

வாக் கல்கர் விலக்கு விவசாய நவினம்யமாக்கல் திட்டம் Agriculture Modernization Project



කෘෂිකර්ම අමාතනාංශය Ministry of Agriculture கமத்தொழில் அமைச்சு

ENVIRONMENTAL SCREENING REPORT

Subproject title: Construction of Dry Chilli collection Center in Batticaloa





Sri Lanka Agriculture Sector Modernisation Project (ASMP)

Prepared for Project Management Unit of the Agriculture Sector Modernization Project

Democratic Socialist Republic of Sri Lanka, Ministry of Agriculture (MOA)

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ABBREVIATIONS

ASMP	Agriculture Sector Modernization Project
DSD	Divisional Secretary Division
EMP	Environmental Management Plan
GND	Grama Niladari Division
LKR	Sri Lanka Rupees
MOA	Ministry of Agriculture
PMU	Project Management Unit
WQI	Water quality index
RDS	Rural Development Society
WRDS	Women Rural Development Society

Agriculture Sector Modernization Project

Environmental Screening Report

PROJECT IDENTIFICATION

Project title	Construction of Dry Chilli collection Center in Batticaloa
Project Proponent	Agriculture Sector Modernization Project (ASMP), Ministry of Agriculture

PROJECT LOCATION

Location (Relative to the nearest town, highway)	Batticaloa District situated in the central part of the Eastern province in Sri Lanka is bounded at the North by Verugal Aru & Trincomalee District, at the West by Polonaruwa District at the south by Ampara District and at the East by Indian Ocean. Batticaloa is the major city in the Eastern Province. The total land area of the District is approximately 2,482 square kilometers. Pasikudha is popular tourist destination with a shallow calm sea and a beautiful beach.
	The district is subdivided into 14 Divisional Secretary Divisions (DSDs). Each DSD is again subdivided into several Gram Niladari Divisions (GNDs). The total number of GNDs is 345. Each GND consists of several villages. There are 965 villages in the district. The local authorities comprise one Municipal Councils in Manmunai North, two Urban Councils in Kattankudy and Eravur Town and eleven Pradeshiya Sabas.
	Proposed dry chilli cluster project has selected farmlands across 8 villages and 6 out of them belong to the Manmunai South & Eruvil Pattu (MS&EP) Kaluwanchikudy DS division while two villages belong to the Manmunai Pattu (MP) - Arayampathy DS division.
	The project includes establishment of dry chilli cluster, establishment of Elephant fence and construction of collection center. However, this environmental screening report is prepared only considering the construction of dry Chilli collection center. Construction of Elephant fence and the dry chilli cluster implementation will be addressed separately. Manmunai South & Eruvil Pattu (MS&EP) Kaluwanchikudy DS division has 45 GN divisions and dry chilli cluster project locations are scattered in six villages namely Kaluthavali, Thetativu, Mankadu, Chddipalayam, Mahiloor and Kurukkalmadam. Manmunai Pattu (MP) - Arayampathy DS division has 27 GN divisions and dry Chilli cluster project locations are distributed across two villages namely Kirankulam and Puthukudyruppu.
	Construction of dry Chilli collection center will be taken place in Manmunai Pattu DS division and the selected location is closer to the south border of the Manmunai Pattu DS division. It provides benefits for both DS divisions and that is the reason to be in somewhere middle for both DS divisions.

	Tentative location of the processing centre of this project is shown in Annexure 2.
	1) Tentative location of dry Chilli collection center – 7º37'02"N, 81º45'57"E
Definition of Project Area (The geographical extent of the project & areas affected during construction)	Batticaloa is an agricultural economy-based district and rice production is the main agricultural activity undertaken by farmers in lowlands. The agricultural lands are the second largest land use cover of the District. Major land uses and land cover in the District are forests, agriculture, home gardens and water bodies. Forest covers 41% of the total land area and it represent 101,459 ha the while agricultural land covers 37% of the total land area representing 92,868 ha in the District. The rest of the land covers by the home Garden, water bodies, wetlands and Non-Agricultural lands.
	Kaluwanchikudy and Arayampathy DS division armers cultivate paddy on lowland in one term (Maha Seasons) per year. During Yala season (May to August), cultivation activities are limited to paddy on lowlands and upland seasonal crop cultivation is dominant. Farmers use water from minor tanks and open well for the cultivation purposes. Farmers have cultivated perennial crops such as coconut and mango on upland for their household consumption. Since it is receiving high rainfall during Maha season (September to March), some farmers are cultivating seasonal crops on their uplands. During Yala season, seasonal crops such as ground nuts, Chili and varies vegetables are cultivating by using open well/tube well water. However, open well/tube well water is not sufficient to cultivate their entire land and most of the time only around 0.5-1 acer is cultivated. However, project selects farmers only having water sources for the cultivation.
	Total Land area of the Arayampathy DS division is around 32 km ² and two villages were selected for the project. Total population of the Arayampathy DS division is around 38,405. Six villages are represented from the Kaluwanchikudy DS division and total land area 52.5 km ² . Total population of Kaluwanchikudy DS division is around 70,000. The highest population of the Arayampathy DS division is belonging to the Palamunai GN division while Kaluwanchikudy south is from the Kaluwanchikudy DS division. Hindu community is common to the both DS division and it is around 95% in the Manmunai Pattu & Eruvil Pattu DS division while Manmunai Pattu DS division represent around 67% of the total population.
	Dry Chilli cluster project will select about 100 potential chilli cultivating farmers who are fulfilling the project criteria enabling the project to cluster the farmers into one group for project intervention. The minimum requirement to be a beneficiary is having 0.5 acer land for the chillie cultivation and rest of the beneficiary selection criteria to be met as per the selection comity recommendations. Selected beneficiary list is shown in annexure 3. All these beneficiaries are entitled for the processing centre

	benefits as well. Selected location is accessible through a gravel road. A rice mill is closer to the processing center and it is around 100 m away from the location. However, the proposed construction activities and the operational activities does not have negative impact to the rice mill. Lands are generally flat terrain. Selected part for the processing center is a bare land and either side of proposed area contains both cultivated and bare lands.
Adjacent land and features	Batticaloa District situated in the central part of the Eastern province in Sri Lanka is bounded at the North by Verugal Aru & Trincomalee District, at the West by Polonaruwa District at the south by Ampara District and at the East by Indian Ocean. Batticaloa is the major city in the Eastern Province. The total land area of the District is approximately 2,482 square kilometers.
	The district is subdivided into 14 Divisional Secretary Divisions (DSDs). Each DSD is again subdivided into several Gram Niladari Divisions (GNDs). The total number of GNDs is 345. Each GND consists of several villages. There are 965 villages in the district. The local authorities comprise one Municipal Councils in Manmunai North, two Urban Councils in Kattankudy and Eravur Town and eleven Pradeshiya Sabas.
	Major land uses and land cover in the District are forests, agriculture, home gardens and water bodies. Forest covers 41% of the total land area and the agricultural land covers 37% of the total land area in the District. The rest of the land covers by the home Garden 5%, water bodies 5%, wetlands 2% and Non-Agricultural lands 5%. Other Land types such as Vacant Lands, Unproductive Lands, Sandy Area, Rockout crops etc. cover around 6% of the total land area.
	Agricultural activities include paddy cultivation and high lands are used for seasonal crops such as groundnuts, chili, long bean, and several cereal crops. Further, perennial crops such as Palmyra, coconut, Cashew are found within the selected area. addition, it was observed that many Adathoda and some native species such Kohomba, Murunga, etc.

