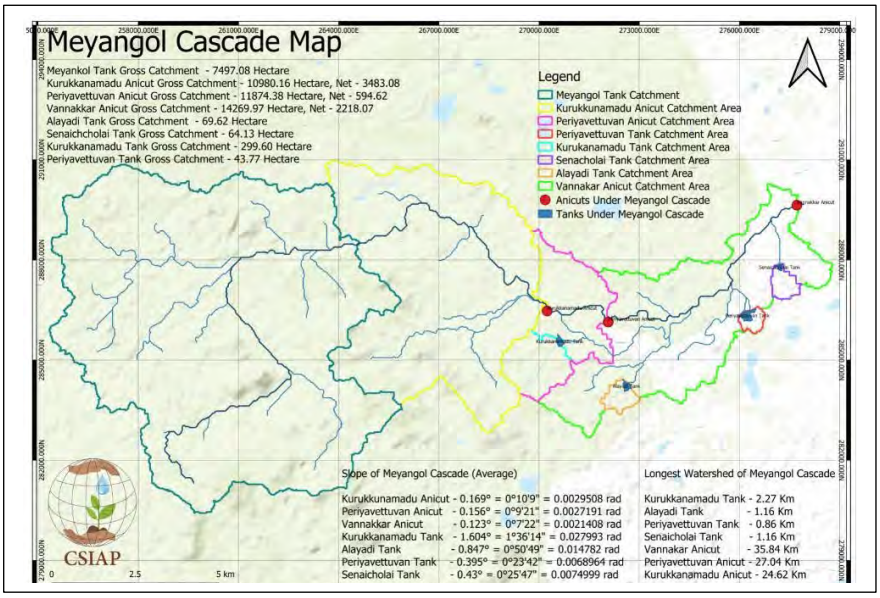
Miyangal
Cascade Profile & Basic Development Plan



Climate Smart Irrigated Agriculture Project (CSIAP)

Muntheniyaru River Basin
Eravurpattu DSD
Batticaloa District
Eastern Province

Draft

Rambawewa Cascade Profile (CP) and Basic Cascade Development Plan (CDP)

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Small water storages are recognized as a key invention that facilitated the colonization of the dry zone of Sri Lanka. These small reservoirs are referred to as ‘tanks. In the dry zone of Sri Lanka, natural or man-made tanks have served for the collection, storage and distribution of rainfall and runoff and provided irrigation water for the cultivation of paddy and OFC for 2000 years. During the two main rainy seasons in April - May and September - December, surface runoff is collected and stored in these tanks and successively distributed during the dry periods to the fields located in the downslope.

The tanks are arranged in a cascade-like fashion along shallow valley courses. They are connected by canals, natural drains and spillways and build a complex system of floodwater harvesting, water storage and water distribution. The tank cascade system (wewa-ellangava in Sinhala or viluneer kulathodar in Tamil) is an ancient Sri Lankan irrigation infrastructure. The system is a network of small tanks draining to large reservoirs that store rainwater and surface runoff for later use.

Besides irrigation, the stored water is used for domestic purposes, desiccated tank beds serve as pasture for the cattle and deposited sediments are used as raw material for brick production. Thus, the tanks have characterized the cultural landscape and have become an identity-generating factor for the rural culture.

The main principle behind the Tank Cascade System is recycling and re-using of water through a network of small to large-scale tanks. The advantage of such system is that excess water flowing from a reservoir along with the water used in its command area is captured by the next downstream reservoir and, thus, put to use again in the command area of the second reservoir. This water is continuously filtered and recycled in subsequent tanks. Tank Cascade Systems buffer the effects of climatic fluctuations and work as a cornerstone in coping with future climate change in the dry zone of Sri Lanka.

The management of Tank Cascade Systems is intimately associated with their sociological setting and the evolution of rural settlements. Therefore, the overall objective of cascade management is to enhance the living standards of rural communities and the environment through the restoration and improvement of the system on a sustainable basis.

The World Bank Funded Climate Smart Irrigated Agriculture Project (CSIAP) implementing under the Ministry of Agriculture has formed Cascade Management Committees consisting of the project beneficiaries, government officers and other community-based organizations in the cascade area. In order to maintain sustainably of the development of the “Climate Smart Irrigated Agriculture Project” by protecting and conserving the cascade system, which is one of the most magnificent creations of the irrigation management. The primary responsibility of the Cascade Management Committees is to bring together all the stakeholders in the cascade and manage all the resources well, and to facilitate that task.

A Cascade Profile is prepared for each Cascade in the province to collect the necessary information to prepare a Cascade Management Plan. Through the Cascade Management Committee, the Cascade Management Plan has been prepared with a participatory approach with the aim of protecting the Cascade and the watershed area.

1.1 Brief introduction to the cascades situated in the area

The hotspot area of Batticaloa District was selected mainly based on the “Muntheniaru” river basin. Under the Muntheniaru river basin, all the tanks are individual tanks except “ Miyangal Cascade”.

1.2 Miyangal cascade system

The Miyangal cascade is situated in the Eravurpattu Divisional Secretariat Administrative Division, There are three tanks and three anicuts in Miyangal cascade, the names are given below;

- Alayadi kulam
- Kurukkunamadu tank
- Kurukkunamadu anicut
- Periyavettuvan tank
- Periyavettuvan anicut
- Vannakkar anicut

Existing capacity of the Miyangal cascade is 3,492.7 ac. Ft. and the designed capacity of the cascade 4,420 ac. Ft..

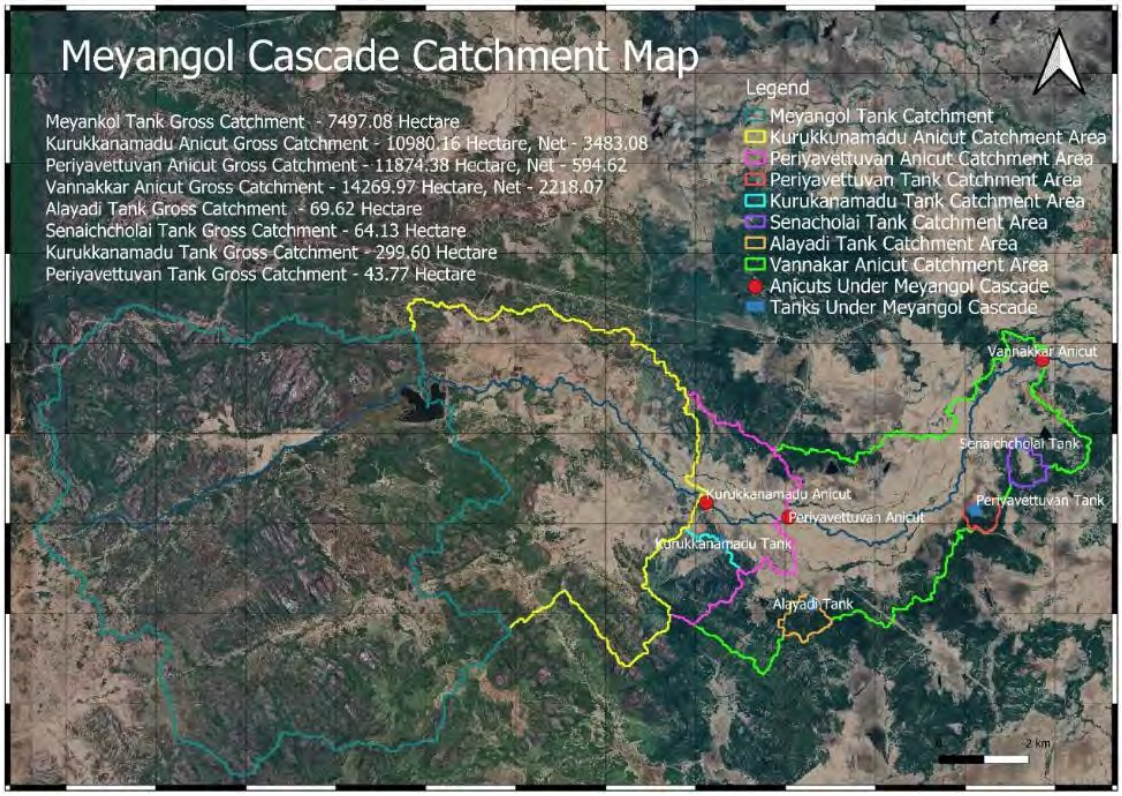
The general information of the Miyangal cascade is given in Table 1.

Table 1: The general information of the Miyangal cascade

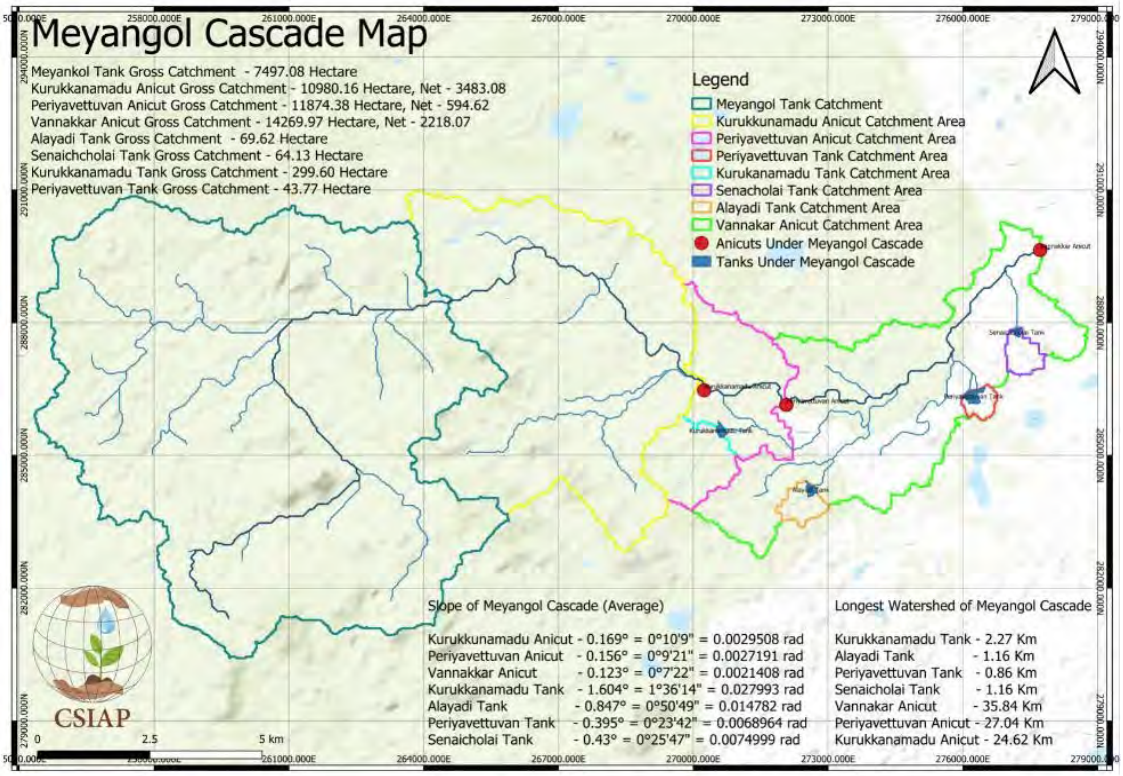
Information	Details
Name of the District	Batticaloa
Name of the Divisional Secretariat/s	Eravurpattu
Name of the electorate	Batticaloa
Name of the river basin	Muntheniaru
Name of the Cascade:	Miyangal Cascade
Name of the Agrarian Development Center/s.	Vantharumullai
Name/s of Grama Niladari Division/s	Eralakulam
Extent of the cascade in hectares	423 ha
Number of sub watersheds	N/A
Number of clear catchments	3,172 acres
Number tanks / anicuts used for agriculture	03 tanks & 03 anicuts
Restricted forest areas, if any	N/A
Number of Beneficiaries	Male – 362, Female - 332
Number of tanks/anicuts located within the forest	03 tanks & 03 anicuts

1.2.1 Map of the Miyangal cascade system

The Miyangal cascade map is given below; **Map 1: The Cascade Map**



Source: Climate Smart Irrigated Agriculture Projectu



Map 2: Map of the Miyangal Cascade
Source: Climate Smart Irrigated Agriculture Project

The map no. 1 was developed earlier by the DPD's office CSIAP and that was updated after the transact walk and drawn a latest one (Map no. 2) by the project team.

1.2.2 Information of the small tanks within the cascade system

There are 694 farm families directly benefited by this cascade. The total command area of this cascade is 918.7 ha. In this cascade, 3 tanks are belonging with the Department of Agrarian Development and 3 anicuts are under department of provincial irrigation Batticaloa. Last three decades there were no rehabilitation activities in these tanks and anicuts because of the inadequate fund allocation to the departments. Especially in the case of maintenance of anicuts farmer organizations have been spent approximately Rs. 500,000.00 per year. During the flood time human made sand buds destroyed and that want to rebuild again for other season.
The details of tank wise GN Divisions, tank capacity, command area and farm family details given in the table 2.

