Completion report covering UNDP interventions

of the project

Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka

Funded by the UNFCCC Adaptation Fund
Implementing Entity: WFP
Executing Entities: Ministry of Mahaweli development and Environment and UNDP
Start of project: August 2014

By

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LIST OF ACRONYMS….

AF	Adaptation Fund
ASC	Agrarian Service Centre
AFB	Adaptation Fund Board
CCS	Climate Change Secretariat
CCAP	Climate Change Adaptation Project
CRVDC	Climate Resilient Village Development Plan
CPF	Country Programme Framework
DAC	Development Assistance Committee
DAD	Department of Agrarian Development
DS	Divisional Secretary
DSD	Divisional Secretary Division
FO	Farmer Organization
GAP	Good Agricultural Practices
GND	Gramasewa Niladari Division
IWMI	International Water Management Institute
HH	House Hold
LKR	Sri Lankan Rupees
LUPPD	Land Use Policy Planning Department
MCB	Mahaweli Construction Bureau
MERE	Ministry of Environment and Renewable Energy
MMDE	Ministry of Mahaweli Development and Environment
MOE	Ministry of Environment
MTR	Mid- term review
NAPA	National Action Plan for Adaptation
NBRO	National Building and Research Organization
NSC	National Steering Committee
OECD	Organization for Economic Corporation and Development
PSU	Project Support Unit
SDGs	Sustainable Development Goals
SOP	Standard Operating Procedures
TOT	Training of Trainers
UNDP	United Nation Development Programme
UNDAF	United Nations Development Assistance Framework
UNIFAP	National Redplus Investment Framework and Action Plan
UNV	United Nations Volunteers
UOM	University of Moratuwa
UNFCCC	United Nations Framework Convention on Climate Change
VDP	Village Development Plan
VRA	Vulnerability Risk Assessment
WFP	World Food Programme

1. Executive Summary

In response to a request of the Government of Sri Lanka and with the mediation of the World Food Programme, the Adaptation Fund (AF) approved a USD 7,989,727 project titled "Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka" in 2012. The outcomes and outputs are designed to address specific vulnerabilities faced by 14039 rain-dependent farming families in three hazard-prone Divisional Secretary Divisions (DSDs), namely Walapane of Nuwara Elyia district, and Medirigiriya and Lankapura of Polonaruwa district. The overall objective of the project was to secure community livelihoods and food security against climate change-induced rainfall variability leading to longer droughts and more intense rainfall. To address these climate induced impacts, the project implemented activities to; 1. Develop household food security and build resilient livelihoods for rain-fed farming household, and 2. Build institutional capacity in village, local, regional service delivery to reduce risks associated with climate-induced rainfall variability.

Project implementation commenced in 2013, WFP as the implementing entity and the Ministry of Mahaweli Development and Environment (MMDE) as the executing entity. In 2017, WFP involved UNDP as a joint executing agency with well defined roles and responsibilities through a UN agency to UN agency contribution agreement initially for a period of 18 months which was extended for another 12 months with the expected outcome of putting the project back to the adaptation focus with 5839 target beneficiary house holds.

Focusing on UNDP interventions of the project, the adaptation measures include agriculture base interventions such as ecological food production through drought resistant crop varieties in diversified home gardens ; developing alternative income sources such as beekeeping and off-farm livelihoods such as post-harvest and agri-products processing particularly focused on women's access to climate-resilient livelihoods; establishing alternate livelihoods such as textile and apparel, handicraft and handloom; supplying of input packages and rehabilitating community assets to ensure efficient use of water resources; implementing early warning systems and strengthening knowledge of climate risks to ultimately strengthen adaptive capacity to climate change in the targeted communities of Mahaweli Basin. Additionally, strategies to support these livelihoods such as micro irrigation systems for the efficient management of water were introduced. Rain water harvesting tanks were introduced to home gardens to sustain these climate resilient livelihoods. Furthermore, the introduction of women-based alternative income generation awareness, women leadership programmes, book keeping and record keeping, marketing skill development programmes have been conducted for women members of targeted farmer organizations to enhance women's economic empowerment.

1800 farmers were trained on small tank management, aqua farming, sustainable management of land, water efficient agriculture and training on climate information through weather stations had broaden their awareness

on climate risks and adaptive strategies. All FOs in target area have received information and tools to develop local adaptive strategies to safeguard livelihood assets. Three hundred grassroot level officers were trained on the concept, approaches and strategies of climate change adaptation and sustainable rural development.

Overall, the project has a satisfactory level of progress. The current project expenditure stands over 95% (UNDP component) against the total UNDP allocation. The physical progress was just above 90% of the planned activities.

2. Project Overview

2.1 Basic information:

Project:	Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka
Funded By:	The UNFCCC Adaptation Fund
Implementing Entity:	World Food Programme
Executing Entities:	Ministry of Mahaweli Development and Environment United Nations Development Programme
Start Date of Project:	August 2014
Targeted Families	14039
Project implementing area	40 GNDs in Medirigiriya and Lankapura Divisional Secretariats in Polonnaruwa district and 20 GNDs in Walapane Divisional Secretariat, in Nuwara Eliya District.

2.2. Key milestones

Date	Milestone	Remarks
October 2011	Government of Sri Lanka requested the assistance of WFP to develop the project proposal for AF of UNFCCC	MERC as the focal Government agency
December 2012	Approval of US$ 7,989,727 for the said project by AF	Project duration 3 years
November 2013	Project Inception Report finalized at a two day workshop with the participation of Key stakeholders	Inception phase commenced in March 2013
August 2014	Project Implementation commenced	With the signing of SOP
December 2015	New project administrative structure was established to expedite the very slow implementation process	Under the new ministry portfolio of MMDE
July 2017	Project internal review	Wickramasinghe and Prerera (2017)
August 2017	AF granted 18 months no cost project extension	Project end date extended from August 2017 to February 2019
October 2017	UNDP partnered the project through a UN Agency to Agency contribution Agreement between WFP and UNDP	UNDP was allocated USD 1,829,223 to implement clearly identified activities from October 2017 to February 2019.
July 2018	Mid Term Review done	Kuruppuarachchi and Munasinghe (2018)
August 2018	12 month project extension granted by AF	Project activities extended from March 2019 to February 2020.

April 2019	Amendment No, 02 to the agreement between UNDP and WFP amending the contribution amount to include a new allocation of USD 1,028,492	UNDP activity plan also amended accordingly.

2.3 Project Background

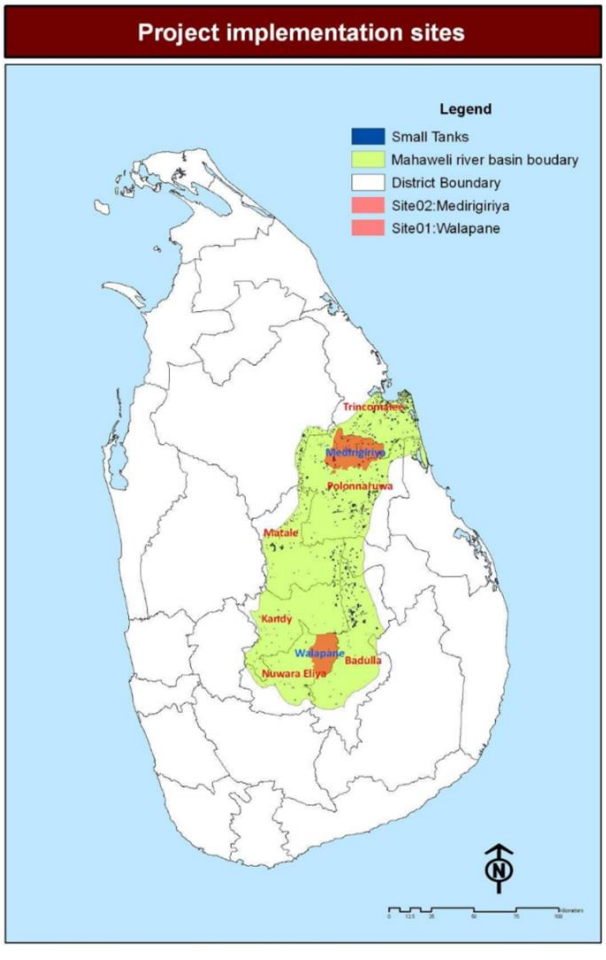
In October 2011, the Government of Sri Lanka, represented by the Ministry of Environment and Renewable Energy (MERE), requested the assistance of the World Food Programme (WFP) to develop a project proposal to the Adaptation Fund (AF) of United Nations Framework Convention on Climate Change (UNFCCC). A project titled "Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka" was submitted and approved by the Adaptation Fund Board in December 2012 with a budget of US$ 7,989,727 for a three-year period.

The overall objective of the project was to secure community livelihoods and food security against climate change-induced rainfall variability leading to longer droughts and more intense rainfall. To effectively address these climate-induced impacts, the project proposed to:

1. Develop household food security and build resilient livelihoods for rain-fed farming households
2. Build institutional capacity in village, local, regional service delivery to reduce risks associated with climate-induced rainfall variability

The Mahaweli river basin with the largest draining area of around 10,000 square kilometers comprising 40 Divisional Secretariat Divisions (DSDs) in six districts is the principal source of water for the dry zone. Food security and poverty in different regions of the Mahaweli River Basin are linked to production patterns, income opportunities, disaster exposure, access to education and other socio-economic conditions. Vulnerability analysis conducted by the International Water Management Institute (IWMI) revealed that DSDs of Walapane, Medirigiriya and Thamankaduwa were the most vulnerable areas. These DSDs are not serviced by major irrigation infrastructure, and farming communities live in drought-prone areas with small village irrigation facilities or on steep mountainous slopes with poor accessibility and very poor infrastructure.

The project (UNDP) targets 5839 rain-dependent farming families in three hazard-prone DSDs, namely Walapane, Medirigiriya and Lankapura in the Mahaweli River Basin of Sri Lanka (Figure 1). The Walapane DSD includes five Agrarian Service Centre (ASC) divisions: Walapane, Nildandahinna, Theripaha, Ruupaha, and Munwatte. The Medirigiriya DSD includes one ASC division: Medirigiriya, and the Lankapura DSD has two ASC divisions: Galamuna and Pulasthigama.



Walapane DS Division
Walapane
Nildandahinna
Theripaha
Rupaha
Munwatta

Medirigiriya DS Division
Medirigiriya

Lankapura DS Division
Galamuna
Pulasthigama

Figure 1. Map providing the project sites (Source: Project Document). *Note*: Lankapura DS division was not included in the original project map

2.4 Project Implementation

In December 2015, a new administrative structure was established under the new ministry portfolios (Ministry of Mahaweli Development and Environment – MMDE) and the project implementation picked up the pace as reflected in the financial progress of USD 1.094 million during the period December 2015 to December 2016 against the financial progress of USD 30,849 during the first year of implementation. Although, the project had achieved some progress compared to the first reporting year (August 2014-September 2015), the overall project execution was still far from achieving the project targets. The inadequate implementation capacity both at national and regional (project site) levels, the complex cross-

ministerial and cross-institutional mechanism for project activity planning, cost estimates, approval and implementation, and the malfunctioning of the steering/monitoring committees have been the major contributory factors for the slow progress of project implementation.