PROJECT JUSTIFICATION

Need for the project (What problem is the project going to solve)	Chilli production is very low in the drier months of May, June, July and again in the rainy days of November, December and January. During dry period production is affected due to extreme heat causing stress to the plant which in turn reduces the fruit set. Further, the presence of peak insect pest population during the months of May to July also makes the plants less productive. Flower drops is very high during rainy season and the wet conditions is more favourable for many fungal diseases leading to loss of production. The technology package of insect proof net and poly mulching along with drip irrigation technology system would overcome the losses caused by biotic and abiotic stresses specially during drier
	months.

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	 With the dry chillie cluster project will cultivation overlaps with offseason, higher price may provide more margins to farmers. Farmers will be able to access export market for the value-added products and prevailing dried chilli import restriction could provide a ready market for local production. All above benefits are directed towards the sustainable income of the farmers. In addition, below objectives to be achieved to increase economy of selected farmers. a. Create competitive market for the value added products b. Increase young generation involvement for seasonal crop cultivation c. To introduce and demonstrate efficient and effective water d. management in dried chilli production
	With the expansion of cultivation, high quality product will have higher prices and main purpose of the construction of collection centre is to ensure competitive market price for Chilli by adding economic values beyond the existing value.
	In addition, below objectives to be achieved to increase economy of selected farmers.
	 a) To introduce machineries to improve the quality of dry Chilli b) To provide storage facilities prior releasing to the market c) To introduce various value-added products to the market d) To increase direct marketing opportunities
	Further, Compost unit facilities with necessary machinery and equipment will be provided to the societies for them to produce their own compost.
	Since organic manure application envisages a large portion of cost of cultivation. The said compost unit will help the societies to produce their own compost on commercial basis and sell it to the membership for a fee making it as viable business.
Purpose of the project (What is going to be achieved by carrying out the project)	The use of technology reduce cost of production on one hand and increase the yield on the other thereby increased margins to the farmer in chilli cultivation. Further, the chilli collection center is used for store, dry and to facilitate direct market opportunities. Electric drier provided to the society will be used to dry the ripen fruit for uniform drying and appearance. This will reduce the cost of manual sun drying while increasing the quality.
	Dried Chili collection center is driven to achieve below objects.
	 a) To introduce machineries to improve the quality of Chilli b) To provide storage facilities prior releasing to the market c) To introduce various value-added products to the market d) To increase direct marketing opportunities

	Simply, ultimate purpose of the overall project is to have sustainable income generation by the agricultural activities. Finally, products should have required value additions to be competitive at the market and proposed processing center will full fill the requirements in different ways. Currently, open drying of Chilli is taking place and required humidity levels are not possible to control by the farmers. Chilli drying machines will make sure the relevant qualities are met. Wastage of these types of crops are higher due to lack of acceptable storage conditions and providing proper storage facility is also can be considered as a key purpose of the project. Further, different value-added products will be directly expose to the market without any interfering of intermediate buyers.
Alternatives considered (Different ways to meet the project need and achieve the project purpose)	The "site alternative" would mean feasibility of meeting the project needs at the selected cluster. Chilli is an important cash crop to the farmers in Batticaloa district. There is potential to expand this further, as land and water resources are available in the district. Selected villages have well- established farmer organisations already and production of seasonal crops available immediately. There are experienced ground nuts, chili and vegetable farmers and all these upland cultivations rely on the technological support. Most of the farmers have large scale, low flat farmer-based lands with traditional cultivation practices. These farmers capable of cultivating chilli of their entire uplands, if they are getting technological guidance during the cultivation and also support on value additional services during the post harvesting processes. Further an attitude and market-led vision of field staff is highly acceptable. Hence, the selected area is highly supportive to meet the project needs within short period of time with the expected quality.
	The "technology alternative" would mean different technology applications to meet the project needs at the selected cluster. On farm technological applications will be introduced by ASMP with the dry chili cluster development plan. Hence, these technological improvements will result the consistent dry chili production to meet the project objectives. Farmer assets such as Hybid chilli seeds, Seedling trays, Drip tape Irrigation system, Insect proof net, GI pipes and Polymulch film will be provided and society assets will be provided to complete the project. Further, the construction of dry Chilli collection project is to provide value additional services during the post harvesting processes. Hence, technological benefits will be there for the existing farmers.
	The "no-action" alternative would mean that no Dry chilli cluster project undertake by the ASMP and hence no irrigational support for the existing cultivators in the selected area. That will lead the same agricultural activities and economy of farmers won't increase. Therefore, conventional farm practices, low productivity, low quality and low income will continue to dominate the economy of the farmers and agriculture sector will not develop in selected villages.

PROJECT DESCRIPTION

Proposed start date	November 2021
Proposed completion date	June 2022
Estimated total cost	LKR 35 million
Present land ownership	Processing centre land: LRC (Consent letter is attached in annexure 4)
Description of the project (With supporting material such as maps, drawings etc. attached as required)	Agriculture Sector Modernization Project identified dried chilli also one of the market competitive and remunerative crops with potential for value addition. Chilli is one of the main spice ingredients in cooking. Thus it should be made available without shortage and price hikes. The country's annual dried chilli requirement of 60,000 mt is largely imported and supplied. Cost of annual import amounts to about Rs. 10 billion. The immediate objectives of the modernization are to increase productivity, decrease cost of production, improve value addition and provide steady market through buy back agreement. The ultimate goal is increased income and employment opportunity in production and value addition. Chilli processing center mainly focus on value addition and post harvesting activities of Chilli. Electric drier provided to the society will be used to dry the ripen fruit for uniform drying and appearance. This will reduce the cost of manual sun drying while increasing the quality. However, construction of the Chilli processing center is the final subproject under the series of projects taking place by ASMP covering these two DS divisions. Construction of Chilli processing center is to add values for the hilli produced by the surrounded farmers. It will provide Chilli drying facilities and also required machinery to process up to marketable varieties of valificult at home and this processing center will provide facilities to store value added products until get the market access. Once the operation is established, controls of the processing center will be taken by the farmer society. There will be permanent employment opportunities and also daily paid employment opportunities attached to the activities involved. There are altogether about 100 leading farmers who will be benefitted with existing plantations in the most suitable location with maximum exposure to a large number of farmers. The project is keenly looking to get on board at least 40% of female representation for the project. The selection of such farme

Project Management	A PMU was established under the Ministry of Agriculture to implement proposed project activities.
Team	Project Director
	Agriculture Sector Modernization Project Ministry of Agriculture No. 123/2 Pannipitiya Road, Battaramulla Tel: +94 112 877 550 Fax: +94 112 877 546 Email: projectdirectorasmp2@hotmail.com Web: https://www.asmp.lk/
	Deputy Project Director – Eastern Province Agriculture Sector Modernization Project Ministry of Agriculture
	Environmental and Social Safeguards Specialist
	Agriculture Sector Modernization Project
	Ministry of Agriculture
	No. 123/2 Pannipitiya Road,
	Battaramulla
	$101: +94 112 877 550$ $E_{2V}: \pm 04 112 877 546$
	Fmail: saniavadms@hotmail.com
	Web: https://www.asmp.lk/
	Nature of Consultations and Inputs Received
	Consultations with Environmental and Social Safeguard Specialist/ PMU
	Great potential to increase farmers' income with less labour and
	inputs.
	Ability to save water in the reservoir for the next cultivation season
	and minimize water crisis during Yala season.
	Enective mechanism to attract young farmers for commercial agriculture
	 Almost all the farmers cannot cultivate their entire farmland (3)
	acres) due to lack of water
	• Farmers are waiting up to the completion of the project to extend
	the cultivation in their entire.