Table 2: Details of Capacity of tanks and Beneficiaries of tanks

No	Tank name	GND	Capacity (Acre feet)	Command area (Hectares)	Beneficiaries	
					Male	Female
1	Alayadi kulam	Eralakulam	107.4	40.4	22	23
2	Kurukkunamadu tank	Eralakulam	212.7	40.4	17	25
3	Kurukkunamadu anicut	Eralakulam		202.4	98	96
4	Periyavettuvan tank	Eralakulam	172.6	20.2	33	30
5	Periyavettuvan anicut	Eralakulam		425.1	96	86
6	Vannakkar anicut	Eralakulam		141.7	56	42
				918.7	**362**	**332**

Details of tank coordinates of Miyangal cascade is given in Table 3

Table 3: Details of tanks and coordinates

No	Tank name	GND	Coordinate	
1	Alankulam	Eralakulam	7.762111	81.433129
2	Kurukkunamadu tank	Eralakulam	7.774113	81.414848
3	Kurukkunamadu anicut	Eralakulam	7.782798	81.410123
4	Periyavettuvan tank	Eralakulam	7.779318	81.427179
5	Periyavettuvan anicut	Eralakulam	7.779394	81.427045
6	Vannakkar anicut	Eralakulam	7.808075	81.503192

1.3. Importance of managing the Miyangal Cascade for its sustainability

The Miyangal cascade refers to a system of interconnected irrigation channels and downstream water flows that are strategically designed to provide water to agricultural fields and ensure efficient water distribution. This system is often employed in areas where water scarcity is a challenge and where there is a need to optimize water usage for agricultural purposes.

The need for a well-designed cascade profile arises due to several reasons. Firstly, it enables equitable water distribution, ensuring that all agricultural fields within the system receive their required share. By following the natural contours of the land, the cascade profile helps in minimizing water wastage and reduces the risk of waterlogging or erosion.

Secondly, the Miyangal cascade profile helps manage the gravity-driven flow of water. By constructing the channels and structures at appropriate elevations, the system can take advantage of the natural force of gravity to move water from higher to lower elevations, reducing the need for pumping and energy consumption.

Additionally, the cascade profile allows for the regulation of water flow and storage. By incorporating storage reservoirs at different levels, excess water can be stored during periods of high rainfall or low irrigation demand, ensuring a steady water supply during dry spells.

Overall, the Miyangal cascade profile plays a vital role in maximizing water conveyance efficiency, minimizing losses, and promoting Climate Smart Agricultural practices in water-scarce regions. It allows for the optimal utilization of available water resources and helps farmers to meet their irrigation needs while minimizing environmental impact.

1.4. Forming of Cascade Management Committees (CMCs) for sustainable management

Small tank cascade systems (STCS) are part of Sri Lanka's hydraulic civilization. These systems interconnected small man-made reservoirs which capture seasonal rainwater for agriculture, household, and environmental purposes are considered the lifeblood of communities in the Dry Zone of Sri Lanka. These time-tested drought and flood mitigation systems are now increasingly being seen as excellent community resilience systems for adaptation to climate change in the Dry Zone of Sri Lanka. Somewhat neglected by the authorities, the systems are now being revived, and restoration of degraded STCS is being recognised as a viable option for adaptation in the National Action Plan for Climate Change Adaptation in Sri Lanka as well as articulated as adaptation actions in the Nationally Determined Contributions (NDCs) under the Paris Agreement. This chapter brings out the unique features of these systems and discusses how the systems have been helpful in addressing drought and flood mitigation historically; in building climate change resilience in small-scale farming communities in the Dry Zone in the present context in; how they were managed over time and what future they hold in climate change adaptation planning in the country.

Role and responsibilities of the cascade management committee

- The committee should take necessary decisions to manage the resources of the cascade with a joint approach of all agencies and beneficiaries of the cascade and follow up the implementation of those decisions and make the necessary corrections accordingly.
- The committee should discuss the maintenance work to be carried out in the cascade by respective farmer organizations.
- It should organize participatory activities of the development programs at the cascade level
- The committee should discuss the outcomes of cultivation committee meetings and issues that can be solved at the cascade level.
- They should plan cultivation, water issues, input supply, training programs, and other production activities and make arrangements for the marketing of products.
- They should bear the overall responsibility of the development and production programs within the cascade and the management of water and associated resources (including ecosystems) in the cascade.
- Through integrated management, ensure drinking, agricultural, livestock, and inland fisheries requirements are equitably met.
- Promote climate-smart agriculture practices and technologies.
- Prepare/ update an agriculture development plan for the entire cascade.
- Facilitate market access to the production from the agriculture plan implementation.
- Facilitate the community to access the weather and agriculture advisories.

During the Participatory Rural Appraisal (PRA) time, number of cascades identified in Eastern Province. Cascade system is new concept of Eastern area. Therefore, the necessity of cascade management committee formation and development of cascade management plan is identified by the CSIA Project. It will be a route map of the future investors and planners as well as the government and non-government officers who are interested to the cascade system development.

Figure I: Major stakeholder agencies currently involve the CMC

Composition of the cascade management committees

i. Representative of the Divisional Secretary (DS) - Chairman

ii. Divisional officer of Department of Agrarian Development (DAD) - Secretary

iii. Agriculture Instructors (AIs) in the cascade

iv. Representative of the Department of Irrigation (DOI)
v. Representative of the Department of Wildlife Conservation (DOWC)
vi. Representative of the Provincial Irrigation Department (PID)
vii. Representative of Department of Forest Conservation (DOFC)
viii. Representative of Geological Survey and Mines Bureau (GS & MB)
ix. Representative of Water Resources Board (WRB)
x. Representative of the Local Government Authority (Pradheshiya Saba)
xi. Representatives of the Grama Niladhari level Committee
xii. Representatives of Department of Land Use Planning
xiii. Representatives of NACTA
xiv. Department of Police
xv. Representative of Farmer Organizations (FOs)
xvi. Representative of Community Base Organizations (CBOs) in the cascade

The Co-Chairman of the CMCs must be a representative of the farmer organization.

1.5. Necessity of a Cascade Management Committee

The established of Miyangal Cascade Management Committee is essential to ensure the coordinated and effective management of a series of interconnected tanks and anicuts. This committee would oversee critical aspects such as tank maintenance, operational protocols, safety measures, and resource allocation, optimizing the functionality, water sharing, water safety and maintaining ecosystem of the entire cascade system. The appointed CMC concluded the representative from each & every tank for centralizing decision-making and fostering collaboration among relevant stakeholders, the committee would help prevent disruptions, minimize downtime, and enhance the overall efficiency and reliability of the tank cascade

A Cascade secures the surface and ground water level of the catchment area and as a result provides water for domestic and agricultural activities. According to Figure 1, there are public, private stakeholders involving with farmer and other community-based organization's representatives have responsibilities to protect the Cascade. However, as mentioned in section 3, the Cascade has been seriously degraded due to the lack of attention of the stakeholders and natural and human activities. Therefore, a coordinating body like the Cascade Management Committee has become more necessary to take action to protect the Cascade.

- Tanks serve multiple purposes: agriculture, water for livestock, inland fisheries, groundwater recharge, etc.
- Groundwater supports domestic water and upland agriculture, including home gardens.
- Other than agriculture water users, there is hardly any contribution from the other users for the maintenance of the irrigation system.
- The resources are used by other users without any limitation.
- Common resources, such as water and the environment, could not manage individual perspectives.

1.6. Necessity of preparing a profile for Miyangal Cascade

Preparing a profile for Miyangal Cascade system is essential as it provides a comprehensive overview of the system's design, components, and operational parameters. This profile serves as a valuable reference for engineers, operators, stakeholders and layman farmers involved in the system's installation, maintenance, and management. By detailing factors such as tank specifications, interconnections, control mechanisms, safety features, critical issues and fluid transfer dynamics, the profile enables a clear understanding of how the cascade system functions and how it fits within the entire command and catchment areas. Ultimately, this profile facilitates effective decision-making, troubleshooting, and optimization, ensuring the tank cascade system operates reliably and efficiently to meet its intended purpose.

The sustainable existence of cascade was established due to the rural institutional structure and socio-economic practices, traditions and customs of the past to maintain the cascade and gradually with the change of these conditions, the cascade system deteriorated and at present it is deteriorating very rapidly. It is very important to identify the current situation and existing problems of the cascade and the critical issues among them in order to restore the cascade systems, prevent resource degradation and manage them properly.

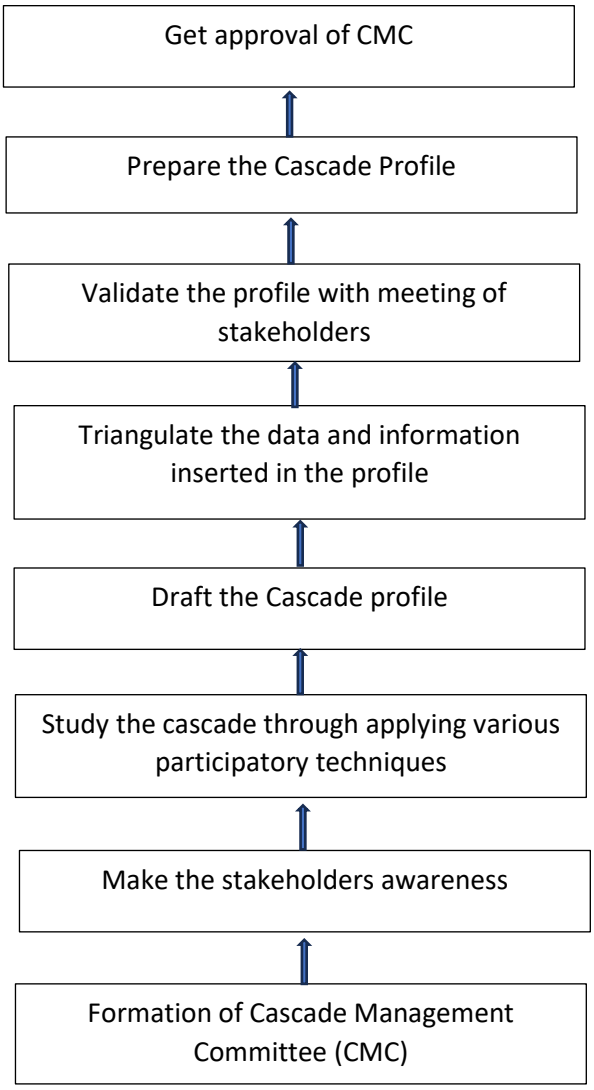
1.7. Preparation of Miyangal Cascade Profile

Information was obtained from several sources to develop the Cascade profile. Transact walk, secondary data and group discussions were the main, among them as secondary data, information was obtained from the hotspot area agriculture development plan prepared for the hotspot areas of the project, engineering survey, hydrological survey and other statistical information of the Divisional Secretariat, Wildlife and Forest Conservation Department. Apart from this, a transect walk was also conducted with the participation of all stakeholder organizations to generate primary data. In the transact walk, officers and farmers divided in to two groups. Group A travelled from Alankulam through Kurukkunamadu tank, Kurukkunamadu anicut to Periyavettuvan anicut and the Group B covered Vannakkar anicut and Periyavettuvan tank Information was obtained on 03.08.2023 by the groups covering all the main water catchment areas of cascade. Information was collected at 100 by 100 meters of the road and geographical information, geological information, hydrological information, ecological information, socio-economic information about resource degradation and severity of resource degradation were collected through observations and discussions. Beneficiaries, farmer organization members and officials of all government agencies participated in the transact walk and after the walk, a workshop was held with the participation of all the parties involved to further verify the accuracy of the information.

In particular, the information contained in this cascade profile is very important for the preparation of the basic plan for cascade management and will be very helpful for those who study cascade in obtaining information about cascade and planning future development of cascade.

The participatory assessment process is the basic methodology for developing the cascade profile, and appropriate tools were used to identify the bio-physical condition of the cascade area. Focused group discussion, matrix ranking, and transect walk were the main tools. Participants living in the hotspot area and members of Cascade Management Committees (CMCs), members of farmer organizations, and representatives of Government Organizations have participated in this assessment process.

The process of preparation of cascade profile includes the following major activities such as;



The objectives of the cascade profile development and how needful data is to be collected and generated during the interactive and iterative process have been conducted in Focus group discussions. The main intervention was identified and ranked during the discussion.

1.8. Objectives of preparation of a cascade profile and a cascade Management Plan (CMP)

The main objective of the cascade profile is facilitating to learn the cascade status and issues that affect negatively to it, which enables to develop a pragmatic cascade management plan to ensure the sustainability of the cascade and the water productivity of the tank system in the area.

