*38*	*1*	3	34	24
Total	**476**	**2**	**23**	**451**	**331**

It has been planned to complete the remaining 25 tanks to rehabilitate before the second quarter of 2025. The reason for such delay was some contracting issues and the issues have been resolved and started rehabilitation work.

The graph below illustrates the achievement as of end 2024.



Graph 9:Tank rehabilitation progress as of end 2024

Plate 17: Tank rehabilitation work in NP

8.6.1.2 Impact of rehabilitation of Irrigation Systems

The table below illustrates the irrigable areas and tank water capacity with the project and without project at district level in six provinces.

Table 27 Impact of rehabilitation of irrigation systems:

No	District	Capacity without project Ac/ft	Capacity with project Ac/ft	Capacity Increase- (Ac.ft)	Irr. Area without project (Ac)	Irr. Area with project (Ac)	Area increase (Ac)
1	Kurunegala	7085	7530	444	3,050	4,780	1,730
2	Puttalam	4195	4407	212	2,527	2,915	388
3	Anuradhapura	7531	7938	407	2332	2623	291
4	Polonnaruwa	1511	1544	33	172	202	30
5	Kilinochchi	8000	11736	3736	2372	2796	424
6	Mullaitivu	5645	6106	461	4165	4313	148
7	Trincomalee	7857	8910	1053	2409	3844	1435
8	Batticaloa	6495	8372	1877	5285	8503	3218
9	Ampara	4426	5353	927	1913	2977	1064
10	Monaragala	5205	5919	714	2789	3590	801
11	Hambantota	9480	10204	724	686	1334	648
	Total	**67430**	**78018**	**10,588**	**27700**	**37,877**	**10,177**
				+15.7%			**+36.7%**

Source: Engineering Division report

8.6.1.3 Rehabilitation of Irrigation Systems - Phase II

With the extension of project implementation period with the extra funds of USD 25 million, it was planned to rehabilitate some other tanks that are under hydrological studies. Accordingly, at an initial step 205 tanks were identified for rehabilitation. In the process of starting implementation of this activity, it was found that, only 179 tanks can be rehabilitated within the allocated time period. Provincial wise distribution of these identified irrigation systems, with the status of procurement process is given in the table below.

Table 28: Status of new tanks identified for rehabilitation

Province	Expected Total	STEP Approved	Awaiting Approval	Bids to be invited	Bids Invited	Bid Evaluation	Contract Awarded
EP	26	21	5	2	7	0	12
NP	29	20	9	0	13	7	0
NCP	41	25	16	3	7	12	3
NWP	38	32	6	2	4	17	9
SP	18	10	8	5	5	0	0
UP	27	19	8	9	5	0	5
Total	**179**	**127**	**52**	**21**	**41**	**36**	**29**

Source - Procurement Division Reports

The project has planned to complete the rehabilitation of above 179 tanks, before end of the year 2025. Procurement process is being going on at the time of reporting and, the project expects to complete the contract awarding within the first quarter of 2025, thus enabling completion before the end of year.

8.6.1.4 Operation and Maintenance of Irrigation Systems

Sub component - 1.2, Operation and Maintenance of Irrigation Systems aim to ensure the sustainable operation and maintenance (O&M) of tanks systems at the individual tank level and systems. Established Cascade Management Committees and strengthened Farmer Organizations should work on O&M of rehabilitated irrigation systems on sustainability while a monitoring system for water use and availability will be designed and implemented.

Activities planned for this sub-component includes that; training of farmer for water management and operations and maintenance, preparation of cascade water management plan and providing training, providing water-measuring devices (cutthroat Flumes) for measuring water productivity, developing O&M hand-book, supporting to install AWD pvc pipe gauges for rotational water issues etc. Additionally, as a new intervention, laser leveling of paddy fields for better water management has been planned and initial actions have been taken to procure two laser land levelling machines.

Under this sub-component hydrological assessments in hotspot areas has been conducted in the 14 river basins. Two hydrological methods have been used as indicated in the below table.

Hydrological Method	Covered River Basins
Soil & Water Assessment Tool (SWAT)	1. Mi Oya, 2. Yan Oya, 3. Mandakal Aru
Hydrologic Modeling System (HEC-HMS)	4. Manik Ganga, 5.Karanda Oya, 6.Kirindi oya, 7.Hedo Oya, 8. Wil Oya, 9. Kala Oya, 10 Per Aru, 11. Mundeni Aru, 12. Kunchi Kumba Aru, 13. Mee Oya, 14. Meyangola Ela

8.6.1.5 Water Productivity/Water Use Efficiency (WUE) Measuring

Measuring Water Use Efficiency (WUE) is the main key performance indicator under the water management sub-component. Project target is to increase the water use efficiency by 30%. In the Maha season 2023/24 WUE has been measured using 25 pilot tanks and in the Yala season of 2024, 48 pilot tanks were measured for WUE. The results of these two studies are given in the table below.

Table 29: Measuring Water Use Efficiency (WUE)

Season	Maha - 2023/24 (in Pilot Tanks)	Yala - 2024 (in Pilot Tanks)
Total Number Of Tanks Surveyed	25	48
WUE Achieved (30%)	2	6
WUE Achieved (20% To 30%)	6	17
WUE Achieved (10% To 20%)	2	8
WUE Achieved (Less Than 10%)	15	7
Crop Damaged	Floods – 11, BPH attack - 1	1
Not Cultivated	-	5
The Sample Average of WUE Increased	22.05%	20.80%

8.6.1.6 Implementation of Laser Levelling for better water use efficiency

Laser Land Leveling (LLL) is a laser-guided technology used to level fields by removing soil from high points of the field and depositing it in low points of the field. LLL improves crop establishment and enables crops to mature uniformly. It is essentially a water-saving technology as it uses scarce groundwater optimally by ensuring even coverage. Compared to traditionally levelled land, a laser levelled farm minimizes run-off and waterlogging ensuring that farmers use just as much water they need in the best possible way.

Laser Land Leveling is an advanced agricultural practice that uses laser-guided equipment to precisely level fields. This method offers several benefits over traditional leveling techniques, including improved water distribution, increased crop yields, and reduced labor and water use.

As a new intervention, project is piloting the laser land leveling practices for paddy lands with the purpose of efficient water management and improved production. NP & NCP Completed the laser land leveling in 10 Acs pilot plots. The other 3 provinces completed the land selection, initial surveying & leveling work. The main issue for practicing this activity is the lack of lase levelling machinery in the field and the project had to hire a machine for piloting. Other barrier is that; the well trained machine operators are not adequate for the available few machines in the field. The Project has also planned to procure two laser levelling machines to enhance this activity.


