



World Food Programme



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# Final Completion Report

## Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of SRI LANKA

2011-2020

SAVING LIVES  
CHANGING LIVES

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## Annex 1: Financial Report

## ABBREVIATIONS

AF	Adaptation Fund
AI	Agricultural Instructor
ASC	Agrarian Service Center
AR&Ps	Agrarian Research & Production Assistants
CCAP	Climate Change Adaptation Project
DAD	Department of Agrarian Development
DO	Divisional Officer
DOA	Department of Agriculture
DSD	Divisional Secretarial Divisions
FO	Farmer Organizations
FGDs	Focus Group Discussions
FCRDI	Field Crop Research and Development Institute
GNDs	Grama Niladhari Divisions
KIIs	Key Informant Interviews
MMDE	Ministry of Mahaweli Development & Environment
MTR	Mid Term Review
PSU	Project Support Unit
RAP	Rapid Assessment of the Progress
WFP	World Food Programme
UNDP	United Nations Development Programme



# 1. Basic Information

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<b>Project Title</b>	Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka
<b>Project/Programme Category</b>	Regular project
<b>Project Period</b>	December 12, 2012 - September 30th 2020
<b>Country</b>	Sri Lanka
<b>Sectors</b>	Climate Change Adaptation and Food Security
<b>Implementing Entity</b>	World Food Programme (WFP)
<b>Type of implementing entity (MIE, NIE or RIE)</b>	Multilateral Implementing Entity
<b>Executing Entities</b>	Ministry of Mahaweli Development and Environment <sup>1</sup> and United Nations Development Programme
<b>Amount of financing approved (USD)</b>	7,989,727 USD
<b>Project Contacts</b>	Andrea Berardo (andrea.berardo@wfp.org)
<b>Date of Report</b>	September 30 <sup>th</sup> 2020

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<sup>1</sup> In 2019, Ministry of Mahaweli Development and Environment (MMDE) was renamed Ministry of Environment and Wildlife Resources. Since the contractual agreement states MMDE, the document will refer to the former name of the Ministry.

## 2. Key Milestones

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1	Project Proposal for Sri Lanka	October 10, 2011
2	Date of Award to WFP	December 12, 2012
3	Date of Project Inception	March 2013
4	Initially Planned Project Implementation Period	August 2014 to August 2017
5	National Steering Committee appointed and made functional	December 2013
6	CCAP implementation commenced in Walapane DSD	August 2014
7	CCAP implementation commenced in Medirigiriya & Lankapura DSDs	August 2014 (Medirigiriya) October 2014 (Lankapura)
8	Baseline Studies (2)	July 2017
9	First Extension of Project Implementation Period *Implementation delays	August 2017 to February 2019
10	Second Extension of Project Implementation Period *Eastern Sunday Bombings and Presidential Elections	August 2017 to February 2020
11	UN agency-to-agency agreement was signed between WFP and UNDP	September 2017
12	Mid Term Review	July 2018
13	Report of the Rapid Assessment of the Progress	January, 2019
14	Final Extension of Project Implementation Period *Delays caused by Covid-19 containment restrictions	July 2020
15	Date of Project Completion	September 30, 2020
16	Terminal evaluation	March 2021

### 3. Project Overview and Description

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Agriculture is one of the most important sectors in the Sri Lankan economy. Its contribution to the Gross Domestic Production is 7.9% and it accounts for 25.5% of the employment. However, the performance of the agricultural sector is hampered by several climatic hazards, limited adaptation and socio-economic vulnerabilities.

The Mahaweli River Development Scheme is the largest multipurpose development project implemented in Sri Lanka, aiming at provision of irrigation water and generation of hydro power. Although the scheme brought substantial development benefits to the project areas and to the nation, considerable areas in the river basin remained marginalized from the development. These remote areas located in the mid and upper catchment and downstream are characterized by rain-fed subsistence small farms with high levels of food insecurity and poverty. Moreover, these regions are highly exposed to climate induced disasters coupled with water scarcity. The vulnerability analysis on disaster exposure, irrigation and drinking water scarcity, erosion of soil and food insecurity revealed that Divisional Secretary Divisions (DSDs) of Walapane, Medirigiriya and Lankapura are highly vulnerable. Of these areas, the upstream areas such as Walapane are characterized by poor infrastructure facilities with steep mountainous slopes whereas the areas in downstream such as Medirigiriya and Lankapura are characterized by drought-prone areas with small village irrigation structures.

In response to Sri Lanka's vulnerability to climate change, the Adaptation Fund financed the Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka Project, through the Implementing Agency of the United Nations World Food Programme and executed by the Ministry of Environment and Wildlife Resources and United Nations Development Programme.

The project focused on developing community resilience by improving household food security and building sustainable livelihoods of 14,039 rain-fed small-holder farming households in Polonnaruwa (Lankapura and Medirigiriya) and Nuwara Eliya (Walapane) districts. The project was granted in March 2013 and ended in September 2020.

## 4. Results and Key Outcomes

### 4.1 The Overall Objective

The overall objective of the project was to mitigate effects of climate change induced rainfall variability and its impacts on livelihood and food security in rainfed farming communities in three sub watersheds of the Mahaweli River Basin. To directly address these climate-induced impacts, the project undertook a multi-pronged strategy:

**Component One:** Developed household food security and built resilient livelihoods for rain-fed farming households; and

**Component Two:** Built institutional capacity in village, local, regional service delivery to reduce risks associated with climate-induced rainfall variability.

In component one, the project prioritized concrete adaptation measures that made a tangible impact to the lives of vulnerable farming communities by increasing the local availability of food, developed alternative livelihoods - particularly for women - that can withstand climate shocks, provided timely climate information on risks and adaptive strategies, and strengthened dissemination of early warning information to ultimately support farming communities to make more informed decisions and access critical climate smart inputs to build their adaptive capacity.

While in component 2, the programme developed the institutional capacity of Farmer Organisations (FOs), Extension Officers and local development officials to better identify climate risks, facilitate the development of local adaptation strategies, and to support farming communities to undertake adaptive measures through informed and timely extension services. This was further reinforced by the development of case studies and policy briefs to capture best practices and policy recommendations that aimed to enhance the enabling environment for effective and sustainable adaptation measures for future programming and national investment.

#### Summary of Objective Results

Results		Indicator	Baseline	Target	Actual
Project Results	To mitigate effects of climate change induced rainfall variability and its impacts on livelihood and food security in rainfed farming communities in three sub watersheds of the Mahaweli River Basin	Percentage of target population adopting risk reduction measures	Less than 10% of target population (14039 households) practice climate risk reduction measures	75% of target population (14039 households) practice at least one climate risk reduction measure introduced through project interventions	98% of sampled households practiced at least one climate risk reduction measure. 15,507 Households (54% F) have been reached.
		Household consumption score	Both DSDs indicate food insecurity in VAM (Vulnerability Analysis and Mapping Data) Walapane- Very High Medirigiriya Moderate	14039 farming households indicate improved levels of food security compared to the initial consumption survey	Prevalence of households with borderline food consumption improved during the project implementation period, dropping from 16 percent to only 1 percent of households in 2020.

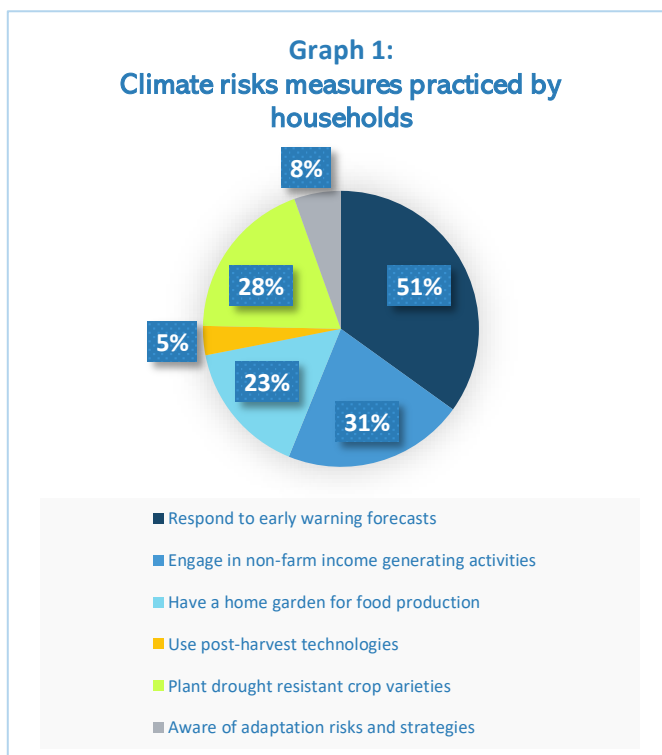
The Programme Management Unit commissioned an endline survey of the project to measure the progress towards achieving the project's outcomes, as outlined in the Logical Framework. The analysis of the findings of the surveys, in combination with project reports, have been presented in this report. The endline surveys adopted various methods to gather primary and secondary data from the sampled respondents (Endline Survey TOR and Limitation of the Study – Annex 1). The primary data was collected from 879 households, using the Krejcie and Morgan formula with 5 percent degree of accuracy and 95 percent confidence level. A household survey questionnaire was used to collect data from the sampled households with in the targeted three DSDs, namely Walapane, Medirigiriya and Lankapura. Qualitative data was also collected from 12 FGDs involving women and men (gender-separated groups). Eleven Key Informant Interviews (KIIs) were conducted with government officials and project staff. Secondary data sources included the Baseline and Midterm studies, Grant Agreement, and Project Performance Reports.

The results of the theory of change in meeting the objectives of the programme was assessed through two proxy indicators. The first evaluated by 'the number of the households that practiced at least one climate risk reduction measure.' At the time of the baseline, less than 10% of target population (14039 households) practiced climate risk reduction

measures and by the end of the project, the findings from the household survey saw a dramatic increase to **98% of sampled households practiced at least one climate risk reduction measure of the 15,507 households reached**. The four leading practices that were identified included: a) responding to early warning forecasts; b) engaging in non-farm income generating activities; c) Introduce and promote drought-tolerant crop varieties and agronomic practices to counter effects of rainfall variability; and d) engaging in home-garden – based agroforestry systems for securing food production.

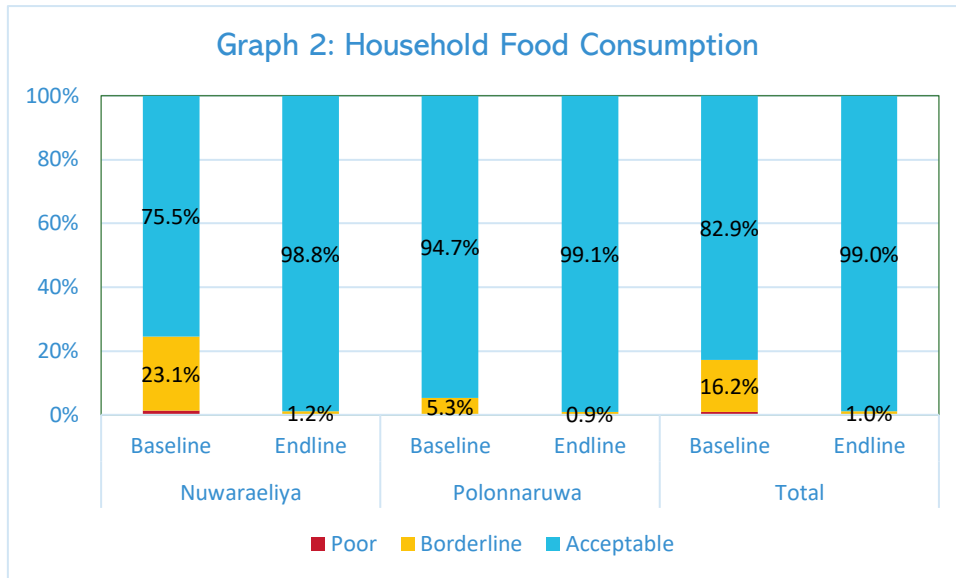
The second proxy indicator that measured against the objective was the food consumption score. The FCS is a proxy indicator of households' access to food and is a core WFP indicator used to classify households into three different groups: households with poor consumption, borderline consumption, and acceptable consumption.