The specific objectives are:

- To identify the water-sharing mechanism of the cascade
- To reduce vulnerability to climate change
- To enhance the restoration of the watershed of the system to enhance biodiversity (Flora & Fauna, Wild animals, etc.) through integrated management
- To address the water scarcity faced by rural communities living in the cascade (addressing the farming, drinking and environmental water requirements of the area)
- To manage water and associated natural resources in a sustainable manner.
- To promote crop zoning programmes and facilitate marketing.
- To enhance the living standards of rural communities on a sustainable basis.

1.9. Importance of preparation of profile and the cascade management plan

A cascade management plan is urgently needed to protect the resources and ensure sustainability of the cascade system. Also, cascade should be managed with an integrated approach through an appropriate institutional structure with the participation of all stakeholders in cascade. For that purpose, a cascade profile and a cascade plan will be prepared to achieve the following objectives.

A detailed Cascade Profile including information on damage to the cascade system mainly due to geographic, hydrological, ecological, cropping patterns and human activities and a map prepared using of Geographical Information System (GIS) for the use of stakeholder organizations and Facilitating stakeholder organizations to save the environment.

Preparation of a basic plan (Cascade Management Plan) that includes the elements of strategic interventions to solve the critical issues and the monitoring system, tentative cost estimates, expected implementation time period and responsible organizations to be involved in the implementation of the plan.

To support policy makers and stakeholders to the identification of the critical issues of the cascade system.

02. Methodology applied in preparation of the Cascade Management Profile and the Basic Cascade Management Plan (CM)

The Climate Smart Agriculture Project, after analysing the current situation of the Miyangal Cascade, confirmed the need for an institution like the Cascade Management Committee involving all stakeholders to protect the cascade. To achieve this goal, a scientific and participatory cascade management plan is needed as a major task for the cascade management. The Climate Smart Irrigated Agriculture Project also realized that. It helped the Cascade Management Committee to prepare a formal Cascade Profile and Cascade Management Plan. Studying the cascade and collecting secondary and primary data and information, generation of information was a pre requirement for the cascade profile preparation.

Cascade management plan preparation is a multifaceted task that includes field-based activities. For that, before preparing the cascade management plan, cascade profile should be prepared, where participatory and multi-stakeholder methods are used to assess the geological, ecological, hydrological and social aspects of cascade. Data generation, data analysis, report writing, plan preparation and stakeholder validation required multi-skilled personnel. All these tasks were carried out by the Climate Smart Irrigated Agriculture Project officials with guidance of the World Bank staff. For setting up, the Climate Smart Irrigated Agriculture Project and partner institutions have come together and followed the following steps:

(i) Conduct meetings

(ii) Collect secondary data

(iii) Generate primary data using participatory techniques such as transact walk

(iv) Validate the data

(v) Developing cascade profile

(vi) Identifying issues using participatory techniques like problem tree, using participatory techniques like pairwise comparison

(vii) Identifying critical issues

(viii) Formulating the cascade plan

(ix) Validating the correctness of the cascade management plan with stakeholder participation

(x) Identifying proposed strategic interventions and key activities to address or mitigate the critical issues in a special meeting of the Cascade Management Committee and preparation of tentative estimates for the implementation of the proposed strategic interventions and implementation periods divided into short term, medium term and long term have been

included in the cascade management plan so that the cascade management committee can easily implement them.

03. Details of the current profile of the Miyangal cascade

3.1. Details of geographical aspect

The cascade entirely in the dry zone and is located east longitudes. The land is flat terrain comprising of paddy lands, high lands, forests, tanks and river. The extent of the Eravurpattu DS Division is 402.5 Sq. Km and the extent of the Eralakulam GN Division (201A) is 65.6 Sq. km.

The physical feature of the DS Division and cascade area is flat land not exceeding 7.62 meters in height above the sea level. It consists of undulating plains and alluvial flats watered by river from central province. In this area sandy and clay soil.

Batticaloa is singularly unfortunate in being the only Dry zone District which does not have any perennial river flowing through it. All the streams that end into the lagoon or sea have the source in the Dry Zone itself and consequently while they run in spate through North East Monsoon dwindle into more trickle of water by about July and August. This is the fate of Mahilavatuvan river, Mundanai Aru and the Madhuru Oya which feed reservoirs viz Unnichai.

3.2. Details of Geological aspect

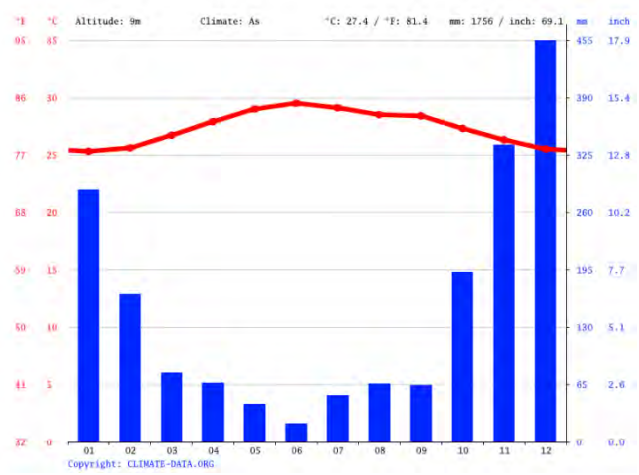
The district which belongs to the Dry Zone receives mean annual rainfall of 1650.9 mm. The rainfall is not equally distributed throughout the year and has a bimodal pattern having heavy intensity in the months of October to March (“Maha” Season) with less shower in April to September (“Yala” season). The annual average rainfall varies from 864 mm to 3,081mm (50 years data). The North East Monsoon brings major part of the rainfall with little variation within the district.

The dry season occurs between the months of January to July where average monthly rainfall is less than 40mm. A graph showing the change in rainfall throughout a year is provided at Figure C-3, Average Monthly Rainfall. In addition, rainfall analysis has revealed that there is an increase of average monthly rainfall during North-East monsoon,

The mean annual temperature varies from 25 0C to 35 0C (Table C-2). The maximum temperature averages around 32 degrees Celsius. The warmest time period of the year is recorded from March to May and the minimum temperature is recorded in November/January.

Between the driest and wettest months, the difference in precipitation is 419 mm | 16 inches. During the year, the average temperatures vary by 4.2 °C | 39.6 °F.

Figure Error! No text of specified style in document.**-1: Mean annual rainfall and temperature of Batticaloa District**



3.3. Details of hydrological aspect

Direct rainfall, Water collected in minor tank cascade systems by rainfall and what is available from Miyangal scheme are supposed as main sources of water supply in this area. Livelihood of village communities entirely dependent upon water availability from the Miyangal river basin

The Miyangal cascade faces several hydrological concerns and issues. The following hydrological issues were observed during the Focus group discussion and transect walk.

The proposed cascade experiences significant water scarcity due to limited water resources and irregular rainfall patterns. The region relies heavily on monsoon rains, and any deviation from normal precipitation levels can lead to water shortages, especially during the dry season.

The excessive extraction of groundwater for agriculture, domestic and industrial purposes has resulted in the depletion of the groundwater level in the area. Overexploitation of groundwater can lead to saltwater intrusion, making the water unfit for consumption and irrigation.

Pollution from agricultural runoff and inadequate wastewater treatment poses a significant threat to the water quality in the cascade area. Contamination of surface water and groundwater sources negatively affects human health and the ecosystem.

Limited infrastructure for water storage and distribution hampers effective water management in the area. Insufficient river paths, irrigation systems, and canals lead to inefficient water management, hindering agricultural productivity and economic development.

The amount of water received by the tanks of Miyangal cascade is shown in table 5.

Table 4. Details of Monthly wise water inflow to the tanks

(Acre feet)

No	Tank name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	Alayadi kulam	20.0	11.0	6.0	4.0	3.1	2.1	2.3	3.1	5.3	12.6	26.8	31.1
2	Kurukkunamadu tank	54.3	115.4	134.0	86.3	47.5	25.8	17.4	13.4	9.0	10.0	13.2	23.0
3	Periyavettuvan tank	12.6	6.9	3.8	2.5	2.0	1.3	1.5	1.9	3.3	7.9	16.8	19.5

Note: Only the tanks in the cascade have water inflow data

The traditional village cascade system was damaged, because of that there is soil erosion, silt deposits in tanks, erosion in tank bunds and salinity in paddy fields are increased in the cascade area.

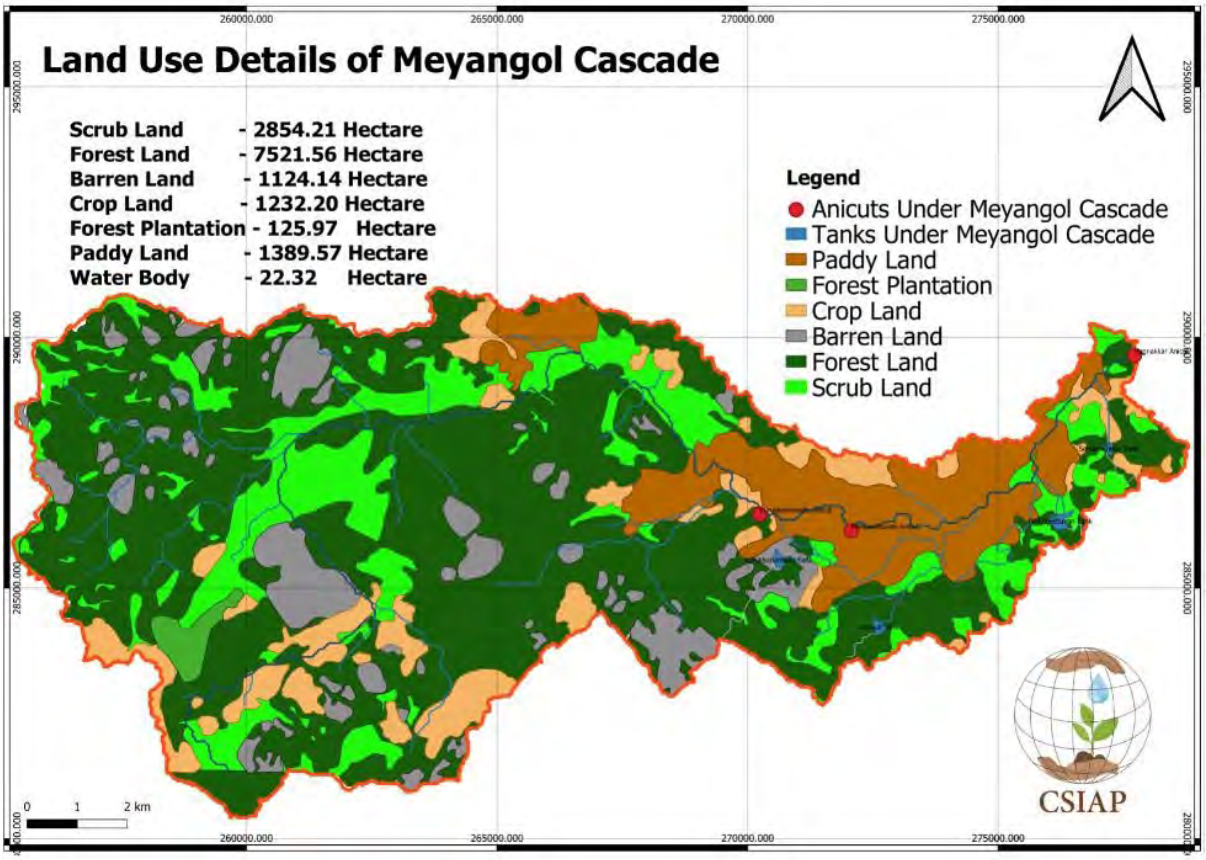
3.4. Details of Environmental aspect

Eravur Pattu D.S. Division, with total extent of 60,817 Ha has been classified to consist of 13 main land use categories of which scrub lands and paddy are the most dominant. About 21,367 Ha of scrub lands, which is approximately 20% of the total land area are scattered all over the D.S. Division while paddy lands are confined to middle part along stream and river courses and towards eastern border. Some of these streams are found to be generating from two major tanks, Rukam wewa and Kitul wewa. A patch of Forest with an extent of 4,543 Ha and consisting both primary and secondary forest are located towards western boarder in close proximity to Thalawaga and Dandagala villages and Rocks and rock-out crops, which is another important land use type in terms of high bio diversity and representing about 3,716 Ha of lands lie in close association with forest lands. As usual, Homesteads are found along peripheral areas of paddy lands and so as about 913 Ha of coconut plantation.