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DESCRIPTION OF THE EXISTING ENVIRONMENT

PHYSICAL FEATURES -	ECOSYSTEM COMPONENTS
Topography and terrain	The topography of the district varies from flat to undulating. The elevation of the District is not exceeding 8 meters in height above the sea level. It consists of undulating plains and alluvial flats watered by rivers from the mountains of uva and central province.
	Agro Ecological region represents the combinations of the characteristics of climate, soil and relief which basically determine the land use and management requirements of a given location. Batticaloa District is having one major agroecological region namely Low country Dry Zone (DL). DL region in the district is again sub divided into three sub regions. These Sub regions are DL2B, DL2 and DL4. 96% of the total land area of the Batticaloa district represent DL2B.
Soil (type and quality)	The dominant soil group (approximately 21% of the total extent of land) in the District is the Alluvial soil in flat terrain. The next dominant soil group is Reddish Brown earths, Non calcic Brown soils & Low Humic Glay soils; it occupies about 18% of the total land area. Rest of the area covers with several soil groups. They are Non Calcic Brown soil & Low Humic Glay soil in undulating terrain, Non Calcic Brown soil on old alluviam & solonetz in undulating terrain, Reddish Brown earths & Low Humic Glay soil in undulating terrain, Regosols on recent beach and dune sands in flat terrain, Solodized Solonetz and Solonchaks in flat terrain. There are some erosional remnants and Rock Knob Plains in the area. It covers 03% and 11% respectively. The physical and chemical properties of these soils are suitable for agriculture. However, the major constraint to crop production is the low available water rather than the limitations of the soils. Alluvial soil has the highest productivity with respect to other soils. It is present mostly along rivers and is carried by its streams during weathering of rocks. The soil is generally covered by tall grasses and forests, as well as a number of crops, such as rice and wheat. Alluvial soil is one of the best soils, requiring the least water due to its high porosity. The consistency of alluvial soil ranges from drift sand and rich, loamy soil to silt clays. Reddish-brown earth soil is a well-drained soil found on the crest, upper slope, and mid-slope physiographic positions within undulating and rolling landforms. Depth of soil varies according to the physiographic position of the landform. On hilly terrain, surface soil is eroded and quarts rich subsurface soil are gravelly sandy loam. Available soil moisture content is very low and therefore very susceptible to drought conditions. The soil is susceptible to soil erosion and should not be exposed. It has low organic matter content but is fair in available nutrient.
	Low Humic Gley soil is a deep and poorly drained soil found in flat terrain. The texture is sandy clay loam throughout the profile. CaCO3 depositions

	are present in the subsurface soil as concretions and it is a potential saline soil. Available soil moisture content is medium. It has low organic matter content and low available nutrient. Soil is used mainly for irrigated paddy.						
	The dominant soil type of the Batticaloa district is Alluvial soils of variable drainage and texture; flat terrain and it is 21% of the total land area. Second highest soil type of the district is Reddish Brown earths, non-calcic Brown soils & Low Humic Glay soil in undulating terrain and it is around 18% from the total land area.						
Surface water	Water bodies represent 5% of the total land area of the Batticaloa district						
(Sources, distance from the site, local uses and quality)	and 2,104 ha of natural ponds. MS&EP DS division has 28 tanks while 8 tanks are distributed across the Manmunai Pattu (MP) DS division. None of these two DS division has rivers or channels. There are no major perennial rivers that could be tapped to provide irrigation for cultivation.						
	As there are no perennial rivers, seasonal rivers drain the rainfall water into the tank. Nevertheless, surface runoff water is stored in the irrigation tanks. However, there are certain environmental issues, particularly the inland salinity and major and minor irrigation tank pollution that need careful consideration in the district. Tanks, rivers or any other channels were not found in the selected project locations.						
Ground water (Sources, distance from the site. local	In Batticaloa district deep confined aquifers of more than 60m deep have a relatively high recharge rate. The sedimentary limestone is highly faulted and it separates the aquifer into a series of isolated blocks, thus forming a number of separate groundwater basins.						
uses and quality)	Based on field investigations, it is not possible to exactly quantify the availability, yield, and capacity within the project area. The groundwater table could be observed at 5-6m depth from the ground surface. The water table goes deeper during the dry season; however, it rises up during the rainy season. Groundwater is used for drinking purposes through dug wells, however, "hard water" is found in the project area.						
	Agricultural wells are a common sight in the area which is used to extract groundwater to irrigate small areas of high-value crops or to provide a supplementary and secure source of water for the paddy crop. Closer to lagoons and the shoreline there is a possibility of contaminating groundwater by salts.						
Air quality	Any major air pollution sources in the vicinity of the project site are not						
(Any pollution issues)	the area. However, <u>https://www.breezometer.com/air-quality-map/air-quality/sri-lanka/Batticaloa</u> shows that the Air Quality Index (AQI US) of Kirankulam is 35/500 and PM _{2.5} is the dominant pollutant.						
ECOLOGICAL FEATURE	S – ECOSYSTEM COMPONENTS						
Vegetation	Major land uses and land cover in the District are forests, agriculture, home gardens and water bodies. Forest covers 41% of the total land area						

(Trees, ground cover, aquatic vegetation)	and the agricultural land covers 37% of the total land area in the District. The rest of the land covers by the home Garden 5%, water bodies 5%, wetlands 2% and Non Agricultural lands 5%. Other Land types such as Vacant Lands, Unproductive Lands, Sandy Area, Rockout crops etc. cover around 6% of the total land area.				
	Agricultural activities include paddy cultivation and high lands are used for seasonal crops such as groundnuts, chili, long bean, and several cereal crops. Further, perennial crops such as Palmyra, coconut, Cashew are found within the selected area. addition, it was observed that many Adathoda and some native species such Kohomba, Murunga, etc.				
Presence of wetlands	Batticaloa district has water bodies covering around 5% of the total lan area. Annexure 5 shows the distribution of water bodies of the Batticalo district. These water bodies include lagoons, major and minor tanks natural ponds, and rivers and streams. There were no Wetlands observe within the selected project locations.				
Fish and fish habitats	Livestock and Fishing play a supplementary role in the district's economic activities. Nearly 14,000 fishermen are found in the Batticaloa district. Manmunai Pttu DS division has around 700 fishermans and it is higher than the agricultural occupation in the DS division. Manmunai south & Eruvil Pattau DS division has around 800 fishing employees. Associated waterways were not identified as fish habitats around the selected areas.				
Birds (waterfowl, migratory birds, others)	Water bodies/Wetlands, Coastal Natural Habitats associated vegetation, natural scrublands and abandoned paddy fields can be potential bird habitats including migratory birds. Many large birds such as owls, eagles and hawks hunt rodents.				
Presence of special habitat areas (special designations and identified sensitive zones)	Some areas in the district are protected by gazette notifications. The protected area network includes Forest, Wild life reserves and corridors, other state forest lands, Grass Lands, Archeologically and Historically significant places, Areas of natural beauty and natural features of exceptional value; Water bodies/Wet lands, Coastal Natural Habitats and Urban Forests/Urban Parks.				
	Batticaloa district has protected areas such as forest reserves, archaeological reserves, coastal reserves. More than 99% of the protected area includes forest reserves and water bodies. Refer to Annexure 6 which shows the reserve forest of Batticaloa district. However, the selected project areas have not been identified as special habitat areas.				
5.3 OTHER FEATURES					
Residential/Sen sitive Areas (E.g., Hospitals, Schools)	Selected project locations are scattered in six villages namely Kaluthavali, Thetativu, Mankadu, Chddipalayam, Mahiloor and Kurukkalmadam. Manmunai Pattu (MP) - Arayampathy DS division has 27 GN divisions and project locations are distributed across two villages namely Kirankulam and Puthukudyruppu. Commonly, there are few Hindu temples are found across these villages. As per the selected random farmland, there is a				