Plate 18; practicing lase levelling and laser levelled area in NP

8.6.1.7 Providing Modified AWD Apparatus to all schemes

Introducing the improved AWD (Alternate Wetting and Drying) apparatus designed for easy use by farmers. This new device features a top indicator with a scale that is easily readable from a distance, allowing farmers to quickly and accurately determine the optimal time for irrigation. This innovation ensures efficient water management, promoting sustainable farming practices and enhancing crop. It has been planned to issue 11,900 AWD to be provided in the first quarter of 2025. Two types of AWD have been identified for distribution. One is AWD Pipe with LED & Solar panel and the other category is AWD color code apparatus. Project will provide 10,900 of AWD apparatus and 1000 improved AWD color code apparatus.

AWD Pipe with LED & Solar panel

AWD colour code apparatus

8.7 Progress of Component – 3 : Project Management

8.7.1 Environmental and Social Safeguard

The project is classified as Environmental Category B due to civil work activities to be undertaken through small-scale nature. A screening process was implemented to identify the impact and a management plan was developed to mitigate the negative impact. Monitoring activities carried out to identify the impact mitigation process. During the screening and monitoring process, several impacts were identified to produce mitigation measures.

8.7.1.1 Environmental and Social Safeguard Screening Reports

Social and Environment Safeguard Unit of the Project is responsible for environmental safeguards related to the CSIAP investments and proper monitoring and reporting of safeguard implementation. Accordingly, Environmental and Social Safeguard Screening Reports (ESSR) on tank rehabilitation are submitted by the Safeguard Unit of the Project. At end of year 2024, it has been reported that 175 reports were developed covering all the planned tanks for phase-1

8.7.1.2 Tree Planting for Catchment Area Management

Environment and Social Safeguard Unit of the project also carried out tree planting process as reforestation, agro-forestry, wind barrier, Kattakaduwa (the land between the dam of the tank and cultivated area under the tank) development and compensation tree planting. The table below shows the current achievement of tree planting and tree removal. As of end 2024 it has been reported that around 18,000 trees were planted and the removal was of about 650 trees.

8.7.1.3 Social Safeguard

The project is expected to have significant social benefits, including smallholder farmers. Some activities supported under the project such as infrastructure necessary to support climate-resilient irrigated agriculture, are likely to cause, in some instances, substantial social risks and impacts, including land acquisition to be paid by the GoSL, impacts on livelihoods, loss of assets, and so on.

8.7.1.4 Citizen Engagement

The project is designed to mainstream citizen engagement activities through a coherent approach that advocates for a critical role for citizen voices in development planning and monitoring to increase transparency, accountability, and effectiveness of the public institutions engaged in project implementation. The two beneficiary feedback indicators are: (a) grievances registered related to the

delivery of project benefits that are addressed - percentage by gender; and (b) beneficiaries that feel the project investment reflected their needs.

8.7.1.5 Grievance Redress Mechanism

The project gives attention on resolving grievances, under the grievance redressing mechanism and national, provincial and community based committees were established for this process. As to the end of reporting year 2024, it has been reported that 263 grievances were resolved from 279 recorded grievances. 16 unresolved grievances are being attended to with the interference of officers of DPD offices and relevant stakeholders. These grievances are reported under few categories, such as Technical, Environmental, Gender based violence, contract management, livelihood related etc. It has been reported that 60 grievances were under the category of 'Technical' and 14 under the environment etc.

Table 30: Grievances received and solved progress

Province	No. of Reported Grievances	No. of resolved Grievances	No. of Un-resolved Grievances
EP	38	35	3
NP	13	13	0
NCP	75	75	0
NWP	30	22	8
SP	78	75	3
UP	45	43	2
Total	**279**	**263**	**16**

8.7.1.6 Agro-Ecological Landscape Plan

CSIAP with a concern that natural biological diversity strengthens agro-ecological resilience in production landscapes commissioned the study. The overall aim is to understand the ecological character, both in production and non-production habitats, current issues, and challenges and to seek opportunities to bring in greater environment and social resilience via integration of sustainable agro-ecological practices within HHSA. At the reporting period, study of the Hambantota District is completed.

8.7.1.7 Gender Inclusion

In the project measuring indicators, Gender Inclusion in project activities is included in KPI and output indicators. It has been reported` that the gender wise participation is in a satisfactory level in the CSA activities. All CSA trainings, home garden programs, ICE programs, Producer Societies, Producer

Associations, Social Audit Committees etc., women participation is at a remarkable stage. Furthermore, the community level societies such as PS, PA, SAC etc. women in the key positions can be seen.

It is important to highlight that even though the project's target was 30% women participation, it was recorded that average women participation as 42% in CSIAP. at the reporting period. But the average percentage slightly change with the increased number of participation in continuous project interventions, because the last year it was reported as 44% women participation as an average.

8.7.1.8 Crop Protection Seasonal Electric Fences

A considerable amount of crop damage, human and elephant deaths are identified every year in hotspots areas. Hence, to minimize the HEC, CSIAP proposed to establish movable paddy field fences around the paddy field in hotspots areas. The safeguard team of CSIAP is closely coordinating this subproject activity with the Department of Agrarian Development. The CSIAP implemented a seasonal paddy filed electric fencing subproject. This subproject mainly focused on community-based solutions to HEC in hotspot areas.

Crop protection seasonal electric fences offer several advantages for farmers looking to safeguard their crops from wildlife, pests, and other potential threats. Electric fences act as a deterrent for wildlife, preventing animals such as deer, rabbits, and rodents from accessing and damaging crops. The electric shock delivered by the fence serves as a humane but effective method to discourage animals from entering protected areas. Seasonal electric fences are often a cost-effective solution for short-**term crop protection needs and they can be installed and dismantled relatively easily, making them** suitable for seasonal or temporary farming operations. Moreover, they can be set up quickly, providing a rapid response to emerging threats to crops.

Seasonal electric fences are highly portable and can be moved to different locations within the field as needed. Compared to permanent physical barriers, electric fences have a lower environmental impact. They can be installed without significant ground disturbance, and their temporary nature minimizes long-term alterations to the landscape. Electric fences generally require less maintenance compared to traditional physical barriers. Routine checks and occasional repairs are usually sufficient to keep the fence in good working order, reducing the time and effort required for upkeep.

The project supported to cover 701kms in establishment of such electric fences which has been completed at the end of year 2024. Another 740km. of length fences has been planned for year 2025.


Plate 19: Elephant fence at Periethithimadu GND, Oddusuddan , Mullaitivu district

8.7.2 Institutional Development and Capacity Building

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Institutional Development and Capacity Building is another key area of activities implemented by the project. Establishment of community level institutions and strengthening the capacities of such institutions to ensure the project sustainability are handled by this intervention. With this project intervention project expects to have a good collaboration and coordination within all the relevant stakeholders of the project. Community level societies such as Producer Associations, Producer Societies, Farmer Organizations, Social Audit Committees, Cascade Management Committees are the key parties facilitated under this category.