Table 5: Land use extents of Eravur Pattu DSD

Pattern		District (Sq. Km)	Eravur Pattu (Sq. Km)	Percentage
Total Area		2,633.10	634.16	24.08
Land Area		2,403.91	591.51	24.61
Large in land water		229.19	42.65	18.61
Urban Land	Built up Land	40.22	8.50	21.13
Agriculture Land	Homesteads	224.34	42.00	18.72
	Paddy	583.78	138.54	23.73
	Upland	54.23	13.00	23.97
	Perennial Crops	9.92	1.76	17.74
	Permanent Crops	94.23	18.00	19.10
	Coconut	81.39	18.00	22.12
	Cashew	62.22	12.90	20.73
	Sparsely used Land	181.77	50.00	27.51
Forest Land		408.66	111.00	27.16
Range Land	Scrub Land	266.37	77.00	28.91
	Grass Land	201.60	49.00	24.31
Wet Land	Mangroves	16.06	2.81	17.50
Water		229.19	42.65	18.61
Bare Land		179.18	49.00	27.35
Total		**2,633.16**	**634.16**	**24.08**

Figure: Land Use map of Meyangal Cascade



The effects of climate change, such as rising temperatures and variation of precipitation patterns, further exacerbate hydrological concerns in the cascade system. Erratic rainfall, increased frequency of droughts and intense storms, and sea-level rise pose additional challenges for water resource management and planning.

Addressing these concerns and issues requires a comprehensive approach that includes improved water governance, sustainable water management practices, investment in infrastructure development, and initiatives to promote water conservation and pollution control. It is crucial to prioritize long-term solutions that ensure water availability, quality, and resilience in the Siththan Odai cascade.

There are dense forests in the water catchment areas, there is no soil erosion and silt deposition in the tanks is also at a minimum level. It is seen that some of the villagers get the wood required for building houses from these forests. Wood cutting in the forest is not found. Also, earth cutting and sand mining activities are not done in this area. There are several archaeological sites but there is no information that it has been damaged. No rock fragments of any kind were found in this cascade area. no sandbags or temporary embankments have been constructed at the tank sites. The bird species in the forest live safely.

Wild animals have become a major problem in these cultivated areas and inhabited areas. wild elephant fence has been constructed. Local residents say that this is very weak. It is said that due to the poor condition of this fence, elephants often break the fence and enter the residential areas and damage the paddy field and some properties also. In the last three months, 06 human deaths have been reported. In addition to this, crops are damaged by monkeys, squirrels, woodpeckers, peacocks and wasps.

There are opinions that wild elephants from other parts of the island are brought to the forest area. Farmers say that the elephant population has increased by 300% for last 10 years.

Some farmers have erected temporary elephant fences and said they often break down the fences and damage the paddy field because they are less strong. There is a need to build permanent elephant fences for paddy fields. Rehabilitation activities can be carried out with the help of the department of forests and wildlife.

Environmental aspect focusing on current status of the environment in the Cascade. Ecological services and their values will assess whilst gaining an in-depth understanding of forests and biodiversity in the cascade and its surroundings. Special consideration given to border areas between protected and sensitive areas.

Major terrestrial vegetation/habitat types

1. **Vegetation**
   Dry mixed evergreen forests are the most extensive type of forests and are found in the dry zone. They are characterized by monsoon forests and thorn scrub lands.
   These forests are dominated by Palu (***Manilkara hexandra***) (Sinhala – Palu), Satin (***Chloroxylon sweitenia***) (Sinhala – Burutha), ***Drypetes sepiaria, Feronia limonia, Vitex altissima, Syzygium spp., Drypetes sepiaria*** and ***Chukrasia tabularis.***

2. **Protected / Sensitive areas**
   Forest area - The Kurukanamadu tank is situated near the conservative forest, and in accordance with guidelines for Environmental and Social Management Plan (ESMP), tank rehabilitation will be carried without causing any damage.

   Archaeology site – Archaeology site observed near the Kurukanamadu tank, with help of Archaeology department support the tank rehabilitation works are carrying out. Other tanks and anicuts not having Archaeology site areas

3. **Effects on Flora and Fauna**

   Several species of flora & fauna are observed on or around the cascade during the transect walk especially local birds specially egret (*Ardea alba*) observed in Kurukanamadu tank.

   Due consideration should be given to carefully clearing of vegetation avoiding destruction of habitats of fauna. The removed vegetation matter shall immediately be disposed of to pre-decided disposal sites.

   The contractor will take reasonable precaution to prevent workmen or any other persons from removing and damaging any flora (plant/vegetation) and fauna (animal) including fishing in any water body and hunting of any animal.

   Fishing observed in Kurukanamadu tank, local fisherman is catching fish for home consumption purposes. They don't use boats; instead, they fish using traditional methods.

4. **Safety from wildlife**

   The contractor will educate his staff about possible attacks from wildlife such as elephants and snakes. Protocols to be adopted should be shared with all workers.
   Strict instructions and monitoring to be done on worker activities after 6 pm, they should not roam into the wild. Workers should not work in isolation at any time within the project site.
   PPEs are essential in land clearing as snakes are present.

   If any wild animal is found near the construction site at any point of time, will report to the nearby Forest Department /Department of Wild Life Conservation (range office or divisional office) and will take appropriate steps/ measures, if required in consultation with the forest officials.

5. **Health hazard:** Health hazards could be anticipated in terms of injuries due to rehabilitation activities, including the usage of heavy machinery. However, such incidents can be avoided

with proper precautions and exercises for wearing Personal Protective Equipment (PPE) in health & safety aspects.

All workers will be provided with necessary PPEs (basic should include safety helmet, protective footwear, and high visibility jackets). Any visitors to the worksite also need to be provided with PPE. Gloves, ear muffs, goggles, dust masks, safety harness and any other equipment considered necessary should be maintained in stock at the site office.

6. **Trees in the catchment area:**

   No animals or plants of any nature shall be removed under any circumstances from the project site or surrounding areas without the consent from the Forest Department.

   To remove the trees, the Engineer together with the relevant officers shall be informed in advance to verify and report on the technical justification for the trees that will be required to be removed and the lack of technical alternatives

7. **Declines of forest area:** A gradual forest declines observed in Kurukanamadu tank.

   Forest services – farm families living in the border areas of cascade depend on the forest for

   a) Grazing their cattle in the scrub jungle area
   b) Collecting of logs and dead trees for fire – wood
   c) Collecting forest fruits (wood-apple, Palu, Wira etc.)
   d) collecting medicinal plants and fishing in the tanks and water-bodies inside the declared reservation.

8. **Siltation:** There is significant siltation was observed in this cascade area. The rehabilitation of the cascade system will mitigate these impacts.
9. **Encroachment:** No encouragement observed in this cascade tanks
10. **Soil erosion sites:** In the cascade areas, there are no places of soil erosion.

3.5. Details of Human livelihood activities occurring within the cascade

People enter the forest to extract honey. Although people go in to pick fruits like palu, weera, galziambala, they said that the fruits are less this season and these seem to be eaten mostly by birds. Fresh water fishing in the tanks is done by the community living in these villages' livelihood depend on this.

Most of the villagers are doing farming for their livelihood. The land owners are living nearby eravur town area and they visited their cultivation sites for cultivation seasons only. Only 25 % of the farmers are living in the tanks and anicuts site. Majority of the farmers are occupied with the cultivation of paddy in the maha season. During the yala season farmers are cultivating Other Field Crops also. Livestock also one of the major income sources of this area farmers.

3.6. Details of the socio-economic aspect

Table 6: Socio economic details - Miyankal cascade

No	Name of Tank / Anicut	Village	GND	ASC Division	DS Division
1	Alyadikulam	Eralaikulam	Eralaikulam	Vantharumoolai	Eravur pattu
2	Periyavettuvan Tank	Eralaikulam	Eralaikulam		
3	Periyavettuvan anicut	Periyavettuvan	Eralaikulam		
4	Vannakar anicut	Sonakanveddai	Sittandy 03		
5	Kurukanamadu anicut	Kurukanamadu	Eralaikulam		
6	Kurukanamadu Tank	Eralaikulam	Eralaikulam		

Table 7: Distribution of Population Ethnicity wise

No	G.N.Divisions	Population	Ethnic Groups					
			Sinhalese		Tamil		Muslim	
			M	F	M	F	M	F
01	Eralakulam	1,065	-	-	527	538	-	-

Table 8: Details of Head of households in the Cascade

S.No	GN Division	GN Code	Toal No.of Families	No.of Families	
				Men Headed Families	Women Headed Families
1	Eralakulam	201A	315	308	7

Table 9: Details of vulnerable families in the cascade

No	GND	G.N number	No of villages	Extent (Sq.Km)	Total Families	Male	Fe male	Total population	Samurdhi	Women headed families	Widows	Elders	Disabilities
1	Eralaikulam	201A	39	65.6	350	691	685	1376	155	55	46	151	17
2	Sittandy 03	201/3	08	1.3	659	1099	1055	2154	354	124	116	205	35

Table 10: Details of FOs functioning in the Miyangal Cascade

No	Name of Tank / Anicut	Farmer Organization
1	Alyadikulam	Alayadi FO
2	Periyavettuvan Tank	Periyavedduvan Vadakku Farmer Organization
3	Periyavettuvan anicut	Kayanady FO, Periyavedduvan North FO & Periyavedduvan South FO
4	Vannakar anicut	Sonakanveddai Farmer Organization
5	Kurukanamadu anicut	Kurukanamadu Farmer Organization
6	Kurukanamadu Tank	Kurukanamadu Farmer Organization

3.7. Details of construction activities within the cascade system

Last thirty years there was significant rehabilitation activities in the cascade tank's upstream and downstream, only few maintenance works done by the DAD and also the farmer organizations builds sand bunds at the anicuts in every year with the farmer contribution.

It is observed that, there is a foreign funded project "Agriculture Sector Modernization Project" is ongoing in the DS Division. And also "Miyanhgal River Basin Development Project" study project (grant) completed their studies and it has been temporarily stopped due to some implementation issues.

Government supported housing project and other non-government organizations supported livelihood projects also ongoing in these areas.

Table 11: Constructions activities under implementation of CSIAP

S.Nos.	Miyangal Cascade Tanks	Work Details	Civil Cost (Rs.Mn.)
01	Periyavettuvan Anicut	14 bay anicut, R.C. Retaining wall, Turnout cum retaining wall, Concrete lining cum Road, Unit office, Flank bund,9 bay anicut	42.17
02	Kurukunamadu Anicut	16 bay anicut, R.C. Retaining wall, Turnout cum retaining wall, Flank bund, Concrete lining, Access Road, Unit office	42.17
03	Vannakar Anicut	9 bay anicut, R.C. Retaining wall, Turnout cum retaining wall, Concrete lining, Unit office	27.72
04	Kurukunamadu Tank	Improvement Tank Bund, Regulator Repair, Concrete lining, Construction of LB & RB Access Road, LB Channel, RB Channel, Concrete Road	42.81
05	Alayadi Tank	Improvement Tank Bund, Spill, Sluice, AB Channel, CD Channel, Box culvert	30.67

06	Periyavettuvan Tank	Improvement Tank Bund, Spill, Sluice, concrete Linning Channel, Agro Road	47.34
	Total Civil Cost		**232.88**

3.8. Details of crop pattern within the cascade system

In the cascade system the name of the tanks and Farm families benefitted under each tank, cultivable area now and proposed cultivable area after rehabilitation is shown separately for Maha and Yala in the table.

Table 12: Cultivation Details before & after rehabilitation of tanks/anicuts

No	Name of Tank/ Anikut	No of Farm families	Cultivation area before Rehabilitation (Acres)		Cultivation area After Rehabilitation (Acres)		
			Yala	Maha	Yala	Maha	OFC
1	Alyadikkulam	144	10	50	10	130	20
2	Periyawettuvan Tank	32	10	50	10	75	20
3	Periyawettuvan Anikut	182	250	600	250	1050	50
4	VannakarAnikut	98	200	350	200	550	30
5	Kurukkanamadu tank	27	-	100	50	301	20
6	Kurrukkanamadu Anikut	194	500	950	500	1200	35
	Total	677	972	2100	1020	3306	175

Presently cascade feeding area before rehabilitation was 3072 ac whereas as paddy crop during Yala is being cultivated 972 ac and 2100 ac during Maha. Any how after rehabilitation it is targeted to cultivate 3306 ac of paddy during Maha and 1020 ac of Paddy. Also, after rehabilitation other field crops like Maize, cowpea, green gram, black gram and groundnut also could be increased up to 175 ac. There are about 677 families will be getting benefited from this cascade.

This cascade includes roughly 40 % the forest area and 60 % of the areas are under cultivation. As a annual crop Mango, Coconut tree are cultivated. Anyhow we can see banana cultivation here and there which can be expanded through out of the year.

It is also observed that more density of rainfall received during Maha compare to Yala. The cropping pattern is coupled with livelihood of the people because when Maha or cultivation begins, they cultivate paddy and other field crops. But in between the main season (Yala and Maha) inter seasonal cultivation done with other field crops. In addition, seed production also done with cowpea, green gram. Vegetable like brinjal, Bandakka, bitter gourd and snake gourd also cultivated for their livelihood purpose.