	Hindu temple call Vishnu Kovil around 200m away. Distances for the closest residential/sensitive locations are varying from the respective farmlands. The closest school is called Bt /Pd/ Mankadu Saraswathi Maha Vidyalayam and its around 750m away from the selected farmland.
Traditional, economic and cultural activities	Out of the 14 DS divisions of the Batticaloa district, only two DS divisions are selected have been selected for the implementation of the Agriculture Sector Modernization Project (ASMP). Manmunai South & Eruvil Pattu (MS&EP) Kaluwanchikudy DS division has 45 GN divisions and this selected project locations are scattered in six villages namely Kaluthavali, Thetativu, Mankadu, Chddipalayam, Mahiloor and Kurukkalmadam. Manmunai Pattu (MP) - Arayampathy DS division has 27 GN divisions and project locations are distributed across two villages namely Kirankulam and Puthukudyruppu.
	Six villages of Manmunai South & Eruvil Pattu (MS&EP) Kaluwanchikudy DS division represent farmlands from different GN Divisions. Total population of these selected GN divisions is 29,494. It represents 14,377 male and it is 49% of the total population. Female population of these selected GN divisions is 15,117 and it represent 51% of the total population. All are Sri Lankan Tamil and only 7 Buddhist were found in the selected GN divisions. 96% of the selected GN division is Hindu and 2% represent Roman catholic.
	Only around 57% of the population is between 20-60 age category in the selected GN divisions of Manmunai South & Eruvil Pattu DS division. Nearly 12.0% of the population of the selected GN divisions is above 60 years of age and 31% of the population is below 20 years of age. The average family size in the GN division is 3.0. As per the age structure, nearly 67% of the population have registered as voters eligible for voting in the public elections. Accordingly, there are 3468 receiving Samurdhi in these GN divisions.
	Two villages from Manmunai Patty DS division were selected for the project and these farm lands are scattered across few GN divisions. Total population of these selected GN divisions is 10,706. It represents 5,279 male and it is 49% of the total population. Female population of these selected GN divisions is 5,437 and it represent 51% of the total population. 100% Sri Lankan Tamil ethnicity was found in the GN divisions. 72 Roman catholic, 122 other Christians are found while all others are Hindu.
	Only around 58% of the population is between 20-60 age category in the selected GN divisions of Manmunai Pattu DS division. Nearly 10% of the population of the selected GN divisions is above 60 years of age and 33% of the population is below 20 years of age. The average family size in the GN division is 3.0. However, only 278 farmers are found in these selected GN divisions. Accordingly, there are 1,944 receiving Samurdhi in these GN divisions.
Archaeological resources	Batticaloa district does not have considerable land extent having archaeological resources. Total archaeological reserved land area is

PUBLIC CONSULTATION

The consultation was held with the support of the project director, project engineer, and agricultural scientist of the Northern Province and the project coordinator of the selected DS division. Overall project implementation and future plan were discussed with them and deep level information was collected. They were trying hard to rehabilitate and distribute water as soon as possible to the beneficiaries.

Farmer gatherings were not conducted due to the pandemic situation. However, on-field discussions were conducted with benefitted farmers while ensuring COVID 19 safety precautions. The conclusion of the consultation was clear, and it was to rehabilitate the pump house and provide water immediately starting from next season onwards. Further, the following comments were taken during the discussions held with farmers in the selected area.

• Existing issues due to an unavailability of a collection center

During high heat and festivals periods they fetched very high price. Again, in rainy and also in lock down periods price fell far below and sometime they could not even dispose their produce and allowed to go waste. If the producer group can store Chilli in good condition until the next peak price period, they will be able to get higher income. Thus, processing the excess produce during glut period is very essential for the producer groups to get higher margins for their membership. If they were able to collect at one place, they will be able to grade it and sell at higher price than at present. Thus, collection centre is necessary for the members to bring their produce to one location and do the value addition like grading, packing etc. before disposal

• Direct access to the market

As both DS divisions do not have a collection centre of their own, producer groups have to visit each membership fields and collect their produce for sale. Further, in this instance producer groups sells the produce without grading. In past years, producer groups sold their dry Chilli ranging from Rs 450 to Rs 550 per kg. Thus, there is a high-income fluctuation to farmers and farmers looking to have a higher and stable price in the future.

Concerns were raised from beneficiaries that they are not competent enough to challenge the current market with the existing quality of the Dry Chilli. Less damaged, and red-looking dry chilli is having high price at the market and that is to be obtained from the Chilli drying machines. Further, they will be exposed to the market as a united farmer organisation and it will reduce the high price fluctuation with the higher bargaining power.

• Expansion of Chilli cultivation

With the availability of high-quality value-added product in hand, farmers will get economic benefits by directly engaging with local market. There are series of projects to be taken place to increase the cultivation of Chilli and the proposed processing center will make sure the high-quality product in the market with higher price. This will increase the income of farmers and more engagement is expected.

• Failure on export market

One of the main objectives of the project is to full fill the local market-based production and doubt were highlighted that what will happen if local market demand is lower than the supply. Are there any options available in the local market for excessive production?

• Other ASMP projects

Beneficiaries are well aware on the projects proposed by the ASMP and waiting for the completion of lift irrigation project at first. Some beneficiaries already cultivating Chili up to 0.25-0.5 acers along with the other crops. They are very keen to expand the chili cultivation once the technological package received and willing to take technical support towards the high yield.



Figure 1: Selected land for the construction

The majority of the community is willing to support the project activities as they will benefit from the proposed sub-project directly. Summary of social screening feedbacks is shown below.

Name	Details	Matter Discussed/Suggestions	
Vaiyamuththu Shashikumar	is a 47 years old farmer having six family members including himself. He is a leader of one of the farmer organisation and he has 1 acer deed land.	Only a part of the land is cultivated twice a year using tube well water. The current water level of the open well is around 20 feet below the ground level. However, he is managing cultivation activities using tube well water and mainly seasonal crops are cultivated such as Pathola, Long bean and Chilli. He sells crops in to the Arayampathy market and current price of green chilli is around 150 LKR. He is waiting to get the technological support to extend chilli cultivation up to entire land and he hopes to manage water with the introduction of drip irrigation system.	
Shivaneshthura Shivarasha	he is a 46 years old farmer with five family members. He also has 1 acer deed highland and it is the land proposed for the chilli cultivation.	Chilli and Brinji is the main crop he is cultivating using a tube well. However, he sends the crops to the Kalmunai market which is bigger than the Arayampathy market. Currently, seasonal crops are cultivated based on the water availability of the tube well. As per his experience, it is enough to cultivate two seasons marginally.	
A. Kularathanam	Kularathanam is a 50 years old farmer having four family members. He was representing Puthukudyruppu South and he has 2 acers of Cashew cultivation.	Two acer highlands is used for Cashew and 1 acer land is currently used for seasonal crop cultivation. Tube well water is used for the cultivation and he already has one acer of Chilli cultivation. His ambition is to get the technical support from the project for 0.5 acer cultivation package and to extend up to his entire land.	
K.Satheesilam	He is 54 years old farmer having 1 acer rent land. He has four family members including himself.	Chilli and Brinji is the main crop he is cultivating using a tube well. He sends his crop to the Arayampathy market and he is not satisfying with the current market price of dry chilli.	
including himself.tImage: transform of transformation of tr		Entire 1.5 acer of high land is used for seasonal crops and he claims that he is extracting enough water from the tube well for his entire cultivation. He is already having 1 acer chilli cultivation. He is very keen on the benefits which are derived from the Chilli collection and processing center	
N. Kannasundaram	He is a 51 years old farmer from Mankadu. He has four family members and 1 acer permit land is used for the cultivation	Main crop is green chilli and lady fingers are cultivated to full fill the remaining part of the land. He also uses wate from tube well. His closest market is Kalmunai and he does not satisfy the price of Hybrid chilli. He expects to have stable high price for the chilli through the collective approch from the proposed processing center.	