- *Poor food consumption*: Households that do not consume staples and vegetables every day and never or very seldom consume protein-rich food such as meat and dairy.
- *Borderline food consumption*: Households that consume staples and vegetables every day, accompanied by oil and pulses a few times a week.
- *Acceptable food consumption*: Households that consume staples and vegetables every day, frequently accompanied by oil and pulses, and occasionally meat, fish and dairy.





Findings from the endline survey reflect an overall improvement in the food security of households compared to the baseline (Graph 2), with nearly all households sampled consuming an acceptable diet. There is considerable improvement in Nuwara Eliya in particular, where households with acceptable food consumption increased from 75 percent to nearly 99 percent. Overall, the prevalence of households with borderline food consumption improved during the project implementation period, dropping from 16 percent to only 1 percent of households in 2020.



## 4.2 Results of Component 1

Results Outcome 1		Indicator	Baseline	Target	Actual
Project Logical Framework	<b>Outcome 1</b> Diversified and strengthened livelihoods and sources of income for vulnerable farm families in minor irrigated and rain fed areas	Percentage of target households with sustained climate resilient livelihoods	Farm families under minor irrigation/rain fed conditions highly exposed to climate change related livelihood insecurity Threat level: Very High	14039 target households have developed at least one climate resilient livelihood strategy or alternate source of income	15,507 farming households (54% W) received inputs to support their efforts in developing a climate resilient livelihood strategy.
		No of women with new source of income	Women in target areas practice traditional rain fed farming  *assumption: Less than 10%	Home gardens generate income in 50% of target population  - Women's contribution to household income increased by 50% in target households  Assumption: 15% of women are contributing to the household income than 20%	90% of the home gardens generate income from their cultivation.  Women's contribution to household income increased by over 50% in target households  (54% of women are contributing to the household income, more than 20%)

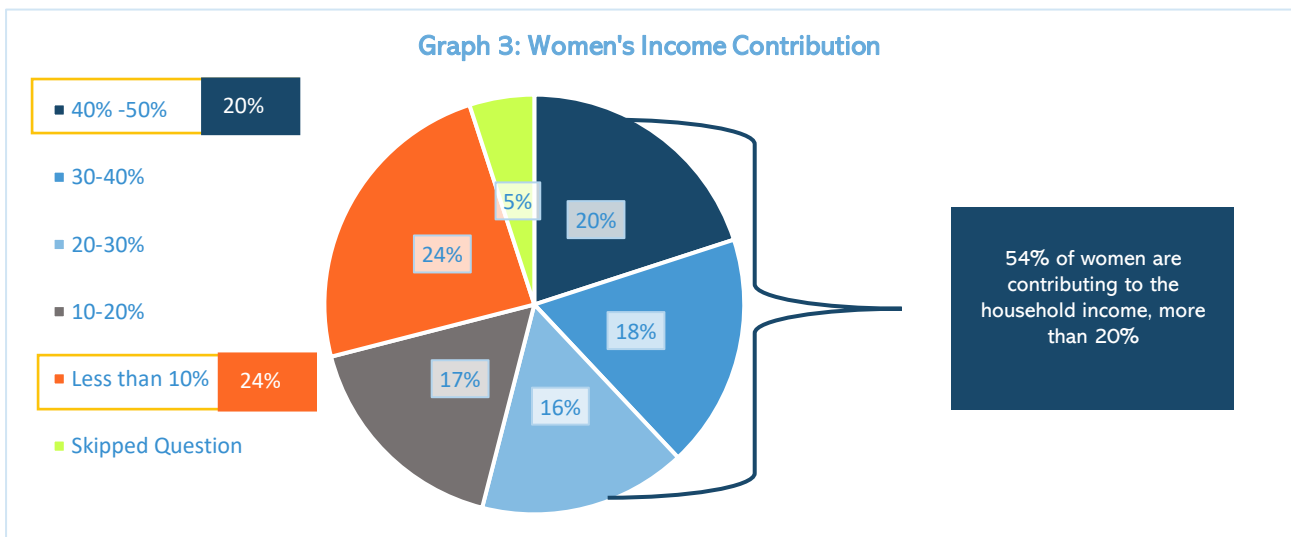
The beneficiaries in the project areas are mainly dependent on rain fed agriculture-based livelihoods. In order to develop more resilient livelihood strategies, the project developed home gardens, alternative income avenues, distributed post-harvest technologies and built community assets. **Over 15,507 farming households (54% W) received inputs to support their efforts in developing a climate resilient livelihood strategy.**

Project interventions in animal husbandry and rearing of small drought-resilient animal breeds have increased the adaptability and drought tolerance of households to supplement their income from agricultural activities during inter monsoon seasons. Income generating activities such as mushroom growing, bee keeping, floriculture and off-farm alternative livelihoods were also supported under this project. Crops such as Coconut and Cashew were introduced to households based on market demand and their resistance to floods and droughts, making these sustainable income generating strategies.

These strategies were further developed by introducing more efficient water management strategies such as micro irrigation systems and pitcher irrigation. Agro wells and rain water harvesting tanks were also introduced to home gardens to sustain them during the dry seasons or even during droughts. These interventions have supported households to increase the productivity and generate supplementary income from home gardens. Based on the endline household survey, **90% of the home gardens generated income from their cultivation.**

Moreover, alternative livelihoods have been developed under five value chains namely, agro-ecological farming, dairy production, food processing, garment & handlooms, and handicrafts. More than 2490 households directly benefitted from this and 51% of which were women. Under the food processing value chain, 693 households were supported and 68% of these were women. Through cash for work initiatives among 685 beneficiaries (220 women), the project rehabilitated community infrastructure such as irrigation canals, anicuts, agri-roads and minor tanks, serving over 20,723 community members that now have access to these climate-proof assets.

Women's contribution to household income has steadily improved. The baseline was registered as 'women in target areas practice traditional rain fed farming, with less than 10% of women contributing to household income. The target for this indicator required women's contribution to household income increase by 50% in target households. To compare against the baseline, this target has been interpreted as 15% (50% increase from 10% is 15%) of women who are contributing to the household income more than 20%. The benchmark of 20% was determined because the thresholds category was 10-20% and responses above that threshold would be included in the result. Based on this reasoning and in review of data from the household survey, the result is **women's contribution to household income increased by over 50% in target households**. This has been determined by the findings that consolidated the three categories over 20%. Moreover, although 24% of households had less than 10% of women's income contributing to the household, the second largest category was 20% of women's income contributing to the household between 40%-50% which is a significant change (refer to Graph 1 and highlighted % for reference).



## Output 1.1 – Home Gardens

Results	Indicator	Baseline	Target	Actual
Develop home garden based agro forestry systems in target DSDs to diversify livelihoods and build adaptive capacity of households to climate change	No of diversified home gardens created through project intervention	Home garden diversity low - medium	14039 rain-fed farming families benefit from home garden improvement	15,507 rain-fed farming families (54% W) benefited from home garden improvement
	Value of food and income generated through diversified home gardens	Low- >10 species of food and multipurpose tree species	Diversity (no of multipurpose tree species) in home gardens improved	Diversity (no of multipurpose tree species) in home gardens have <u>not</u> improved
		Medium-10-25 High- <25 species	Household income from home gardens increased	Household income from home gardens increased  62% earned less than 5000 rupees per month, while 10% earned between 5000-10,000 rupees per month.

Climate-vulnerable households have been provided with need-based training, drought-tolerant seeds, equipment and planting materials to diversify their home gardens in order to strengthen their adaptive capacity and economic and food security.

**Capacity Building:** 382 farmers participated in 9 training sessions to develop their home gardens. Of these, ninety-six organic input producers from 3 DSDs were trained on certified organic input production to be marketed at a commercial level, with the technical assistance of the Center of Excellence in Organic Agriculture at Makandura of the Department of Agriculture. Out of this, 12 farmers are producing around 5000 kg of compost and organic input on a commercial basis for the market under the brand name of 'Haritha,' and registered as two business entities (community enterprises) in Madirigiriya and Walapane. These farmers will continue to be supported by the 101 Agriculture Instructors (AI's) and Agriculture Development Assistants who have been trained to conduct soil tests to continue providing technical assistance.

Project farmer arranging her produce for sale at the weekly farmers market in Walapane



**Input Supply:** To foster the development of home-gardens, the project provided drought-tolerant seeds and tools. The project also provided 131 agro wells, 415 rainwater harvesting tanks, 1683 micro irrigation kits (water tanks, drip and sprinkle systems), 300 compost barrels and insect repellent nets to beneficiaries based on their needs and to improve the productivity of their home gardens. To assess soil conditions in developing sustainable home gardens, 29 soil testing kits were distributed among Agriculture Instructors (AIs) and Agriculture Research & Development Assistant (KUPANISA) through Agriculture Service Centers.

**Farmer Linkages:** Although the primary objective of the home-gardens was for home consumption, the project did introduce farmer markets to give home-gardens a local market to sell any surplus produce. Over 200 'Farmers Market' events have been facilitated with around 750 farmers supplying fruits and vegetables and other organic products through the farmers markets. Some of the produce were transported to Colombo and sold at the Good Market since September 2019 which allowed for higher returns.<sup>2</sup> Some of these home-garden farmers now have an established clientele, both at village level and in Colombo, who regularly visit these markets for organic products. Four 'farmer markets' have been established with vendor forums and registered as community enterprises to manage the farmer markets on a regular basis. According to records, around LKR 9.1 million have been earned from selling home garden products at the farmer markets. Also, around LKR 1.2 million were raised from the products marketed at the Colombo Good Market.

As per the findings of the Household Survey, **home gardens have been developed by 90% of households**, which was indicated by 795 sample farm families in the entire project area, who have access to land. Although the household survey did identify a major improvement in the number of households utilizing home gardens, there was not much change in the diversity of crops planted compared to the baseline. At the end of the project, **home garden diversity remained low**, with 70% of households planting between less than 5 different types of species, while only 18% planted between 5-10% crops.

According to the survey respondents, the purpose of the home garden was mainly for consumption and sale. Specifically, it was found that over 36% in Nuwara Eliya and 48% in Polonnaruwa, use them solely for household consumption, and 35% and 26% of respondents respectively use the produce for a combination of reasons, such as consumption, sale and for health improvement. Of the households earning income from home gardens, **62% earned less than 5000 rupees per month, while 10% earned between 5000-10,000 rupees per month.**

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<sup>2</sup> Good Market is a curated platform that connect environmentally conscious consumers with social enterprises, responsible businesses, and changemakers.