The Home Garden is practised by all farm families in almost all area. The home garden is basic livelihood where they get their day-to-day expenses and nutritional requirement. lThe farmers are requesting following development from the project

- The required agro well is more but allocated agro well in this area is not enough
- There are possibility to use solar power adjoining to canals and high land
- Permission should be getting water to be spill out water 400 m. Forest should allow land for this
- Bund should be erected for 10-15 feet hight as spill out water could eject behind the tank
- If there are canals build farmer can cultivate thorough out the year
- Goat farming can be promoted
- Elephant issue can be attended by erecting elephant fence
- Farmers request to levelling the field (Levelling the field will increase the productivity of crop) by the expense of the project
- Drying floor is necessary to the farmers

3.9. Details of irrigation management within the cascade system

The total production of water (Total water storage of tanks) of this Miyangal cascade system is not enough to cultivate all the land in Yala seasons. Around 30% of land are being cultivating in Yala season. The person called Vattavedanai, who nominated by the farmer organisations is the responsible person for suppling water to the paddy land. Each of tank has one Vattavedanai for this water management purposes. Water supplied to the paddyland ones 10 – 15 days intervals. There is no flow measuring gauges to measure the channel discharges. Therefore, the water losses are very high.

3.10. Details of the current situation of the command areas

There is no proper channel system to entire command area. Most of the land are not flat land.

04. Major Challenges face by the cascade system

The following are the major challenges faced by the Miyangal Cascade: (i) Soil erosion due to chena cultivation and deposition of silt in the tanks (ii) Unauthorized chena cultivation in the catchment areas and watersheds (iii) Destruction of traditional ecosystems like Kattakaduwa, Gus Gommana etc. (iv) Depletion of forest population due to chena cultivation and deforestation (v) Improper maintenance of tanks, irrigation canals and structures (vi) Destruction of lake ecosystem due to non-performance of farmer organizations established for irrigation and maintenance of irrigation systems, (vii) Increase in siltation of tanks due to lack of tank reserves in almost all the tanks in cascade, (viii) Due to insufficient rainfall, due to the severe water shortage, it is not possible to cultivate yala under the tanks (ix) Crop damage by the elephants is a significant problem faced by farmers in this area (x) There is no proper drainage system in the cascade that leads for the flood and crop damage during the rainy season.

4.1 Critical Issues of the cascade system

Issues and interventions addressed to be urgently to protect the cascade were identified as critical issues. They were identified among the main challenges of the cascade and related to be the data and information mentioned in the Cascade Profile. Using the key stakeholders, critical issues were identified in a participatory and realistic manner. These critical issues are summarized in Table No. 10 below.

Table 13: Details of critical issues identified

S.No.	Critical Issue	Specific area
01	Crop damage by wild animals specially Elephants damage	Wild animal problem
02	Non availability of quality drinking water (Salinity water)	Salinity in drinking water
03	Poor drainage system cascade area Maha panikkatiyawa to Bellankadawala Bellankadawala to Kantha Alawa mahawewa Ralappanawa to Kanthamalawa maha wewa In proper canal system causes water loses (high conveyance losses) in the cascade area	No Drainage system
05	Shortage of water in the tanks of cascade, it leads to the reduction in Yala season cultivation	Water scarcity for agriculture
06	Delays in receiving technical assistance in water management	Poor technical knowledge
07	Non availability of quality seeds on time	No quality seeds
08	Land encouragement at the catchment area of tanks in the cascade	No proper Land demarcation
09	Improper maintenance of tanks, irrigation canals and structures	Tank maintenance

4.2 Proposed strategic interventions plan by the CMC to resolve/mitigate Critical issues of the cascade system

4.2.1. Goal

All stakeholders are working together effectively for formulate Cascade Management Plan to make Miyangal cascade as a prosperous and sustainable cascade system.

4.2.2. Objectives (These are considered as strategic interventions used to solve critical problems

i. Contribute to reduce crop damage by elephants
ii. Maintain efficient & effective water storage and usage in tanks and anicuts

iii. Facilitate for demarcation of tank reservation area

iv. Facilitate to provide water availability in uplands

v. Provide accessibility for the supply of inputs and marketing of outputs

vi. Contribute to reduce agricultural water scarcity and encourage farmers to adopt climate smart irrigation practices

vii. Contribute to develop regular tank system maintenance mechanism

viii. Facilitate for the quality seeds availability on time

ix. Develop land scaping in the cascade area

x. Facilitate to establish sustain cascade system

4.3 Key activities suggested by the Cascade Management Committee to address or mitigate critical issues

Critical issues are the issues that need to be solved by policy makers, the cascade management committee and stakeholder organizations need to addressed urgently. Critical issues can be solved or minimized through the implementation of strategic interventions. Critical issues can be solved/minimized through the realistic action plan through the key activities including technical interventions in collaboration with the stakeholders and community-based organizations. They are shown in Table No. 11 below.

Table 14 - Proposed key activities to overcome the identified issues

Sub No.	Objective	Proposed Activities
1	Contribute to reduce crop damage by elephants	1.1. Establishment of seasonal elephant fences in the selected area
		1.2. Farmer awareness program for deforestation
		1.3. Make arrangement for the repairing of damaged elephant fences
2	Maintain efficient & effective water storage and usage in tanks and anicuts	2.1. Provide training to FOs for the water management
		2.2. Provide water measuring equipment to the FOs
		2.3. Rehabilitate tanks upstream and downstream system in the cascade
3	Facilitate for demarcation of tank reservation area	3.1. Make arrangement for demarcation of tank area for all tanks /anicuts in the cascade
4	Facilitate to provide water availability in uplands	4.1. Awareness program for farmers regarding crop diversification
		4.2. Reconstruction of agro wells
5	Provide accessibility for the supply of inputs and marketing of outputs	5.1. Rehabilitate agri access roads in Periyavettuvan anicut, Kurukkunamadu tank, Alayadi tank and Periyavettuvan tank
6	Contribute to reduce agricultural water scarcity and encourage farmers to adopt climate smart irrigation practices	6.1. Introduction of climate smart agriculture practices, modern as well as improved agro-technical methods through producer societies
		6.2. Provide micro irrigation system to the farmers in the area
		6.3. Introduce low water consuming crops in the cascade area
		6.4. Provide serious of training regarding the CSA technology
7	Contribute to develop routine tank system maintenance mechanism	7.1. Make awareness for the maintenance of tank and canal system to the members of FOs
		7.2. Prepare an action plan for the O & M system of tanks in the cascade

		7.3. Create fund raising mechanism for O & M system of tanks in the cascade
		7.4. Provide basic assistance/ equipment to FOs for tank O & M activities
		7.5. Tree belt development in the cascade
8	Facilitate for the quality seeds availability on time	8.1. Make awareness for the importance of seeds production
		8.2. Establish seed growers for paddy and OFC in the cascade area
		8.3. Organize technical training programs on seed production of paddy and OFC
		8.4. Assist to link Producer Societies with Department of seed production in the area
9	Develop land scaping in the cascade area	9.1. Aware the farmers regarding the importance of maintaining land levelling in paddy field
		9.2. Improvement of land levelling mechanism in the cascade
10	Facilitate to establish sustain cascade system	10.1. Aware among stakeholders regarding benefits of cascade management
		10.2. Strengthening of Cascade Management Committee (CMC)
		10.3. Assist to prepare cascade profile and cascade development plan

05. Cascade Management (Basic) Development Plan

The participatory assessment process is the basic methodology for developing the Cascade Management (Basic) Development Plan (CMBDP), and appropriate tools were used to identify the bio-physical condition of the cascade area. CMBDP leads to more appropriate actions to protect the landscape of the cascade. All stakeholders have been re-intervened and identified the acute cases.

5.1: Total estimated cost for implementing interventions and contribution expected from the stakeholder agencies

Table 15: Gannt Chart for proposed activities and responsible entities for implementing

No.	Proposed Activities	Budget (Rs. Mn.)	2024				2025				Responsible Agencies
			QI	Q2	Q3	Q4	QI	Q2	Q3	Q4	
1	1.1. Establishment of 40 km of seasonal elephant fences in the selected area	40.00									DAD, FO
	1.2. Farmer awareness program for deforestation	0.03									Dept. of forest
	1.3. Make arrangement for the repairing of damaged elephant fences	1.00									Dept. of wildlife
2	2.1. Provide training to FOs for the water management	0.10									CSIAP
	2.2. Provide water measuring equipment to the FOs	1.00									CSIAP
	2.3. Rehabilitate tanks upstream and downstream system in the cascade Construction of regulator in L/B main canal Periyavettuvan anicut Improvement of R/B main canal Kurukunamadu anicut Box culvet in R/B main canal – Vannakkar anicut Improvement of canal system – Kurukkunamadu tank Improvement of canal system – Alayadi tank Improvement of canal system – Periyavettuvan tank	25.00 5.00 3.5 2.5 2.5 2.5									DAD & PID
	3.1. Make arrangement for demarcation of tank area for all tanks /anicuts in the cascade	1.00									DAD, Dept. of forest

	4.1. Awareness program for farmers regarding crop diversification	0.05										DOA
	4.2. Reconstruction of agro wells	13.00										DAD & CSIAP
	5.1. Rehabilitate agri access roads in Periyavettuvan anicut, Kurukkunamadu tank, Alayadi tank and Periyavettuvan tank	10.00										DAD & CSIAP
	6.1. Introduction of climate smart agriculture practices, modern as well as improved agro-technical methods through producer societies	0.10										DOA
	6.2. Provide micro irrigation system to the farmers in the area	8.75										DOA & CSIAP
	6.3. Introduce low water consuming crops in the cascade area	0.05										DOA & CSIAP
	6.4. Provide serious of training regarding the CSA technology	0.30										DOA & CSIAP
	7.1. Make awareness for the maintenance of tank and canal system to the members of FOs	0.05										DAD
	7.2. Prepare an action plan for the O & M system of tanks in the cascade	0.15										DOA & CSIAP
	7.3. Create fund raising mechanism for O & M system of tanks in the cascade	-										DOA & FOs
	7.4. Provide basic assistance/ equipment to FOs for tank O & M activities	0.10										DAD & CSIAP
	7.5. Tree belt development in the cascade	0.15										Dept. of forest
08	8.1. Make awareness for the importance of seeds production	0.05										DOA
	8.2. Establish seed growers for paddy and OFC in the cascade area	0.03										DOA
	8.3. Organize technical training programs on seed production of paddy and OFC	0.10										DOA & CSIAP

	8.4. Assist to link Producer Societies with Department of seed production in the area	-									DOA & CSIAP
09	9.1. Aware the farmers regarding the importance of maintaining land levelling in paddy field	-									DOA & CSIAP
	9.2. Improvement of land levelling mechanism in the cascade	3.00									DOA & CSIAP
10	10.1. Aware among stakeholders regarding benefits of cascade management	0.05									CSIAP
	10.2. Strengthening of Cascade Management Committee (CMC)	0.15									CSIAP
	10.3. Assist to prepare cascade profile and cascade development plan	0.03									CSIAP

5.2. Total estimated cost for implementing interventions and contribution expected from the stakeholder agencies

Table 16: Interventions and contribution expected from the stakeholder agencies

No.	Proposed Activities	Est. Cost (Rs. Mn.)	Expected budget contribution (Rs. Mn.)			
			Private	Line agencies	Farmer	Funding Agencies
1	1.1.Establishment of 40 km of seasonal elephant fences in the selected area	40.00				40.00
	1.2.Farmer awareness program for deforestation	0.03				0.03
	1.3.Make arrangement for the repairing of damaged elephant fences	1.00				1.00
2	2.1. Provide training to FOs for the water management	0.10				0.10
	2.2. Provide water measuring equipment to the FOs	1.00				1.00
	2.3. Rehabilitate tanks upstream and downstream system in the cascade					
	Construction of regulator in L/B main canal Periyavettuvan anicut	25.00				25.00
	Improvement of R/B main canal Kurukunamadu anicut	5.00				5.00
	Box culvet in R/B main canal – Vannakkar anicut	3.5				3.5
	Improvement of canal system – Kurukkunamadu tank	2.5				2.5
	Improvement of canal system – Alayadi tank	2.5				2.5
	Improvement of canal system – Periyavettuvan tank	2.5				2.5
3	3.1. Make arrangement for demarcation of tank area for all tanks /anicuts in the cascade	1.00		1.00		
4	4.1. Awareness program for farmers regarding crop diversification	0.05		0.05		
	4.2. Reconstruction of agro wells	13.00			6.50	6.50
5	5.1. Rehabilitate agri access roads in Periyavettuvan anicut, Kurukkunamadu tank, Alayadi tank and Periyavettuvan tank	10.00		5.00		5.00
6	6.1. Introduction of climate smart agriculture practices, modern as well as improved agro-technical methods through producer societies	0.10		0.05		0.05
	6.2. Provide micro irrigation system to the farmers in the area	8.75				8.75
	6.3. Introduce low water consuming crops in the cascade area	0.05		0.05		
	6.4. Provide serious of training regarding the CSA technology	0.30		0.15		0.15
7	7.1. Make awareness for the maintenance of tank and canal system to the members of FOs	0.05				0.05

	7.2. Prepare an action plan for the O & M system of tanks in the cascade	0.15				0.15
	7.3. Create fund raising mechanism for O & M system of tanks in the cascade	-				
	7.4. Provide basic assistance/ equipment to FOs for tank O & M activities	0.10				0.10
	7.5. Tree belt development in the cascade	0.15		0.05		0.10
8	8.1. Make awareness for the importance of seeds production	0.05		0.05		
	8.2. Establish seed growers for paddy and OFC in the cascade area	0.03		0.03		
	8.3. Organize technical training programs on seed production of paddy and OFC	0.10		0.05		0.05
	8.4. Assist to link Producer Societies with Department of seed production in the area	-				
9	9.1. Aware the farmers regarding the importance of maintaining land levelling in paddy field	-				
	9.2. Improvement of land levelling mechanism in the cascade	3.00				3.00
10	10.1. Aware among stakeholders regarding benefits of cascade management	0.05				0.05
	10.2. Strengthening of Cascade Management Committee (CMC)	0.15				0.15
	10.3. Assist to prepare cascade profile and cascade development plan	0.03				0.03

5.3. Implementation Methodology of the Cascade Management Plan

CMBDP should be submitted to the Divisional Agriculture Committee and the District Agriculture Committee for approval. After getting the approval, it will be implemented.