K.Nagalingam	She is 48 years old farmer having 3 family members.	She has 1 acer deed high land and water is used from tube well for the cultivation. Mainly chilli and lady finger are cultivated using flood irrigation. She is interested on the drip irrigation technology and issues related to the pesticides were discussed.
 M. Nawanaththana Raja (38 Years old female farmer) S. Kopalasingham (48 Years old farmer) S. Suntharalingam (40 Years old farmer) P. Pakeelatharan (44 years old farmer) M. Rajendram (39 years old farmer) 	All these farmers are having 1 acer deed high land and all of them are using tube well water for their cultivation	Lady fingers are more common among these farmers and few other seasonal crops are available. Existing wild animal threats were highlighted. It was identified that the crop damages are mainly due to Rabits and Monkeys.

1



Figure 2: Onsite discussions with farmers

• Existing environmental issues

Proposed construction will be taken place in a bare land closest structure is a rice mill which is around 100 m away from the selected location. No anticipated negative impacts were identified during the construction activities.

ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

SCREENING FOR POTENTIAL ENVIRONMENTAL IMPACTS

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
1	Will construction and operation of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in water bodies, etc)	v		1) Low-moderate	Construction of processing centre will take place at a bare land and construction activities will slightly change the topography. Debris/unsuitable excavated or clearing material should not be disposed improperly.
2	Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?	V		Moderate	In terms of construction of the building will have substances which could harm human health and environment such as cement. During the construction transport of material and construction activities including vegetation removal, site preparation, material piles will emit dust, and fugitive particles. However, as the affected area is small, and mitigation is straight forward; therefore significance of the effect can be considered as low.

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
3	Will the Project produce solid wastes during construction or operation?	V		Low	Lands clearing and preparation stage there can be an insignificant solid waste generation. During the operation solid organic waste will be produced as crop residuals.
					During the construction of the building, excavated material and debris will be generated and contractor is responsible to manage this waste properly until it is disposed properly. Solid waste collected on the site should be disposed by the contractor himself at a suitable location.
					During the operation, solid waste will be generated such as residual crops from the value addition process. Since it is an operation center having machineries, there will be disposable machinery or related parts with less frequency. Solid waste collected on the site should be disposed by the farmer societies themself at a suitable location.
4	Will the Project release pollutants or any hazardous, toxic or noxious substances to air?		v		

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
5	Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?	v		Low	During construction of processing center, noise and vibration impacts can be anticipated. Site clearing, excavation, backfilling, compaction, loading and unloading of materials are potential sources of noise and vibration during construction. Further, Noise and vibration impacts can be anticipated during operational activities of the processing enter.
6	Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater or coastal wasters?		V		
7	Will the project cause localized flooding and poor drainage during construction		v		The project will not cause localised flooding
	Is the project area located in a flooding location?				

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
8	Will there be any risks and vulnerabilities to public safety due to physical hazards during construction or operation of the Project?	V		Low	No severe health and safety hazard identified. Better hazard identification and prevention and corrective measures during operation will eliminate the risk associate. All the safety measures deployed in "Best Engineering Practices" need to be adopted during the construction period. Safety issues in terms of injuries due to construction work, using heavy machinery could be anticipated. However, such incidences can be avoided with proper precautions exercised on health and safety aspects.
9	Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the project?	V		Low	Chilli transportation from cultivated lands to post harvesting storages and transportation from post harvesting storages to shipments/or any other location will be taken place. No creation of significant environmental problems.
10	Are there any routes or facilities on or around the location which are used by the public for access to recreation or other		٧	N/A	

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
	facilities, which could be affected by the project?				
11	Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the project?		v		No areas or features with high landscape or scenic value on or around the location.
12	Are there any other areas on or around the location which are important or sensitive for reasons of their ecology e.g. wetlands, watercourses or other water bodies, the coastal zone, mountains, forests which could be affected by the project?		v		No important or sensitive areas identified on the project location affected by the project.
13	Are there any areas on or around the location which are used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, migration, which could be affected by the project?		v		No such identified areas
14	Is the project located in a previously undeveloped area where there will be loss of green field land		v		No such Greenfields are encountered.

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
15	Will the project cause the removal of trees in the locality?		v		No removal of trees required.
16	Are there any areas or features of historic or cultural importance on or around the location which could be affected by the project?		v		No features of historic importance identified
17	Are there existing land uses on or around the location e.g. home gardens, other private property, industry, commerce, recreation, public open space, community facilities, agriculture, forestry, tourism, mining or quarrying which could be affected by the project?		V		
18	Are there any areas on or around the location which are densely populated or built-up, which could be affected by the project?		v		No densely populated or built-up areas affected by the project.
19	Are there any areas on or around the location which are occupied by sensitive land uses e.g. hospitals, schools, places of worship, community facilities, which could be affected by the project		v		No sensitive land-uses in the vicinity affected by the project.

	Screening question	Yes	No	Significance of the effect (Low, moderate, high)	Remarks
20	Are there any areas on or around the location which contain important, high quality or scarce resources e.g. groundwater, surface waters, forestry, agriculture, fisheries, tourism, minerals, which could be affected by the project?		V		the ongoing period.
21	Are there any areas on or around the location which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?		v		No location where any environmental standards exceeded or have environmentally polluted.

ESR – Dry Chilli collection center in Batticaloa

ENVIRONMENTAL MANAGEMENT PLAN

Contractor's responsibility for mitigating adverse environmental issues raised during agricultural activities

SN	Potential Environmental Impacts and Risk Level	Key pro activities cau the impact	ct og Mitigation Measures proposed and action to be implemented by the Contractor
1	Public complaints and lack of community support for the project implementation	 Information Disclosure am Stakeholders Community Outreach activ including traini 	 Discussions should be conducted with the beneficiary farmers including women, and youth The beneficiary farmers selection based on the criteria which were developed at stakeholders meeting and identifying of beneficiary farmers were undertaken transparently Residents in the area will be briefed on the project, purpose and design, and outcomes with a comprehensive discussion Communication and training activities focusing on women, youth, and farmers who are poor in communication The contractor should take note of all impacts, especially temporary issues and safety hazards that will be of concern to the cropping pattern of the farmers. All possible impacts will be mitigated as stipulated in the EMP to mitigate them The contractor will maintain a log of any grievances/complaints and actions are taken to resolve them A copy of the EMP should be available at all times at the project supervision office on site
2	Spreading COVID 19 virus	 All activities 	 The contractor must ensure that all workers, including managers are well trained on COVID 19 safety precautions published by health ministry. All construction activities should follow the 'INTERIM GUIDANCE ON COVID-19 (VERSION 1: APRIL 7, 2020)' recommended by World Bank's Operations Environmental and Social Review Committee

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
3	Water Quality	 Spill out of fuels and lubricants from machinery Vegetation removal 	 Avoid stockpiling of earth fill especially during the monsoon season unless covered by tarpaulins or plastic sheets Prioritize re-use of excess spoils and materials in the construction works. Install temporary silt traps or sedimentation basins along the drainage leading to the water bodies; Place storage areas for fuels and lubricants away from any drainage leading to water bodies; Dispose of any wastes generated by construction activities in designated sites.
			 Irrigation works must be planned to be carried out during times of lowest flow
4	Exposing and damaging of physical cultural resources (PCR)	 Site preparatory work Vehicle and machinery movements 	 Upon discovery of physical cultural material during project implementation work, the following should be carried out Immediately stop construction activities With the approval of the resident engineer delineate the discovered site area. Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remains, a night guard should be present until the responsible authority takes over. Through the Resident Engineer, notify the responsible authorities, the Department of Archaeology, and local authorities within 24 hours. Submit a brief chance to find the report, within a specified time period, with the date and time of discovery, location of discovery, description of finding, estimated weight and dimension of PCR, and temporary protection implemented. Responsible authorities would be in charge of protecting and preserving the site before deciding on the proper procedures to be carried out. An evaluation of the finding will be performed by the Department of Archaeology who may decide to either remove the PCR deemed to be of significance. further