8.7.2.1 Development of Institutions

The following table shows the update of institutions formed and operated under the project. The formation of community institutions has been achieved and the capacity building of the members of such institutions is in progress.

Table 31: Institutional development status of the project

Institutional Development of the Project														
Category	**EP**		**NP**		**NCP**		**NWP**		**SP**		**UP**		**Total**	
	T	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**	**T**	**P**
Formation of Producer Societies	77	77	50	50	120	120	230	230	65	65	30	30	**572**	**572**
Formation of Producer Associations	13	13	9	9	6	6	12	12	2	2	3	3	**45**	**45**
Formation of Social Audit Committees	80	80	80	80	74	66	167	167	105	84	42	42	**548**	**519**
Formation of Cascade Management Committees	7	7	10	10	10	10	20	20	8	8	6	6	**61**	**61**
Strengthening Farmer Organizations	69	13	50	13	125	72	124	24	54	13	60	6	**482**	**141**

a) The formation of Producer Societies and Producer Associations plays to collectively address common challenges, pool resources, and improve their overall socio-economic conditions. The formation of Producer Associations provides farmers with increased bargaining power when dealing with input suppliers, buyers, and other stakeholders in the agricultural value chain. Collective marketing through producer societies allows farmers to access markets more effectively. By selling their products in bulk, farmers can often secure better prices for their produce, reducing the impact of price fluctuations and market uncertainties.

b) The formation of producer societies is further expected to help farmers for pooling resources to mitigate risks associated with agriculture, such as crop failure, natural disasters, or market volatility. Collective action enables members to share risks and losses, reducing the financial burden on individual farmers. Moreover, the producer societies empower smallholder farmers by providing them with a collective voice and platform for decision-making. This empowers farmers to actively participate in discussions on policies, market trends, and other issues affecting their livelihoods.

c) Strengthening farmer organizations(FOs) is essential for promoting sustainable agriculture, improving farmers' livelihoods, and enhancing the resilience of agricultural communities. The provision of training and capacity-building programs for members of farmer organizations is required. This includes technical training on modern farming practices, financial literacy, leadership skills, and organizational management. Strengthening the skills of farmers enhances their ability to manage and grow their organizations effectively. Building financial management skills within farmer organizations is essential. This involves training members in budgeting, accounting, and financial planning. Additionally, help organizations access financial services, grants, and credit facilities to support their activities and investments. Integration of climate-smart agriculture practices within farmer organizations is done by the CSIAP through the capacity building of the members of farmer organizations.

   It provides training on sustainable and climate-resilient farming techniques where this includes water management, agro-ecology, and practices that enhance resilience to climate change. Such capacity development and strengthening FOs is very essential for the sustainability of project interventions under the cascade management process. These trainings are also very effective with the rehabilitation of irrigation systems on water management practices under cascade management. 50 FOs were provided such trainings under Water Management, covering 11 districts of the project.

d) The formation of Social Audit Committees (SACs) is crucial for promoting transparency, accountability, and social responsibility in all rehabilitation related civil works done by the project. SACs play a vital role in promoting accountability and transparency within project activities. By independently reviewing and reporting on the project's social and environmental performance, SACs help ensure that relevant stakeholders have access to accurate and comprehensive information. SACs often involve representatives from the community and this fosters community participation in the decision-making process, ensuring that the perspectives and concerns of those impacted by project activities are considered. The existence of a Social Audit Committee enhances the project's public trust and credibility where it demonstrates a commitment to openness and accountability. SACs facilitate stakeholder engagement by providing a platform for dialogue between a project and its beneficiaries. This engagement ensures that diverse perspectives are considered, leading to more inclusive and well-rounded decision-making. Social Audit Committees contribute to identifying and addressing social inequities within field implementations and it can recommend measures to reduce disparities and promote social justice. Finally, the formation of Social Audit Committees is a valuable mechanism for promoting project activities, ensuring accountability, and fostering sustainable development. SACs contribute to a culture of transparency and social responsibility that benefits the project, its stakeholders, and the smallholder farming community benefitted by the project.

8.7.2.2 Formation and Operationalize of Cascade Management Committees

Operation and Maintenance of Irrigation Systems (Sub-Component 2.2) the project intervened to establish the Cascade Management Committees (CMCs) in six provinces as given in the below table. This is for ensuring the sustainable operation and maintenance of tank systems at the individual tank level and system-wise too.

Table 32: Establishment of CMCs and development of CMPs progress

Province	Target No. of CMCs	Formed No. of CMCs	CMPs developed	CMPs in implementation
EP	07	07	06	02
NP	10	10	05	02
NCP	10	10	05	03
NWP	20	20	10	02
SP	08	08	02	01
UP	06	06	01	01
Total	**61**	**61**	**29**	**11**

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The purpose of formation of CMCs is to manage the irrigation and drainage structures as completed by the project and to maintain the functionality of such structures with a view to sustaining the project. For the achievement of this objective CMCs have been formed and strengthening the capacity of the members of the CMCs will also be done by the project. For the achievement of this objective, cascade management plan for each cascade has to be developed by the project to ensure the sustainability of cascades and the water productivity of the tank system. For the preparation of effective cascade management plans for each province, the project has completed the basic need of developing cascade profiles using the data collected through transect walks conducted by the project with the participation of key stakeholders. Additionally, the project has secondary data in hotspot area agriculture development plans, engineering surveys, hydrological survey conducted in advance.

The formation of Village Tank Cascade Management Committees in selected cascades involves creating community-based committees to oversee and manage the water resources associated with village tanks (reservoirs) in a cascading manner. Village tanks are traditional water storage systems in Sri Lanka that play a crucial role in agriculture, water supply, and ecosystem management. Establishing management committees helps ensure sustainable use, maintenance, and equitable distribution of water resources. Conduct awareness programs to educate local communities about the importance of managing village tanks sustainably is required for encouraging active participation and involvement in the formation of committees. Moreover, the conducting of periodic reviews of committee performance and adapt strategies based on lessons learned and changing circumstances need to be carried out. This ongoing process allows committees to evolve and improve their effectiveness over time. The formation of these Committees is an integral part of community-driven water resource management, fostering sustainability and resilience in agricultural practices and local ecosystems. It promotes a collaborative and participatory approach to address the challenges associated with water management in Sri Lanka.

Table 33: Identified themes and roles and responsibilities on CMCs

Identified Themes	**Summary of Roles and Responsibilities**
Identifying and Mapping Village Tanks	Identify and map the village tanks in the area. This includes understanding the connectivity and cascading nature of tanks within the landscape. Recognize the interdependence of tanks in managing water resources.
Formation of Primary Committees	Establish primary management committees at the level of individual village tanks. These committees should consist of local community members, including farmers, representatives from user groups, and individuals with knowledge about water management.
Cascading Structure	Implement a cascading structure of committees, linking primary committees to a higher-level committee responsible for overseeing multiple village tanks. This cascading approach allows for localized decision-making while ensuring coordination at a broader level.