The sub project proposals (Attachment No. 04) will be prepared by CMC with the support of the relevant implementing agencies for obtaining capital assistance

Major partner institutions are committed to implementing the proposed activities, preparing and supporting existing investment plans, budget reports and implementation plans, and assisting CMC in submitting grant funding proposals to be provided.

Social Audit Committees of sub-project implementation effectiveness. CMC appoints Social Audit Committees and gives active contributions to the beneficiaries to enhance the quality of work performed by the CMC

Annexture: 1

Circular regarding Cascade Management Committee

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කමනල අභිවිරුත්තිත් තිණෙක්කළම්
DEPARTMENT OF AGRARIAN DEVELOPMENT

මගේ අංකය / எனது இல. / My No.: 7/3/9/CMC/2023
ඔබේ අංකය / உமது இல. / Your No.:
දිනය / திகதி / Date: 2023.08.03

චක්‍රලේඛ අංකය - 06/2023

සියලුම දිස්ත්‍රික් ලේකම්වරුන් සහ ප්‍රාදේශීය ලේකම්වරුන් වෙත,

එල්ලංගා පද්ධති කළමනාකරණ කමිටු පිහිටුවීම හා පවත්වා ගෙන යාම.
Cascade Management Committee (CMC) Establishment & Continuity

රට අභ්‍යන්තරයේ සිට මුහුදට ගලා බසින ප්‍රධාන ගංගා (Rivers) **කෘතිසික ජල මාර්ග** ලෙසත්, එම ප්‍රධාන ගංගා වලට එකතුවන අතු ගංගා (Tributarite) **ද්විතීක ජල මාර්ග** ලෙසත්, එම අතු ගංගා වලට ජලය සපයන කුඩා ජල මාවත් (Small water ways) **ප්‍රාථමික ජල මාර්ග** ලෙසත් හැඳින්වේ. ග්‍රාමීය වැව් හා අමුණු වැඩි ප්‍රමාණයක් ප්‍රාථමික ජල මාර්ග හරහා ඉදිකර ඇති අතර භූමිය මතුපිට ජලය ගබඩා කර පහළට ගලා යාමට සැලැස්වීමට සකස් කර ඇති වැව් ද මීට ඇතුළත් වේ.

02. මෙරට අභ්‍යන්තරයේ පවතින ප්‍රාථමික ජල මාර්ගයක් හෝ ප්‍රාථමික ජල මාර්ග ජාලයක පිහිටා ඇති, ජල විද්‍යාත්මක වශයෙන් එකට බැඳුණු කුඩා හා මධ්‍යම ප්‍රමාණයේ වැව් පද්ධති හෝ වැව් හා අමුණු පද්ධති හෝ අමුණු පද්ධති වලින් සමන්විත, මධ්‍යම ප්‍රමාණයේ ජල පෝෂක ප්‍රදේශයක් (Meso-catchment) **එල්ලංගා පද්ධතිය** ලෙස හැඳින්වේ.

03. ශ්‍රී ලංකාවේ එල්ලංගා පද්ධති 1166 ක් දැනට හඳුනාගෙන ඇත. මෙම එල්ලංගා පද්ධති ආශ්‍රිතව භූ විද්‍යාත්මක, ජල විද්‍යාත්මක, පරිසර විද්‍යාත්මක සහ සමාජ ආර්ථික ප්‍රගමණය උදෙසා සම්පත් භාවිතය කාර්යක්ෂමව හා තිරසරව පවත්වාගෙන යාම ඉලක්ක කරගනිමින් 1968 අංක 48 දරන වාරිමාර්ග (සංශෝධන) ආඥා පනතින් සංශෝධිත 1946 අංක 32 දරන වාරිමාර්ග ආඥා පනතේ 1 (අ) 1, 2, 3, 4 වගන්ති ප්‍රකාරව ගොවිජන සංවර්ධන කොමසාරිස් ජනරාල් වෙත පැවරී ඇති බලතල අනුව සහ උක්ත පනත යටතේ පවත්වනු ලබන දිස්ත්‍රික් කෘෂිකර්ම කමිටුවේදී වාරි කර්මාන්ත ආශ්‍රිත වී වගාව ඇතුළු කෘෂිකර්මයට බලපාන හෝ අනුෂාංගික සියලු කරුණු සම්බන්ධව කටයුතු කිරීමට උක්ත පනතෙන් ඔබ වෙත පැවරී ඇති බලතල අනුව **එල්ලංගා පද්ධති කළමනාකරණ කමිටු** [Cascade Management Committee (CMC)] පිහිටුවීම හා පවත්වාගෙන යාම සම්බන්ධයෙන් කෘෂිකර්ම කමිටුවේදී සමාලෝචනය කරන ලෙසත් ඊට පහත සඳහන් කරුණු මාර්ගෝපදේශ වශයෙන් යොදාගන්නා ලෙසත් කාරුණිකව දන්වා සිටිමි.

3.1. එල්ලංගා පද්ධති කළමනාකරණ කමිටු පිහිටුවීමේ පරමාර්ථ

i. එල්ලංගාවක පිහිටි සියලු ස්වාභාවික සම්පත්, එනම් පස, ජලය, වන සම්පත, ජෛව පද්ධති, ඉඩම් හා වාරිමාර්ග පද්ධති කළමනාකරණය කිරීම සඳහා ප්‍රතිලාභීන් සහ අදාළ රාජ්‍ය නිලධාරීන් ඒකාබද්ධ ප්‍රවේශයකින් කටයුතු කිරීම සඳහා ආයතනික ව්‍යුහයක් සකස් කිරීම.

ii. වාරි කෘෂිකර්මය, පශු සම්පත් කටයුතු සහ මිරිදිය ධීවර කර්මාන්තය, සඳහා ජලය සැපයීම, වන සම්පත හා වන ජීවී අවශ්‍යතා තුලනාත්මකව පවත්වාගෙන යාම, භූගත ජල මට්ටම ප්‍රශස්ත ලෙස පවත්වාගෙන යාම, ගෙවතු වගාව ඇතුළු ගෘහස්ථ ජල අවශ්‍යතාවයන් විධිමත් ලෙස කළමනාකරණය කිරීම.

ගොවිජන සංවර්ධන දෙපාර්තමේන්තුව, අංක 42, ශ්‍රීමත් මාර්කස් ප්‍රනාන්දු මාවත, තැ. පෙ. 537, කොළඹ 07.
කමතල අභිවිරුත්තිත් තිණෙක්කළම්, இல. 42, சேர் மார்கஸ் பெர்னாந்து மாவத்தை, அ. பெ. 537, கொழும்பு 07.
DEPARTMENT OF AGRARIAN DEVELOPMENT, No. 42, SIR MARCUS FERNANDO MAWATHA, P. O. BOX 537, COLOMBO 07.

දුරකථන/தொலைபேசி/Telephones:
පොදු කාර්යාලය / பொது அலுவலகம் / General Office: 011 - 2694231, 011 - 2694232, 011 - 2694233, 011 - 2694234
ගොවිජන සංවර්ධන කොමසාරිස් ජනරාල් / கமதல அபிவிருத்தி ஆணையாளர் நாயகம் / Commissioner General of Agrarian Development: 011-2691060
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විදුසුත් පණිවුඩ තැන්පතු / மின்னஞ்சல் / Telegram: ගොවිජනසේවා කොමිසේවා / Agraservis

iii. කෘෂිකාර්මික කටයුතු සඳහා ජලය භාවිතා කරන්නන් ඇතුළුව එල්ලංගා පද්ධතිය නඩත්තු කිරීම සඳහා අමතකුත් පරිශීලකයන්ගේ සහ පාර්ශවකරුවන්ගේ දායකත්වය ලබාගැනීම.

3.2. එල්ලංගා පද්ධති කළමනාකරණ කමිටු පිහිටුවීමේ අරමුණු

i. එල්ලංගා පද්ධති කළමනාකරණය හා තිරසර පැවැත්ම සඳහා නීතිමය පිළිගැනීමක් සහිත ආයතනික ව්‍යුහයක් ඇති කිරීම.

ii. එක් එක් එල්ලංගා පද්ධති වලට අදාළව එහි ක්‍රියාකාරිත්වයට හා තිරසර පැවැත්මට අදාළ වන ගැටළු හා යෝජිත විසඳුම් ඒකාබද්ධ ප්‍රවේශයකින් යුක්තව සාකච්ඡා කර නීතිමය වශයෙන් පිළිගත් ක්‍රමවේදයක් ඇති කිරීම.

iii. එල්ලංගා පද්ධතිය තුළ පිහිටි වාරි කෘෂිකාර්මික, ජල කළමනාකරණ, පාරිසරික, සමාජ ආර්ථික හා භූ විද්‍යාත්මක සාධක පද්ධතියේ මනා ක්‍රියාකාරීත්වය සඳහා අඛණ්ඩව හා සක්‍රීයව පවත්වාගෙන යාමට ක්‍රමවේදයක් ඇති කිරීම.

iv. එල්ලංගා පද්ධතියේ සංවර්ධන කටයුතු වලදී, මුළු පද්ධතියට සිදුවන හායනයන් වලක්වා ගනිමින් අවශ්‍යතා තහවුරු කිරීම, ජල සම්පත් කාර්යක්ෂමව පරිහරණය සඳහා වගා කන්න පදනම් කර ගනිමින් සැලසුම් සකස් කිරීම.

v. එල්ලංගා පද්ධතිය සඳහා ඒකාබද්ධ කෘෂිකාර්මික නිෂ්පාදන සැලැස්මක් සකස් කිරීම හා එම සැලැස්මේ ක්‍රියාත්මක තත්ත්වය පසුවිපරම් කිරීම.

vi. එල්ලංගා පද්ධතියක පැවතිය යුතු අංගෝපාංග ප්‍රතිස්ථාපනය සඳහා අවශ්‍ය කටයුතු කිරීම.

vii. එල්ලංගා පද්ධති හා බැඳුනු සමාජ ආර්ථික සම්බන්ධතා ආරක්ෂා කිරීම හා ඒ පිළිබඳව පාර්ශවකරුවන් දැනුවත් කිරීම

3.3. එල්ලංගා පද්ධති කළමනාකරණ කමිටුවේ කාර්යභාරය

i. එල්ලංගා පද්ධතිය සඳහා වන සැලසුම් සකස් කිරීම, ක්‍රියාත්මක කිරීම හා පසුවිපරම් කිරීම.

ii. එල්ලංගා පද්ධති කළමනාකරණ කමිටු සාමාජිකයන් විසින් ඉදිරිපත් කරනු ලබන ගැටලු, යෝජනා සහ සැලසුම් සඳහා විසඳුම් ලබාදීම සහ විසඳිය නොහැකි ගැටලු අදාළ වන පරිදි ප්‍රාදේශීය / දිස්ත්‍රික් කෘෂිකර්ම කමිටුව වෙත යොමු කර විසඳා ගැනීම.

iii. එල්ලංගා පද්ධති කළමනාකරණයට අදාළ වාර්තාවක් අවස්ථානුකූලව ප්‍රාදේශීය / දිස්ත්‍රික් කෘෂිකර්ම කමිටුව වෙත ඉදිරිපත් කිරීම.

iv. ග්‍රාමීය වැව් එල්ලංගාවන් තුළ පිහිටි සියලුම ජල මූලාශ්‍ර හා ජල පාරිභෝගිකයින් එක්ව එල්ලංගාව අයත් මධ්‍යම ජල පෝෂක ප්‍රදේශය (Meso-Catchment) සඳහා ඒකාබද්ධ කෘෂිකාර්මික සැලැස්මක් පිළියෙල කොට ක්‍රියාත්මක කිරීම.

v. එල්ලංගාවක් තුළ කටයුතු කරන සියලුම ජල පාරිභෝගිකයන්ගේ අවශ්‍යතා අනුව ජල පෝෂක ප්‍රදේශය තුළ පවතින ස්වභාවික සම්පත් කළමනාකරණයට අදාළ තීරණ ගැනීම හා ක්‍රියාත්මක කිරීම.