## Output 1.2: Drought Tolerant Crop

Results	Indicator	Baseline	Target	Actual
Introduce and promote drought tolerant crop varieties and agronomic practices to counter effects of rainfall variability	No and type of drought mitigation practices introduced	Low awareness and adoption of drought tolerant agronomic practices	All Farmer Organizations trained to engage in drought tolerant agriculture	10 drought tolerant practices introduced that supported 3273 beneficiaries.
			Farmer field trials conducted with national technical agencies for 500 farms families selected by FOs	70 farmer field trials on climate resilient agriculture practices among 1876 beneficiaries
			Seed banks and seed distribution established in each ASC	3 seed banks, covering 3 ACSs.

Drought mitigation practices introduced through the project included promotion of drought tolerant crop varieties, ecological approaches, Good Agricultural Practices, organizing farmer groups for seed paddy production to maintain seed security, and establishment of plant nurseries to make suitable planting materials more readily available in the area.

**Table 2: No. of Programmes and Direct Beneficiary Coverage under Output 1.2**

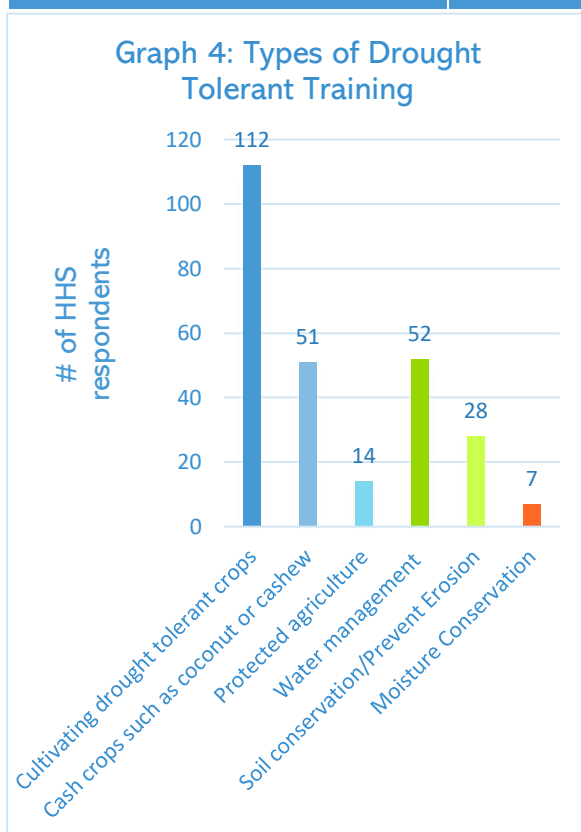
	Activity	No of programs done	Beneficiary coverage
1	Micro irrigation systems	5	118
2	Polytunnel cultivation	2	55
3	Pitcher irrigation	1	750
4	Seed paddy production and marketing	1	28
5	Parachute cultivation method	1	26
6	Drought tolerant crops	10	857
7	Plant Nursery	1	106
8	Ecological rice production processing	1	58
9	Establishment of Coffee Nursery	1	25
10	Bean seed production and storage	1	57
11	Kittul Based products	1	50
12	Distribution of farmer hand book	1	2000
	<b>Total</b>	<b>16</b>	<b>4130</b>

Overall, there were **10 drought tolerant practices introduced that supported 4130 beneficiaries**. Some of the key practices were captured in the farmer hand book that was distributed to 2000 beneficiaries. To increase the adoption of practices, the project facilitated **70 farmer field demonstrations on climate resilient agriculture practices among 1876 beneficiaries** (585 farm families in Walapane and 1291 farm families in Medirigiriya).

**Table 3: No. of Programmes and Direct Beneficiary Coverage under Output 1.2**

Type of field trials	No of participants	No of field trials	Technical agency
Parachute method	11	11	Interprovincial Dept of Agriculture

Organic farming	300	19	Interprovincial Dept of Agriculture
Mushroom development	80	2	Provincial Dept of Agriculture
Sprinklers, net houses, water pumps, mushroom huts	80	1	Provincial Dept of Agriculture
Cashew planting methods and fertilisation	700	20	Cashew Corporation
Coconut planting methods and fertilisation	200	10	Coconut Cultivation Board
Bee keeping demonstration	200	1	Provincial Dept of Agriculture
Hand tractor demonstration	140	1	Provincial Dept of Agriculture
Polytunnel demonstration	75	2	Department of Agrarian Development
Dairy farming	90	3	Department of Animal Production & Health
<b>Total</b>	<b>1876</b>	<b>70</b>	



In the household survey, 231 of 879 (26%) respondents indicated that they participated in training and awareness activities related to drought tolerant crops. Based on those results, cultivating drought tolerant crops was the most attended. Moreover, 219 out of 879 (25%) respondents noted that they received drought tolerant crops from the project.

Focus Group Discussions (FDGs) that were held with Women Farmer Organizations and Agrarian Research and Production Assistants (AR&Ps) revealed that agricultural inputs, capacity building training, follow-up in the whole life cycle of the crop, have been provided to small holder farmers, through the project. Seed and planting materials were provided to establish and improve home gardens included nutrient-rich vegetables, namely, mung, cashew, cow pea, peanuts, and manioc, aiming at both local and export markets.

Meanwhile, Key Informant interviews conducted in all 3 DSDs have commented positively about how the project supported in bringing in resources to marginalized farming communities to cope up with climate change variability.

## Output 1.3: Alternative Income Generating Activities

Results	Indicator	Baseline	Target	Actual
Identify and promote climate-resilient alternate income sources such as livestock, perennial cash crops and inland fisheries	No and type of alternate livelihood assets created	Low level of access to non-farm livelihood assets including Information Training/skills Market linkage Finance	Six technical assessments for climate resilience and market chain analysis conducted	5 technical assessments for climate resilience and market chain analysis conducted.
	No of women participated in livelihood training		Training provided to all FOs on selected livelihood options per DSD by specialized state agencies	Training provided to all FOs on viable climate-resilient alternative livelihoods
			Livelihood support equipment provided to six viable livelihood proposals from every FO	28 types livelihood support equipment provided for proposals from selected beneficiaries and FOs

Introduction of alternate livelihood options was targeted under the output 1.3 to supplement agricultural livelihood, especially during the long dry spell that coincides with the minor rainfall season or Yala from May to September.

Based on the technical assessment conducted by National Enterprise Development Authority (NEDA), UNDP and National / Sub-National agencies, alternative livelihoods were identified under the following value chains, namely Animal Husbandry, Apiculture, Agro-ecological Farming, Dairy, Food Processing, Garment & Handloom and Handicraft.

**Animal Husbandry and Apiculture:** Through the Department of Livestock Development, 59 cows, 11 goats and 590 chicks (depending on beneficiary needs and requirements) were distributed to 267 beneficiaries to support climate-resilient alternative livelihoods. The cattle and goats distributed were heat tolerant and were high milk producing breeds that are conducive to the local environment (Jersy, Sahiwal and Jamnapari). Training sessions were conducted on animal husbandry practices with the beneficiaries that received the livestock and small ruminants. Selected Farmer Organizations were also provided with livelihood equipment such as milking machines, grass cutters, haybale making machines and hoof trimmers, to enhance productivity. Additionally, incentives were provided for the construction of cattle, goat and poultry sheds to give the animals a proper shelter, along with cattle insurance in case of loss. Moreover, 1450 bee boxes were distributed to 700 beneficiaries through the Divisional Secretariats to help in the production of honey and to promote the pollination of nearby crops.

**Agro-ecological farming:** The project has provided technical support and basic infrastructure to 96 farmers to develop the ornamental fish farming as a community enterprise (self-help group). The self-help group has been officially handed over to the local government (Mahaweli Authority) to continue providing technical support to the society and supporting to access technology and markets. Moreover, approximately 204,000 fingerlings have been provided for inland fishery. Fresh water fish fingerling advancing unit was established to supply required advance fingerling to the 28 fisheries societies in Madirigiriya DSD division to ensure the continuous supply of fresh water fish from the seasonal tanks. 750 families have benefited directly, and the enterprise will be managed by 15 farmers (40 % women) in the Fresh Water

Fish Fingerling Advancing Unit. Mahaweli Authority has appointed a separate unit to develop and support aquaculture enterprises in the area and they will continue to support the group.

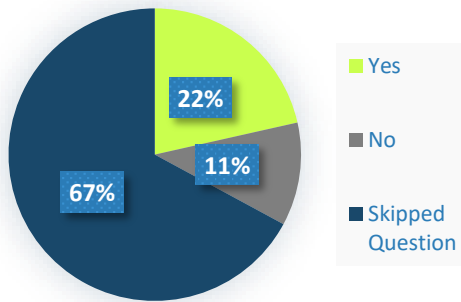
In addition to the inland fisheries, mushroom cultivation was introduced to 41 beneficiaries in both DSDs to encourage alternative income sources. Shade nets were also distributed to encourage floriculture and plant nurseries. The project also introduced coconut and cashew as perennial cash crops to beneficiaries. Cashews are a high value product that has good demand and thrives in dry regions, while coconuts are also a high value product, with good demand in local and international markets. As such, cashew plants were distributed to 843 beneficiaries and coconut plants were distributed to 720 beneficiaries who had the land space and capacity to develop these crops as a source of income.

**Dairy:** 574 dairy farmers (58% women) in Madirigiriya and Lankapura DSDs have benefited from the initiative through promotion of evening milking and selling to the factory at a fair price). The dairy enterprises established by the project engage in manufacturing clean, value-added nutritious dairy products at the local level. Yoghurt, flavoured sterilized milk, milk toffee, and curd are churned out by these enterprises and sold at the weekly farmers markets established by the project. The community enterprise managing the dairy value chain is in discussions with local preschools to be stocked at the local school canteens to promote nutritional diversity. Introduction of manufacturing value-added products to these enterprises have proved to be a fruitful endeavour that has encouraged the farmers to return to the practice of afternoon milking which had been previously abandoned when working with large-scale processor companies.

**Handicraft:** Women, youth and differently abled people were supported in developing eight categories of handicraft products to the value-added markets targeting tourists and environmentally conscious consumers in different parts of the country. Handicraft products are developed from natural resources like reed, cane, fabric, clay, and coconut shells. The product range includes clothing, bags, jewellerys, household utensils and kitchen utensils. Lankapura and Medirigiriya groups have recorded an average income of Rs 50,000 and Rs 20,000 per month respectively.

**Garment and Handloom:** Four Mini Garment factories have been established in Medirigiriya, Lankapura, Walapane and Mahaweli System D as an alternative climate resilience non-farm income source for the most vulnerable women in the farm families who were living in the marginal locations. These mini garment factories are providing income opportunities (full time, part time, home based) for women who were trained under Sri Lanka's Institute of Textile and Apparel (SLITA), under the project. The various shifts aim to address some of the gender-based barriers to women's economic participation and accommodates women's schedule and preferences. The aim of the intervention was to ensure economic stability in the time of crop losses due to climate change variability. The capacity building trainings, renovation of the buildings and machinery installation was provided by the project. Also, in addition to the handloom training and production center in Walapane and Pulathisigama, a Handloom Production center was established in collaboration with Mahaweli Authority (System D) in Madirigiriya.