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
			 excavate within a specified distance of the discovery point and conserve on-site, and/or extend/reduce the areas demarcated by the contractor, etc. This should ideally take place within about 7 days. Construction work could resume only when permission is given from the Department of Archaeology after the decision concerning the safeguard of the heritage is fully executed.
5	Spreading of Invasive Alien Species	 Vegetation clearing Material transportation Desilting 	 Close monitoring of transportation, storage of borrowing material for the spread of any invasive species must be done. Vehicles should be covered during transportation of cleared vegetation to and from the construction site. Borrow material to be brought from properly identified borrow pits and quarry sites, the sites should be inspected in order to ensure that no invasive plant species are being carried with the burrowing material. Washing the vehicles should be conducted periodically to prevent carrying any invasive species The construction site should be inspected periodically to ensure that no invasive species are establishing themselves at the site. Good housekeeping
6	Noise Pollution & Vibration that can affect nearby structures	 Operation of equipment and machinery. Material storage and transport Use of hammer type pile driving 	 Working time for noise/vibration generation activities should be restricted and carried out only from 6.00 am to 6.00 pm. All equipment and machinery should be operated of noise not to exceed 75 dB (during construction) as practical as possible. Regularly maintenance of all construction vehicles and machinery to meet noise control regulations stipulated by the CEA in 1996 (Gazette Extra Ordinary, No 924/12). If the construction activities happen during the night-time, it is necessary to maintain the noise level at below 50 dB.

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact		Mitigation Measures proposed and action to be implemented by the Contractor
		will generate high noise and vibration.	•	Use of mechanically driven saw blades for tree felling will make the noise levels restrict to only a short period of time. Construction equipment and machinery should be maintained in good condition. The contractor shall submit the list of high noise/vibration generating machinery & equipment to the PE for approval
7	Air Pollution including dust generation that can affect nearby vegetation and households	 Site Preparation activities setting up of material storage yards, and removal of vegetation Transport of construction material and storage on site 	•	In the construction method statement, the contractor should clearly designate areas for maintaining material stockpiles, waste stockpiles, labor camps, and vehicle maintenance yards. These dust-emitting sources should be located away from human activity and natural drainage paths as much as possible. All heavy equipment and machinery shall be fitted in full compliance with the national and local regulations. Stockpiled soil and sand shall be slightly wetted before loading, particularly in windy conditions. The site should be wetted at least 2/3 times a day during dry weather to keep dust levels low. Vehicles transporting soil, sand, and other construction materials shall be covered. Limitations to the speeds of such vehicles are necessary. Transport through densely populated areas should be avoided. Regular and proper maintenance of construction vehicles and machinery to avoid air emissions. There should be no burning of wastes on-site. Until removal to arranged disposal sites, waste from demolition shall be held stockpiled in a place with minimal interference with local drainage paths and

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
8	Solid Waste Disposal	 Site clearing Construction waste Waste from labour resting areas 	 The contractor shall make a list of all types of waste resulting from the construction activity, and obtain direction from the LA on possible disposal sites for each waste type. Any hazardous type of waste shall be dealt with special care and instructions from the LA. The contractor shall document all types and quantities of waste generated and removed from the site and the disposal locations. The contractor shall remove waste from the site each day and dispose of the waste in
9	Blocking of surface drainage paths leading to localized flooding and ponding of water	 Site Preparation including provision of access roads, material/waste piles 	 the LA approved site/s. Until transported out to arranged disposal sites, debris and waste from site preparation work and desilting shall be stockpiled in a place with minimal interference with local drainage paths and obstruction to traffic and local residents. The contractor shall identify areas for stockpiling material and waste. The stockpiles should be suitably covered to minimize wash-offs to nearby waterways. If impacts to surface drainage cannot be avoided leading to ponding of rainwater and inconvenience to people, the contractor must provide an adequate surface drainage system to safely remove water from the site to the canal to avoid on-site ponding or flooding. Proper planning to avoid construction during the rainy season. Preventing total blockage of streams / providing alternative drainage paths during construction.
10	Public/occupational safety hazard	 Site clearing, storage of equipment, material etc. Increased traffic of 	 Training 1. The contractor must ensure that all workers, including managers, are trained on occupational health and public safety risks and mitigation measures for the site, prior to commencement of construction. Personal Protective Equipment

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
		heavy vehicles for material transportation Noise and vibration of construction machinery	 All workers will be provided with necessary PPEs (basic should include a safety helmet, protective footwear, and high visibility jackets). In addition, the contractor shall maintain in stock at the site office, gloves, ear muffs, goggles, dust masks, safety harness, and any other equipment considered necessary. A safety inspection checklist should be prepared to take into consideration what the workers are supposed to be wearing and monitored. Site Delineation and Warning Signs The entire construction site should be delineated using devices such as cones, lights, tubular markers, orange and white stripes, and barricades to inform oncoming vehicular traffic and pedestrians in the area about work zones. All digging and installation work items that are not accomplished should be isolated and warned of by signposts and flash lamps in the nighttime. Dangerous warning signs should be raised to inform the public of particular dangers and to keep the public away from such hazards. Trenches should be progressively rehabilitated once work is completed. Overloading of vehicles with materials should be controlled Construction wastes should be removed as much as possible within 24 hours from the site to ensure public safety. The safety inspection checklist must look to see that the delineation devices are used, whether they are appropriately positioned if they are easily identifiable, and whether they are reflective.
			12. Work zone workers use tools, equipment, and machinery that could be dangerous if used incorrectly or if the equipment malfunctions. Inspections must be carried out

SN	Potential Environmental Impacts and Risk Level	Key activities the impact	project causing	Mitigation Measures proposed and action to be implemented by the Contractor
				to test the equipment before it is used so that worker safety can be secured. Inspections should look for evidence of wear and tear, frays, missing parts, and mechanical or electrical problems.
				 Emergency Procedures 13. An emergency aid service must be in place at the worksite. 14. During health and safety training, site staff should be properly briefed as to what to do in the event of an emergency, such as who to notify and where to assemble in an emergency. This information must be conveyed to employees by the site manager on the first occasion a worker visits the site.
				 Construction camps 15. Construction camps should have adequate sanitation facilities for construction workers to control the transmission of infectious diseases. 16. Avoid housing workers in camps and provide socio-economic benefits locally by employing local people. If there is no alternative to employing workers from elsewhere, locate accommodation camps away from communities on land acquired from willing sellers. Provide labor camps with adequate sanitation, waste disposal, and health facilities according to labor laws. Clear work campsites after use and reinstate vegetation. Conduct programs to raise worker awareness of HIV/AIDS.
				 Information management 17. Develop and establish the contractor's own procedure for receiving, documenting, and addressing complaints from the affected public and nearby communities. 18. Provide advance notice to local communities by way of information boards or leaflets about the schedule of construction activities, interruption to services and access, etc.