Identified Themes	Summary of Roles and Responsibilities
Committee Roles and Responsibilities	Clearly define the roles and responsibilities of each committee level. Primary committees may focus on day-to-day maintenance and water allocation at the local level, while higher-level committees could address broader issues such as infrastructure development and policy advocacy.
Water Allocation and Distribution	Develop transparent and equitable mechanisms for water allocation and distribution. Ensure that water resources are distributed fairly among farmers and user groups based on agreed-upon criteria.
Conflict Resolution Mechanisms	Establish conflict resolution mechanisms within the committees to address disputes related to water use, allocation, or maintenance. A fair and transparent process for conflict resolution helps maintain harmony within the community.
Capacity Building	Provide training and capacity-building programs for committee members. This includes education on water management practices, infrastructure maintenance, and the use of technology for efficient water distribution.
Community Empowerment	Empower local communities by involving them in decision-making processes. Encourage the active participation of women, marginalized groups, and other community members to ensure a diverse and inclusive approach to water management.
Collaboration with Government Agencies	Collaborate with relevant government agencies responsible for water resource management. Establish clear communication channels and partnerships to ensure that the committees work in alignment with national policies and regulations.
Data Collection and Monitoring	Implement systems for data collection and monitoring of water levels, usage patterns, and infrastructure conditions. Regular monitoring helps committees make informed decisions and respond to changing conditions.
Resource Mobilization	Explore avenues for resource mobilization to fund infrastructure development, maintenance, and other water-related projects. This could include seeking support from government programs, non-governmental organizations, and other stakeholders.
Community-Led Initiatives	Encourage community-led initiatives for the conservation and sustainable use of water resources. This may include promoting water-saving practices, watershed management, and afforestation around tank areas.
Legal Framework and Governance	Establish a legal framework for the functioning of the committees and their adherence to relevant regulations. Ensure that the committees operate within a governance structure that promotes transparency, accountability, and compliance.
Periodic Review and Adaptation	Conduct periodic reviews of committee performance and adapt strategies based on lessons learned and changing circumstances. This ongoing process allows committees to evolve and improve their effectiveness over time.

8.7.2.3 Developing Cascade Management Plans and Implementation of the Plans

To ensure the sustainability of the project, Cascade Management Plans (CMPs) have to be developed under each CMC. For the preparation of effective cascade management plans for each province, the project has developed cascade profiles using the data collected through transect walks conducted by the project staff with the participation of key stakeholders. In addition, the secondary data is also available in the project collected from the hotspot area agriculture development plans, engineering surveys, hydrological survey conducted at the initial stage of the project. Accordingly, up to end of third quarter 29 cascade management plans have been completed by the project. Implementation of the prioritized activities of such developed CMPs has now been started in the provinces and short-term prioritized activities in 11 cascade management plans as given in the table above.


Plate 20: CMC preparation activities transect walk and CMC implementation Kattakaduwa

8.7.2.4 Capacity Building Activities

CSIAP capacity building activities are carried out for farmer/community level organizations and the project staff. Strengthening of Producer Association, Strengthening of Producer Societies, Strengthening of Farmer Organizations, capacity development and training workshops for cascade management committees, awareness and trainings for stake holders, training and workshops for program staff in different categories are conducted under the IDCB unit of the project. Training plan has been developed to address the training need of all such categories.

8.7.3 Monitoring and Evaluation

8.7.3.1 Results Frame work of the Project

PDO level indicator	End Project Target	By end of third quarter 2024
Cropping intensity (%)	150%	**148%**
Share of non-paddy crops in the command area (%)	50%	**43.0%**
Area under improved CSA practices (ha)	50,000	**50,052**
Direct project beneficiaries (Total No.)	470,000	**365,471**
Direct project beneficiaries (Female No.)	150,000	**160,807**

8.7.3.2 Periodical Evaluation of CSIAP Interventions

Periodical Evaluation has been conducted to measure the results of the project interventions which was commenced in March 2024 lead by the M&E Specialist of the CSIAP with the support of M&E Team and the Agricultural Facilitators. Survey method was a questionnaire prepared and finalized with the discussions of key officers assigned to project interventions and data collection was done by the AFs using Kobo Toolbox. M&E Specialist did the data analysis and accordingly achieved results were shared with the key stakeholders at the 12th implementation supervision mission, NSC meetings and progress review meetings.

In addition to this evaluation, it has already been planned to conduct the evaluations of other interventions focus on the impact Such as, Farmer Training conducted by the FTS Thirappane, Crop protection seasonal fencing etc. following the same method used for periodical evaluation on CSIAP interventions.

8.7.3.3 Economic Analysis

A training program was conducted to key officials on Economic Analysis lead by the Project Director and M&E Specialist. Practical experience is given on calculation of Internal Rate of Return (IRR) and Benefit-Cost Ratio (BCR) and advised the filed level officers to practice it at field level and report to the PMU for evaluation purposes. EP, NP and SP has submitted such analysis done by them under few tanks rehabilitated in the provinces.

A sample report practiced by the Southern Province M&E Officer on Medagamkadawara Tank construction is attached below as an example. It was calculated the BCR and IRR and has measured that sub-project as economical viable. As to that calculation, it was reported the BCR as 1.29 and IRR as 13.4% at the discount rate of 9.5%, The sample report can be seen by clicking the following icon.

Economic Analysis_Medagamka

8.7.3.4 Survey on Cost and Profit Analysis of Selected CSA practices

M&E Team supported the WB to conduct the survey on cost and profit analysis of selected CSA practices with the data collection support from Agricultural Facilitators of provinces. Moreover, support was given on data cleaning process and the cleaned data was submitted to the WB for their analysis purposes.

8.7.3.5 Monitoring Visits by the M&E Team and Reporting

Field monitoring visits are a need to measure the relevancy, efficiency and effectiveness of the project activities implemented in the field. Project monitoring team at provincial level do the field monitoring and they submit the reports on their monitoring visits. In the reports they clearly mention the locations visited, the issues or gaps identified with suggestions and the good practices. At their visits, the best cases found are being reported separately. These reports have been shared with the project implementation team for their attention.

8.7.3.6 Success Stories on Project Interventions

At the Monitoring visits by the M&E team started documenting the best practices found in the field from 2023 onwards. Some of such success cases were provided as small video clips and published in the communication channels/electronic media of the CSIAP. All such information has been shared with the staff for information and use for whenever needed.