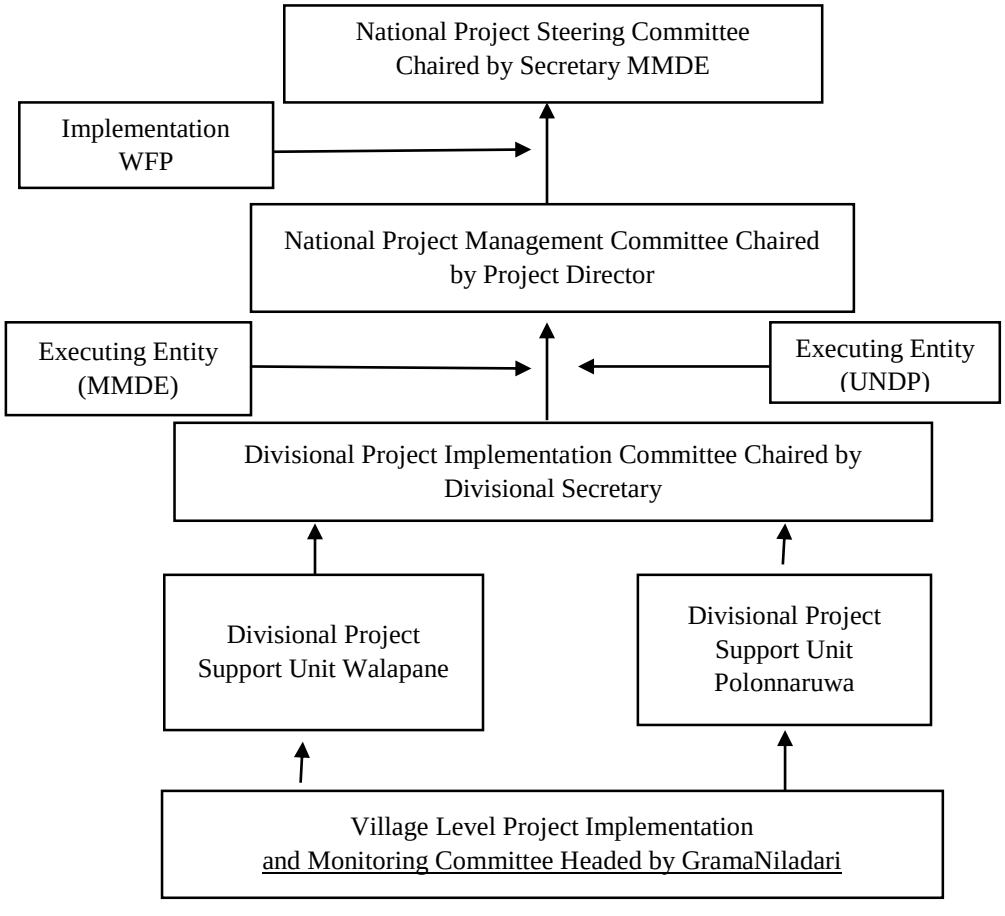
Considering the difficulties in project completion and based on the findings of the project review (Wickramasinghe & Perera, 2017), WFP as the Implementing Entity of the Project in consultation with the government counterpart, managed to get the project extended with no additional cost for another 18 months from the closing date ofAugust 2017 to February 2019. Given the challenges on project execution, WFP proposed the involvement of the United Nations Development Programme (UNDP) to partner in project execution using a different implementation strategy. A UN agency-to-agency agreement was signed between WFP and UNDP for this effect with an allocation of USD 1,829,223 to help implement clearly identified activities from October 2017 to February 2019. The roles and responsibilities of WFP, UNDP and the MMDE (executing entity) in delivering the project have been clearly identified and documented in the above-mentioned agreement. Mid-term review of the project conducted in July 2018 had recommended to request for a no-cost extension of the project for additional 12 months to facilitate efficient utilization of remaining funds, provide time required for climate smart interventions to be introduced and stabilized and to sustain the capacity building process.

Amendment No 2 to the agreement between WFP and UNDP provided a new allocation of US $ 1,028492, and extended the UNDP project end date to 28 February 2020.

The project was initially designed with the MMDE as the main executing entity. Since the project is multi-disciplinary, a National Steering Committee (NSC) was designed to comprise all relevant government departments established and chaired by the Secretary to MMDE. The main function of the NSC is to steer the project with appropriate policy directions. The regional level project activities are identified and prioritized by the divisional steering committees headed by the DSs and the implementation of project initiatives at the village level is monitored by the village level project committees headed by the GN. Though these 4 main committees have been proposed in the project document as the management arrangement (Figure 2), to provide policy direction; technical supervision; field implementation support; and village level monitoring respectively, these bodies were not functioning to the expected level during initial implementation District and divisional level management structures have been revitalized at latter stages of implementation due to joint effort of both executing entities.

However, village level project implementing, and monitoring committees were not functioning well, but it was apparent that with capacity building work initiated at the village level, GNs and Krupanisas were motivated to fulfil the functions expected from these committees.

Figure 2: Management structure



3. Scope and Objectives of the mission.

The report represents the UNDP interventions of the project in achieving targeted objectives and their influence on the sustainability, scalability and replicability of outputs and provide required information to compile the final completion report of the project.

The scope of this mission is to capture the project interventions and their potential impact in terms of climate change adaptation and livelihood development for vulnerable people under 11 output areas and to access them in terms of their likely contribution towards achieving the overall project objectives.

The mission was focused on topics related to agriculture, natural resource management, disaster risk reduction and climate change issues in undertaking the contract within a 10 days' timeframe (Annex 1)

4. Methodology

Data collection

The mission was basically a desk review using the secoundary data collected from qualitative and quantitative methods. Secondary resources that reviewed includes: Project Performance Reports, Logical Framework, Baseline and Mid-Term Evaluation Reports, relevant regional and national reports, policies on climate change, food security and economic development, relevant Central Statistics Agency reports, Inception Workshop Report, Consultancy Reports, Annual Reports, reports of existing statistics and financial data showing the breakdown of expenses on different activities ((Annex 3). The findings of the desk review were validated with key informant discussions and focused group consultations conducted in a brief field visit to the project area where, a total of three (3) focus group discussions were held with FOs entrepreneur groups'.

5. Key outcomes and outputs

5.1 Project Design and strategies

The outcomes and outputs are designed to address specific climate change induced vulnerabilities faced by rain dependent farmers, through a range of strategies introduced to ensure food and income security. These strategies included: introduction of diversified income sources to broad-base risks, improving water storage and irrigation methods to overcome uncertainty of rainfall, improving soil quality and fertility for increased production and timely and quality agricultural advice and extension.

As a key project implementation strategy, UNDP component of the project had selected five sectors/value chains such as; Agriculture, Handicraft, Dairy, Processed food and Handloom & Apparel to develop resilience livelihoods and food security of about 5,800 selected marginalized farmer families covering 60 highly climate vulnerable villages. The project interventions have supported to develop 36 community enterprises under these five sectors with the technical support of over 10 government

institutes. Annex 4 describe the five sectors/value chains and the number of community enterprises that were established with the project support.

5.2 Analysis of Results Framework

The **overall goal** of the project:

Build diversified and resilient livelihoods for marginalized farming communities in the Mahaweli River Basin through effective management of land and water resources.

Analysis

The project has selected 60 GNDs for UNDP operations in the 3 DS Divisions under the criteria of most vulnerable villages for climate change impacts which consist of marginalized farming communities. Over 5839 beneficiary households have received livelihood assistance of which only about 50 - 60% have received the capacity building support to make their livelihoods more resilient and sustainable.

Although over 95% of the farmers in the project area are aware of the impacts of climate change in general, it is only about 50-60% of them who practice the effective management of land and water as adaptive measures for climate change impacts. From the monitoring reports and field verification visits it was observed that the capacity building programmes planned and carried out by UNDP over the last 27 months have contributed to increase the number of beneficiaries who effectively manage land and water resources and secure diversified and resilient livelihoods. This would be elaborated later in relevant outcome areas.

The overall objective: To mitigate effects of climate change induced rainfall variability and its impacts on livelihood and food security on farm households in two vulnerable divisions of the Mahaweli River Basin

Indicators

Percentage of target population adopting risk reduction measures
Household consumption score

Analysis

Through UNDP interventions approximately 5585 households (96% of the targeted population) have been directly benefited, who practice at least one climate risk reduction measure. These adaptation

measures include home garden ecological food production through drought resistant crop varieties; developing alternative income sources such as beekeeping, innovative dairy management (introducing loose barn system) and off-farm livelihoods; establishing post-harvesting and agri-products processing, particularly focused on women's access to climate-resilient livelihoods; supplying of input packages and rehabilitating community assets to ensure efficient use of water resources; implementing early warning systems and strengthening knowledge of climate risks.

During the dry season, food availability is limited in markets. In response, the project has initiated various strategies to cultivate drought tolerant crop varieties in the targeted DSDs which includes both annual and perennial crops. The project has supported with cool storage for the farmers who produce drought tolerant bean variety in Mungwaththa ASC at Walapane. Fity farmers have been invoved in this activity and formed the 'Bean seed producers and market socity' which produce around 200 kg of good quality seeds in a season. This society has developed a strong partnership with the provincial Department of Agriculture. A coffee nursery has been established to distribute a new drought tolerant coffee variety in Nildandaahinna, Walapane DSD. In addition, the project has introduced dehydrator machines and food preservation techniques via awareness programmes to improve post-harvest practices to reduce losses and preserve excess production in off seasons. Further, pulse de-huller machine was introduced at Walapane to promote Cereal products together with necessary machineries to process local grain verities like Kollu and green gram. To improve household nutrition levels, the project also took measures to stock village tanks with fish fingerlings. Through awareness programmes the communities were encouraged to fish and consume tank fish. This integrated approach could have contributed towards improved food security, which will be measured through the end-of-project household consumption survey.

Outcome 1

Outcome 01: Diversified and strengthened livelihoods and sources of income for vulnerable farm families in minor irrigated and rain fed areas

Indicators

Percentage of target households with sustained climate resilient livelihoods

No of women with new source of income

Analysis

The beneficiaries in the project areas are mainly dependent on rain fed agriculture-based livelihoods. In order to mitigate the effects of climate change induced rainfall variability, the project developed home gardens, alternative income avenues, post-harvest technologies and built community assets.

Sustainable home gardends have been established through the introduction of efficient watermanagement practices, organic input production, bee keeping and establishment of farmer markets both locally and in outside areas, enabling the farmers to cultivate during water deficient periods and obtain a reasonable price for their products. About 34% (1961 households) of the targeted farmer families have been directly benefitted from this initiative and 51% of these were women based. As drought mitigation measures, plant nusaries and seed production programmes have been established and through this seed paddy, seeds of a drought tolarent bean variety and planting material of other drought tolarent plant varieties suitable for the area were produced and marketed. 221 house holds (3.7% of the targeted farm families) were directly benefitted from this and 59% of them were women. Alternative livelihoods have been developed under five value chains namely, Agro-ecological farming, dairy production, food processing, garment & handlooms and handicrafts. Altogether, 2490 households (43% of the targeted) directly benefitted from this and 51% of which were women. Under food processing 12% of the targeted farm families (693 household) have been benefited and 68% of these were women. Under community assets 220 women (4% of the targeted households) were supported under cash for work programme on creating alternate income generation awareness, developing leadership and marketing skills in order to enhance women's economic empowerment. The end-of-project survey will determine the percentage of women's contribution to household income.

Output 1.1

Develop diversified home garden based agro forestry in target DSDs to build household adaptive capacity to climate change

Indicators

No of diversified home gardens created through project intervention
Value of food and income generated through diversified home gardens

The first out put to achieve strengthend livelihoods and income was the development of diversified homegardens on a sustainable manner that generate domestic food requirement and a reasonable income for the vulnerable farm families. In order to achieve this the project had adopted several stretegies such as, provision of required inputs, building the capacity of the targeted farm families / service providers through training and monitoring, empowerment and diversification.

Input Supply

To assess soil conditions in developing sustainable home gardens, 29 soil testing kits have been distributed among Agriculture Instructors (AIs) and Agriculture Research & Development Assistant (KUPANISA) through Agriculture Service Centers. To ensure efficient water management of selected home gardens and commercial cultivations, 150 rainwater harvesting tank, 1683 micro irrigation kits (Water tanks, drip and sprinkle systems), 300 Compost barrels and insect repellant nets had been distributed.

Capacity Building

Ninety-six organic input producers from 3 DSDs have been trained on quality certified organic input production at commercial level with the technical assistance of Center of Excellence in Organic Agriculture at Makandura of the Department of Agriculture. Out of this, 12 farmers currently producing around 5000 kg of compost and organic input on commercial basis for the market under the brand name of 'Haritha', and registered as two business entities (community enterprises) in Madirigiriya and Walapane. 101 Agriculture Instructors (AI's) and Agriculture Research & Development Assistants have been trained on using soil test kits.

Empowerment

Over 200 'Farmers Market' events have been conducted with around 750 farmers supplying fruits and vegetables and other organic products to the farmers markets. Part of these products were brought to Good Market, Colombo 07 and with effect from September 2019, 16 such events have been conducted. Project had established a 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 a community enterprises to manage the farmer markets on regular basis in four locations within three DSDs with 157 active members.