vi. ස්වභාවික ආපදා, ව්‍යසන හා හානිකර මානව ක්‍රියාකාරකම් අවම කරගැනීමට හැකිවන පරිදි සියලු ජල මූලාශ්‍ර කළමනාකරණය කිරීම.

vii. එල්ලංගාව තුළ පිහිටි සියලු ජල මූලාශ්‍ර ආශ්‍රිත ජල පාරිභෝගිකයන් අතර කාර්යක්ෂම තොරතුරු සන්නිවේදන ක්‍රමයක් ස්ථාපිත කිරීම.

viii. එල්ලංගාව තුළ ඇති පරිසර පද්ධති වලට අදාළ යෙදවුම් හා නිමවුම් ප්‍රශස්ත ලෙස කළමනාකරණය සඳහා විධිමත් ක්‍රමවේදයක් ස්ථාපිත කිරීම.

ix. පවතින හා ඉදිරියේදී ඇතිවිය හැකි බවට අනාවැකි පල කරන දේශගුණික විචලනයන් සඳහා යෝග්‍ය වූ දේශගුණික සුහුරු උපායමාර්ගික සැලසුම් ක්‍රියාවට නැංවීම සහ ජල පාරිභෝගිකයන් එවැනි දේශගුණික අනුගත වීම් වලට හුරු කිරීම.

x. එල්ලංගා පද්ධතිය තුළ ජල පාරිභෝගිකයන් අතර දැනුම, ආකල්ප, කුසලතාවයන් සහ සම්පත් ඵලදායී ලෙස හුවමාරු කරගැනීම.

xi. ජල පාරිභෝගියන්ගේ ඉඩම්, ජලය හා පරිසර පද්ධතිවල ඵලදායීතාවය ඉහළ නැංවීමට කටයුතු කිරීම.

xii. කෘෂිකර්මයට හා ජල පරිභෝජනයට අදාළ වන පරිසර පද්ධති හා සම්බන්ධ සාම්ප්‍රදායික නීති හා පනවන ලද නීති බලාත්මක කිරීමට අවශ්‍ය සහය ලබා දීම.

xiii. ඉඩම් හිමි ගොවීන්ගේ හා බුක්තිකරුවන්ගේ රැස්වීම (වගා කන්න රැස්වීම) පැවැත්වීම සඳහා අවශ්‍ය මූලික තීරණ ගැනීමට ගොවීන්ට සහාය වීම, ඊට අදාල සම්බන්ධීකරණ කටයුතු සිදු කිරීම සහ පසුවිපරම් කිරීම.

xiv. එල්ලංගා පද්ධති බල ප්‍රදේශය තුළ සියලු ජල මූලාශ්‍ර සහ ඊට අනුබද්ධ අනිකුත් පරිසර පද්ධති වල තිරසර බව සඳහා අදාල රාජ්‍ය ආයතනවල මහ පෙන්වීම හා උපදෙස් අනුගමනය කරමින් සංරක්ෂණය කරවීමට ක්‍රියාමාර්ග ගැනීම.

xv. එල්ලංගා පද්ධතියට හානිකරන පාර්ශවයන්ට එරෙහිව නීතිමය පියවර ගැනීමට අවශ්‍ය කටයුතු කිරීම.

xvi. එල්ලංගා පද්ධතියේ සෑම සංවර්ධන ක්‍රියාවලියකදීම ඒ සඳහා ක්‍රියාකාරී ලෙස දායකත්වය ලබාදීම හා ප්‍රගති සමාලෝචනය කිරීම.

xvii. එල්ලංගා පද්ධතියේ වාරි කර්මාන්ත වල කන්න රැස්වීම් තීරණ ක්‍රියාත්මක කිරීමේ නත්ත්වය පසුවිපරම් කිරීම.

xviii. එල්ලංගා පද්ධතියේ වාරි කර්මාන්ත වල මෙහෙයුම් හා නඩත්තු වැඩසටහන පසුවිපරම් කිරීම.

3.4. එල්ලංගා පද්ධති කලමණාකරණ කමිටුවේ සංයුතිය

3.4.1 ප්‍රාදේශීය මට්ටම

මෙම කමිටුව අදාල ප්‍රාදේශීය ලේකම් බල ප්‍රදේශයේ පහත නිලධරයන්ගෙන් සමන්විත වේ.

i. ප්‍රාදේශීය ලේකම්
ii. ගොවිජන සංවර්ධන ප්‍රාදේශීය නිලධාරී
iii. කෘෂිකර්ම උපදේශක
iv. පළාත් වාරිමාර්ග දෙපාර්තමේන්තුව නියෝජනය කරමින් ඉංජිනේරු / තාක්ෂණික නිලධාරී
v. ගොවිජන සංවර්ධන දෙපාර්තමේන්තුව නියෝජනය කරමින් ප්‍රාදේශීය ඉංජිනේරු / තාක්ෂණික නිලධාරී
vi. කෘෂිකර්ම පර්යේෂණ හා නිෂ්පාදන සහකාර
vii. ග්‍රාම නිලධාරී
viii. සමෘද්ධි සංවර්ධන නිලධාරී
ix. ආර්ථික සංවර්ධන නිලධාරී
x. ඉඩම් පරිහරණ හා ප්‍රතිපත්ති සැලසුම් දෙපාර්තමේන්තුවේ නියෝජිතයෙකු
xi. පළාත් ධීවර දෙපාර්තමේන්තුවේ නියෝජිතයෙකු
xii. ජලජීවී වගා සංවර්ධන අධිකාරියේ නියෝජිතයෙකු
xiii. පරිසර අධිකාරියේ නියෝජිතයෙකු
xiv. පොලිස් පරිසර ඒකකයේ නියෝජිතයෙකු
xv. සත්ත්ව නිෂ්පාදන හා සෞඛ්‍ය දෙපාර්තමේන්තුවේ නියෝජිතයෙකු
xvi. කෘෂිකාර්මික හා ගොවිජන රක්ෂණ මණ්ඩලයේ නියෝජිතයෙකු
xvii. වාරි මාර්ග ඉංජිනේරු/තාක්ෂණ නිලධාරී
xviii. වන ජීවී සංරක්ෂණ දෙපාර්තමේන්තුවේ නියෝජිතයෙකු
xix. වන සංරක්ෂණ දෙපාර්තමේන්තුවේ නියෝජිතයෙකු
xx. භූ විද්‍යා හා පතල් කැණීම් කාර්යාංශයේ නියෝජිතයෙකු
xxi. ජාතික ජල සම්පාදන හා ජලපවාහන මණ්ඩලයේ නියෝජිතයෙකු
xxii. පුරාවිද්‍යා දෙපාර්තමේන්තුවේ නියෝජිතයෙකු
xxiii. සිවිල් ආරක්ෂක දෙපාර්තමේන්තුවේ නියෝජිතයෙකු
xxiv. පළාත් පාලන ආයතන නියෝජනය කරමින් බලයලත් නිලධරයකු
xxv. ගොවි සංවිධාන, කාන්තා ගොවි සංවිධාන, නිෂ්පාදන ගොවි සංවිධාන නියෝජනය කරමින් එක් එක් ගොවි සංවිධානයේ සභාපති හෝ ලේකම්
xxvi. ප්‍රජා ජල සංවිධානයක නියෝජිතයෙක්

Press Esc to exit full screen

3.5. එල්ලංගා පද්ධති කළමණාකරණ කමිටුවක නිලධාරී මණ්ඩලය - ප්‍රාදේශීය මට්ටම

i. එල්ලංගා පද්ධතියට ප්‍රාදේශීය ලේකම් කොට්ඨාස එකකට වැඩි ගණනක් පවතින අවස්ථාවක දී සහභාගී වන සෑම ප්‍රාදේශීය ලේකම්වරයෙක්ම කමිටුවේ සම සභාපති ලෙස නිල වශයෙන් කටයුතු කළ යුතුය.

ii. එල්ලංගා පද්ධතියට අදාල ගොවිජන සේවා බල ප්‍රදේශයේ ගොවිජන සංවර්ධන ප්‍රාදේශීය නිලධාරි කමිටුවේ ලේකම් ලෙස නිල වශයෙන් කටයුතු කළ යුතුය. එල්ලංගා පද්ධතියට ගොවිජන සේවා බල ප්‍රදේශ එකකට වැඩි ගණනක් පවතින අවස්ථාවන්හි දී වැඩි පෝෂිත අක්කර ගණනක් පවතින බල ප්‍රදේශයේ ගොවිජන සංවර්ධන ප්‍රාදේශීය නිලධාරි ලේකම් ලෙස කටයුතු කළ යුතුය.

iii. කමිටුවේ සභාපතිවරයාගේ උපදෙස් පරිදි ලේකම්වරයා විසින් රැස්වීම් කැඳවීම සිදු කළ යුතුය.

3.6. එල්ලංගා පද්ධති කළමණාකරණ කමිටුවක නිලධාරී මණ්ඩලය - දිස්ත්‍රික් මට්ටම

i. එල්ලංගා පද්ධතියට දිස්ත්‍රික් එකකට වැඩි ගණනක් පවතින අවස්ථාවක දී සහභාගී වන සෑම දිස්ත්‍රික් ලේකම්වරයෙක්ම කමිටුවේ සම සභාපති ලෙස නිල වශයෙන් කටයුතු කළ යුතුය.

ii. එල්ලංගා පද්ධතියට අදාළ දිස්ත්‍රික් නියෝජ්‍ය / සහකාර කොමසාරිස්වරුන් කමිටුවේ ලේකම් ලෙස නිල වශයෙන් කටයුතු කළ යුතුය. එල්ලංගා පද්ධතියට ගොවිජන සේවා බල ප්‍රදේශ එකකට වැඩි ගණනක් පවතින අවස්ථාවන්හි දී වැඩි පෝෂිත අක්කර ගණනක් පවතින දිස්ත්‍රික් නියෝජ්‍ය / සහකාර කොමසාරිස්වරුන් ලේකම් ලෙස කටයුතු කළ යුතුය.

iii. කමිටුවේ සභාපතිවරයාගේ උපදෙස් පරිදි ලේකම්වරයා විසින් රැස්වීම් කැඳවීම සිදු කළ යුතුය.

04. ශ්‍රී ලංකාවේ කෘෂිකර්මාන්තයේ තිරසර බව රඳා පවතින ප්‍රධාන අංගයක් වන ජෛව පද්ධති කළමනාකරණය සඳහා එල්ලංගා වාරිමාර්ග කළමනාකරණය විධිමත් කිරීම සඳහා පිහිටවනු ලබන එල්ලංගා පද්ධති කළමනාකරණ කමිටු [Cascade Management Committee (CMC)] තුළින් අපේක්ෂිත කාර්යභාරය ඉටුකරගැනීම සඳහා ඒකාබද්ධ ප්‍රවේශයකින් කටයුතු කරනු ඇතැයි අපේක්ෂා කරමි.