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact		Mitigation Measures proposed and action to be implemented by the Contractor
11	Damage to Flora and	 Vegetation 	•	Speed limits and operating times for the construction vehicles should be imposed.
	Fauna	clearing	•	Due consideration should be given to carefully clearing of vegetation avoiding the destruction of habitats of fauna.
			•	The de-silted matter shall immediately be disposed of off to pre-decided disposal sites.
			•	The contractor will take reasonable precautions 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.
			•	If any wild animal is found near the construction site at any point of time, the contractor will immediately upon discovery thereof acquaint the Engineer and carry out the Engineer's instructions for dealing with the same.
			•	The Engineer 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.
			•	It is recommended to do the project work day time only.
12	Soil erosion,	Construction work	•	Soil stockpiles and other construction material should not be placed within the bed or
	sedimentation of	Removal of topsoil		banks of the tanks or canal.
	and low-lying areas	 Vegetation 	•	Installing and maintaining permanent erosion and sediment control measures such as
12	Access restrictions and		-	sint traps to avoid sediment runon into the tank and hearby water ways.
12	nublic inconvenience	 Material transportation and 		inform the concerned houses prior to breaching access
		storage		Provision of access during designated times of the day or where possible provides
		 Noise, vibration 		temporary access naths for nedestrians on the downstream side of the hund
		dust and waste	•	If the road is closed completely for a period, signage to be put up at both ends.
		piling from		

SN	Potential Environmental Impacts and Risk Level	Key project activities causing the impact	Mitigation Measures proposed and action to be implemented by the Contractor
		demolition and	
		construction	
Post c	onstruction phase	1	
14	Clearing/Closure of Construction Site/Labour		 Contractor to prepare site restoration plans for approval by the engineer. The plan is to be implemented by the contractor prior to demobilization. This includes burrowing sites and storage yards as well
	Accommodations		 On completion of the works, all temporary structures will be cleared away, all rubbish cleared, excreta or other disposal pits or trenches filled in and effectively sealed off and the site left clean and tidy, at the contractor's expenses, to the entire satisfaction of the engineer.
15	Solid waste	 Operational stage Chilli related organic waste, general household waste & machinery parts. 	 Any hazardous type of waste shall be dealt with special care and instructions from the LA. The farmer societies shall document all types and quantities of waste generated and removed from the site and the disposal locations. The farmer societies shall remove waste from the site each day and dispose of the waste in the LA approved site/s.
16	Environmental Enhancement/ Landscaping		 Landscape plantation, including turfing shall be taken up as per either detailed design or typical design guidelines given as part of the Bid Documents. The contactor also shall remove all debris, piles of unwanted earth, spoil material, away from the site and disposed at locations designated or acceptable to the Engineer or as per the stipulated waste management criteria of this EMP

COST OF MITIGATION

N⁰	Environmental mitigation measure	Cost (LKR)	Remarks
1	Information Boards, leaflets	60,000	Awareness leaflets for organic cultivation practices and pest management
5	Waste removal from site	40,000	Waste from vegetation clearing, site preparation, labour camps
6	Training of Farmers and Village level stakeholders on new technological applications	200,000	Should be scheduled to a few sessions

CONCLUSION AND SCREENING DECISION

Summary of environmental effects:

Assuming that all mitigation measures are implemented as proposed, the following effects can be predicted

Key project activities	Potential Environmental Effects	Significance of environmental effect with mitigation in place ¹	
Material transportation and storage	Emission of dust, generation of noise and disturbance to community including farmers, and households	NS	
Vegetation clearing	Clearing of vegetation will collect significant amount of waste which will lead to several environmental issues such as blockage of drainage,	NS	

¹ NS - Effect not significant, or can be rendered insignificant with mitigation, SP - Significant positive effect, SN - Significant negative effect, U - Outcome unknown or cannot be predicted, even with mitigation

Key project activities	Potential Environmental Effects	Significance of environmental effect with mitigation in place ¹
	siltation of downstream, damage to habitats, spreading of invasive species etc.	
Construction of building	Emission of dust, generation of noise and disturbance to community including farmers, and households	NS
Processing activities	Solid waste generation from crop related value addition and machinery parts will lead minor environmental issues.	NS

EMP IMPLEMENTATION RESPONSIBILITIES AND COSTS

The overall responsibility of ensuring compliance with safeguard requirements lie with PMU while the contractor will be responsible for implementing the provisions of the EMP. In addition, the PMU will be directly responsible for reviewing the proposed design to ensure that all design related mitigation measures mentioned herein are implemented with the support and supervision of the PMU. The overall supervision will be carried out by the inhouse staff of the PMU supported by the Provincial Deputy Project Director who is responsible for the overall supervision of the proposed project. Any consequent design modification will be reflected in the project cost.

Environmental monitoring will be carried out largely through visual observations and compliance monitoring using the checklist provided in the EMF by the Provincial project engineer of the PMU and the contractor jointly. The Environmental and Social Safeguards Specialist will need to visit the site on a monthly or quarterly and report on issues and performance on EMP implementation to the PMU.

SCREENING DECISION RECOMMENDATION

This project does not require environmental clearance under national environmental regulations. No other approval is required due to the spread and magnitude of the project. These potential impacts are temporary in nature. It is recommended to start the project work off-season for upland cultivation and avoid night-time work. However, it should be noted that EPL is not required for the processing centre as per the CEA direction since processing centre does not have grinding operation. This processing centre is more likely a collection centre. Implementation of the Environmental Management Plan is sufficient to mitigate the identified impacts.

DETAILS OF PERSONS RESPONSIBLE FOR THE ENVIRONMENTAL SCREENING

Screening conducted and reviewed by	Date
	December 2021
D.M. Sanjaya Bandara	
Environment and Social Safeguard Specialist	Supa,
Agriculture Sector Modernization Project	
	TT
Name/Designation/Contact information	
	Signature
Screening report recommended by	Date
	December 2021
Dr. Rohan Wijekoon	\bigcirc \land
Project Director	
Agriculture Sector Modernization Project	
Name/Designation/Contact information	Circulture
	Signature

Annexure 1: List of References

1) <u>https://luppd.gov.lk/images/content_image/downloads/pdf/llrc_batticaloa.pdf</u>

Annexure 2: Project location maps



Annex 3: Designs of the Collection Centre





Annex 4: Beneficiaries list

S.N	Beneficiaries Name	Address	NIC No	Contact No	G.N Division
01	Nagalinkam yogarasa	Kirankulam – 06- North	71269.3584V	0774164558	
02	Vairamuthu Sasikumar	Beach Rd, Kirankulam-North	751582862V	0775918202	
03	Ponnampalam Thevarajah	Aalaiyadi Rd, Kiranulam - Central	196704603591	0758550065	
04	Amarasinkam Varnakulasingam	Visnukovil Rd, Kirankulam - Central	711610286V	0779060683	
05	Ravindran Sasikaran	Visnukovil Rd, Kirankulam - North	832604593V	0758251033	
06	Poopalapillai Sivanantharasa	Main Rd, Kirankulam - South	62694180V	0754258767	
07	Selvarethinam Thavaroopan	Music college Rd,Navatudah(kirankulam North)	791412269V	0769498545	
08	Sivalinkam Nirmalathevi	Beach Rd,Kirankulam - Central	608463496V	0767029111	
09	Kanakasabapathi Thanapalasingam	Kanthaiyah Rd, Kirankulam	850151377V	0752006580	
10	Samithampy Mahathevi	Palaiya thapalaka Rd,Kirankulam – central	635122838V	0778685668	
11	Selvanayagam Nadesalinkam	Panaiyadipalla Rd, Kirankulam -06	701880501∨	0771019293	
12	Allimuthu Vijayan	Sellathampy Rd,Kirankulam – North	750050069∨	0757952209	
13	Sivanesathurai Sivarasa	Main Rd,Kirankulam-06	740281283V	0757598100	
14	Kirusalini Gowravan	Nesavunilaiya Rd,Kirankulam	907391108V	0752824808	
15	Samithampy Thavarasa	Nesavunilaiya Rd,Kirankulam	590144096V	0756000770	
16	Thampirasa Kanthalingam	Tharmapuram,Kirankulam	520084940V	0773941011	