Diversification

As diversified home garden intervention, 36 Farmers have been trained and supported to start bee colony and bee honey production in Walapane DSD. Carpentry machine was provided for the group to produce bee colony boxes to expand the bee colonies in the area. The bee- farmers were registered as a community enterprise (Bigunada bee honey producer society) and merged with the food processing center in Walapane and the group supply value added bee honey to Farmer markets.

A total of 1961 farmers (948 male and 1013 female) in all three DSDs have been benefited from home garden diversification initiatives. Some of these vulnerable families had only managed to secure their domestic food requirement while the others (around 750) were able to produce in excess of their requirement and generate a reasonable income depending on the resources available. According to records, around LKR 9.1 million have been earned through selling of diversified home garden products at the farmer markets. Also, around LKR 1.2 were raised from the products marketed in Good Market, Colombo 7 and from Colombo market wholesale buyers with effect from September 2019.

Output 1.2
Introduce and promote drought tolerant crop varieties and agronomic practices to counter effects of rainfall variability

Indicator
No and type of drought mitigation practices introduced

Drought mitigation practices introduced through the project included promotion of drought tolarent crop varieties, organizing farmer groups for seed paddy production to maintain seed security in the area during difficult times and establishment of plant nursaries to make suitable planting material freely available in the area**.**

Drought Tolerant Varieties:

A drought tolerant bean verity has been identified for Walapane area and bean seed production has commenced with 57 farmers as a community enterpise. Since farmers did not have an appropriate technology to protect and store bean seeds, they were provided with a cool storage with the capacity of 1 ton and handed over to the Provincial Department of Agriculture, Central Province which provided the technical support on regular basis.

Seed and planting material security:
A group of 50 farmers have been mobilized in seed paddy production and processing program in Medirigiriya which was operational for the last two seasons . Two seed paddy processing machines were provided by the project to this' Haritha' farmer's society which also produce traditional rice verities which are well adapted to the area.

Planting material :

Wholesale plant nursery and marketing center has been established as a community enterprise with 106 small scale nursery keepers in Madirigiriya DSD with the assistance of Mahaweli Development Authority. Inputs such as efficient water supply system, elephant fence and other basic infrastructure has been provided to stabilize this initiative which supply part of the planting material requirement of the area. The society is linked with the 'Suwahas' Nursery Society under Department of Botanical gardens and wildlife to introduce value added technologies, market support and to organize regular promotional exhibitions. Total revenue recorded from this initiative up to now is around LKR. 2.5 million. The project had supported to start up a coffee nursery at Nildandaahinna in Walapane DS division in collaboration of Nuwara Eliya GA and Export Development Board , named as 'Lak Parakum' and had produced and sold around 100,000 coffee plants so far and continuing to produce other required drought tolerant crop veritie as well.

Capacity Building:

Three workshops have been conducted with the technical assistance of Provincial Department of Agriculture for 50 Officers and 70 farmer representatives on adaptive, drought resilient cropping practices that suits water limited situations in the area.

Output 1.3

Identify and promote climate-resilient alternate income sources such as livestock, perennial cash crops and inland fisheries

Indicators

No and type of alternate livelihood assets created

No of women participated in livelihood training

Based on the technical assessment conducted by National Enterprise Development Authority (NEDA), UNDP and National / Sub-National agencies, alternative livelihoods were identified under five value chains, namely Agro-ecological Farming, Dairy, Food Processing, Garment & Handloom and Handicraft. Out of 74 projects already identified under village development plans, in consultation with regional steering committee's a total of 36 community enterprises were established under the project support. Annex 4 shows the details of these community enterprises in terms of human resources development, production capacity and their current status.

Agro-ecological farming

Project has provided technical support and basic infrastructure for 96 farmers to develop the ornamental fish farming as a community enterprise. The unit has been handed over to the Mahaweli authority to continue the operations with the society and supporting to access technology and markets. 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. This unit has been managed as a community enterprise by one of the seasonal tank fisheries society established with NAQDA. 750 families are 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 and management of the of the enterprise.

Dairy

Attempts to promote Dairy Industry through value addition have been observed in all three DSDs and most of the mini/ micro level factories have commenced production and at testing and quality improvement stage at present. 574 dairy farmers (58% women) in Madirigirya and Lankapura DSDs will be benefited from the initiative through promotion of evening milking and selling to the factory at a fair price.

Handicraft

Women, youth and handicapped persons have been selected from three DSDs for developing 8 categories of handicraft products to the value-added markets targeting tourists and Green product conscious consumers in different parts of the country. Handicraft products are developed from natural resources like reed, cane, fabric, clay, coconut shells etc. The product range included Dresses, T shirts, bags, jewelries, household utensils and kitchen utensils. Community enterprise is registered and trainings are being conducted in the first round of production. Lankapura and Medirigiriya units have recorded an average income of Rs 50000 and Rs 20000 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 operational at present producing different types of Garments and providing income

opportunities (full time, part time, home based) for women who were trained under Sri Lanka Institute of Textile and Apparel (SLITA) under the project. The aim of the intervention was to ensure economic stability in the time of crop failure due to climate change variability. The capacity building trainings, renovation of the buildings and machinery installation were done by the project. Also, in addition to the handloom training and production center in Walapane and Pulathisigama, a Handloom Production center has been established in collaboration with Mahaweli Authority (System D) in Madirigirya. The production of this is directed to the Mahaweli mini garment established under the project for producing value added garments for the identified Green Markets.

These alternate livelihood interventions helped 1916 (631 male and 1285 female) direct beneficiaries in improving their incomes through alternate livelihoods.

Output 1.4
Promote improved post-harvest technologies as viable climate-resilient livelihood sources for farm women

Indicator
No of farm women engaged in project introduced post-harvest livelihoods

Postharvest Technology

Established following post-harvest centers and trained beneficiaries, mainly women on climate resilience livelihoods development.

Social Enterprise	Product	Location	Human Resource	Women %
Govijana Bojunhala	local instant cooked food	Madirigiriya	30	100
Govijana Bojunhala	local instant cooked food	Lankapura	30	100
Govijana Bojunhala	local instant cooked food	Walapane	30	100
Food processing center	Bottled food	Lankapura	30 producers and 20 processors	96

Food Processing Center	Processed food	Madirigiriya	100 producers and 15 processors	96
Food processing center	Dehydrated fruits/Vegetables	Walapane	50	100
Rice processing center –	Local, nutritious rice varieties	Medirigiriya	54	96
Cereal Processing center	Cereal products	Walapane	300producers and 30 processors	51
Cofee Processing Center	Cofee powder	Walapane	25	36
Kithul Based products	Kithul based value added food products	Walapane	53	39

The project has provided equipment to establish these post-harvest centers and required technologies transferred. Reviewer visited three of these centers and had discussions with the beneficiaries as well as the customers who expressed their complete satisfaction over the steady income they generate and the quality of service they received respectively.

Fifty five farmers (52 women) engaged in home based nutritious rice production. They were trained and engaged on collective rice processing as a sustainable income generation initiative. PDOANCP provided technical support to develop rice processing as a community enterprise. Rice mill has been established in the multipurpose agriculture marketing center at Vijayapura, Madirigiriya but not commissioned by the time the reviewer visited the site in mid-January 2020. The plan was to supply home based Par boiled rice produced by the group, milled at the center and supply to Green community marketing channel.

Value added local cereal processing and marketing has been commenced with a group of 20 entrepreneurs in Walapane. This activity has facilitated 347 chena farmers in the dry GN areas of Walapane to obtain a decent income from eco-products of their chena . The entrepreneurs were supported by the project with quality assurance, packaging and labeling of the processed cereal verities enabling them to tap the value-added markets.

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Output 1.5
Build Community Assets and Livelihood Resources through cash for work to support climate risk reduction measures

Indicators
Percentage and level of community participation in cash for work system
Number of women participating in cash for work program

It has been observed that the cash for work facility has been utilized by the project basically to provide on the job training, where skills had to be developed depending on the specific jobs that they were to be engaged. For instance, 15 women were paid through cash for work in Handloom center during the training period, 20 women were paid for cash for work during the nursery development, 30 women were paid cash for work during the food processing trail production period, 15 women were paid for coffee nursery maintenance and also, 80 women were paid cash for work in four garment factories and another 45 women from handicraft sector were supported through cash for work by purchasing finished products initially.

Outcome 2
Strengthened ownership of climate risk reduction processes and increased replication potential of adaptation strategies at local level and basin/sub national level

Indicator
Percentage of target population (Gender Disaggregated) aware of predicted impacts of climate change and appropriate responsive adaptive actions to safeguard livelihood assets

The baseline situation was that Extension officers and CBO officials have had no training on climate change and local community development, thus awareness of climate impacts and adaptive actions at household and community level was very low. Though, 79% of the HHs (at least one member) have heard about 'Climate Change Impacts', only 15% was clearly aware about it. 69% of the HHs had not taken any adaptive actions to safeguard HH properties.

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 broaden their awareness and knowledge on

climate risks and adaptive strategies. All FOs in target area have received information and tools through the project to develop local adaptive strategies to safeguard livelihood assets.

1103 grass root officers (48 % female) consisted of Development officers representing each Divisional Secretariat Divisions, Grama Niladaris, samurdhi officers, economic development officers and Agricultural Investigation officers were trained on preparation of village development plans, soil testing, micro irrigation, geo-infomatics.

The officers had actively worked hand in hand 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 built to replicate the best practices to ensure the sustainability of the project. Overall, the Reviewer rate the achievement of Outcome 2 at a satisfactory level based on the recent progress reports and with the limited experience in interacting with few stakeholers in the field. It was estimated that over 90% of the target beneficiaries are fully aware of the predicted impacts of climate change and around 75% have adapted at least one action to to safeguard their livelihood assets.

Output 2.1
Train and mobilize officers at village, division and provincial level to design, and monitor local adaptation strategies

Indicator
No of villages, divisional and provincial officers trained to address climate risks

The main focus of this output area was to train and mobilize officers on climate risk screening in agriculture and natural resource management and engage them in rural development.

A total of 135 officers (from DoA, DAD and selected GSNs) participated in the 3 training of trainer (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 the proposed three Climate Smart programs in three days exposure visit in Kurunegala district.

Capacity of 304 selected government officers on climate change adaptation strategies and Participatory Rural Appraisal (PRA) tools were build and another 284 selected officers from three DSDs were trained as trainers to prepare 60 Climate Resilient Village Development Plans (CRVDP)

'Farmer handbook' on climate resilience agronomic practices was completed in consultation with the officers of the Department of Agriculture in two districts and 2000 copies of the handbook were printed and distributed among Agriculture Instructors and lead farmers. Technology packages and the input packages were developed and shared among these key stakeholders.

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 has been very useful in identifying soil conditions and designing appropriate agronomic practices for the diversified homegarden programme.

101 Agriculture instructors and Agricultural Investigation officers were trained as trainers of introducing micro-irrigation system to support targeted 1,800 households establishing micro irrigation systems in their home gardens

182 selected government officers were also trained on 'Geo Information System' (GIS) to be utilized for village development planning. Majority of the Development Officers representing each Divisional Secretariat Divisions were trained under this activity.

Output 2.2
Strengthen Farmer Organizations with information, training and equipment to implement adaptation strategies

Indicator
Capacity of farmer organizations to respond to climate risks

A survey of registered and unregistered FOs in the eight Agrarian Service Areas of target DSDs had revealed that FOs lack information, planning capacity and some villages were not organized as FOs.

Training of FOs on method of conducting vulnerability reduction assessments (VRA)

A total of 800 farmers representing 40 farmer organisations were trained on sustainable management of minor tanks. Awareness for around 1,600 households on organic farming and climate smart agriculture has being raised. Two minor tank catchment conservation plans and two sub-watershed management

plans have being prepared and planned to use as demonstration sites to enhance the knowledge of 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

(c) Minor tank ecosystem development

This capacity building initiative of FOs has taken place 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 aware of their rights to take part in adaptation activities of the project.

Farmer Registration

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

Twenty three climate smart input models have been designed to use in rain fed upland farming systems, minor tank-based farming systems and in the major irrigation areas. The project target, however, was to design climate smart input packages for 180 producer groups.

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. It was also noted that continuous monitoring and knowledge dissemination is essential to avoid farmers turning away from organic farming.