ඒ.එච්.එම්.එල්.අබේරත්න
ගොවිජන සංවර්ධන කොමසාරිස් ජනරාල්

පිටපත් :-

i. ලේකම්, රාජ්‍ය පරිපාලන, ස්වදේශීය කටයුතු, පළාත් සභා හා පළාත් පාලන අමාත්‍යාංශය
ii. ලේකම්, කෘෂිකර්ම අමාත්‍යාංශය
iii. සියලුම පළාත් ප්‍රධාන ලේකම්වරුන්
iv. විගණකාධිපති, ජාතික විගණන කාර්යාලය
v. පොලිස්පති, ශ්‍රී ලංකා පොලිස් දෙපාර්තමේන්තුව
vi. අධ්‍යක්ෂ ජනරාල්, කෘෂිකර්ම දෙපාර්තමේන්තුව
vii. අධ්‍යක්ෂ ජනරාල්, වාරිමාර්ග දෙපාර්තමේන්තුව
viii. අධ්‍යක්ෂ ජනරාල්, සම්බද්ධි සංවර්ධන දෙපාර්තමේන්තුව
ix. අධ්‍යක්ෂ ජනරාල්, වනජීවී සංරක්ෂණ දෙපාර්තමේන්තුව
x. වන සංරක්ෂක ජනරාල්, වන සංරක්ෂණ දෙපාර්තමේන්තුව

xi. අධ්‍යක්ෂ ජනරාල්, සත්ත්ව නිෂ්පාදන හා සෞඛ්‍ය දෙපාර්තමේන්තුව
xii. අධ්‍යක්ෂ ජනරාල්, ඉඩම් පරිහරණ හා ප්‍රතිපත්ති සැලසුම් දෙපාර්තමේන්තුව
xiii. අධ්‍යක්ෂ ජනරාල්, පුරාවිද්‍යා දෙපාර්තමේන්තුව
xiv. අධ්‍යක්ෂ ජනරාල්, සිවිල් ආරක්ෂක දෙපාර්තමේන්තුව
xv. අධ්‍යක්ෂ ජනරාල්, ජලජීවී වගා සංවර්ධන අධිකාරිය
xvi. අධ්‍යක්ෂ ජනරාල්, මධ්‍යම පරිසර අධිකාරිය
xvii. අධ්‍යක්ෂ ජනරාල්, භූ විද්‍යා හා පතල් කැණීම් කාර්යාංශය
xviii. සභාපති, කෘෂිකාර්මික හා ගොවිජන රක්ෂණ මණ්ඩලය
xix. සමාන්‍යාධිකාරී, ජාතික ජල සම්පාදන හා ජලපවාහන මණ්ඩලය
xx. සියලුම පළාත් ලේකම් වරුන්, පළාත් කෘෂිකර්ම අමාත්‍යාංශය
xxi. ලේකම්, පළාත් වාරිමාර්ග අමාත්‍යාංශය
xxii. සියලුම පළාත් කෘෂිකර්ම අධ්‍යක්ෂකවරුන්, පළාත් කෘෂිකර්ම දෙපාර්තමේන්තුව
xxiii. සියලුම පළාත් සත්ව නිෂ්පාදන හා සෞඛ්‍ය අධ්‍යක්ෂකවරුන්, පළාත් සත්ත්ව නිෂ්පාදන හා සෞඛ්‍ය දෙපාර්තමේන්තුව
xxiv. ව්‍යාපෘති අධ්‍යක්ෂකවරුන් - CSIAP/ CRIWMP/ SARP
xxv. සියලුම ගොවිජන සංවර්ධන නියෝජ්‍ය/සහකාර කොමසාරිස් වරුන්

(කාරුණික දැනගැනීමට සහ අවශ්‍ය කටයුතු සඳහා)

Annexture 2

Attendance of Transact walk

MINISTRY OF MAHAWELI, AGRICULTURE, IRRIGATION AND RURAL DEVELOPMENT
CLIMATE SMART IRRIGATED AGRICULTURE PROJECT (CSIAP)
PROVINCIAL DEPUTY PROJECT DIRECTOR'S OFFICE, EASTERN PROVINCE

Date: 08/08/2023 Time: 9 am to 4 pm Venue: Miyanteal
Subject: Transect walk - Miyanteal Cascade. Batticaloa.

தொ.இல.	பெயர்	ஆண்/ பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
01	த. சண்முகராசா	M	ஆசரியர்.	811172660 V	0776491263	
02	[illegible]	M	ஓந்தாச்சிமடம்	748027326V	0773191716	
03	J. [illegible]	M	[illegible]	921941390V	0752615683	
04	T. பத்மதன் [illegible]	M	( )	812453653V	0778824213	
05	[illegible]	M	[illegible]			
06	[illegible]	M				
07	[illegible]	M				
08	[illegible]	M.			0776563499	

தொ.இல.	பெயர்	ஆண்/ பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
09	P. Pratheesh	Male	Dep. Wildlife Conservation - Kallady	902092625V	075 4258843	
10	V. P. S. Karunarathna	m	Forest Department	197704303827	0770809234	
11	N. Ramakrishnan	M	P/Irrigation offr - Chenkalady	Cannot read	0774360[illegible]	
12	E. Sakthithasan	male	ADA office vanthaarumoolai	741872200V	0776325461	
13	Mrs. Navanitha - Parthiban.	Female	Dept. of Archaeology, Zonal Office, Zonal-03, Pangudaveli	875484591V.	0770505393	
14	RA. Ramkumar.	Male.	P/Irrigation Chenkalady.	791731682V.	0777756912	
15	K. Selvarasa	M	DS/GP- CDO Eralakkulam	682430532V	0775154231	

தொ.இல.	பெயர்	ஆண்/பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
16	A. S.M. Hussain	M	CSIAP	[illegible]	[illegible]	[signature]
17	F. Mariyanayagam	M	P.I.D	653222505V	0767356638	[signature]
18	T. Suthakaran.	M	CSIAP - T.O	770101778V	0741053637	[signature]
19	T. Sekaran	m	CSIAP - SSO	[illegible]	0775228125	[signature]
20	T. S. wijayasiri	M	CSIAP	850701546V	0716729975	[signature]
21	P. Kathakharan	M	CSIAP	811560839V	0772635974	[signature]
22	[illegible]	M	[illegible]		0771759870	[signature]

தொ.இல.	பெயர்	ஆண்/பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
23	க. சிவாகரன்	M	வந்தாறுமூலை		[illegible]	[signature]
24	N. Vimalraj	Male	DAD Batticaloa	861591905V	0777361896	[signature]
25	[illegible]	M	[illegible]		0776443499	[signature]
26	[illegible]	M	[illegible]	0743573212		[signature]
27	D.V. Bandulaceera	M	IDD CASP - PMU	[illegible]	0718089655	[signature]
28	H.G.K. [illegible]	M	CSIAP	0766703564		[signature]
29	[illegible]	F	[illegible]		0767154112	[signature]

தொ.இல.	பெயர்	ஆண்/ பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
30	B. நாகம்மா	F	வெல்லாவெளி			நாகம்மா.
31	B. தயாநந்தி	F	வெல்லாவெளி			த. தயாநந்தி
32	B. தங்கராசா	M	வெல்லாவெளி			[signature]
33	பா. தட்சணாமூர்த்தி	M.	வெல்லாவெளி.		0775534954	பா. தட்சணாமூர்த்தி

MINISTRY OF MAHAWELI, AGRICULTURE, IRRIGATION AND RURAL DEVELOPMENT
CLIMATE SMART IRRIGATED AGRICULTURE PROJECT (CSIAP)
PROVINCIAL DEPUTY PROJECT DIRECTOR'S OFFICE, EASTERN PROVINCE

Date: 03.08.2023 Time: 9.30a.m Venue: Vannakar Anicut & Periyavedduvan Tank.

Subject: Transect walk and Discussion with FO member

தொ.இல.	பெயர்	ஆண்/ பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
1	G. Pugalhenthiran		[illegible] Batticaloa	910691805V	0774158965	[signature]
2	P. Komalarupan	M	DS/FP CAN-201/A	892391858V	0770046849	[signature]
3	A. Anojan	M	TA- Eravurkulam Department of Agriculture	913632303V	0757923903	[signature]
4	T. Sivasinthujan	M	IE's office Chenkalady	197019300320	0777327794	[signature]
5	K. Pavakaran	M	CEA/DO/ Batticaloa.	850953970V	0759594000	[signature]
6	Eng G. Sujitharan	M	WRDS CSIAP	792511570V	0771616131	G. Suji

தொ.இல.	பெயர்	ஆண்/ பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
7	Ms.K Brabhaker.	female	IE's office, Cherlady.	825571624V	077669980 -70	
8	K. Karthiga	F	CSIAP – EP			
9	J. T. Kayanthily	F	CSIAP - EP			
10	J. A. S. Jayakody	M	CSIAP - IEP			
4	G. Achchuthan	m	CSIAP. EP.	741191734V		
12	(periyareddiyan tamas.) K. Thangarasa	m	farmer.	682563075V	0779758403	
13.	S. Sathiyaseelan	m	farmer.		0770227895	

தொ.இல.	பெயர்	ஆண்/ பெண்	முகவரி	அ.அ.இலக்கம்	தொலைபேசி இல.	கையொப்பம்
1.						
2.						
3.						
4.						
5.						

Annexture 3: List of officials and members of the first CMC.

Climate Smart Irrigated Agriculture Project (CSIAP)
Deputy Project Director's Office – Eastern Province

District: - **Batticaloa** ASC: - **Vantharumullai**

Name of the Cascade Management committee: **Miyangal CMC**

Date of Formation: **10/05/2023**

Position	Nominated Person	Position & Department/Organization	Conduct No
Secretary (ADO)	Mr.I Badurdeen	ADO, Vantharumullai	0776054334
Chairman (Rep. of DS)	Mr.A.Suthakaran	DDP, Eravurpattu DS Office	0759194061
Treasurer	T.Thavarasa	President, Sonahanvettai FO	0769451983
CO- Chairman (Rep. of FO)	Mr.N.Devarasan	Yayanodai FO Periyavettuvan	0773428229
Vice Secretary (Rep. of FO)	Mr.K.Kanthasamy	Kurukkanamadu FO	0776123791
Committee Members 1	Mr.K.Selvarasa	EDO, Eralakulam	0775154231
2	Mr.R.A.Premkuman	Provincial Irrigation Department, Chenkalady	0777569129
3	Mr.W.P.S.Karunathasa	Forest Department	07770809239
4	Mr.P.Pratheesh	Dept. of Wildlife conservation, Kallady	0754258843
5	Mrs.Navanitha Parthiban	Dept. of Archeology, Zonal office	0770505393
6	Mr.K.Pavakaran	Central Environmental Authority	0759594000
7	Mr.A.Anojan	TA – Eralakulam, DOA	0757923903

annexture 4: Guidance format for preparation of subproject proposals to raise funds to implement interventions and major activities

Format for preparing a Subproject Proposal (SPPs) to obtain funds for implementation of interventions.

1. Administrative Details:

No	Matters	Details
1	Contact details of proposal submitting agency: (postal, e-mail, telephone etc	
2	Contact Details of the implementing agency: (postal, e-mail, telephone etc.)	
3	Contact details with the position of the person responsible for providing information of the proposal (e-mail, telephone – land/mobile:	
4	Sector of the proposal (rehabilitation of tanks/catchment treatment/agriculture practices/ marketing/ institutional development/technology transferring/training/other (specify etc.).	
5	Ref. no of the concurrence of the Divisional Agriculture Committee (DAC).	

2. Sub-Project Details:

2.1. Title of the Sub-Project (Please note that the name may be very similar to that of the project development objective, but not in all time):

……

2.2. Summary of the sub-project (please give a very brief paragraph answering the questions of what it is, why it is, who it is, where it is and when it is implemented? The estimated total cost is also needed).

……

2.3. Project Location (details such as cascade, Agrarian Service Centre, Local Government Ward, GN Division etc. If the project location is considered as a highly vulnerable area to flood or drought, please indicate that too).

……

2.4. Project issue/rational/justification (This is very important and is considered as the main part of the proposal. Therefore, please highlight what the issue, how it is impacted on the farmers, how it was identified and what bad effects would happen, if it is not resolved).

……

2.5. How the critical issue was identified? (through community consultations, requests from farmer organisations, cascade management plan etc.).

……

2.6. Objective of the sub-project (please formulate this in very rational manner since it is important for the monitoring purpose).

……

2.7. Specific Objectives (Specific objectives need to be developed according to SMART form and this is also very important for the monitoring purpose.

1.

2.

2.8. Proposed sub- project activities (This part needs to be described very rationally and what actions the implementing agency proposed to address the critical issue and how it contributes to achieve the project objective?

……

2.9. Expected results (these may be economic, political, social, environment, cultural, nutritional etc.).

1.

2.

2.10. Beneficiaries (The nature of the beneficiaries – In addition to number of male and female, please indicate other characteristics also such as belonging to low-income or indigenous groups, affected by war etc.).

……

2.11. Who of the beneficiaries will participate in implementation?

2.12. How do women get benefited?

……

2.13. Who will be responsible for operation and maintenance (O&M) including estimated cost for O&M?

……

2.14. Potential Risks and strategies propose to minimize the risks

2.15. Does the project fall either under the negative list or prescribed list?

(a) If, yes, please explain whether IEE or EIA is required.

……

(b) If No, IEER/EIS format will be required.

2.16. Name/names of the proposed farmer organizations or producer organizations that could be got involved in implementing the sub-project (if applicable, details need to be annexed).

……

3. Implementation methodology

3.1. How the project is planned to be implemented and with what stakeholders etc? (describe with adequate details).

……

3.1. Tendering process (explain how it is planned to procure required materials).

3.2. Activity plan (describe the activity plan with the time frame and the responsible agencies/persons in implementation. This need to be describe using a Gantt chart).

4. Subproject Monitoring Mechanism: (This is very important. Therefore, please describe how the monitoring activities are taken place providing adequate details).

.....

5. Subproject Evaluation Mechanism: (please indicate how the implementing agency plans to evaluate the project and at what intervals).

……

6. Reporting arrangement (please describe who will take the responsibility of making both financial and progress reporting and also the expected time period).

7. Estimated Cost:

No	Major Activity	Total estimated cost in LKR	Community Contribution (LKR)	Other sources(specify) (LKR)	Amount expected from donor agency (LKR)
1					
2					

8. Submission

8.1. Authorized person to submit the sub-project proposal on behalf of the Cascade Management Committee (CMC).

8.2. Position, contact details, frank, date of submission

09. Annexes:

(Please annex all relevant additional details to provide adequate information to justify the subproject proposal and thereby to expedite the approval process.

Annex 5: Any other appropriate information

Pictorial Perspective of Transact walk


02.08.2023


02.08.2023


02.08.2023


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