8.7.3.7 Progress Reporting

Progress reporting is one of the main tasks of M&E Unit and this task has been regularly attended to by the M&E Unit. Monthly progress reports have been submitted to the Ministry of Agriculture, Department of Project Management and Monitoring (under the Treasury – Ministry of Finance) on the 10th of each month. Quarterly progress reports have been submitted to the World bank regularly. Annual Report for the year 2023 has been submitted to WB in due dates. In addition to those regular reports, the information required on the project performance by various stake-holders have been submitted timely on requests. Monthly progress reports to the PMU are being submitted by the M&E Officers at field level and monthly progress is reported based on such reports and the progress updated by the specialist team on their subject areas. In addition, the M&E Unit has been introduced an 'at a glance progress' on the project that could easily be referred for current status of the project and it has been updated monthly with the support of project team. Moreover, information needs for the progress review meetings conducted by the Ministry, National Steering Committee meetings conducted by the Ministry, provincial steering committees conducted at provincial level and other

urgent meetings by stakeholders were provided and presented by the M&E Team in PMU and provincial level.

8.7.3.8 Annual Work Plan and Budget

Annual work plan with budget has initially been prepared up to the end of June 2024 since the project was due for closure at the date. But with the project extension, the revised work plan and budget covering the entire year has been approved by the Secretary of the Ministry.

8.7.3.9 Training on M&E work

Required trainings on need have been conducted by the M&E Specialist for the M&E team, Agriculture Facilitators and other staff officers. These trainings are as follows:

T**rainings for Agriculture Facilitators** in 6 provinces –
Data feeding to MIS using mobile application, Using Kobo-toolbox for data collection, Data Entering for periodical evaluations

Online and physical participation sessions for M&E Officers –
Preparation of work plan with budget, Data feeding to MIS, Data analyzing tools (SPSS), Data management, Importance of M&E, Using Kobo-toolbox for data collection, Monitoring visits and how to write monitoring visit reports, reporting best practices highlighting CSA concepts, Data feeding to google sheets and google file transfers etc.,
A training plan for the need of M&E unit has been prepared and submitted to the IDCB unit for further training requirements.

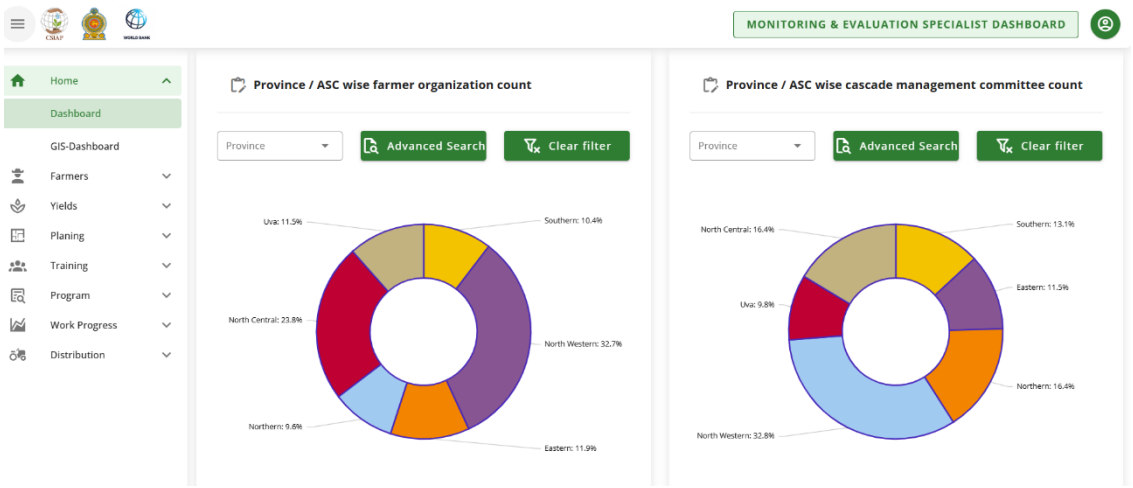
Plate 21: Field level data collection - M&E team

Plate 22: M&E support for a planning session

8.7.4 Information Education and Communication (ICE) and Information Communication Technology (ICT)

8.7.4.1 Management Information System (MIS)

Management Information System was established and 80% of data entering has been completed. Initially a big backlog of data sets was in provincial officers and the provincial level M&E Officers supported for data feeding under the guidance M&E unit. At the time of data feeding to the system there were some identified issued, and the MIS consultants addressed the main issues. The responsibility of MIS was assigned to ICT/ICE Unit of CSIAP in mid July 2023 and all work relating to MIS work will be handled ICT/ICE unit. ICE ICT Unit has uploaded a google sheet to upload the day today issues identified at the data entering. ICT unit takes measures to address such issues with the MIS consultants. Currently the data feeding to the system is supervised by the relevant subject specialists and provincial level data feeding is going on as a continuation work.



Graph 10: Picture of a dash board of MIS

8.7.4.2 ICE Campaigns

Regular ICE campaigns are conducting at farmer/beneficiary level covering all ASC areas in six project provinces. At the end of the year totally 2259 such ICE campaigns have been conducted covering six provinces out of the planned 2267 programs.

8.7.4.3 ICT activities by the CSIAP

Both electronic and printed media is used to highlight project activities. There are five social media links handled under the ICT activities. CSIAP Web page, Blog, Twitter, Linked-in and Facebook are

the social media where CSIAP work illustrated. All important events, success stories, project work, work-plan and reports on project activities have been uploaded to these media links as relevant. As printed media, posters, leaflets and handbooks have been prepared for Agriculture Production and Marketing component to handle Farm Business School activities, promote product selling stoles etc. Following illustrations highlights the work done under this category.

Daily News

HOME | October 26, 2024 | Daily News | 3: Page

CSIAP trains over 1,900 farmer leaders with World Bank assistance

The Climate Smart Irrigated Agriculture Project trained 1,966 farmer leaders to impart knowledge on Climate Smart Agriculture to around 19,600 farmers.

The Climate Smart Agriculture Project (CSIAP) built a Climate-Smart Agriculture Farmer Training School for the first time in South Asia in an area of three acres in Thirppappane, Anuradhapura district at a cost of Rs. 117 Mn with the support of the World Bank to promote Climate-Smart Agriculture (CSA) in Sri Lanka. A total of 1,966 farmer leaders including 788 women farmer leaders have been trained in 86 training programmes to disseminate the knowledge, that they have acquired about CSA, to more than 19,600 farmers in the six provinces namely Northwest, North Central, Northern, Eastern, Uva and Southern Provinces where the CSIAP is being implemented.

The CSIAP Project, implemented under the Agriculture, Lands, Livestock, Irrigation, Fisheries and Aquatic Resources Ministry, aims to guide the farming community living in the project area to use CSA technologies and train them to cope with and adapt to the adverse effects of climate change by building this training school. Training sessions are also conducted for technical personnel during the project period.

The construction of the Farmer Training School started on December 22, 2021 and was opened on December 4, 2022. The coordinator of this school, Sajith Ekanayake, says that the school is used to train farmers to give hands-on experience in CSA practices and technologies and address challenges to climate change mitigation, adaptation, and food security.