**Graph 5: Do you have an alternative income source?**



Overall, these interventions helped 1646 direct beneficiaries to improve their incomes through alternate livelihoods. This was supported through the household survey that indicated **67% of respondents confirmed that they received inputs**. This is an important achievement when compared to the baseline that recorded only a low level of access to non-farm livelihood assets. Furthermore, **64% of people responded stating that they have an alternative income source**. The table 4 below provides insight to various alternative income sources indicated by respondents.

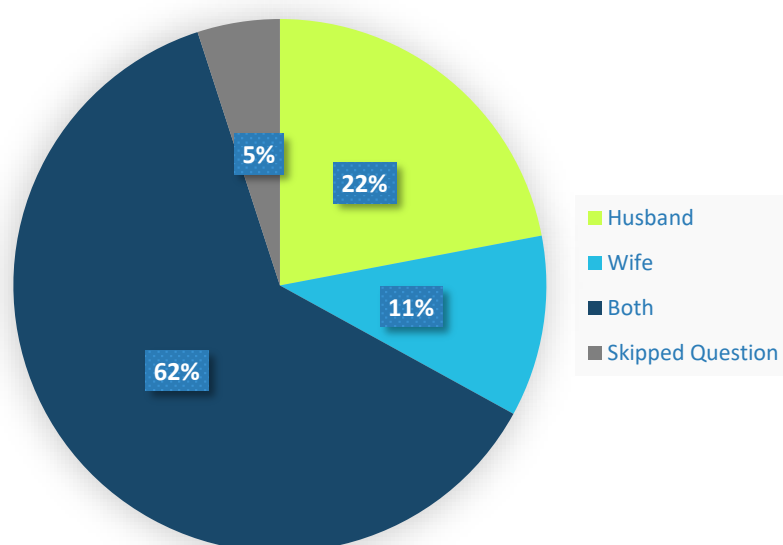


**Table 4: Average income per month from alternative sources of income**

*\*Highlighted figures are discussed in the narrative below.*

Alternative Source of Income	Nuwaraeliya		Polonnaruwa	
	No of respondents	Average Income per Month	No of respondents	Average Income per Month
1 Vegetable cultivation	99	11,059	110	5,926
2 Fruit crop	7	5,357	6	6,533
3 Export agriculture	28	13,490	1	500
4 Plantation	6	12,300	4	4,000
5 Other crops	15	6,936	30	11,122
6 Dairy	5	5,200	29	9,002
7 Goat rearing	0	0	5	7,640
8 Pig rearing	0	0	0	0
9 Poultry	0	0	19	4,209
10 Other lives stocks	9	2,694	7	11,571
11 Working in a Garment factory	2	12,500	4	29,500
12 Daily wage earner	16	9,774	22	12,077
13 Food processing	1	2,000	5	6,200
14 Handicraft	1	4,500	2	1,250
15 Handloom	1	15,000	1	5,000
16 Inland fisheries	0	0	1	20,000
17 Plant nursery	1	15,000	2	6,500
18 Handicraft jewelry	1	6,500	0	0
19 Shoe making	0	0	0	0
20 Other Employment	18	12,944	47	18,280
21 Retail shop	10	10,910	17	31,782
22 Part-time Govt./Private work	17	33,397	16	36,638

**Graph 5: Who in the family decides on how the income is spent?**



Based on the above, vegetable cultivation, other food crops, daily wage, and retail are popular in both districts. Although there are varying degrees in how much income is earned per month, the number of potential income sources available in rural communities speaks to the investment made by the project, private sector and the Government of Sri Lanka. When asked ‘who in the family decides on how the income is spent?’ 62% of HHs respondent indicated – both.

## Output 1.4: Post Harvest Technologies

Results	Indicator	Baseline	Target	Actual
Promote improved postharvest technologies as viable climate-resilient livelihood sources for farm women	No of farm women engaged in project introduced postharvest livelihoods	Non availability of information and training on postharvest technologies at ASCs	Post-harvest centers established (equipped and staffed) in 08 ASCs in the two project DSDs	10 post-harvest centers were established, equipped and staff, across the three targeted DSDs
			One post-harvest village established in each ASC area	Post-harvest centers have been established in 7 ASC areas
			760 farm women in 08 villages linked with local livelihood incentive programs	767 farmers (71% F) have been linked with local livelihood incentive programs

Post-harvest losses continue to be one of the most pressing issues for Sri Lanka's agricultural sector. The losses are estimated around 30-40% and attributed to pests, inefficiencies and wastage along the value chain and food system. The project's strategy under this output was to introduce post-harvest technologies as an adaptive strategy in order to contribute to: a) climate resilient livelihoods for women and b) improve household incomes, thus increasing their adaptive capacity.

Within the scope of this strategy, the following post-harvest centres were established. Firstly, the Government of Sri Lanka donated the land and buildings which were when rehabilitated and equipped to space and facilitate livelihood activities. Overall, **10 post-harvest centres were established, equipped and staff**. These centres have been registered and handed over to the Ministry of Cooperatives who will continue to support beneficiaries with technical and business enterprise support.

**Table 5: Description of Post-Harvest Centres**

#	Post-Harvest Processing Centers	Product	Location	Beneficiaries	# of Women	% of Women
1	Govijana Bojunhala	local instant cooked food	Madirigiriya	30	30	100%
2	Govijana Bojunhala	local instant cooked food	Lankapura	30	30	100%
3	Govijana Bojunhala	local instant cooked food	Walapane	30	30	100%
4	Food processing center	Bottled food	Lankapura	50	48	96%
5	Food Processing Center	Processed food	Madirigiriya	115	110	96%
6	Food processing center	Dehydrated Fruits/Vegetables	Walapane	50	50	100%
7	Rice processing center	Local, nutritious rice varieties	Medirigiriya	54	51	96%
8	Cereal Processing	Cereal products	Walapane	330	168	51%
9	Coffee Processing	Coffee powder	Walapane	25	9	36%
10	Kithul Based products	Kithul based value added food products	Walapane	53	20	39%
				<b>767</b>	<b>548</b>	<b>71%</b>

In addition to the equipment provided to the post-harvest centres, farmer organisations were provided with equipment and supported with essential trainings for the purpose of improving their productivity. Moreover, 11 micro-finance groups were formed and have undertaken group enterprises in their community. *The approaches undertaken through this output informed the Policy Brief: Gender and Climate Change which shares experiences of the project in developing the value chains and community enterprises and provides policy recommendations.*

**Table 6: Equipment provided to Farmer Organisations and Beneficiaries**

Activity	Beneficiary coverage
Training women on book keeping	61
Training on food processing	460
Threshing machines (30 FOs)	30 FOs
Kollu seed processing machine	2
Dehydration machine (2 FOs)	2 FOs
Tarpaulin (30 FOs)	30 FOs + 30
Seed cleaning machine (seed paddy FO)	3 FOs
Weighing scale (seed paddy FO)	3 FOs
Bag closure machine (seed paddy FO)	2 FOs
Moisture meter (seed paddy FO)	1 FOs
Grass cutter	2 FOs
<b>Total</b>	<b>72 FOs and 553 beneficiaries</b>



Milking Machine (above) and Grass Chopper (left) to improve productivity

## Output 1.5: Community Assets

Results	Indicator	Baseline	Target	Actual
Build Community Assets and Livelihood resources through cash for work to support	Percentage and level of community participation cash for work system	0% participation in PES schemes in target area	1500 households benefit from cash for work schemes in two micro catchments in target DSDs	914 households (668 women) benefited from cash for work schemes in two micro catchments in target DSDs
	Number of women participating in cash for work program			

This output aimed at achieving two important objectives, specifically, financial support for poor rural women and strengthening assets and livelihood resources that farming communities depend on to overcome climate risks. As such, through the provision of cash for work among 914 beneficiaries (668 women), the project involved the community in maintenance activities of community infrastructure such as irrigation canals, anicuts, agri-roads and minor tanks, serving over 20,723 community members that now have access to these assets. Major repairs of these assets were contracted through the farmer organisations who worked to rehabilitate the assets they regularly utilize as a livelihood resource. The renovation of these assets was an important component of ensuring continuous irrigation to cultivation areas of vulnerable rain fed famers, as small irrigation systems are plagued with a number of defects including abandonment, siltation, invasive species and disrepair of irrigation structures. Building these community assets leads to increased storage of rainwater, minimizes wastage of irrigation water and enables utilizing available water productively which in turn increases cropping intensity. Additionally, 220 rural women were supported through the cash for work programme while they engaged in developing climate resilient alternative income avenues.

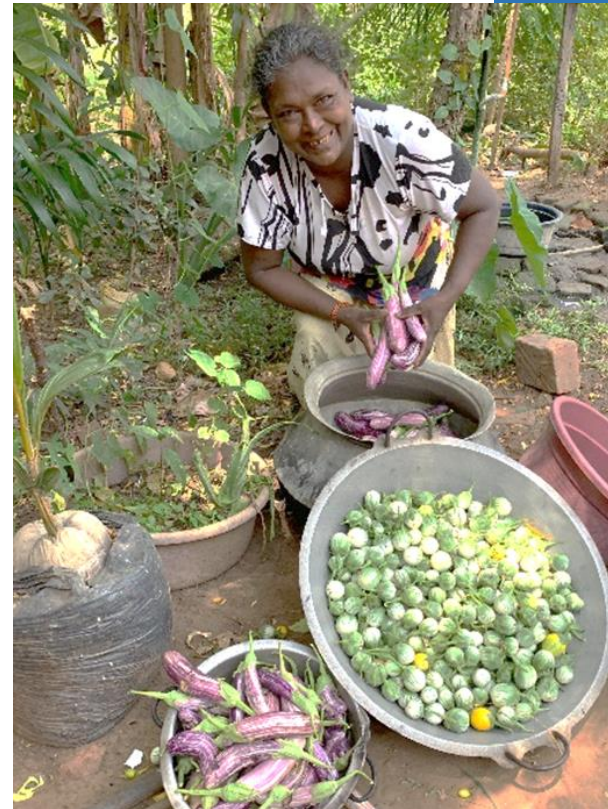
However, the cash for work scheme was difficult to administer and significantly delayed implementation firstly, due to the severity of repairs required by the community infrastructure and secondly due to the reluctance of the community to participate in cash for work activities. The repairs required more skilled and mechanised interventions which farm women in particular could not participate in. The renovation activities were carried out by the farmer organisations under the supervision of Engineers and Technical Officers of implementing agencies. Payments for work done was deposited with the farmer organisation who collectively benefit from the maintenance of the livelihood resource. The community was reluctant to leave their agricultural and alternative income activities as they were able to earn a high daily income through these activities than cash for work.



## VOICES FROM THE FIELDS: PLANTING SEEDS FOR NUTRITION

The climate is changing. This is a fact. The impact of climate change is already being felt across the country, where farmers are struggling with drought conditions that are decreasing their production, while in other regions people are experiencing flash floods and landslides.

The partnership between the Ministry of Environment and Wildlife Resources, World Food Programme and the United Nations Development Programme, financed by the Adaption Fund, has taken serious steps to adapt and mitigate the climate crisis in regions of Sri Lanka that are at the frontline, through the Climate Change Adaptation Project. This programme supports the most vulnerable farmers in Polonnaruwa and Nuwara Eliya districts by developing their livelihood, agriculture, to be climate-resilient by enhancing the sustainability of the local food system as a whole. And, when implementing this sustainable food systems approach, the project has also taken steps to ensure nutrition-sensitivity. Diversification of agricultural production, supporting local level livestock rearing and fisheries, encouraging biodiversity in agriculture for food and nutrition, and establishing value addition and post-harvest processing are some of the ways the project has approached shifting the food system to be sustainable while integrating nutrition-sensitive interventions.