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
Pilot integrated watershed management plans to safeguard climate sensitive livelihood assets such as land and water

Indicators
Availability of watershed-level irrigation management plans
Increased extent cultivated under pilot minor irrigation schemes

Management plans for Watershed development

Natural Resource Management Centre of Dept. 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 is in progress.

Two selected minor tank surveys completed by the Department of Agrarian Development and preparation of water management plans under the financial assistance of the Department is in progress.

80 farmers were trained on ecological restoration of minor tanks

Increasing cultivated extents

Restoration of four tanks such as Pambemada wawa, Rattiyaulpotha wawa, Alakola wawa and Walihinda wewa completed thus their storage capacities have been 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.

Output 2.4
Conduct Risk Assessment and Adaptation Planning with target communities

Indicators
Level of awareness among target group of climate risks
Capacity of community to plan and prioritize adaptive actions

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

Training on Vulnerability Risk Assessment (VRA)

The study "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 Niladarie division (GND). Based on the assessment, the awareness for around 6000 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. Conducted Spatial Variation of Vulnerability assessment to Climate Change in Walapane, Medirigiriya & Lankapura Divisional Secretariat Divisions

Output 2.5
Document and disseminate lessons of climate resilient community-based watershed management

Indicators
No of news outlets in the local press and media reported on project lessons
No of new project proposals/ new community-based adaptation initiatives generated within and outside the DSDs

Current status

Media publications and policy briefs

Preparation of four case studies completed . Three policy brief areas were identified and workshops to inform on policy development at district level were held.

Four short videos were prepared and generated around 10 social media reports on the project (please see Annex 5)

GCF/ ESR technical staff and government officers visited CCAP project locations to learn on the good practices. Also, 300 farmers were taken on 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

Output 2.6
Design and implement early warning systems for climate induced risk of landslide and drought in Mahaweli Basin

Indicator
Development and functioning of early warning systems

Early Warning Systems

Two Agro meteorology weather stations established in Walapane and Madirigiriya 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.

5.3 Contribution to Sri Lanka's Climate Change Commitments

The National Climate Change Policy contains a broad policy statements under Vulnerability, Adaptation, Mitigation, Sustainable Consumption and Production, Knowledge Management and General Statements.

Vulnerability

Under output 2.4, project assessed the vulnerability to adverse impacts of climate change in the socio-economic and environmental sectors of the project areas and under output 2.5 developed an

information and communication strategy to enhance the adaptation capacity of the communities in the targeted areas of project based on its vulnerability to climate change.

Adaptation

The project through its outputs 1.1, 1.2 ,1.3 and 2.1 take action to address the adverse impacts on crop and animal production and fisheries sectors due to climate change and to minimize the impacts on food production and to ensure food security through climate resilient environmental friendly and appropriate innovative technologies.

Sustainable consumption and production

Output 2.3 of the project addressed responsible use of Natural resources and Biological diversity in developing environment friendly products, processes and techniques to promote sustainable utilization of natural resources to mitigate adverse impacts on natural resources and biodiversity.

Knowledge management

Education, Awareness creation and Capacity building are key areas of knowledge management in national climate change policy. Through, Outputs 2.5 and 2.6, the project adopt multiple approaches to enhance knowledge, skills and positive attitudes of different stakeholders in targeted areas at all levels to address multifaceted, current and emerging issues of climate change. Basically, the project attempted to facilitate and promote the availability, accessibility, and sharing of climate change related information across all sectors at all levels within the project area.

5.4 Assumptions and Risks

Some of the risks and assumptions identified at the project inception are still valid. As identified at the design stage, frequent changes of officers at the DS levels have hampered the project progress and the mitigation measures identified are beyond the capacity of the project team.

At project preparation it was noted that the availability of climate risk information was weak, and this will lead to poor awareness among farm families preventing them from moving for possible adaptation at household and community levels.

Project has also taken steps to obtain scientific and technical information from Agriculture Department and other support organizations to overcome the climate change effects on rained agricultural farmers. In this process, farmers would be provided information to plan their harvest with right timing while avoiding periods of disaster and calamity to maximize their yield. Thus, the risk of unavailability of

Scientific & technical information in relation to climate change & its effects on the Basin remain law at present.

Another risk component identified at the project design stage was lack of awareness among participating communities and local officials on climate change (CC) and potential impacts remain very law at present due to a number of awareness raising and planning sessions conducted by the project with the relevant stakeholders including local communities and local officials, where their knowledge was enhanced further on climate change and potential impacts. Selected officers were trained as trainers to conduct Vulnerability Risk assessments in selected 60 GNs and to develop 60 village development plans integrating climate smart villages, Climate Smart Social Enterprises and Climate Smart Markets concepts with the community participation.

Another risk area identified at project design was the local government in project implementation areas fails to prioritize climate change policies in their strategies and plans as Policy makers and politicians prioritize economic benefits over sustainable and resilient ecosystems. By conducting field level discussions, regular field visits and meetings about the project implementation, there was an increased awareness of climate change policy among the field level officers, and their role in implementation. Initiatives were taken in Divisional Project Implementation and Monitoring Committee meeting to include the concept of sustainable and resilient initiatives into Institutional Plans as well as Annual Action Plan.

Protracted delays in project implementation are expected due to recurrent administration changes at the government and project implementation management, leading to great hindrances towards the end of the project life, and a likelihood of delay in project completion. This risk component remains at moderate level at present. To mitigate this risk, thorough coordination among both executing entities and line agencies on a joint action plan is required to deliver and sustain project interventions at the final stage of implementation.

The project activities conducted through government field officers will have limited time due to their commitments in their own agencies. In order to minimize the risk, the respective officers were formally engaged and delegated with clear responsibilities, deliverables and timeline to lead the respective activities of the project. The project took steps to strengthen the capacity of Field Officer's Office Stations through provision of office equipment and tools to increase their contributory capacity to the project. Moreover the appreciation of Field Officer in the Divisional Project Monitoring and Implementation Committee Meeting was used to motivate the officers to work efficiently, while recognizing their contribution thus far.

The project updates were presented to the District Secretary and regularly discussed with Divisional Secretaries for implementation support, learning, replication and sharing. The Steering Committee functioning at DS level provides overall guidance at the Divisional level, chaired by the DS with the membership of other key partner agencies also help to mitigate this risk. However, after the project completion and with the project officials of the implementing entities withdrawn, continued involvement of government field officers in project activities remain a high risk area which will affect the sustainability of project initiatives. Also, the Partner agencies that are required to provide technical backstopping may not be able to commit the time and effort required to sustain intended outcomes over time.

The home garden can be considered as an important source of food and income security for rural farmers and if maintained properly, it can also become the immediate alternate livelihood option for them. Therefore, the community interest and commitment in developing and maintaining the already established home gardens are of paramount importance.

Rain-fed farm families are highly vulnerable to the risk of food and livelihood insecurity. Access to micro financing-based credit and markets and marketing networks for investment in better livelihoods and sales of produce for income generation by farmers will contribute to lowering this risk. The project has already initiated a number of options to find sustainable markets for farmers. However, it is also a challenge for farmers to ensure an adequate local production to maintain a continuous supply to the market at the required quality standards. Introduction of a viable post-harvest/food processing programme could offset these issues.

Farmer organizations represent the most climate vulnerable segments of the rural population in the two DSDs. Their capacity and the motivation to invest time and effort in supporting the introduced interventions to be continued at village level is essential.

5.5 UNDP comparative advantage

UNDP's mode of Direct Execution has been very helpful in expediting the activities under the targeted outputs of the project. Their field staff with adequate resources such as office equipment, transport support and management support is a plus for effective project implementation. The comparative advantage of the UN system in responding to farmers' needs quickly and the availability of enabling systems have been instrumental in timely delivery. Their flexibility to identify and recruit service providers was an added advantage.

UNDP became a joint executing entity together with the Ministry of Mahaweli Development and Environment in October 2017, to expedite the project implementation and reach the targets within the remaining time of the project. UNDP had only 26 months to achieve the targets, however, the initial awareness creation and capacity building of field level official and FOs had laid a very firm foundation at the village level in introducing and building up identified interventions to mitigate the effects of potential climate extremities. Annex 6. Summarize the technical assignments identified and contracted by UNDP to expedite the Project.

The participatory approach adopted in developing village development projects, to match with village resource profiles, initially by training field officers and FOs on 'project cycle management' has proved to be a very practical approach as the beneficiaries realized their level of vulnerability and became owners of the projects that were implemented in their villages. The prioritization of these village development projects through the DS level project steering committees was a good transparent process and the selection of interventions to improve the productivity of agricultural commodities such as food crops, dairy and inland fishery as well as non-agricultural alternate enterprises like garments, handicraft, and food processing proved to be a good balance approach.

Also, reviewer observed that at the field level, all producers were organized into collective bodies which were linked up with appropriate markets and institutions that provide technological support.

Quarterly Progress Reports, CCAP exit strategy, Sustainability Assessment of Community Enterprises and Spatial variation of vulnerability to climate change in Walapane, Medirigiriya and Lankapura Divisional Secretariat (DS) Divisions in Sri Lanka were some of the reports that the reviewer came across to suggest that UNDP team had conducted an effective monitoring and evaluation programme in order to sustain the interventions introduced and developed.

5.6 Gender Equality

Experience has shown that taking into account gender dynamics in designing and implementing adaptation approaches helps ensure sustainability and greater impact. In the design of the current project the output 1.4 (Promote improved post-harvest technologies as viable climate-resilient livelihood sources for farm women) was targeted at developing avenues of income for rural women through provision of knowledge, skills, tools and market access. Under output 1.4, through UNDP interventions around twelve post-harvest centers were established and trained beneficiaries on climate resilience livelihoods development. More than 500 rural women had directly benefitted from these interventions in all three targeted DSDs and also the project had linked up these enterprises with local producer groups as well as with local and outside markets for their sustenance.

Gender-responsive adaptation is important as the impacts of climate change are not gender neutral, so strategies to address them cannot be gender neutral. Men and women differing coping and adaptive capacities - and different access to and control over resources - that translate to both gender-differentiated vulnerabilities to the impacts of a changing climate, and differentiated strengths to adapt to these changes. While climate change often intensifies existing economic and social gender disparities, gender-responsive adaptation addresses these disparities, while also enhancing adaptation outcomes and strengthening gender equality.

Addressing gender inequality in the response to climate change is one effective mechanism to build climate resilience and reducing emissions. Mainstreaming gender early in climate projects will lead to more effective, equitable and sustainable results that benefit both women and men. The current project too provided the opportunity for entrepreneurship, building green-minded businesses equally for both men and women. Annex 7 shows the number of direct beneficiaries (sex segregated), and it was evident that equal opportunities have been provided for both men and women under UNDP interventions covering all output areas in all three DSDs.

6. Project Results

6.1 Relevance

It was observed that the overall relevance of the project is satisfactory. The Project 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 homegardens, 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 relevant to UNDP's mandate, which is to support developing countries in designing and implementing national policies for sustainable human development with a focus on poverty reduction and the SDGs. The project is also aligned with the United Nations Development Assistance Framework – UNDAF (and now UN Sustainable Development Framework – UNSDF) - and Country

Programme Framework (CPF). Moreover, the project is in line with and relevant to the Adaptation Fund's objectives.

6.2 Effectiveness

Overall, the reviewer found a fairly satisfactory degree of effectiveness. The activities planned under Component 1 have been achieved up to a greater extent. In establishing diversified home gardens as income generating sources project has trained and build the capacity of large number of rural farmers by providing appropriate inputs to support production. Relevant field staff also has been trained to provide technical services as and when required. In order to diversify the production, interventions like bee honey production, organic input production etc. have been promoted at stable and commercial level. Drought tolerant crop varieties (eg. Bean) have been introduced together with appropriate agronomic practices to counter effects rainfall variability. Also, to sustain these varieties, over 50 farmers have been trained and provided with necessary facilities for seed and planting material production. Number of alternate livelihood assets such as inland fisheries and dairy industry has been promoted; women, youth, and handicapped persons have been trained to produce 8 categories of handicrafts. Mini garment factories and handloom centers have been established for women beneficiaries. These alternate income sources are operational at present and the beneficiaries are generally satisfied over the income they receive. Post-harvest centers have been developed as steady income sources for farm women and linked up with local agricultural production to raise local farmer income through value addition.