The CSIAP has planned to establish a platform for the dissemination of CSA knowledge in the village and provide beneficiaries living in the areas where they are experiencing climate change with CSA technology by covering all 47 agricultural service centre divisions. Eventually, the CSIAP envisages dissemination of CSA technologies and practices among entire farming communities that are vulnerable to the effects of climate change in the country through the intervention of officials from the Agriculture Department.

Plate 23: newspaper Article on CSIAP

9. Annexures

Annexure - 1: Success Stories of the Project

Farming is not Gender Neutral, the Women also Have a Role to Play...

SA Dayasili lives in Kotakumbuka village of Devramwehera GN division where there is an arid climate in Lunugamwehera DS Division of Hambantota district. Mrs. Dayaseeli is a mother of three children. She has been living in this village since 1990, taking agriculture as her livelihood and being satisfied with the traditional agricultural environment with her husband. With the onset of the COVID-19 epidemic in 2020 and the untimely death of her husband in 2021, Ms. Dayaseli's life began to change unexpectedly, and she was assigned the difficult task of bearing the burden of her family's life alone. At that time, her younger daughter was going to start higher education at the Mechanical Engineering Institute of Technology and her younger son at the Peradeniya Faculty of Medicine, and she was going to bear the additional expenses for that. As a mother, she took on the responsibility of nurturing her children alone and started full-time agriculture in that environment.

In 2021, the "Devramvehera Dilena Tharu Production Society" will be established by the Climate Smart Irrigated Agriculture Project, and since she was involved in the awareness program about the project at that time, Mrs. Dayaseli took membership of the production society and held the position of its secretary. She developed her 02-acre high land and turned to agriculture using climate Smart agricultural practices and for the first time, she starts to cultivate twice a year, both yala and maha seasons. The converting her small well to Agro-well under the CSIAP intervention is a big milestone in her cultivation life. After securing the water availability, She started to cultivate under insect-proof net and sprinkler water system provided by the CSIAP and successfully cultivated tomatoes and chilies. Also, she Cultivates papaya, Maize, groundnut, and brinjal outside the insect-proof net using climate-smart practices. Oranges, cashews, and mangoes are also cultivated as permanent orchards.

Compost-making equipment and Home gardening tool kit provided by the project are useful for home gardening and vegetable cultivation for family needs. It has been a huge help to the family's food security since the COVID-19 era.

Currently, she earns nearly 04 lakh rupees as net income from chili and tomato cultivation in one cropping season and harvests approximately 60 kg per week during the season. in addition to that, by using crop diversification, she got a good harvest and nearly LKR. 40,000.00 income per month from OFC, vegetable, and fruit cultivation throughout the year, which is a big achievement. That advantage has helped them to achieve a high economic position in rural society.

M&E Unit - CSIAP

Water Availability Throughout the Year Motivated me for Continuous Cultivation

"I mortivated to do Inter-Cropping with Mung Bean and Maize cultivation using mulching with crops residues. I was able to earn Rs. 75,000 from intercrop (Mung Bean) within a short period before cultivation the major crop. It was posible to irrigate my cultivation with surface irrigation due to the availability of this agro-well.

Mr Sanjaya Kapila Kumara is young farmer who have one hectare land in 6th mile post, Wadinahela, Hadapanagala in Monaragala district. He is a fulltime farmer but suffered lack water issue during dry season and cultivation had done only under rain fed condition. He has lot of experiences about crops failure in drought during specially in Yala season. According to farming interrace previously he already started to build an agro- well however due to lack of finance he was not able to finish it. In 2022 he participated in an awareness program conducted by the CSIAP. After that he has been requested the Agriculture Facilitator (AF) to engage his name in agro-well rehabilitation list. After screening the fundamental requirements which are needed to give him an agro-well the project granted 50% financial support to rehabilitate the existing well. Accordingly, the project contributed LKR 0.65Mn and he was able to contribute LKR 0.7 Mn.

During 2023/24 Maha season maize was cultivated in 1 acre under rain fed condition and now it's in harvesting stage. However this cultivation was not irrigated under this agro-well. However, at latter part of 23/24 Maha, 1/3 acre of chilly cultivation was implemented and now it's becoming harvesting stage. Just after maha rain, 1 acre of okra cultivation was started and now it is in flowering stage. Present farmer village area belongs to dry condition and very helpful for cultivating chilly as well as okra crop. So Mr Sanjeeva giving massage to us is continue farming, producing in from same land.

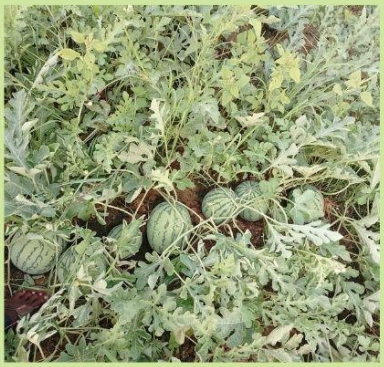
Further he said, "I want to develop this to get maximum production and benefits. So accordingly the the ½ acre can keep for resident and perianal mix cropping (coconut & fruit plants). Then other 2 acres for seasonal crops cultivation as use micro irrigation systems and insect proof net cultivation for high value crops. He said that " during cultivation period CSIAP's ,Agriculture Facilitator gave technical guidance as ell as KUPANISA gave other various supports as needed".

I KNOW HOW TO SAVE 5000 RUPEES PER DAY WHILE CULTIVATING.

My name is V.G. Lalanda. I am in Dunumadalawa GN division. I am 45 years old. My hometown is Rajanganaya. Before farming, I used to buy and sell vehicles. Later I left that job and came to this area. After coming, I started farming. In those days, farming was done using the rain

The GN officer came to me and told me that there is a project to be involved. That's how I got involved in this project.

An agricultural well was built but it always breaks. There is no end. It was a great relief that Lida was rehabilitated. It costs me about 6000 rupees a day to use the water motor. Now, because of this project, I am using water by using a tank, so I am saving about 5000 rupees a day. I bought the water pipe after spending money. I got a lot of seeds from this project. The project helped a lot by giving advice. The man in charge of the project comes often. Come and see if I can take advantage of this.



Almost 3 acres of watermelons have been planted here. It has been cultivated on the other side as well. There used to be a papaya plantation here. There was a chili plantation at the top.

In terms of the support I got through this project, setting up the agro well was a big help. I saved all the costs for that. Now after installing a tank and a water motor here, I can always use water. Then I can save 5000 per day. That means when I cultivate, I can save 3-4 lakhs per month.

Farmers are suffering due to climate change. I have been informed that I can get some help now through this agro well. Now there is water to do 6 acres without fear. The people of this province are doing a lot of things because of this project. I will share what I know with anyone who is interested in this matter.