*Farmer, Ms. Sugathadasa, with organic vegetables harvested from her home garden in Polonnaruwa.*

Ms. Sugathadasa lives in Polonnaruwa and shares her experience with ecological agriculture. She used to be a labour worker but had to stop because she suffers from Chronic Kidney Disease (CKDu), which the World Health Organization has flagged as a serious public health problem in Sri Lanka. This disease appears to disproportionately affect poor, rural farmers living in hot climates. She was advised by her doctor to drink filtered water and grow her food through ecological methods, with no chemicals. She started an ecological home garden and received drought-tolerant crops and an agro well by the Climate Change Adaptation Project. She now grows vegetables and fruits certified under Participatory Guarantee System (PGS), and sells the excess in the local farmers market, as well as the Good Market in Colombo, through linkages established by the project. “My doctor said that my test results are improving and I’m feeling much better. The income from the home garden is also helping me take care of my 5 children.” She shared how worried she was when she was first diagnosed, and how she didn’t even know that people would buy ecological produce when she started. “People are starting to realize the health benefits of ecologically produced food. It also provides a good income for farmers.”

There are a lot of reasons to switch to agroecological food such as the absence of artificial chemical pesticides and fertilizers that are harmful to human health and ecosystems. These pesticides and fertilizers are contributing to greenhouse gas emissions that increase global warming. Purchasing agroecological produce from your local market means that consumers are reducing the food transport-related emissions while also supporting rural women like Ms. Sugathadasa earn a livelihood—a win-win! Adapting to climate change is not easy, it requires each one of us to take conscious steps towards building a climate resilient, green community and supporting local producers like Ms. Sugathadasa to make healthier, more sustainable choices.



## 4.3 Results of Component 2

Results	Indicator	Baseline	Target	Actual
<b>Outcome 2</b>  Strengthened ownership of climate risk reduction processes and increased replication potential of adaptation strategies at local level and basin/sub national level	Percentage of target population (Gender Disaggregated) aware of predicted impacts of climate change and appropriate responsive adaptive actions to safeguard livelihood assets	Lack of awareness of climate impacts and adaptive actions at household and community level	All 14039 households participate in climate risk assessment in target area receives climate change awareness	71% of respondents are aware the major climate risks and adaptation measures
			At least 50% of community risk assessment meetings consist of women	55% of community risk assessment meetings consisted of women
			All FOs in target area receive information and tools to develop local adaptive strategies to safeguard livelihood assets	All FOs in target area received information and tools to develop local adaptive strategies to safeguard livelihood assets
		Extension officers and CBO officials have no training on climate proofing local community development	All local and divisional-level officials engaged in agriculture, fisheries, forestry and disaster management receive at least one training on supporting adaptive strategies	725 in total

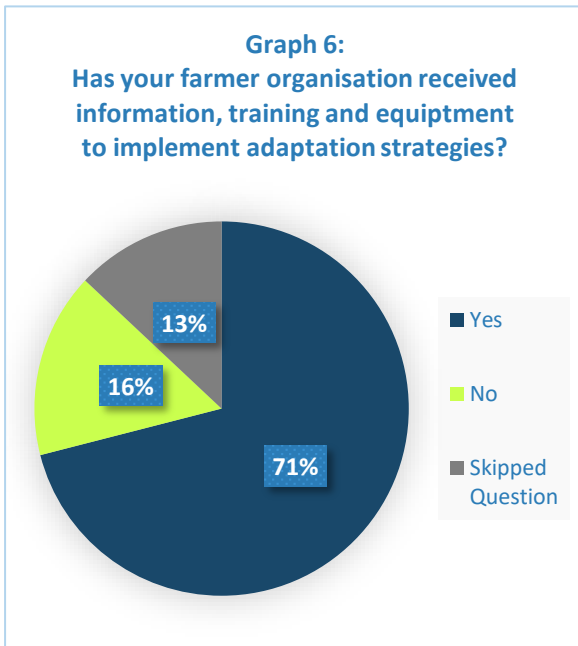
This component strengthened the capacity of farmer organisations and extension officers, in Agriculture, Agrarian Services and Disaster Management to develop adaptation and risk reduction strategies in their local community. Institutional capacity building is critical to the sustainability of programme outcomes and leads the way to scaling up best practices in other communities.

As such, village, divisional and national level officer training and awareness programmes were conducted mainly focusing on participatory rural assessments, preparation of climate sensitive projects, village development planning, investing in livelihood asset rehabilitation, and livelihood assets security etc. The officers trained under the project possessed first-hand experience in designing, implementing and reviewing climate change adaptation projects and programmes. The officers actively worked in hand with the project team to conduct risk assessments and develop Village Development Plans (VDP). With this exposure they have built capacity to replicate the best practices to ensure the sustainability of the project.

A total of 963 farmers (20% women) were trained on small tank management, aqua farming, sustainable management of land, water efficient agriculture, minor tank operation / maintenance and on climate information through weather stations. These trainings had broadened their awareness and knowledge on climate risks and adaptive strategies. All farmer organizations in the target locations have received information and tools through the project to develop local adaptive strategies to safeguard livelihood assets.

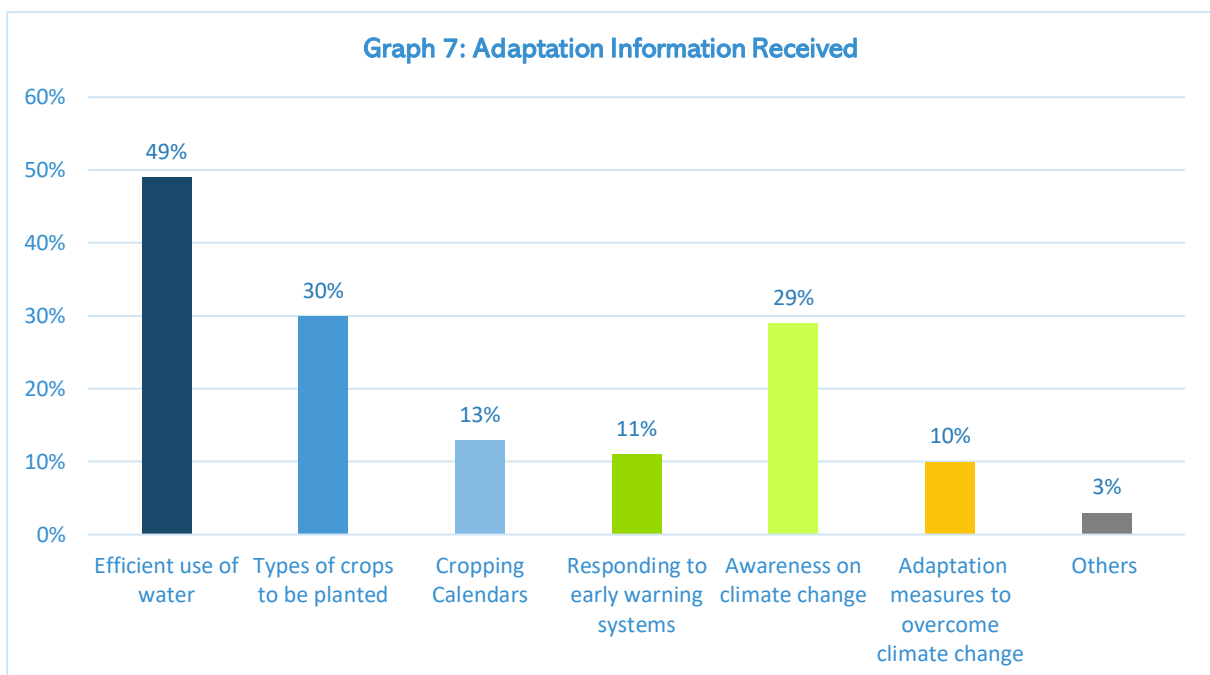
Furthermore, 1103 grassroots officers (48% female) consisted of Development officers representing each Divisional Secretariat Divisions, Grama Niladhari, Samurdhi officers, Economic

Development Officers and Agricultural Investigation Officers were trained to prepare village development plans, conduct soil testing, and monitor micro irrigation and geo-informatics.



The officers had actively worked together with the project team to conduct risk assessment and develop Village Development Plans (VDP). With this exposure, the capacity of both grass root officers as well as farmers were strengthened.

Based on the household survey, 71% indicated that their farmer organisation received information, training and equipment to implement adaptation strategies (refer to Graph 6). When asked what kind of adaptation information was shared, the most common response was ‘efficient use of water – with 49%. The findings also concluded that a majority (71%) of respondents are aware of the major climate risks in their community.



## Output 2.1: Extension Officers training on adaptation strategies

Results	Indicator	Baseline	Target	Actual
Train and mobilize officers at village, division and provincial level to design, and monitor local adaptation strategies	No of village, divisional and provincial officers trained to address climate risks	Training programs on climate risk management are not available at regional and local level	One training module Developed	3 training modules have been developed.
			Six TOTs developed and conducted	4 TOTs have been developed and conducted
			250 officials trained at provincial, divisional and village engaged in rural development	987 officials trained at provincial, divisional, and village engaged in rural development
			All Agrarian Service Centers in project DSDs receive climate risk management tools	All Agrarian Service centers in project DSDs have received climate risk management tools.

The aim of output 2.1 was to develop the capacity of the field extension officers working in Department of Agriculture (DoA) and Department of Agrarian Development (DAD), Mahaweli Authority, Disaster Management Center, Forest Department (FD) and village administrative officials to identify climate risks, develop local adaptation strategies, and monitor localized vulnerabilities in their geographical regions.

A total of 135 officers (from DoA, DAD and selected GSNs) participated in the three Training of Trainers (ToT) workshops conducted on technical and input module development. Planning Divisions of the 3 DSDs were provided with 3 GIS compatible desktop computers and related peripherals to improve capacity of divisional planning to develop Climate Smart Villages, Climate Smart Social Enterprises and Climate Smart Markets with the community participation. 300 officers were trained on three Climate Smart programs and participated in a three-day exposure visit to Kurunegala district. Furthermore, 304 selected government officers participated in training on climate change adaptation strategies and Participatory Rural Appraisal (PRA) tools, while another 284 selected officers from three DSDs were trained as trainers to prepare 60 Climate Resilient Village Development Plans (CRVDP).

Training on soil testing for 101 field officers (Agriculture Instructors and Kupanisa – Agricultural Investigation Officers) of the Department of Agriculture and the Department of Agrarian Development was very useful in identifying soil conditions and designing appropriate agronomic practices for the home garden programme. 101 Agriculture instructors and Agricultural Investigation officers were trained as trainers on micro-irrigation system to support 1,800 households to establish micro irrigation systems for their home gardens. 182 selected government officers were also trained on 'Geo Information System' (GIS) for village development planning. Majority of the Development Officers representing each Divisional Secretariat Divisions were trained under this activity.