Most of the planned activities in Component 2 have been satisfactorily completed and the involvement of UNDP as co-executing entity has contributed immensely towards this effect. It was noted that the field teams have been actively engaged in the implementation of activities. Reviewer during his field visit observed that beneficiaries have got the right message in terms of the purpose of the assistance and the adaptation measures that they all could follow in order to minimize the adverse impacts of the climate change. With the availability of the weather and climate change related information for the use by the farmers, a high level of awareness and knowledge sharing exist on the concepts of climate change adaptation among the project beneficiaries. Building technical capacity to generate vulnerability assessments to droughts and floods was an effective adaptation measure. Field level technical staff and some lead farmers had acquired competence in techniques and able to perform vulnerability analyses. Information dissemination on hazards and response recommendations were communicated through extension materials.

The delays in delivering certain outputs attributed to challenging implementation arrangements may have influenced the effectiveness of some interventions due to the fact that the time from the receipt of inputs to the project end was not sufficient to stabilize these interventions. It was also noted that there was a low level of mastery of the principles of results-based project management at early stages of the project, which seems to have hindered or prevented the delivery of intended outputs to a certain extent. However, the recent positive developments of the project have enabled the field teams to drive towards the achievement of the intended outputs in most effective manner.

In project development, UNDP interventions were focussed on community enterprices both agro based and non-agro based in building climate resilient livelihoods. The key component of the community enterprices was the collective action. UNDP has adopted a collective approach in production, processing and marketing in all community enterprices. Market access and mobility were the main issues faced by small holder enterprenures. Project has addressed this issue by providing 2 small trucks, 3 three wheelers and 5 motor cycles to be shared among 36 community enterprices in delivering inputs and products to respective markets effectively and more than 2000 community members benefited from this.

6.3 Sustainability

As a key project implementation strategy, project selected five sectors/value chains such as; Agriculture, Handicraft, Dairy, Processed food and Handloom & Apparel to develop resilient livelihoods and food security of over 5,000 selected marginalized farmer families covering 60 highly climate vulnerable villages. The project has supported to develop 36 community enterprises under these five sectors with the technical support of over 10 government institutes. As the short mission did not permit to assess the the sustainability of these community enterprices, reviewer sumerises here the key findings of a sustainability assessment of those community enterprices conducted by UNDP in October 2019. It was an opinion assessment exclusively used only for project management perspective to test the sustainability of community enterprises. Further the assessment was conducted using quantitative data analysis method covering 5 selected variables and 42 attributes. The ratings used for analysis were;

High (3) - Can survive without support after End of Project (EOP)

Medium (2) - Need minimum support up to maximum of 6 months to continue after EOP

Low (1) - Assistance required over 6 months after project end

From the analysis, it had been revealed that thirteen community enterprises which was about 33% of the total community enterprises can survive without financial or technical support after End of Project (EOP), Community enterprises of about 56% needs minimum financial and technical support up to

maximum of 6 months to continue after EOP but have a clear marketing strategy/way forward and other community enterprises which is about 11% of total community enterprises required financial and technical assistance over 6 months after EOP (Annex 8).

The UNDP project team had developed an exit strategy for all thirty six social enterprises that have been established. For each of these enterprises, a transition plan has been developed, potential partners and the type and status of partnership identified and transition readiness in four months (April 2020) evaluated. A concerted effort is needed in developing a clear exit strategy identifying mechanisms and responsibilities with the participation of all stakeholders at the divisional level.

The Green Community Forum (GCF) was established as the sustainable arm of the Climate Change Adaptation Project (CCAP) which was implemented by United Nation Development Program (UNDP) collaborating with Ministry of Mahaweli Development and Environment and World Food Programme (WFP). Green Community Forum has been registered as a company limited by guarantee bearing its registration no GA00212132 under the Companies Act no 07 of 2007. GCF is a facilitating and incubating non-profit agency which provides technical support, an enabling environment, market facilitation support, and an accreditation body, voicing for the most vulnerable communities. The forum strives to assist these marginalized demographics, especially women, to economic stability through collective action and is another initiative to sustain community enterprises established within the project area.

Financial Sustainability

In order to establish certain interventions, project had hired required services. For an example, the project had hired an expert in garment industry to support newly started garments with technical and trade expertise. According to the members of the Garments at Lankapura and Medirigiriya and the Handloom centre at Lankapura, whom the reviewer had discussions during his brief field visit, the profit margins that they receive at present were low, however, they were optimistic that with the training that they have received and the exposure in the industry, they can improve these profit margins through new linkages and expanding the product range. They are hopeful that with little more financial stability, they will be in a position to obtain required expertise services once the financial assistance of the project terminates. Similarly, project field coordinators still play a role in the market chains of vegetables and other products and farmer organizations are aware that these services are vital even after the project terminated and the office bearers of the farmer organizationsa were planning that how they continue to get these services beyond the project life. It is very important that these beneficiaries should get sooner than the later the message of self-sustenance that has to be made after the project.

Socio-political sustainability

Political interferences were not reported in the early project implementation, however, there were several incidents reported during the period of presidential elections (latter part of 2019) which had some influence on the project delivery, as they occur during the closing stages of the project.

There is a rising level of awareness on the climate change and its impacts among the public. Government has also taken up this issue and developed a national climate change policy and mobilized support to mainstream climate change in Sri Lanka's development agenda. Government has already developed the National REDD+ Investment Framework and Action Plan (NRIFAP), completed the Second National Communication and National Strategy for Climate Change Adaptation (2011-2016). These are good examples to showcase the commitment of the Sri Lankan Government to address climate change and its adverse impacts.

The project is implemented with the participation of a wider stakeholder audience including the national and local key Government Institutions, beneficiaries, FOs and the UN counterparts. Private sector involvement too was visible under UNDP initiatives. Annex 4 shows the partner agencies of different community enterprices.

There is a strong governance structure proposed in the original project document. The key stakeholders of the project have been given the opportunity to make relevant inputs to the project through the identified management structure as shown in Figure 2.. The review observed that the coordination and information sharing among key stakeholders were not very strong.

Environmental sustainability

It was noted that there is a risk analysis done in the inception report. However, there was no explicit assessment of environmental impacts of proposed local adaptation options and technologies, nor was there an effort to conduct a comprehensive ecosystem assessment for adaptation purposes. However, it was observed that the project did not appear to have any negative environmental impacts.

The project has worked towards reducing its contribution to carbon emissions by ensuring that all enterprises that require large volumes of electricity or are dependent on such energy sources for its daily operations like garment factories, food processing centers and seed storage facilities are all equipped with solar panels. All such interventions established by the project have been converted to the use of renewable energy such as the use of solar energy to ensure that emissions are kept to a minimum or none. Annex 9 shows the detail installation of Solar units.

6.4 Scaling-up and Replication

Demonstration of successful interventions under an enabling environment would be key aspects relating to scaling-up and replication of climate interventions. Capacity development can also play an important role in replicating and scaling up climate interventions. Therefore, as the capacity building and dissemination of climate related information has been given very high priority under UNDP implementation as most of the interventions demonstrated above can be expected to have a high potential for replication and scaling-up. Local food stalls (Hela-Bojun), Ecological farming and farmer markets, drought tolerant and alternate livelihood options such as bee industry and inland fisheries would be interventions that have higher potential for replication and scale-up while the interventions such as apparels, hand looms, handicrafts and seed processing centers would have lower potential for replication.

However, the reviewer feels that project executing entities need to focus on involving divisional /village level project partners such as DSs, Departments of Agriculture, Agrarian Development, Export Crops, Forest etc. in identifying their responsibilities in replicating and up-scaling the successful interventions outside the project areas as the project has adequately capacitated these partners in carrying out these responsibilities covering all output areas. Emphasis should be given on having a strong extension service, appropriate market avenues and availability of micro finance by networking as they are vital ingredients for long term sustainability and the ability to replicate the project outputs.

It was observed that there was no proper mechanism to prioritize the selection of adaptation technologies to be piloted / replicated.

6.5 Financial Management

UNDP initially received a 'contribution' of USD 1,829,223 through a UN agency to UN agency contribution agreement from WFP to implement certain remaining activities of the project from 15th October 2017 to 31st January 2019. The roles and responsibilities of the two implementing entities were well defined in the contribution agreement. On 16th August, through Amendment No 02 of the above agreement, the contribution amount was amended as USD 2,857,715 (including a new allocation of USD 1,028,492) and extended the effective period till 28th February 2020 identifying specific activities to be implemented under different output areas.

Budget vs Expenditure as at the end of the review for UNDP interventions shown in Annex 10. It is observed that over 95% of the allocated budget was spent by January 2020, and under certain output areas such as 'piloting integrated watershed management models' and 'knowledge management' , fund

have been committed and activities are progressing. In all other output areas, targeted activities have been accomplished and stabilized. Annex 10 also shows a summary of key activities undertaken and satisfactorily completed under different output areas by end January 2020.

Therefore, financial management can be considered as efficient and satisfactory as over 95% of the allocated budget utilized to achieve targeted outputs over a period 26 months and most of these interventions have been successfully stabilized in sustainable manner. The remaining portion of the budget is also committed to continue knowledge management activities and also for piloting and scaling-up during the final completion stage of the project.

6.6 Strengths and Opportunities

Based on the limited project exposure (through literature and short field visit) and the opinion of different stakeholders the reviewer made a SWOT analysis on the current project situation (Annex 11).

At project completion, most of the planned outputs achieved, stabilized and in line with climate change adaptation principles owing to the following strengths and opportunities.

- Availability of well-trained human resources required for future development activities in village and regional level.
- Presence of well-trained team of government officers at field level capable of identifying adaptation issues at village level and develop project proposals utilizing the software such as vulnerability and land use maps already developed through the project.
- Enhanced livelihoods of hazard-prone beneficiaries and stakeholders to adapt to extreme events built through UNDP's comparative advantage
- Inputs and infrastructure facilities already delivered through the project.
- Availability of sufficient awareness of all stakeholders of the potential threat of climate change and the need of climate-smart interventions.

6.7 Lessons Learned and Best Practices

Implementation issues/lessons:

Beneficiary selection was one of the major challenges encountered by the project as selection of most eligible beneficiaries among household living in similar socio-economic background was a challenging

task. The government officers who worked at the village level (Economic Development Officer, Grama Niladarie, Samurdhi Officer and Agricultural Production & Research Officer) were assigned the responsibility to select the beneficiaries and the respective Divisional Secretaries endorsed the beneficiary list was the practice adopted and was often subjected to questioning by certain parties. This Project has been implemented through multiple government organizations which caused delays in implementation since each organization has their own targets to achieve. Lengthy financial and approval procedures for implementing partners was a main challenge that delayed the project implementation. The lesson learnt from this issue is to carry out project activities with an independent body, including engaging the private sector, by employing required human resources. The inclusion of UNDP as an implementing partner had greatly enhanced the implementation process.

Changes to project design.

To improve ground level results, the project had to pay high attention to implement agriculture, animal husbandry and livelihood development based programmes on the field level to achieve the project objectives rather than focusing on community assets development.

Gender considerations

The resilient livelihood activities introduced were focused exclusively on women as the additional income earned would enhance family's food security. Women were considered for different livelihood activities under 5 value chains such as home gardening, textile and apparel, handicraft, farmers markets and sales centers. Gender disaggregated data were collected and maintained from the beginning of the UNDP interventions to document the impact of these interventions, across all outcome area.

Potential for the climate resilience measures be replicated and scaled up

The three Climate Smart Concepts; (a) Climate Smart Villages (Vulnerability to resilience) (b) Climate Smart Entrepreneurs (Market for Poor) (c). Climate Smart Markets (Circular economy model) supported to scale up and add value to the project outputs as well as the outcomes. The focus of the concept is to develop systems and mechanisms to facilitate the market access and to bridge the gap between producer and consumer.

7. Conclusion

As 96% of the targeted population practicing risk reduction measures introduced by the project and over 53% women in that group have achieved new sources of income, it can be sumarised that the project

demonstrated a satisfactory performance, in spite of a number of significant technical and managerial challenges that the implementation encountered. Key conclusions are as follows:

Having recognized the capacity and technical gaps of the PSU, WFP's initiative to include UNDP as executing entity has proven instrumental in bringing the project implementation up to the level of today. As project activities were executed in the field by two entities, namely the PSU under MMDE and the UNDP, it would have been much productive the joint implementation carried out under a joint implementation plan with clearly identified roles and responsibilities that have been clearly defined and accepted by all parties. However, it was not clear the required coordination and complementarity was in place in delivering certain outputs areas, which jeopardized the smooth implementation and finalization of the project interventions and achievement of outcomes as one project.