I Became an Agripreneur with the Knowledge Taken from Farmer Business School (FBS)

Farmer Business School (FBS) is an educational program designed to enhance the business management skills of farmers, particularly smallholder farmers in rural areas. The program aims to empower farmers with the knowledge and skills necessary to effectively manage their farms as businesses, improve productivity, increase income, and ultimately achieve sustainable livelihoods.

Mr. Wajira, residing in Polpithigama area, was selected as a Youth Farmer in 2022 by the CSIAP. In the initial phase, he received essential agricultural support, including an Aro-well, Water Pump, Drip Irrigation System, Poly Bags, Poly-mulch, and Insect Proof Nets. Starting with Capsicum cultivation, he shared his cultivation experience and highlighted notable improvements achieved through FBS training.

He said, “I enrolled in the FBS training program organized in our region by CSIAP officers, actively participated in all 12 training sessions. The opportunity was immensely gratifying for me, as I learned crucial aspects of minimizing hazards during the cultivation period and gained insights into approaching the market, understanding market behavior, and selecting suitable crop varieties with market value”. Before commencing cultivation, I sought advice from various farmers to understand the selection of appropriate crops and their demand. After gathering information, I decided to cultivate Chili on my land and selected the variety called "DAIYA". Following the variety selection, I visited the market to assess its price and demand. I identified a substantial demand for it in both the Dambulla Wholesale Market and at the village level. Subsequently, armed with this information, I formulated a budget and initiated the cultivation process”.

Further he added, "I have cultivated 400 Chili Plants in Polybags to withstand water-logged conditions. Drip irrigation is employed to efficiently meet their water requirements. I measure the water quantity received by each plant using a 1-liter cup. The watering schedule involves providing 1 liter in the morning and 1 liter in the evening, totaling 2 liters per day. This approach aims to minimize water losses while ensuring adequate hydration for the plants."

According to his budget, he assumes a yield of 2.0 kg per plant during the crop's life. He has calculated the minimum cost for a plant to be Rs. 500. His target selling price is set at a minimum of Rs. 500 per kg. With a target profit of around Rs. 0.2 Mn, he aims to minimize cultivation and market risks and uncertainties. His strategy involves leveraging lessons learned from present and past cultivation experiences to mitigate risks in future cultivations.

M&E UNIT - CSIAP

EVEN IF THERE ARE NO FISH IN THE LAKE, WE CAN CONTINUE OUR LIFE NOW.....

Piyal Thilakarathne
358,Oyamaduwa
Tanthirimale

At first, we only did yala & maha. Usually, the people of the village used to live in Talava Ela and Wilachchi tank by collecting sand and catching fish. After the project, many things changed. In addition to main crops, they started cultivating intermediate crops. Many people are now motivated by it. It has a big advantage

Seriously, I have received a lot of things from the project. People have never farmed before under agro wells. There was not enough knowledge about agro wells. only Yala and Maha seasons are farming.

Things like sesame are cultivated. Maize, chilies, and pumpkins are cultivated for the maha season. Cultivation was not big. Then we found the cultivation. After that, we started to build small gardens. Starting there has made a big difference. It has been 1 ½ years since we joined the project. There is a big difference, not a small one.

I am aware of the impacts of climate change on farming. I have been taken to training in this regard. It has great importance. It's not raining the way it rained when we were kids, it's raining now. Many people are familiar with this project now. Now we are not even aware of that compost fertilizer. The earth is dead, the land is turned unnecessarily, chemicals are applied unnecessarily. There are some places where nothing grows. Compost is put in such places.

Crop cover nets have been provided by this project. When the net is put, the insects come less. Then insect damage will be reduced. When that decreases, there is also a small profit in oil fertilizers. In addition, weed removal machines have been provided in some places. I have also received a machine. When you find it, you don't even need to dig. That's a big advantage.

Today, the salary of a hired worker is around 2000 to 2500 rupees. When you look at it like that, chillies have to be given at the price of gold. There is no such thing in our country. Then water flowers have been given. It also has a big advantage and there is a lot of difference to providing water before. It was from this project that I found out that such a technology exists.

Even if this project is over, we will continue to do the things we used to do. Because this is good. There is a difference. We used to farm only two seasons, now we don't even have fish in the lake. There is no sand to collect. People have changed a lot from those things. You can hear that many people in this village are fishermen. Now there are no fishermen. Now most of the people are doing farming. Because of the project, people were able to grow crops in addition to the yala and main crops. It was a help. Before this project, there were 5 to 6 agro wells in the village. Now there are about 30 to 40 agro wells.

Waste to Wealth

Meena's Story on Compost production and Organic farming

Kuchchavelli, Trincomalee of Eastern Province

"My journey into compost production didn't start with grand ambitions; it began with a Climate Smart Irrigated Agriculture Project of Eastern province which advocated compost production during the critical period of Inorganic fertilizer crisis in Sri Lanka. "

My name is Meena, and I reside in Kuchchavelli, Trincomalee. Through the CSIAP EP, I received ***compost production equipment and materials*** to establish a small-scale compost production unit. Though it was a modest beginning, it signified the onset of a remarkable journey.

I have a simple desire to achieve something grater in my life. Due to my family situation, I was unable to pursue studies during those days. Therefore, I chose the path of organic farming to achieve greater success and started working hard towards my goal. Little did I know that this decision would lead to a remarkable transformation not just in my fields, but also in my entire farming operation.

I am producing compost, liquid fertilizers, 3-G solution, fish tonic, glyricidia solution, neem seed oil spray and garlic spray. I utilized this compost to cultivate my organic garden. Pomegranates (var. red angel) and turmeric soon became the stars of my organic garden. There are Mango (var. Vilad & TOMEJC), Papaw and Kolikuttu banana. With each passing season, the results were nothing short of extraordinary. Not only did my soil regain its vitality, but my crops also thrived like never before. I witnessed increased yields, improved plant health, and a remarkable reduction in the need for synthetic inputs. Moreover, the produce from my farm gained a reputation for its exceptional quality and taste, attracting discerning customers who appreciated the sustainable farming practices behind it.

I sell surplus compost to villagers at a price ranging from Rs. 60 to Rs. 70. Additionally, I market pomegranates and turmeric directly to the Good Market in Colombo via train. Last time, I marketed pomegranates at a rate of Rs. 4000 per kilogram to the Good Market, and the remaining low-grade pomegranates were sold at the rate of Rs. 1000 per kilogram to villagers. I saved these profits and reinvested them for further development of my organic home garden.

Always I prefer the direct approach to avoid interference from middlemen. To facilitate direct sales, I market my products to the Samurdhi office and banks in Kuchavelli and Pulmodai. Furthermore, I engage in marketing activities at the District Secretariat in Trincomalee once a month and at the Divisional Secretariat in Kuchchavelli once every three months, promoting my products under the category of Organic Vegetables and Fruits.

"My ultimate goal is to gain recognition for my products and directly market them at the Dambulla market. Thanks to the CSIAP EP team for initiating this success and showing me the path to pursue a role in agripreneurship."