## Output 2.2: Farmer Organizations

Results	Indicator	Baseline	Target	Actual
Strengthen Farmer Organizations with information, training and equipment to implement adaptation strategies	Capacity of farmer organizations to respond to climate risks	Farmer Organizations lack information on risks, and lack planning capacity to address them	All farmer organizations in target DSDs have developed management plans for local irrigation management and catchment conservation	81 FOs in target DSDs have developed management plans for local irrigation management and catchment conservation
			Management plans are funded through community and government input	FOs developed proposal based on management plans and were funded through community contribution, government input and project support.
		Some villages do not have formalized farmer organizations	All FOs in the target divisions are registered with Agrarian Services and have elected representatives	All FOs in the target divisions were registered with Agrarian Services and have elected representatives.
			At least six members each FO trained to conduct vulnerability reduction assessments as input to 2.4	300 village level officers covering 60 villages were trained on vulnerability assessment

The Farmer Organizations (FOs) are key groups that coordinate and implement the community and field activities of the project. Therefore, strengthening FOs are of paramount importance to deliver most of the project outcomes. At the beginning of the project, these FOs lacked information on risks and lacked planning capacity to address them.

**Training of FOs on vulnerability reduction assessments (VRA):** A total of 800 farmers representing 40 farmer organisations were trained on sustainable management of minor tanks. Moreover, awareness of around 1,600 households have been raised on organic farming and climate smart agriculture. Two minor tank catchment conservation plans and two sub-watershed management plans have been prepared. These minor tanks are also used as demonstration sites to enhance the knowledge of peer farmer groups. Some 300 village level officers covering 60 villages were trained on vulnerability assessment and around 6,000 villages were involved in preparation of VDP's followed by village level vulnerability assessments.

**Participatory and technically sound management plans developed for every minor irrigation scheme with FO -** 783 farmers covering 40 Farmer organizations in Madirigiriya and Walapane have been trained on: (a) Minor Tank Construction Supervision; (b) Minor tank operations and maintenance; and (c) Minor tank ecosystem development. This capacity building initiative of FOs have taken place in parallel to the rehabilitation of selected small tanks under the planned project tank ecosystem development programme. Overall, the training component has empowered farmers to work as a team and have made them more aware of the selection criteria to take part in adaptation activities of the project. Capacity building initiatives of FOs have taken place in parallel to the rehabilitation of selected small tanks under the planned project on Tank Ecosystem Development Programme.

**Farmer Registration:** All FOs in the target divisions were registered with Agrarian Services and have elected representatives, these include the 36 community enterprises. Moreover, 150

farmers were given PGS Certifications from Good Market/IFOAM PGS and are in the process of assessing their farms to access high end markets for their products.

Under the programme of capacity building on Climate Smart Villages (Promotion of Organic Agriculture for development of climate smart villages -Technology & Certification) 3 training workshops for 300 government officers on climate smart village development have been completed. And also, training has been conducted for 150 vendors and 100 selected farmer leaders on Good Agriculture Practice (GAP) certification. NAQDA technically supported to raise the awareness of 600 farmers on inland fisheries management and 30 fisheries societies have been registered under the Department of Agrarian Development.

### Output 2.3: Watershed Management Plans

Results	Indicator	Baseline	Target	Actual
Pilot integrated watershed management plans to safeguard climate sensitive livelihood assets such as land and water	Availability of watershed-level irrigation management plans	No cluster/cascade level watershed management plans exist	Management plans for two micro watersheds developed and implemented Farmer Organizations	Management plans for 11 micro watersheds have been developed and is being implemented by Farmer Organizations.
	Increased extent cultivated under pilot minor irrigation schemes	CI in village tanks in lower catchment <90% CI in anicut systems in middle catchment <70%	Increase cropping intensity in both systems to over 100%	It is estimated that the pilot minor irrigation schemes have safeguarded 1506 acres of cultivation and is expected to increase cropping intensity due to renewed soil health.

Output 2.3 aimed at expanding the community-based watershed management and adaptation planning. At the beginning of the project, the baseline noted that there were no cluster management plans available. The consequence to a lack of management is catchment deforestation and small streams that supply irrigation and drinking water to mid elevation villages dry up fast. In the lower elevations, siltation and high evaporation rate reduce village irrigation reservoirs to mere mud pits. Ground water depletes and wells dry up.

In response, the project has made substantial investments to rehabilitate minor tanks, canals and anicuts and establishing rainwater harvesting units. Hazard zonation maps were developed for 25 Grama Niladhari Divisions in Walapane and land use maps were completed for 67 villages in Medirigiriya and Lankapura. 7,660 African Mahogany plants as well as tree crops such as Mee, Kumbuk and Neem were planted by the project as part of the overall watershed restoration strategy.

**Watershed Management Plans:** Management plans for 11 micro watersheds have been developed and is being implemented by Farmer Organizations. Natural Resource Management Centre of Department of Agriculture conducted a survey to establish two sub watershed management plans in Walapane and Madirigiriya DS divisions. All the water sources in Walapane DSD was spatially mapped by Land Use Policy Planning Department and total of 297 water sources were identified, and their water quality testing were completed and demarcation



of buffer zones for conservation/protection was conducted, while 80 farmers were trained on ecological restoration of minor tanks.

**Increasing cultivated extents:** Restoration of four tanks including Pambemada wewa, Rattiyaulpotha wewa, Alakola wewa and Walihinda wewa were completed, thus their storage capacities has improved, leading to additional extent of land becoming cultivable. Soil conservation practices have been carried out covering 150 ac through community based conservation activities in Walapane and Madirigiriya through the Provincial Department of Agriculture and 1000 trees were planted to control soil erosion and restore the ecosystem.

The Key Informant Interviews captured that most of the farmers, particularly the FO office bearers, were aware of the availability of watershed-level irrigation management plans and participated in different types of cascade-based tank rehabilitation aiming to extend cultivation under such pilot minor irrigation schemes. The related irrigation system development, water availability and farmer contribution to build them were discussed in detail under Output 1.5.

Both FO members and AR&PA groups are aware of the fact of availability of watershed-level irrigation management plans for increasing extents of cultivation under pilot minor irrigation schemes. Both AR&PAs and FO represented interviewed through KIIs and FGDs in both locations witnessed and confirmed that Agri-infrastructure has been a positive achievement of the project.



Divulankadawala Wewa



Dimuthu Wewa



Kadawala Wewa



Pulutuman Wewa

Pilot minor irrigation schemes have safeguarded 1506 acres of cultivation and is expected to increase cropping intensity due to renewed soil health.

## Output 2.4: Risk Assessment and Adaptation Planning

Results	Indicator	Baseline	Target	Actual
Conduct Risk Assessment and Adaptation Planning with target communities	Level of awareness among target group of climate risks	Target population unaware of climate risks and adaptive measures	VRAs conducted in all Farmer Organizations targeting 14039 households	VRAs conducted in all Farmer Organizations
	Capacity of community to plan and prioritize adaptive actions		>45% female participation	55%

The main activities of this output pertained to training of FOs on methods of conducting vulnerability reduction assessments (VRA) among member households. This involved conducting VRAs in every target FO by involving one member from every target household and evaluating results and prioritizing adaptive actions.

A study on "Spatial variation of vulnerability to climate change in Walapane, Medirigiriya and Lankapura Divisional Secretariat Divisions", was conducted and climate change vulnerability ranking was applied for each Grama Niladhari division (GND). Based on the assessment, the awareness of 6,000 community members and 300 officers on climate vulnerability and adaptive measures was raised in most 60 vulnerable villages (GND's).

### VRA conducted for FOs

University of Moratuwa completed five model GN level Village Development Plans and trained 300 Economic Development Officers on preparation, monitoring and reporting on VDPs.

## Output 2.5: Dissemination of best practices

Results	Indicator	Baseline	Target	Actual
Document and disseminate lessons of climate resilient community-based watershed management	No of news outlets in the local press and media reported on project lessons	Reporting on climate adaptation in national media poor	10 case studies generated 05 Policy Briefs Produced and shared with NPSC 50 media reports on project outcomes (35 print and 15 electronic) 02 Provincial Workshops to share project learning National Workshop to share project learning	10 case studies Generated 05 Policy Briefs Produced and shared with NPSC Over 50 media releases have been shared over print and electronic channels 2 Provincial Workshops conducted National Workshop conducted
	No of new project proposals/ new community-based adaptation initiatives generated within and outside the DSDs	No such project proposals exist	20 CBA proposals from other vulnerable communities generated through exchange visits	41 new project proposals were received through exchange visits

This output was designed to document and disseminate lessons pertaining to the project’s experiences through various communication channels.

Over the course of the project, over 50 media reports were shared through newspaper articles and social media. This allowed the project approaches, findings and experiences to be shared amongst a general audience. The project used significant calendar dates such as World Environment Day or International Climate Change summits to call attention to global issues and shared local experiences of how concrete adaptation practices were being applied in the Sri Lankan context.

Project farmers participated in an exchange visit from Polonnaruwa to Walapane as a measure to promote replication potential and bring the adaptation focus in to local development planning processes, especially village development plans. Another exchange visit for farmers from Polonnaruwa to Ritigala and Habarana was conducted to visit plant nurseries. Moreover, under the Animal Husbandry programmes, the project conducted exchange visits to foster learning of project beneficiaries by visiting the successful adaptive practices of animal husbandry farmers. Based on the past three-year project experience and lessons learned, **41 new project proposals were received.**

GCF/ ESR technical staff and government officers visited the project locations to learn from the promising adaptive practices. Also, 300 farmers were taken on an exposure visit to study and learn about climate resilience villages, enterprises and markets. A total of 74 climate resilient village development projects worth of USD 4.6 million were identified under the Village Development Planning process conducted in 60 villages.

The project team also generated 10 case studies and 5 policy briefs on important topics to further the discourse at a technical and policy level. The policy briefs have been shared with the National Project Steering Committee.

**Table 7: Policy Briefs and Case Studies developed**

#	Policy Brief Topic	#	Case Studies
1	Sustainable Food Systems	1	Ecological Agriculture
		2	Nutrition and Climate Change
		3	Market Linkages
2	Ecosystem-Based Adaptation	4	Minor Tank Restoration
		5	Ecosystem Restoration
3	Climate Advisory Services	6	Early Warning Systems
4	Climate Smart Tools	7	Polytunnels
		8	Threshing Machines
5	Gender and Climate Change	9	Micro-Finance
		10	Value Chains and Women’s Economic Empowerment

In the final year of the programme, the Ministry of Environment and Wildlife Resources facilitated 2 provincial workshops and 1 national workshop to share key results of the programme, best practices and lessons. These workshops served as important platforms to



discuss the way forward and affirmed the Government of Sri Lanka's commitment to take these experiences to inform future Climate Adaptation programming in Sri Lanka.

## Output 2.6: Early Warning Systems

Results	Indicator	Baseline	Target	Actual
Design and implement early warning systems for climate induced risk of landslide and drought in Mahaweli Basin	Development and functioning of early warning systems	No community based landslide warning in project DSDs	Developed and implemented drought forecasting and timely dissemination model for Mahaweli Basin	Developed and implemented drought forecasting and timely dissemination model for Mahaweli Basin
		No drought/seasonal forecasting systems in place	15 Community based landslide early warning systems with telemetric rain gauges are operationalized in Walapane DSD	Installed 10 telemetric rain gauges and 5 extension meters to monitor rainfall pattern and monitor land slips in 5 identified locations

The prime aim was to disseminate sufficient early warning on significant diversion of the expected rainfall pattern so farmers can make informed decisions that reduce risk and respond to disaster signals.