It is unclear whether the technologies piloted, can all be considered adequate adaptation technologies in terms of sustainability and reliability. However, the project has developed a series of rational, adaptation-oriented village plans with the full involvement of local stakeholders, aligning to the project's climate change focus and original results framework.

The comparative advantage of involving UNDP in the capacity building component was well noted.

8. Annexes

Annex 1: Terms of Reference of completion report covering UNDP project interventions

TERMS OF REFERENCE

Job Title: Desk review and preparation of project completion report covering UNDP project interventions of the project "addressing climate change impacts on marginalized agricultural communities living in the Mahawali river basin of Sri Lanka".
Reports to: Technical Coordinator, Climate Change Adaptation Project of UNDP

Language Required : English /Sinhala
Expected Duration : 10 Days
Contract Start Date : 6th. January 2020
Contract End Date : 20th January 2020
Duty Location : Home-based, with a required number of visits to UNDP

Project Brief

Project:	Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka

Funded By:	The UNFCCC Adaptation Fund
Implementing Entity:	World Food Programme
Executing Entities:	Ministry of Mahaweli Development and Environment United Nations Development Programme
Start Date of Project:	August 2014
Targeted Families	14039
Project implementing area	Medirigiriya, Lankapura and Walapane Divisional Secretariat areas in Polonnaruwa and Nuwara Eliya Districts respectively.

1. INTRODUCTION

The project of "Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka" (referred to as CCAP) was awarded to World Food Programme as implementing Entity of the project in December 12, 2012, with a budget of $7,989,727 USD. The Executive Entities responsible for the implementation of the CCAP is the Ministry of Mahaweli Development and Environment.

The project however faced challenges which caused considerable delays. Implementing Entity of the Project, the World Food Programme (WFP), had received approval from the donor, the Adaptation Fund (AF), to extend the project for another two and half years (until 29 February 2020). The AF had also approved the new implementation arrangement on 14 August 2017, where UNDP became another executing entity together with the Ministry of Mahaweli Development and Environment in order to expedite the project implementation and reach the targets within the remaining time of the project. The project ends on February 29th, 2020 and a consultant/firm is sought to provide evidence of results, gather learnings and to develop the Final Completion Report.

2. BACKGROUND AND CONTEXT

Analysis by the Sri Lankan Department of Meteorology indicates an increasing trend in rainfall variability over most parts of the island. Recent decades have seen an overall increase of extreme rainfall events, which are interspersed with longer dry spells and periods of drought. Consequentially, this pattern causes greater erosion of arable soil and more frequent flooding events. Shifts in weather patterns, coupled with a continuous rise of ambient temperature across the country and increasing variability of rainfall were projected to have large-scale effects on 30% of Sri Lanka's population who engage in agriculture including their agricultural productivity, food and water security.

Climate change in the Mahaweli Basin is manifested in increased natural disasters such as landslides, drought and floods, increased land degradation in the upper and mid elevations and reduced agricultural productivity. These problems are attributed to both temperature increase and rainfall variability. As is the case nationally, rainfall variability is by far the most important contributory factor to increased climate risk in the Mahaweli Basin. Many upland or rain-fed farming areas lay scattered in the upper, middle and lower catchments without assured irrigation and exposed to natural hazards such as drought, floods and landslides. Some of these lands are entirely rain-fed.

Poverty and food insecurity are highest among such rain-dependent farmers who have no access to assured irrigation. Farmers in rainfed systems (called upland farmers) have been traditionally poorer than settlers. Due to lack of irrigation at the right time, in the right quantities, these farmers have low productivity and produce crops that do not have high market value. Generally, one season (Maha) is cultivated fully. Livelihood insecurity is high during the lean rainfall season and farmers become labourers and often migrate out of village in search of employment.

Rain-fed farming communities were often ignored by extension services; and lacked basic infrastructure such as electricity, communications and road networks to enable them to engage in more productive alternate livelihoods. In rain-fed and minor irrigated areas, climate change induced weather anomalies have the combined impact of hazard amplification and livelihood insecurity. As rain-fed farming areas are generally poorer; these impacts led to further economic and social marginalization of these farming communities.
Therefore, Climatic Change Adaptation Project was initiated targeting rain-dependent farming families in three hazard-prone divisional secretary divisions (DSDs) in the Mahaweli Basin identified through the vulnerability analysis. These DSDs are, Medirigiriya, Lankapura in Polonnaruwa District and Walapane in Nuwara Eliya District.

3. EXPECTED PROJECT RESULTS

The overall goal:
Build diversified and resilient livelihoods for marginalized farming communities in the Mahaweli River Basin through effective management of land and water resources.

The overall objective: To mitigate effects of climate change induced rainfall variability and its impacts on livelihood and food security on farm households in two vulnerable divisions of the Mahaweli River Basin.

Specific Objective 1: To develop household food security and build resilient livelihoods for rain-fed farming households in Walapane, Medirigiriya and Lankapura DSDs by improving the use of natural resources and strengthening livelihoods in the face of climate hazards.

Specific Objective 2: To build institutional capacity in village, local and regional service delivery to reduce risks of climate induced rainfall variability.

Outputs for Component One

a. Develop home garden based agro forestry systems in target DSDs to diversify livelihoods and build adaptive capacity of households to climate change
b. Introduce and promote drought tolerant crop varieties and agronomic practices to counter effects of rainfall variability
c. Identify and promote climate-resilient alternate income sources such as livestock, perennial cash crops and inland fisheries
d. Promote improved postharvest technologies as viable climate-resilient livelihood sources for farm women
e. Build Community Assets and Livelihood Resources through cash for work to support climate risk reduction measures

Outputs for Component Two

a. Train and mobilize officers at village, division and provincial level to design, and monitor local adaptation strategies
b. Strengthen Farmer Organizations with information, training and equipment to implement adaptation strategies
c. Pilot integrated watershed management plans to safeguard climate sensitive livelihood assets such as land and water

d. Conduct Risk Assessment and Adaptation Planning with target communities

e. Document and disseminate lessons of climate resilient livelihood development and watershed management approaches and best practices
f. Design and implement early warning systems for climate induced risk of landslide and drought in Mahaweli Basin

4. TARGET BENEFICIARIES AND LOCATIONS:

The project targets 14,039 rain-dependent farming families in three hazard-prone in Polonnaruwa and Nuwara Eliya. The divisional secretary divisions (DSDs) are Walapane, Medirigiriya and Lankapura in the upper and down streams of the Mahaweli River Basin of Sri Lanka.

5. PURPOSE OF THE STUDY:

One of the key project deliverables for the Climate Change Adaptation project is a Final Completion Report. The report represents the UNDP interventions of the final report. This detailed report is to provide required information to compile the final completion report of the project.

6. SCOPE OF WORK

The scope of this study is to capture the physical and financial progress of the project interventions on the project beneficiaries to combat climate change impacts and improve their livelihood. The study should cover the Medirigiriya and Lankapura DS Divisions in the Pollonnaruwa District and Walapane DS Division in the Nuwara Eliya District. This study should represent approximately 5,000 targeted beneficiaries residing in these climate change affected areas located in 9 Agrarian Services Divisions within the above 3 DSDs.

The consultant should work with relevant Ministry, UNDP and WFP key project staff to gain an understanding on the field level project implementation activities and its impact on climate change adaptation and beneficiary livelihood improvement and success and issues relating to the project. The consultant should review the project documents and relevant project reports to understand project implementation patterns and its current achievements.

The consultant should study project interventions and should measure its impact in terms of climate change adaptation and livelihood development for vulnerable people due to the climate change on implemented activities under 11 outputs as mentioned above to achieve the overall project objectives and the two specific objectives.

7. KEY TASKS

The consultant will have expertise on topics related to agriculture, natural resource management, disaster risk reduction and climate change issues to undertake this contract within a 10 days timeframe.

The consultant is expected to:

a. To ascertain the relativity of the project framework against the UNDP assigned project activities under the inter-agency agreement.
b. To ascertain the foundation for interventions and record the implementation process that followed to achieve the project objectives.
c. To ascertain whether the interventions are adequately contributed to accomplish the objectives and results.
d. To ascertain that the deliverables are technically matching with the outputs expected by the projects

e. To ascertain whether the interventions are made to facilitate following climate resilience adaptive strategies;

- Climate resilient agriculture
- Alternative and resilient livelihoods (Agri. & non Agri)
- Access to resources
- Wise use of natural resources (Water, land and other natural resource management)
- Climate information and early warning.
- Law emission interventions (carbon foot print)
- Awareness and training on climate change adaptation, etc.

f. To ascertain how five value chains introduced by UNDP complements to MMDE interventions
g. Sustainability, scalability and replicability
h. Lessons learned and recommendations

8. DATA SAMPLING

The data collection will adopt a mixed methods approach which includes both primary and secondary data obtained from quantitative and qualitative data collection methods, conducting desk review, and research from secondary sources. Qualitative methods such as key project staff interviews to be conducted.

Secondary resources will need to be reviewed which includes: Project Performance Reports, Logical Framework, Baseline and Mid-Term Evaluation Reports, relevant regional and national reports and policies on climate change, food security and economic development, and relevant Central Statistics Agency reports.

9. EXPECTED OUTPUTS AND DELIVERABLES

The consultant shall prepare and submit:

a. Draft Completion Report, due on 16th January, 2019

Completion Report Guidance:

- Executive Summary on project results and performance (Max. 2 pages)
- Basic information (Max. 1 page)
- Key milestones (Max. 1 page)
- Project overview and description (2 pages)
- Results and key outcomes, compared to baseline and targets (Max. 30 pages)
- Contribution to Sri Lanka's Climate Change commitments, Nationally determined contributions (NDCs), SDGs, Adaptation Fund Objectives (Max. 5 pages)
- Key Outcomes related to Gender Equality (Max. 2 pages)
- Issues, challenges and mitigation measures (Environmental and social risks, gender consideration, and other risks) (4 pages)
- Lessons learned and recommendations (3 pages)
- Sustainability, scalability and replicability (3 pages)
- Section on project expenditure (2 pages)
  - Annex 1: Final Completion Report TOR
  - Annex 3: List of Officials and Representatives interview
  - Annex 4: List of documents reviewed
  -

b. Final Completion Report, due on 20th January 2020
c. Handover of all original completed surveys and transcripts, due January 20th , 2020

10. INSTITUTIONAL ARRANGEMENT

The principal responsibility for managing the contract resides with the UNDP. The lead consultant is expected to submit an all-inclusive financial proposal (fee of the specialist, travel, accommodation, communications, and other miscellaneous costs etc.). UNDP will be responsible for liaising with the review team (Ministry of Environment and Wildlife, UNDP and WFP) to provide all relevant documents, facilitate stakeholder interviews.