M&E Unit CSIAP

Annexure - 2 : Updated Results Framework

Updated results framework as of mid-November 2024

PDO level Indicators

Indicator	Baseline	Original End Project Targets	Proposed End Project Targets	Actual as of Mid Nov. 2024	Remarks, if any
Cropping Intensity – percentage	110%	-	150%	148%	A new indicator proposed during the 9th Restructuring Mission held between 18-30 Oct 2022 and measured seasonally. The project selected 48 pilot tanks (proportionately to the total number of tanks rehabilitated) to calculate the value of this indicator. The project collected yield data from 39 tanks (from 2023 Maha to Inter-Season II 2024) out of 48 pilot tanks and the calculated value was 148% (see below sheet – *double click to open*).  Crop Diversity and Intensity.xlsx Referring to the Baseline Report, in page number 248, it has mentioned that 'Only 10% of paddy lands in some of the minor tanks is cultivated during dry seasons. Generally, the entire command area of most of the tanks is not cultivated with any crop during dry seasons due to non-availability of sufficient amount of water in the tank. Hence, CI of almost all tanks is less than 110%, etc. Therefore, the BL value was taken as 110% for this indicator.
Share of non-paddy crops in the command area - percentage	10%	-	50%	43%	A New indicator proposed during the 9th Restructuring Mission held between 18-30 Oct 2022 and measured seasonally. As mentioned in above, this value was calculated based on the data

Indicator	Baseline	Original End Project Targets	Proposed End Project Targets	Actual as of Mid Nov. 2024	Remarks, if any
					received from 27 tanks out of 48 pilot tanks, the calculated value for this indicator was 43% (see below sheet – *double click to open and refer to sheet no. 2*). Crop Diversity and Intensity.xlsx Referring to the PAD, in page number 34, it has mentioned that 'all areas are paddy-dominant but with nascent diversification (about **10 percent** of area) …etc. Therefore, the BL value was taken as 10% for this indicator.
Area under improved CSA practices - ha ('000)	0	35	50	49	A New indicator proposed during the 9th Restructuring Mission held between 18-30 Oct 2022 and measured seasonally. According to the data received from the CSA division of the project, by mid-Nov. 2024, the total extent which operates CSA practices was 49,053 ha. CSA Progress_by mid-Nov. 2024.xlsx
Direct project beneficiaries – total	0	470,000	470,000	365,471	Cumulatively, 365,471 beneficiaries have benefitted from the project interventions. Out of that, 299,525 beneficiaries have benefitted from the CERC. There are two interventions implemented under CERC and through the seed subsidiary programme, 265,278 no of beneficiaries have benefitted. Under rehabilitation of stores, 34,247 no of beneficiaries have benefitted. Moreover, 63,539 no of beneficiaries have benefitted under component 01 and 2,407 no of beneficiaries have benefitted under component 2.

<table>
<tr><th>Indicator</th><th>Baseline</th><th>Original End Project Targets</th><th>Proposed End Project Targets</th><th>Actual as of Mid Nov. 2024</th><th>Remarks, if any</th></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td>
<table>
<tr><th>Component</th><th>Intervention</th><th>Total</th><th>Male</th><th>Female</th></tr>
<tr><td rowspan="2">CERC component</td><td>Seed subsidiary programme</td><td>265,278</td><td colspan="2">Data not received from the MoA</td></tr>
<tr><td>Rehabilitation of stores</td><td>34,247</td><td colspan="2">Data not received from the MoA</td></tr>
<tr><td>Component 1</td><td>Agriculture and Marketing</td><td>63,539</td><td>34,944</td><td>28,595</td></tr>
<tr><td>Component 2 (only for completed tanks)</td><td>Rehabilitated tanks (81 Nos.)</td><td>2,407</td><td>1,685</td><td>722</td></tr>
<tr><td colspan="2">Total</td><td>365,471</td><td colspan="2"></td></tr>
</table>
The gender-wise update for CERC has not been received from the MoA. Anyway, the gender proportionate was calculated based on the available data and the Male: Female ratio was 56%: 44%. Based on this assumption, the computed female number of beneficiaries is 160,807.
</td></tr>
<tr><td>Direct project beneficiaries - female</td><td>0</td><td>50,000</td><td>150,000</td><td>160,807</td><td>-</td></tr>
</table>

Intermediate Results Indicators

Component 1: Agriculture Production and Marketing					
Indicator	**Baseline**	**Original End Project Targets**	**Proposed End Project Targets**	**Actual as of End Oct 2024**	**Remarks, if any**
Farmers reached with agriculture assets or services - Total (Number)	0	80,000	40,000	65,539	
Farmers reached with agriculture assets and extension services – Female (Number)	0	24,000	18,000	27,067	
Farmers adopted Improved Climate Smart Technologies and Practices for increased yield (Number)	0	60,000	40,000	33,623	
Farmers adopted improved technologies and Practices for increased yield - Female (Number)	0	15,000	10,000	14,284	
Farmers graduating from Farmer Business Schools, adopting the CSA practices learned and linked to market (Number)	0	60,000	22,000	7047	
Farmers graduating from Farmer Business Schools, adopting the CSA practices learned and linked to market - Female (Number)	0	20,000	7,300	1,879	
Home gardens assisted with project benefits – Number	0	65,000	65,000	65,539	
Demonstration plots established - Number	0	1400	450	611	
Trainers in competencies with CSA practices - Number	0	1,800	3500	2027	
Producer societies formed and operational - Number	0	560	560	572	
Producer associations formed and operational - Number	0	45	45	45	

Crop protected seasonal electric fences established and operational - Km	0	1,000	1,500	1100	
Component 2: Water for Agriculture					
Indicator	**Baseline**	**Original End Project Targets**	**Proposed End Project Targets**	**Actual as of End Oct 2024**	**Remarks, if any**
Functional FOs managing irrigation and drainage structures effectively (Number)	0	1,400	400	141	
Functional CMCs managing irrigation and drainage structures effectively (Number)	0	28	61	61	
Cascades completed with hydrology assessments and modelling for sustainable water management - Number	0	121	120	121	
Rehabilitated cascade and individual tanks in operation - Number	0	476	476	443	
Rehabilitated field canals in operation - Km	0	75	75	32.5	
Area provided with improved irrigation and drainage services - Ha	0	5,000	5,000	2,847	
Component 3: Project Management					
Grievances registered related to delivery of project benefits, addressed percentage disaggregated by Gender (Percentage)	0	100	100	95% (Male-96% and Female-95%)	
Beneficiaries that feel project investment reflected their needs disaggregated by gender (Percentage)	0	80	80	94	
Trainings delivered using agreed capacity development approach (Percentage)	0	90	90	70	
Progress reports meet World Bank quality and timely delivery requirements (Text)	0	Yes	Yes	Yes	