In response, two Agro meteorology weather stations have been established in Walapane and Medirigiriya Agrarian Service Centers to provide necessary weather information required for agriculture. Real-time weather data gathering stations were established in Walapane and Lankapura DSD to retrieve and store weather data to provide weather advisory for the farmer communities. Project has **installed 10 telemetric rain gauges and 5 extension meters to monitor rainfall pattern and monitor land slips in 5 identified locations** with the collaboration of the NBRO by investing Rs. 20mn.

Pictures below: Early warning stations in Walapane



## 5. Issues, challenges and mitigation measures

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**Implementation delays:** The project was initially planned to commence in August 2014 but faced significant delays due to major political changes arising from the Presidential Election of 2015. This caused delays in recruitment of the Programme Management Unit (PMU) of the Executive Entity. Furthermore, the PMU also faced administrative challenges in their procurement process because of a limited signing off authority which meant that the Project Manager continuously required multiple senior officials of the Ministry to sign off on programme activities which significantly delayed implementation.

In recognition of this delay, the Implementing Agency - WFP, signed an agency-to-agency agreement with UNDP and requested the Executive Entity hire a Project Director that would be able to sign higher thresholds. The result of the changes saw project implementation exponentially accelerate from January 2018 after the Programme Management Unit (PMU) of the Executive Agency was fully staffed in April 2018 and UNDP joined as an implementing partner. Unfortunately, the project was also impacted by external factors in 2019 from the Eastern Sunday bombings, Presidential Elections and in 2020 from the Covid-19 pandemic and its containment measures that impacted implementation. The World Food Programme greatly appreciates the understanding of the Adaptation Fund and the granting of No Cost Extensions to overcome these challenges.

**Construction of Community Assets:** The Ministry of Environment's implementing approach was one that worked through various supporting organizations such as the Department of Agriculture, Department of Agrarian Development, Department of Land Use Planning, Department of Export Agriculture, Mahaweli Authority of Sri Lanka, Department of Animal Productions and Health, Department of Forest, NBRO and DSDs/Provincial Councils. At certain time, these departments had a shortage of technical staff to implement the project activities in the field which caused delays in implementing project activities. There were significant delays in the construction of community assets due to delays in preparing estimates and payment of bills by the technical staff. This is because these technical staff do not work exclusively on project activities and therefore had to prioritize their time and resources between the several projects run by the government.

To mitigate the delays caused by the implementation structure, the Executive Entities hired staff and technical experts and provided technical support to the divisional officers. The Project Management Unit also organized and conducted regular meetings and agency visits to the partner agencies to monitor implementation.

**Gender considerations:** Adaptation programs to be sustainable and impart resilient development in communities, climate change adaptation work must be socially inclusive and gender-responsive, at a minimum. This requires participatory processes to examine and quantify how such inequalities affect women, men, girls and boys, along with their different intersecting identities, and work out how these gender dynamics can be shifted towards positive structural change resulting in gender equality and equity.



Since 2011, WFP has greatly evolved the gender-responsive and transformative programming in line with the agency's Gender Equality Policy. A key lesson related to this project is the limited gender-sensitive indicators included in the logframe. Although the baseline captured some important findings, gender analysis that identified barriers faced by women, men, girls and boys was not fully captured. The initial monitoring tools developed by the PMU also did not capture sex-disaggregated information until later in the project. These challenges limit the true scope of the work implemented by the programme and does not fully capture the extent of investment and impact the programme has made to the lives of project beneficiaries, particularly women in rural communities.

## 5. Lessons learned

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**Theory of Change:** The project's logframe has technical issues where several statements are not registered at the correct level (i.e. some outputs are activity statements; some outputs have outcome indicators). In addition, several indicators, baselines and targets are not well aligned. This caused challenges for the project and monitoring teams to interpret the logframe, design appropriate tools and monitor effectively. A clear theory of change and logic frame is critical to assessing the success of the programme.

**Nutrition-Sensitive Climate Change Adaptation:** The project's objective indicator assesses the utilization of food through the Household Consumption Index. However, the outcomes and outputs primarily strengthen climate change adaptation but lack of nutrition-specific or nutrition-sensitive interventions, which may limit food security outcomes. A lesson is drawn about the importance of mainstreaming nutrition-sensitive and nutrition-specific interventions to strengthen programme outcomes. This is particularly critical in the context of Sri Lanka where the country is highly vulnerable to climate-shocks and malnutrition rates are high (i.e. wasting). Since climate shocks contribute to increased frequency of natural disasters, this compounds food and nutrition insecurity.

**Social- Behavioural Change Communications:** The project had a limited social behavioural change communication component and engagement of community members not directly targeted by this project on topics related to climate change and climate-resilient livelihoods. This may have limited the project's ability to mitigate effects of climate change variability, if there isn't widespread support from the community. This can also impact the sustainability of certain interventions because the team may have trained certain vulnerable groups while other neighbouring communities may be undermining those efforts (ie. Cutting down trees for firewood, for example).

**Importance of Capacity Building** Community members and government officials have given a higher value to physical infrastructure rather than softer elements such as capacity building and system strengthening activities. Tangible assets at the community level is critical to climate change adaptation and is seen by community members as a significant investment in their locality. However, capacity building efforts are needed to maintain and sustain these investments over time. Wider advocacy with the national government is needed to support efforts to find the appropriate balance between tangible assets and softer skill development in order to meet the targets in the National Adaptation Plan in a sustainable manner.

**Alternative Livelihoods** The project developed 36 community enterprise across five value chains. Market development has proved to be challenging because these MSMEs are competing with large-scale non-organic, low value products. Significant technical support and time was dedicated during the process to develop the entrepreneurial mindset, generate support from families to encourage women's economic participation, develop quality standards and strengthen market linkages. Furthermore, Covid-19 was a significant setback for these community enterprises, similar to large swatches of businesses across the country and the world have experienced the unprecedented socio-economic impact of this crisis.

## 6. Innovations

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The programme introduced an innovative approach known as Climate Smart Community Enterprises. Although there are similarities to social enterprises, these community enterprises are underpinned by a collective approach for driving the affected community from vulnerability to resilience (V2R) using six key elements. The project developed the capacities within the community, particularly focusing on empowering women through economic participation, and working with the participation of government stakeholders. The six elements are:

1. **Collective Community Action:** farmers were mobilized to work together in the production chain and supply chain. They identified potential collective actions, informed by market assessments, to develop a local alternative livelihood that aimed to keep their individual identity and contribution.
2. **Women Economic Leadership:** farming is understood as a masculine / patriarchal livelihood even though women play a significant role. Women were supported to start non-farm or post-harvest related livelihoods in the household. They were given business management training, access to micro-financing, and opportunities to take the lead role in the enterprises.
3. **Climate-Sensitive Production System:** significant effort was made to reduce emission/ emission free production practices in the supply chain. Use of renewable energy, less use of plastics, less use of synthetic fertilizers, eliminate use of pesticides, weedicides and herbicides were promoted in the value chains. Climate-smart agricultural practices were promoted alongside the principles of recycling, reusing and regeneration.
4. **Value Chain and Value Addition:** the entrepreneurs were supported to enter higher points in value chain through value addition, marketing and branding. Products were developed targeting the end-markets with consumers with higher purchasing power. The products were developed for consumers who were environmentally conscious and wanted quality, local products.
5. **Responsible Consumerism:** The project supported promotional campaigns targeting end-consumers to increase the sense of responsibility towards supporting farmers who try to change the food system, production system and marketing system. Key messages around buy local and eat healthy was largely promoted.

## 7. Empowerment of Vulnerable Communities

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The project paid special attention to climate vulnerable farming households and women as a social group affected, particularly widows and single mothers, who have experienced difficulties in adapting to climate variability. The project made efforts to integrate them within the five value chains and link them to higher value chain markets. While providing economic opportunities, they are empowered to diversify and develop resilient livelihoods.

**Ecological farming technical capacity development:** Over 2044 families were supported to access trainings, water efficient irrigation facilities, certification systems to reach high end markets etc. They were trained and organized into collective groups to aggregate their products, work together and support each other which build stronger social cohesion within these communities.

**Developing skills to transform farmers as vendors:** Farmers traditionally occupy the lower levels within the value chain. The project opened opportunities for farmers (men and women) to be vendors to sell his/her own products as well as the products of the groups at the market directly to the consumers. This opportunity exposed them to deal with market entities, improve their bargaining capacity, as they represented a larger volume of goods and had a better understanding of how to increase the quality of their products to get more profit.

**Managing and owning production chains:** Most of the women in the area had some basic sewing skills. As a coping strategy when crops failed, they would leave their villages and work for the garment industry in the free-trade zone. Through the market assessment and consultations with women, there was a high interest of these women to pursue a garment business in their communities. As such, four mini-garment factories were established and provided required training for managing the operations of the garment factories as a collective entity. Most of the widows and single mothers have taken the leadership in driving these garments units.

**Developing individual artistic skills to collective enterprise:** During the project period, community enterprise members were given opportunities to build up their skills as enterprise owners, research and produce their own designs, engage directly with contractors and manage a viable local business.

**Linking with private sector entities:** The project opened doors for many opportunities to develop the capacity to market demand and supply mechanisms. Agro and non-agro enterprises are linked with various private sector entities keeping the farmers engaged directly with them. The community enterprises have been officially registered and linked to the Ministry of Cooperative who will continue to provide supervision, technical support and provide further market opportunities.

## 8. Long-term institutional and technical capacity for effective adaptation

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The project design focused on climate change adaptation and capacity building of local level officers and community members through training, investment in livelihood opportunities and community infrastructure. Activities intended to enhance the resilience capacities at an institutional and technical level, over the long term were strengthened in the areas of anticipatory, absorptive and adaptive measures.

### Anticipatory –

In establishing the Early Warning System in disaster prone areas of the Walapane DSD, the project brought together various stakeholders for the activation of emergency response plans. A system was created whereby the community members were trained to read the manual rain gauges, report data to the local officers, who in turn forwarded the data to the NBRO, who maintains a permanent dashboard which issues early warning alarms. The Divisional Secretary and the Disaster Management Team as well as the Grama Niladharis, Samurdhi Niladharis, Economic development officers who receives the information were also trained on dissemination of information. Finally, safety locations were identified, and evacuation drills are regularly performed with the community as pre-emptive action.

### Absorptive –

In recognising the impact of climate change on women in particular, the project formed several women's self-help micro finance groups. These groups provide women with financial empowerment to expand on their home-based livelihood activities, preparing them to be able to absorb impacts on food security and income.

To support local rain-fed agricultural communities to be able to withstand climate shocks, the project rehabilitated village tanks and irrigation canals so that water can be efficiently stored and channelled to the cultivation areas. The project provided training to the farmers and local officers on the sustainable management of community water resources.

### Adaptive –

Drought tolerant crops and sustainable agronomic practices in the home garden were promoted by the project to enhance productivity of home gardens. Home gardens are an important source of income and nutrition to rural communities and their resilience is an important aspect of adaptation. Introducing polytunnel innovations also enhanced the capacity of rural agriculture.

As traditional agricultural livelihoods are increasingly less reliable the project looked to enhance diversified skills in alternative livelihood activities. Both men and women were trained in opportunities outside the agricultural sector such as garments, handicrafts, nurseries and inland fisheries.