11. REQUIRED SKILLS AND EXPERIENCE

The selection of the consultant will be aimed at maximizing the overall "qualities in the following areas:

- Recent experience with result-based management evaluation methodologies;
- Master's degree or higher in the field of Agriculture, Social Science, Environmental Management, Forestry, or other related fields.
- Work experience in relevant technical areas for at least 10 years
- Demonstrated understanding of issues related to climate change adaptation, food security environmental management issues;
- Experience in gender sensitive evaluation and analysis;
- Excellent communication skills;
- Demonstrable analytical skills;
- Project evaluation/review experiences within Government and United nations systems will be considered an asset

Annex 2: List of Officials and Representatives of Farmer Organizations met during the mission for consultations

a. Officials

Name	Affiliation
1. Dr. Damith Chandrasekara	Technical Coordinator, C-CAPII
2. Ms. Sureka Perera	Senior Programme Analyst, UNDP
3. Mr. Chaminda Fernando , UNDP	National Consultant - Agriculture Development Agriculture Consultant, C-CAPII Project, UNDP
4. Mr. Kalum Nisantha	Polonnruwa Coordination Consultant Divisional Development (Madirigiriya and Lankapura) C-CAPII Project
5. Mr. R.A.S. Chandrasiri	Project Director, CCAP (From 10-07-2018))
Mr. Kalum Nisantha	Polonnruwa Coordination Consultant Divisional Development (Madirigiriya and Lankapura) C-CAPII Project, UNDP

6. Mr. Athula Weeraratna	Consultant - Divisional Development (Walapane) Nuwara Eliya Coordinator, C-CAPII Project, UNDP
7. Mr. Sanjeewa	Project Coordinator, Medirigiriya

b. Beneficiaries

Name	**Affiliation**
1. Ms. Prabha Jayatilaka	Manager, Haritha Praja Alewi Sala, Minneriya
2. Mr. H.G. Premadasa	President, Suwasawi Govi Welanda Sangamaya, Medirigiriya
3. Mr. T. Dharmarathne	Treasurer, Suwasawi Govi Welanda Sangamaya, Medirigiriya
4. Mr. Ajith Lashantha	Supplier to Farmer Markets
5. Ms. Sardha	President, Medirigiriya Apperal
6. Ms. Dumila Samanthi	Manager, Mahaweli Apperal
7. Ms. Disna	Treasurer, Mahaweli Apperals
8. Ms. Dinusha	Cutter, Mahaweli Apperals
9. Ms. Thilaka	President, Mahaweli, Handloom center
10. Mr. P. Susantha Kumara	Wijayapura Haritha Govi Sanvidhanaya

Annex 3: List of documents reviewed

1. The National Programme Document
2. The Results Framework of the Project
3. Inception Report of the Project
4. Annual Reports and six-monthly reports
5. AFB and WFP Grant Agreement
6. Training on Project Cycle Management and Development of Community Project Proposals
7. Spatial Variation of vulnerability to climate change in Medirigiriya, Lankapura and WalapaneDSDivisions
8. The Baseline Survey Report of the Project on Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin Walapane Project Location By Hector Kobbekaduwa Agrarian Research and Training Institute
9. UN agency to UN agency Contribution Agreement between WFP and UNDP
10. Roles and Responsibilities of WFP/UNDP/Government for Implementation of Adaptation Project –Sri Lanka

11. UNDP Interim Financial Report

12. A Special Project Review Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka by Dharmakeerthi Wickramasinge and Nishanthi Perera

13. UN agency to UN agency Contribution Agreement between WFP and UNDP- Ammendment No 2.

14. Mid Term Review of the Project, July 2018, Premalal Kuruppuarachchi and Nalin Munasinghe

15. Spatial variation of vulnerability to climate change in Walapane, Medirigiriya and Lankapura Divisional Secretariat (DS) Divisions in Sri Lanka, March 2018

16. Quarterly Progress Report on "Addressing Climate Change Impacts on Marginalized Agricultural Communities Living in the Mahaweli River Basin of Sri Lanka" Project in Sri Lanka, July – December 2019

17. Project Performance Report (PPR), September 2018 to August 2019.

18. CCAP Exit Strategy-

19. Green Community Forum, "The Voice of Green Producers"

20. SUSTAINABILITY ASSESSMENT OF COMMUNITY ENTEPRISES - PROJECT MANAGEMENT PERSPECTIVE-October 2019

Annex 4: Community enterprise

Value Chain	#	Social Enterprise		Location	Human Resources	Production capacity	Partnering with
Agriculture	1	Mahaweli Mal Waga Karuwange Sangamaya	Nursery	Bisopura, Madirigiriya	106 home-based nursery farmers	High season, sold 1 million worth of plants	Department of National Botanical Gardens
	2	Haritha Govi Sanagamaya	Rice, flour, and seed paddy processing plant	Vijaya Pura, Madirigiriya	65 farmers	2000 kg, per month	Provincial Department of Agricultural (NCP) will provide technical support
	3	Pulathisi Divisaru Farmers Market	Ecological Farmer market	Pulathisthigama, Lankapura	600 farmers	500 kg, per week	Cooperative Ministry will support in establishing National Markets

	4	Suwa Savi Farmer Market	Ecological Farmer market	Madirigiriya	600 farmers	1000 kg, per week	Cooperative Ministry will support in establishing National Markets
	5	Bisopura, Madirigiriya	Compost	Bisopura	50 farmers	2000 kg, per month	Maheliwi Development Authority
	6	Mihi Saru Organic Inputs	Compost	Thalpotha, Lankapura	Trained 30 people		
	7	Walapane Divi Suru Farmers' Market Society	Ecological Farmer market	Harasbadda, Walapane	600 farmers	1200 kg, per week	Cooperative Ministry will support in establishing National Markets
	8	Haritha Organic Input Producer Society	Organic Input (Compost)	Kandeyaya, Walapane	25 farmers		
	9	Bean Seed Producers' And Marketing Society (Mungwaththa, Walapane)	Bean Seed	Mungwaththa, Walapane	50 farmers	200kg, per season	Provincial Department of Agricultural (CP) will provide technical support
	10	Bingunada, Meemasi Palana Samithiya	Bee honey production	Rupaha, Walapane	50 farmers	50 bottles per season	Provincial Department of Agricultural (CP) will provide technical support
	11	Walapane Coffee Society	Coffee nursery, plant, processing center	Nildandaahinna, Walapane	25 farmers	10kgs, per day - 50K plants	Export Development Board
	12	Mahaweli Kuda Parimana Miridiya Mathsya Wardaka Pokunu Ekakaya	Ornamental Fish Farming	Bisopura, Madirigiriya	96 farmers		Maheliwi Development Authority
	13	Mahaweli Jalajeewi Vaga Wyawasayakainge Sangamaya (Bisopura, Madirigiriya)	Fish breeding and advancing	Bisopura, Madirigiriya	15 farmers	100,000 fingerlings/season	Maheliwi Development Authority
Food Processing	14	Food processing, training and resource center	Bottled food	Harasbadda, Walapane	600 producers, 20 processors	1000 per month	IPHT
	15	Walapane Kithul Producer Society	honey products	Kandeyaya, Walapane	50	100 units, per month	No
	16	Walapane Cereal Producers' Society	Cereal products	Nildandahinna, Walapane	300 producers, 20 processers	500 units, per month	IPHT

	17	Govijanabojun Women's Society	Local food stall	Madirigiriya	30	4000-6000 per day, 15 days per month	DAD
	18	Govijanabojun Women's Society	Local food stall	Pulasthigama, Lankapura	30	2000-3000 per day,15 days	DAD
	19	Serupitiya Helabojun women's society	Local food stall	Serupitiya, Walapane	30	500-2000 per day, 15 days	Provincial Dep of Agri
	20	Pulathisi Foods Nishpadana Sammitiya	Bottled food	Thalpotha, Lankapura	300 producers, 20 processers	2 rounds, 1000 bottles, home based	Cooperative Ministry will support in establishing National Markets
	21	Dehydrated products	dehydrated fruit/veg	Walapane	50	0	Cooperative
	22	Med Foods Nishpadana Sammitya	Snacks	Madirigiriya	100 producers, 15 processers	800 units, 4 rounds	Cooperative Ministry will support in establishing National Markets
Dairy	23	Mahaweli Milk Producer Society- I	Yogurt and milk	Bisopura, Madirigiriya	30 producers, 10 processers		
	24	Mahaweli Milk Producer Society- II	Milk Toffee	Bisopura, Madirigiriya	20 producers, 10 processers		
	25	Thalpotha Milk Based Producer Society	Pastoralized milk and other milk products	Thalpotha, Lankapura	300 producers, 15 processers		
	26	Kandurata Milk Producers' Society	Yogurt and milk products	Harasbadda, Walapane	300 producers, 10 processers	1.5 Million	
Textile	27	Mahaweli Apparel	Garment	Bisopura, Madirigiriya	100 trained; 20 full time	500,000 per month ($)	Changes based on order
	28	Pulathisi Apparel	Garment	Thalpotha, Lankapura	100 trained; 20 full time	500,000 per month ($)	Changes based on order
						500,000 per month ($)	Changes based on order
	29	Medirigiriya Apparel	Garment	Madirigiriya	100 trained; 20 full time	500,000 per month ($)	Changes based on order
	30	Dreams Lanka Fashion Garment	Garment	Nildandaahinna, Walapane	100 trained; 20 full time	70,000 per month ($)	Suntex
	31	Mahaweli Athsalu Piyasa	Handloom	Lankapura	50	10,000	Cooperative
	32	Handloom	Handloom	Walapane	15	50000 per month ($)	Cooperative
Handicraft	33	Abhimani Handy Craft Production Society	Handicraft	Thalpotha, Lankapura	50	20,000 per month ($)	Cooperative
	34	Nirmani Handy Craft Production Society	Handicraft	Medirigiriya	50	0	

	35	Daya Shakthi Handicraftsmen's Society	Handicraft	Nildandaahinna, Walapane	50	400,000 per month ($)	Changes based on order
	36	Green Beads-bags and Jewelry production society	Bags and Jewelry	Nildandaahinna, Walapane	20	High season, sold 1 million worth of plants	Department of National Botanical Gardens

Annex 5. Media publications

N	Name of Publication	Medium (Print/Online)	Platform (the type of social media/publisher)	Links	Date of Publication
1	Feature Story: Despite All Odds	Print	DailyFT/ Weekend Express/Ceylon Today		8th March 2019
		Online	UNDP SL Exposure/DailyFT /Ceylon Today	https://undpsrilanka.exposure.co/despite-all-odds http://www.ft.lk/opinion/Despite-all-odds--Climate-resilient-women/14-674266 http://ceylontoday.lk/print-edition/5/print-more/25794	
2	Unlocked: Here's How Climate Change Will Impact You	Print	DailyFT		21st March 2019
		Online	DailyFT/UNDP SL Blog/UNV Global	https://bit.ly/2TSoxf2 http://www.ft.lk/opinion/Here-s-how-climate-change-will-impact-you/14-674996 https://www.unv.org/Our-stories/Heres-how-climate-change-will-impact-you-%E2%80%93-UN-Youth-Volunteer-shares-her-perspective	
3	A Green Community Market to Empower Rural Farmer Communities Affected by Climate Change—Press Release for the President's Opening Event in Minneriya	Print	DailyFT/Daily Mirror		8th August 2019
		Online	DailyFT/Ada Derana/Colombo Page/UNDP Sri Lanka Blog	http://www.ft.lk/business/Green-community-market-to-empower-rural-farmer-communities-affected-by-climate-change/34-684071 http://bizenglish.adaderana.lk/a-green-community-market-to-empower-rural-farmer-communities-affected-by-climate-change/ http://www.colombopage.com/archive_19B/Aug08_1565271100CH.php	

				https://www.lk.undp.org/content/srilanka/en/home/presscenter/pressreleases/2019/08/Green_Community_Market.html	
3	Volunteering for Climate	Print	Daily Mirror/Daily FT		5th December 2019
		Online	Daily News/Daily Mirror/UNDP SL Exposure/ UNV Global	https://undpsrilanka.exposure.co/volunteering-for-climate-action https://www.dailynews.lk/2019/12/09/features/205149/volunteering-climate-action http://epaper.dailymirror.lk/epaper/viewer.aspx https://www.unv.org/Our-stories/Volunteering-climate-action-Sri-Lanka	
		Social Media	Instagram/Twitter /Facebook	http://bit.ly/2P5k8l7 https://www.instagram.com/stories/highlights/17860747360604195/ https://www.instagram.com/p/B5r-wrqBxTV/	
4	Help for 5,000 Agro-based Families – Paneetha Ameresekere	Print	Ceylon Today		23rd December
		Online	Ceylon Today	https://ceylontoday.lk/print-more/47917	23rd December

Annex 6 . Technical assignments identified and contracted by UNDP to expedite the Project

Assignment	Consultant	Current status (as at 27-05-2018)
1. Village Development Plans and capacity building of government officers in Planning &Development of Climate Resilient Village Development Plans (CRVDP) in the 03 DSDs	Department of Town & Country Planning, University of Moratuwa	• Selection of GramaNiladahari Divisions (GNDs) completed • GND level data collection completed. • Stakeholder consultation completed and 05 GND level draft plans ready for validation.
Installation of 03 community operated real-time weather data stations in 03 DSDs.	Department of Town & Country Planning, University of Moratuwa	• Sits selection for installation completed • Purchasing of required accessories in progress.
2. Baseline Survey of the CCAP – II Project	Hector Kobbekaduwa Agrarian Research & Training Institute (HARTI)	• Inception Report submitted • Questionnaire was field tested and finalized. • A sample of 540 farmer-households selected. • The enumerators were interviewed and selected
3. Climate Vulnerability Analysis of 3 DSDs.	Dr. B.V.R. Punyawardena Mr. Ajith Nanadana	The analysis report on Spatial variation of vulnerability to climate change in three DSDs submitted
3. Vulnerability mapping and GIS training	Mr. Ajith Nanadana	Training conducted for 22 officers in Lankapura DSD.
4. Farmer organization training on small tank maintenance, management and ecological restoration.	Development Facilitators (Pvt) Ltd	Trained 783 farmers of selected 40 Farmer organizations in Madirigiriya and Walapane DSDs.

5. Micro water shed management plan	Natural Resources Management Centre (NRMC) of Department of Agriculture	Contract awarded and two micro catchments selected to initiate the assignment.
6. Preparation of Training Module and Farmers Guide Handbook on Water Management Techniques for Sustainable Agriculture	Dr H B Nayakekorala	Format for Training module and the Farmer guide book finalized.
7. Technical guidelines for market driven fruits and vegetable producer groups and climate smart input packages for 180 producer groups	Dr W M A D Wickramasinghe	• Total 08 input packages were designed to use in rain-fed upland farming systems, minor tank-based farming systems and introduced for the targeted farmer communities. • Training module developed to build capacity of Agricultural Instructors (AIs) Agrarian officers (KUPANISA) to supervise and provide technical assistance to set up climate resilient home gardening
8. Capacity building on Climate Smart Villages (Promotion of Organic Agriculture for development of climate smart villages -Technology & Certification)	Department of Agriculture (Centre of Excellence for Organic Farming)	Three training workshops for 300 government officers completed. Work on-going with plans for training farmer leaders (June), 150 vendors (July) and 100 selected farmers on GAP certification (Aug).
9. Market Assessment and Market Strategy Development	Mr AriyaratneSubasinghe	• The consumer preference survey was conducted to identify the scope of the production chain and supply chain • Total 1,500 consumers in the three townships were interviewed. • 150 stakeholders interviewed. • Final report submitted.
10. Market system development to establish potential social enterprises	Mr Kamal Kumara Kakulandara	• Conduct three 3 one-day TOT trainings for the selected 300 officers • Completed seven workshops on Farmer market development and trained 134 (69 male 65 female) potential vendors who could be connected with the farmers- market initiatives in Polonnaruuwa district.
11. Fingerling stocking and training of Farmer Org. Implementation of Aquaculture Development Program in Medirigiriya and Walapane Divisional Secretariat Divisions	National Aquaculture Development Agency (NAQDA)	• Selected 33 tanks from Medirigiriya DSD and 7 tanks from Walapane DSD for stocking fingerlings • Assessment of 40 tanks for fingerling stocking completed. • Awareness raising was completed covering 600 farmers and registered 30 fisheries societies under Department of Agrarian Development. • Total 1.2 million fingerlings stoked in 28 tanks • Conduct one capacity building program for 40 fisher farmers at Kalawewa NAQDA training center.

		• Awareness creation completed in Bisobandaragama Village (Medirigiriya) for 220 fishermen
12. Develop Climate Smart Entrepreneurships to establish potential social enterprises	National Enterprise Development Agency (NEDA)	• Conducted three one-day TOT trainings for the 300 selected government officers on entrepreneurship. • Conducted enterprise assessment with 376 entrepreneurs in three DSDs (Madirigiriya, Lankapura and Walapane) and Mahaweli "D" system. • Identified 5 value chains to be improved. • Enterprise development assessment completed.
13. Project Cycle Training for about 100 officers and development of a Project Proposal Bank for each Divisional Secretariat Division	Dr Ranjith Mahindapala	• Conduct Project Cycle Management (PCM) and technical writing skill development training for 113 DSD officers • Total 74 Climate resilient village development proposals worth of USD 445,859 were developed covering 03 DSDs

Annex 7. Direct beneficiaries from UNDP interventions

Output	Mederigiriya		Mahaweli System D		Lankapura		Walapane		Total		
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
1.1	279	359	-	-	314	301	484	353	928	1013	1941
1,2	79	36	12	94	-	-	-	-	91	130	221
1,3	247	517	87	186	137	240	160	292	631	1285	1916
1.4	4	106	-	-	1	28	265	310	220	493	693
1.5	-	50	-	90	-	40	-	40	-	220	220
2.1	75	56	-	-	65	98	81	102	216	256	472
2.2	472	104	-	-	32	28	235	92	739	224	963
2.3	-	-	-	-	-	-	-	-	-	-	-
2.4	43	57	-	-	-	-	48	52	91	109	200
2.5	-	-	-	-	-	-	-	-	-	-	-
2.6	-	-	-	-	-	-	-	-	-	-	-
Total	1199	1285	99	370	549	735	1273	1241	**2916**	**3710**	**6626**

Annex 8. Summery of sustainability status of 36 Community Enterprises

Level of Sustainability	Agriculture	Dairy	Food Processing	Handloom & Textile	Handicraft	Total	%
Low	2			1	1	4	11
Medium	**6**	**4**	**3**	**4**	**3**	20	56
High	**5**	**4**	**1**		**2**	**12**	**33**
Total	**13**	**8**	**4**	**5**	**6**	**36**	**100**

Annex 9. the detail installation of Solar units

NO	Project Name	Address	KW
1	Pulathisi Apparel Garment Factory	Divisional Secretariat,Divisional Secretariat Office,Lankapura	5.00
2	Madirigiriya Apparel Garment Factory	Divisional Secretariat,Divisional Secretariat Office,Madirigiriya	5.00
3	Mahawali Apparel System "D" Garment Factory	Project Manger,Sri Lanka mahawali Authority,Bisopura,Madirigiriya.	5.00
4	Food processing and dairy processing Center Pulathisigama	Divisional Secretariat,Divisional Secretariat Office, Lankapura	5.00
5	Helabojun Madirigiriya	Divisional Secretariat,Divisional Secretariat Office,Madirigiriya	3.40
6	Helabojun Lankapura	Divisional Officer,Agriculture Center,Pulastigama	1.60
7	Dreams Lanka Garment Factory Walapane	Divisional Secretariat,Divisional Secretariat Office,Walapane	6.00
8	Walapane Ranseth Shoe Factory	Divisional Secretariat,Divisional Secretariat Office,Walapane	1.60
9	Weather station - Walapane Divisional Secretariat	Divisional Secretariat,Divisional Secretariat Office,Walapane	3.00
10	Been Seed Munwatta	Divisional Officer,Agriculture Center,Walapane	3.00
11	Walapane Helabojun	Divisional Officer,Agriculture Center,Walapane	1.40
12	Rice processing & seed paddy processing Center Vijayapura		5.00
	Total		45.00

Annex 10. Budget vs Expenditure as at the end of the review for UNDP interventions

Interventions	Outputs from UNDP interventions	Total Budget (USD)	Expenditure as at end of project (USD)		Total Expenditure (USD)	% Expenditure of the budget
			Actual	Committed		
1.Develop household food security and build resilient livelihoods for rain-fed farming households						
1.1 Develop diversified home garden based Agro-forestry in target DSDs to build household adaptive capacity to climate change	**-Establishment of 1800 PGS certified home gardening's** **-Establishment of 4 Farmers Markets** **-One regional market** **-03 organic input production units** **-Bee honey production society**	323,990.00	323,990.00	0	323,990.00	100%
1.2 Introduce and promote drought tolerant crop varieties and agronomic practices to counter effects of rainfall variability	**-Plant Nursery** **-Ecological rice production and processing** **-Coffee Nursery** **-Micro irrigation systems** **-Bean seed production and storage** **-Kitul Based products**	205,537.00	205,537.00	0	205,537.00	100%
1.3 Identify and promote climate-resilient alternative income sources among rural farm households dependent on rain fed agriculture	**-40 Community Enterprises established**	741,259.00	741,259.00	0	741,259.00	100%
1.4 Promote improved post-harvest technologies as viable climate-resilient livelihood sources for farm women	**-3 food & cereal processing centers** **-3 Hela Bojun** **-Coffee processing center** **-Rice, flour processing centers**	599,531.34	599,531.34	0	599,531.34	100%
1.5 Build community assets and	**-190 women were paid through cash for work during the training period of**	65,359.00	65,359.00	0	65,359.00	100%

livelihood resources through cash-for work to support climate risk reduction measures.	**Handloom, handicraft, textile, food processing and nursery development,**					
Total of Component 01		**1,935,676.34**	**1,935,676.34**	**0**	**1,935,676.34**	100%
2.Build institutional capacity in village, local, regional service delivery to reduce risks associated with climate induced rainfall variability						
2.1 Train and mobilize officers at village, division and provincil level to design, and monitor local adaptation strategies	**-Training of 300 government officers**	154,299.43	154,299.43	0	154,299.43	100%
2.2 Strengthen farmer organizations with information, training and equipment to implement adaptation strategies	**-Training of 800 farmers** **-Training Module and Farmers Guide Handbook on Water Management Techniques for Sustainable Agriculture** **-Installation of 2 agro meteorological stations** **-Installation of 02 weather monitoring databases.**	91,503.00	83,420.87	8,082.13	83,420.87	91%
2.3 Pilot integrated watershed management models in micro watersheds to safeguard climate sensitive livelihood assets such as land and water	**-02 sub watershed management plans** **-02 minor tank water management plans**	108,588.30	90,128.29	18,460.01	90,128.29	83%
2.4 Risk Assessment and Adaptation Planning conducted with target communities	**-Assessment on Spatial variation of vulnerability to climate change** **-304 officers trained as trainers to conduct**	92,549.00	88,747.00	3,802.00	88,747.00	96%

	Vulnerability Risk assessments **-Prepared 5 model CRVDP and trained 100 divisional level planning officers (EDO's)** **-develop 60 climate smart village development proposals**					
2.5 Document and disseminate lessons of climate resilient livelihood development and watershed management approaches and best practices	**-Preparation of 4 case studies;** **- Three policy brief workshops** **-Four short videos** **-Generated around 10 social media reports on the project** **-Exchange visits**	128,341.94	82,138.84	46,203.10	82,138.84	64%
2.6 Design and implement early warning systems for climate induced risk of landslide and drought in Mahaweli Basin	-**2 Agro meteorology weather stations established** **-Real-time weather data gathering stations were established in Walapane and Lankapura DSD to provide weather advisory for the farmer communities**	188,056.99	171,774.28	16,282.71	171,774.28	91%
Total of Component 2		**763,338.66**	**670,508.71**	**92,829.95**	**670,508.71**	**88%**
Operational cost (if any)		**0**	**0**	**0**	**0**	
Sub Total		**2,699,015.00**	**2,606,185.05**	**92,829.95**	**2,606,185.05**	**96%**
Project execution cost (if any)		158,700.00	134,145.20	24,554.82	134,145.20	85%
Total Project Cost		2,857,715.00	2,740,330.25	117,384.77	2,740,330.25	96%

- Committed = Hard and soft commitments currently in the approval process.

Annex 11. SWOT Analysis of current stand of the project

Strengths	Weaknesses
• Good awareness on the project outcomes and outputs • Capacity of key stakeholders • Identification of a good set of village level proposals • Availability of vulnerability maps and adaptation plans • Well trained group of government officers for project development and implementation • Already given inputs and infrastructure facilitates to improve the livelihoods of beneficiaries • Availability of alternate livelihood options • Sense of ecological production • Income security through a well-connected market linkage	• Poor communication and publicity • Poor record keeping • No proper mechanism to prioritize the proposal implementation • Lack of involvement and ownership by the DS on follow up of project interventions • Lack of effective exit strategy • Lack of proper follow-up in terms of piloting and scaling-up on the completed activities • Lack of strong partnership between the project partners
Oportunities	**Threats**
• Adverse impacts of climate change • Potential of linking up of 36 established enterprises with steady input suppliers and viable markets. • Availability of climate resilient project proposals for project areas • Increasing levels of vulnerability of the rural farmers for sustainable livelihoods	• Divisional level government officers are tied up with their routine programmes • Political instability linked to development activities in the area