Based on project experiences, the Project developed 5 Policy Briefs on key areas crucial to climate change adaptation. These briefs were presented to Government Authorities for their consideration in policy making and can be combined with risk assessment conducted by the project in order to mainstream adaptation strategies in development efforts.

## 9. Complementarity and coherence with other climate finance sources

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The project's objectives are in line with the Sustainable Development Goals (SDGs) and also the national priorities in climate change adaptation and mitigation strategies. The project strategies identified are in line with priorities for adaptation as outlined in the National Action Plan for Adaptation (NAPA). Major adaptation activities identified included: diversified home gardens, drought mitigation through introduction of micro-irrigations systems, drought tolerant crop varieties and organic agriculture, promotion of dairy, post-harvest processing, garments and handicrafts as alternate livelihoods, food processing and building community assets. The project is also aligned with the United Nations Development Assistance Framework – UNDAF (and now UN Sustainable Development Framework – UNSDF) - and Country 33 Programme Framework (CPF). Moreover, the project is in line with and relevant to the Adaptation Fund's objectives.

The National Policy defines a vision that state 'a future where climate change will have no adverse consequences on Sri Lanka. In particular, it has been developed to provide guidance and directions to respond to the challenges posed by climate change for all stakeholders. The policy focus is on environmentally-friendly economic development.

The key National Policy Framework – 'Vistas of Prosperity and Splendor' formulated in 2019 identifies ten policy areas which includes sustainable environmental management. This affirms Sri Lanka's commitment to climate action. Sri Lanka is a party to UNFCCC and submitted its Nationally Determined Contributions (NDC) to reduce the emissions by focusing on 14 sectors during the target period of 2021-2030 and further contributes to the advancement of the Climate Change Policy (2012), the National Adaptation Plan for Climate Impacts (2016-2025), the National Climate Action Plans prepared by the Ministry of Environment, National Climate Change Adaptation Strategy for Sri Lanka 2011-2016-Ministry of Environment, National Disaster Management Policy of Sri Lanka.

The CCAP project complements the following adaptation programmes:

- The World Bank is implementing multi-phase climate resilience programmes with focus on forecasting and early warning of high impact weather and promotion of climate smart agriculture.
- The Asian Development Bank (ADB) is active in the water management sector. Their Integrated Water Productivity Improvement Project builds resilience to climate change through irrigation and water resource management interventions, including improving the governance of national water management.
- The Green Climate Fund currently has two large investments (about \$US50 million each) targeting climate adaptation: a 7-year project which started in 2017 and aims at improving the community irrigation water infrastructure, scaling-up decentralized drinking water systems, and strengthening early weather warnings, flood-response, and water management in the Northern and Eastern Provinces, implemented by UNDP; a recently started project that seeks to strengthen the adaptive capacity of smallholder subsistence farmers to address climate-induced irrigation and drinking water shortages



in the upper watershed and downstream areas of the Knuckles Mountain Range; implemented by IUCN.

- The International Water Management Institute (IWMI) is the lead centre for the CGIAR research programme on water, land and ecosystems. Ongoing IWMI interventions focus on drought monitoring and forecasting and climate resilient integrated water management.
- The FAO implements Country Programming Framework (2018–2022) which addresses sustainable management of natural resources, forests and ecosystems, taking account of climate change, and increasing resilience of the most vulnerable to shocks, natural hazards and climate variability. FAO's work also focuses on the capacity of concerned stakeholders to undertake policy formulation and to collect, analyze and utilize data and information for evidence-based decision making.

## 10. Sustainability, scalability and replicability

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The project's strategy embedded a sustainability lens from the beginning by strengthening national systems and developing local capacities to undertake concrete adaptation measures. The strategy also aimed to work within the framework of national plans and policies outlined in the National Climate Change Adaption Strategy, National Agricultural Policy, National Water Management Policy, and National Disaster Management Policy that ultimately fostered an enabling environment. The following actions were taken to ensure sustainability, scalability and replicability was mainstreamed throughout the project duration.

**The implementation approach** used existing national institutions such as the relevant line ministries and farmer organizations to implement project interventions. Although there were implementation challenges that occurred due to this strategy in terms of delays, this however was an important approach that built the capacities of these key stakeholders to replicate such processes or implement promising practices after the project ends.

**Capacity building** interventions at divisional and village levels, establishment of village markets and introduction of climate smart technology packages - it was expected that project outputs would be adopted by the majority of the beneficiaries. Fulfilling this expectation, like the formation of Cooperative Societies, strengthening market linkages and formation of relevant committees will facilitate continued progress of activities.

**Registration of farmer organizations and formation of Cooperative Societies** (Green Community Entrepreneurs' Cooperative Society) under the Department of Cooperatives for the Community Enterprises will further support the farmer organizations and 36 community enterprises to uphold the standards applied by the project and continue to receive technical support from relevant departments such as the Ministry of Cooperative and Agrarian Services.

All **agricultural infrastructure** rehabilitated through the project have been handed over to the relevant government agencies who have undertaken the responsibility to continue the operations and maintenance. These include minor tanks, irrigation canals and anicuts and agriculture roads, and water supply systems. These agencies have undertaken the responsibility and maintenance of the assets, at their own cost after the project period. Awareness programmes and training modules for maintaining irrigation systems was introduced through the project to farmer organizations.

**Disaster management committees** formed through the Early Warning programme. The project facilitated awareness creation among community members and shared how they can access climate-related information. Early warning exercises were also facilitated through disaster management committees which consist of farmer society leaders and community leaders such as Grama Niladhari, Economic Development Officers and other village leaders. This ensures that when a hazard signal is received through the system, the community is informed of a potential risk through the network of committees.

**Catchment conservation** through the Ecosystem restoration programme and agroforestry programme - the project undertook planting of trees such as bamboo, mee, kumbuk, karanda etc. along the tank bund and within (Riprap) kattakaduwa area near the minor tanks. This ensures that the mineral salinity of the tank is absorbed by the growing trees so that the soil in the adjoining cultivation areas does not become saline over time which leads to cultivation lands being abandoned due to the lack of productivity. It also prevents erosion of soil into the tank causing decrease in its water storage capacity needing it to be desilted often.

## Voices from the Field - Becoming a polytunnel cultivator

J.A. Sujeeva Wasanthi of Harrasbedda North who is a beneficiary of the project is a full-time farmer. She was selected for the development initiative by the project based on her impressive past record on home-based agricultural entrepreneurship at the local Agrarian Services Office. Prior to the project interventions she was operating a floriculture nursery and a plant selling outlet at home, through a home-garden, from which she generated an income of about Rs. 7500 per month. Although she was interested in expanding and diversifying her operations into a high value vegetable cultivation, she was discouraged to make substantial investment given the seasonal fluctuations of precipitation induced by climate change. Her financial abilities at the time were not sufficient to acquire necessary infrastructure to venture into protected agriculture.

Sujeeva was selected by the project and received a polytunnel which she used to cultivate some high-value vegetable crops such as tomato and bell peppers. She has now used the polytunnel for over three full seasons is very satisfied with the infrastructure provided claiming there had been significant improvements in her livelihood regardless of the extreme weather events. In addition to the technical inputs that she received through the project, she was given adequate training on protected culture and entrepreneurship. This has immensely contributed to her interests in learning new technologies, applying them appropriately and sharing the experience with fellow members of the community. She and her family members who support her livelihood/enterprise have been utilizing the facility continuously and engaging in agriculture, while generating a higher and a more sustainable income, compared to the income generated previously. She claims to earn about Rs. 20,000 – 30,000 per month, depending on the market demand. She hopes to save a considerable share of the additional income for her children's education while investing the rest on improving the living standards and quality of life for her family. She places a high priority on feeding her family first, giving some to the neighbours and then selling the surplus. The highlight of her story is the quality of leadership she has manifested in sharing her experience.



*Picture: Sujeeva standing beside the length of her polytunnel that has improved her livelihood*

## Annex 1: Financial Report

TEM / ACTIVITY / ACTION	Budget and Allocation	Expenditure						Cumulative Total Expenditure (2011- Sept 2020) (US\$)	
	Proposal Budget	PPR 1 Start to Aug 2015	PPR 2 2015 to Aug 2016	PPR 3 2016 to Aug 2017	PPR 4 2017 to Aug 2018	PPR5 2018 to Aug 2019	PPR6 Sept 2019 to Sept 2020	Total Expenditure (2011 - Sept 2020)	Variance %
1.1 Develop home garden-based agro forestry systems in target DSDs to diversify livelihoods and build adaptive capacity of households to climate change	1,038,808.00	8,143.31	326,520.98	277,937.21	204,508.17	262,601.95	24,824.94	<b>1,104,536.56</b>	1%
1.2 Introduce and promote drought-tolerant crop varieties and agronomic practices to counter effects of rainfall variability	265,069.00	-	1,454.50	33,005.12	9,969.46	223,549.78	14,553.37	<b>282,532.24</b>	0%
1.3 Identify and promote climate-resilient alternative income sources such as livestock, perennial cash crops and inland fisheries	874,000.00	-	-	46,647.71	774,536.06	64,899.20	39,929.47	<b>926,012.45</b>	1%
1.4 Promote improved post-harvest technologies as viable climate-resilient livelihood sources for women farmers	875,200.00	-	52.28	3,488.99	939.14	763,203.73	24,683.11	<b>792,367.25</b>	-1%
1.5 Build community assets and livelihood resources through cash-for-work to support climate risk reduction measures.	1,024,425.00	122.48	74,220.05	400,453.59	284,489.87	271,670.16	64,808.83	<b>1,095,765.00</b>	1%
2.1 Train and mobilize officers at village, division and provincial level	257,110.00	-	1,526.95	2,457.75	117,298.99	67,644.40	51,108.39	<b>240,036.47</b>	0%

2.2 Strengthen Farmer Organizations with information, training and equipment to implement adaptation strategies	421,000.00	984.07	66,559.96	15,012.04	68,148.67	95,156.11	122,370.09	<b>368,230.93</b>	-1%
2.3 Pilot integrated watershed management models in micro watersheds to safeguard climate-sensitive livelihood assets such as land and water	1,236,104.00	-	64,118.76	566,683.92	163,468.25	303,856.42	111,277.00	<b>1,209,404.34</b>	0%
2.4 Risk Assessment and Adaptation Planning conducted with target communities	110,550.00	-	-	-	39,616.41	49,130.59	15,802.61	<b>104,549.61</b>	0%
2.5 Document and disseminate lessons of climate-resilient livelihood development and watershed management approaches and best practices	252,696.00	-	-	11,520.25	8,947.98	189,295.48	41,987.21	<b>251,750.92</b>	0%
2.6 Design and implement early warning systems for climate-induced risks of landslides and drought in Mahaweli Basin	315,000.00	-	3,153.22	95,852.06	17,036.36	174,764.00	2,641.29	<b>293,446.93</b>	0%
3. Project Execution Cost	693,842.00	18,507.29	47,665.87	75,097.72	3,133.24	322,671.37	226,659.17	693,734.67	0%
MIE fee	625,923.00						631,287.42	631,287.42	0%
<b>TOTAL</b>	<b>7,989,727.00</b>	<b>27,757.15</b>	<b>585,272.58</b>	<b>1,528,156.36</b>	<b>1,692,092.60</b>	<b>2,788,443.20</b>	<b>1,371,932.90</b>	<b>7,993,654.79</b>	0%