Ponnampalam Santhirasekaram	Kirankulam - North	710233373V	0758780557	Kirankulam-North
Konamalai Nanthakopal	Sellathampy Rd, Kirankulam	700072029V	0754082306	Puthukudiyirppu- South
Samithampy Paramalinkam	Cheddipalayam - South	543173592V	0777308680	Puthukudiyirppu- North
Manikkam Thayakaran	9 th kaddai Rd,Kirankulam -North	692460812V	0755630275	Puthukudiyirppu- South
Thavarajah Rakasuthan	Beach Rd ,Kaluthavalai - 04	921253303V	0752922590	Puthukudiyirppu- South
Kanthappodi Sathiyananthan		681132694V	0763136604	Puthukudiyiruppu- North
Sithamparapillai Vijayenthiny	Kanthakuddy Rd, Kirankulam-South	706320156V	0752879873	Puthukudiyirppu- South
Mahendran Seethevipillai	9 th kaddai ,Kirankulam – North	677852666V	0750752212	Puthukudiyirppu- South
Selvarasa Ramesh	Mariyamman Rd,Kirankulam	197921303657	0755133243	Puthukudiyirppu- South
Somasuntharam Jeyasuntharam	Kumaran kalamanra Rd, Kaluwanchikudy	751250754V	0757007106	Puthukudiyirppu- South
Kanthappan Susanthan	Main Rd, Kaluthavalai-01	872851771V	0757021292	Puthukudiyirppu- South
Kaneshan Thevathasan	Sellathampy Rd, Kirankulam North	821121809V	0752456592	Puthukudiyirppu- South
Arunasalam Kunarednam		710015155V	0773132763	Puthukudiyirppu- South
Parasuraman Thanuraj	Visnukovil Rd,Kirankulam-06	911583321V	0756207842	Puthukudiyirppu- South
Senathipathi Arudsevam	Amalapuram	760753947∨	0779684018	Puthukudiyirppu- South
	Ponnampalam Santhirasekaram Konamalai Nanthakopal Samithampy Paramalinkam Manikkam Thayakaran Thavarajah Rakasuthan Kanthappodi Sathiyananthan Sithamparapillai Vijayenthiny Mahendran Seethevipillai Selvarasa Ramesh Somasuntharam Jeyasuntharam Jeyasuntharam Kanthappan Susanthan Kaneshan Thevathasan Arunasalam Kunarednam Parasuraman Thanuraj Senathipathi Arudsevam	Ponnampalam SanthirasekaramKirankulam – NorthKonamalai NanthakopalSellathampy Rd, KirankulamSamithampy ParamalinkamCheddipalayam - SouthManikkam Thayakaran9th kaddai Rd,Kirankulam -NorthThavarajah RakasuthanBeach Rd ,Kaluthavalai - 04Kanthappodi SathiyananthanSithamparapillai Kirankulam-SouthSithamparapillai VijayenthinyKanthakuddy Rd, Kirankulam-SouthSelvarasa RameshMariyamman Rd,KirankulamSomasuntharam JeyasuntharamKumaran kalamanra Rd, KaluwanchikudyKaneshan ThevathasanSellathampy Rd, Kirankulam NorthArunasalam KunarednamYisnukovil Rd,Kirankulam-06Parasuraman ThanurajAmalapuram	Ponnampalam SanthirasekaramKirankulam – North710233373VKonamalai NanthakopalSellathampy Rd, Kirankulam700072029VSamithampy ParamalinkamCheddipalayam - South543173592VManikkam Thayakaran9th kaddai Rd,Kirankulam -North692460812VThavarajah RakasuthanBeach Rd ,Kaluthavalai - 04921253303VKanthappodi SathiyananthanBeach Rd ,Kaluthavalai - 04921253303VSithamparapillai VijayenthinyKanthakuddy Rd, Kirankulam-South706320156VMahendran Seethevipillai9th kaddai ,Kirankulam - North677852666VSelvarasa RameshMariyamman Rd,Kirankulam197921303657Somasuntharam JeyasuntharamKumaran kalamanra Rd, Kaluwanchikudy872851771VKaneshan ThevathasanSellathampy Rd, Kirankulam North821121809VArunasalam KunarednamVisnukovil Rd,Kirankulam-0691158321VParasuraman ThanurajVisnukovil Rd,Kirankulam-0691158321VParasuraman ArudsevamAmalapuram760753947V	Ponnampalam SanthirasekaramKirankulam – North710233373V0758780557Konamalai NanthakopalSellathampy Rd, Kirankulam700072029V0754082306Samithampy ParamalinkamCheddipalayam - South543173592V0777308680Manikkam Thayakaran9th kaddai Rd,Kirankulam -North692460812V0755630275Thavarajah RakasuthanBeach Rd ,Kaluthavalai - 04921253303V0752922590Kanthappodi SathiyananthanBeach Rd ,Kaluthavalai - 04921253303V0752879873Sithamparapillai VijayenthinyKanthakuddy Rd, Kirankulam-South706320156V0752879873Mahendran Seethevipillai9th kaddai ,Kirankulam - North677852666V0750752212Selvarasa RameshMariyamman Rd,Kirankulam1979213036570755133243Somasuntharam LeyasuntharamKumaran kalamanra Rd, Kaluwanchikudy751250754V0757007106Kaneshan ThevathasanSellathampy Rd, Kirankulam North821121809V0752456592Arunasalam KunarednamiYisnukovil Rd,Kirankulam-06911583321V0756207842Parasuraman ThanurajAmalapuram760753947V0779684018Parasuraman ThanurajAmalapuram760753947V0779684018

Details of Dry Chilli Production Program-Beneficiaries

S.N	Beneficiaries Name	Address	NIC No	Contact No	G.N Division
01	Kirupairethinam Mayuran	Cemete Rd, Mankadu	* 793180535V	0754745580	
02	Mahalinkam Srikanth	Visnukovil Rd,Mankadu	831812559V	0770409991	
03	Selvanayagam Kopalasingam	Beach Rd, Mankadu	197320102281	0706489848	
04	Manikkam Rasenthiram	Beach Rd, Mankadu	19823442190	0757175286	
05	Mayilvahanam Navarethinarasa	Visnukovil Rd,Mankadu	820033868V	0785757654	
06	Kanthappodi Komathi	Beach Rd, Mankadu	775714859V	0779571578	
07	Velmurugu Nesamalar	Beach Rd, Mankadu	19756580833	0766363734	
08	Mahesan Pirapaharan	Beach Rd, Mankadu	852694998V	0764211677	
09	Kunasekaram Thayaparan	Ellai Rd,Mankadu	198332900649	0754713999V	
10	Kumarasamy Nagalinkam	Visnukovil Rd,Mankadu	740954172V	0784689026	
11	Kanthaperumal Kalavathi	Perumal Rd,Mankadu	685911124V	0771360934	
12	Mayilvahanam Pathmarasa	Visnukovil Rd,Mankadu	721704025V	0770439778	
13	Rasenthiram Puvi	Beach Rd,Mankadu	882091830V	0757283230	

S.N	Beneficiaries Name	Address	NIC No	Contact No	G.N Division
01	Selvarasa ledsumi	Murugan kovil west Rd, cheddipalayam - South	525892255V	0755156676	
02	Kuhenthirarajah Pirunthan	Murugan kovil west Rd ,cheddipalayam - South	922231770V	0752387433	
03	Thampipillai Thayagaran	Midwife Rd, Cheddipalayam- South	713003492V	0752900459	
04	Pillaiyan Suntharalinkam	Midwife Rd, Cheddipalayam- South	731573956V	0770836641	
05	Kanapathipillai Selvarasa	Murugan kovil East Rd, cheddipalayam -South	593423344V	0752656795	
06	Pillaiyan Visvalinkam	Murugan kovil Rd, cheddipalayam - South	590362573V	0756847313	
07	Sivaganam	Midwife Rd, Cheddipalayam- South	601465167V	0757234313	
08	Yoganathan Sumitha	Cheddipalayam - North	850164932V	0754294919	
09	Thavarasa Kamalesh	Cheddipalayam - South	785512278V	0776733547	
10	Karunagaran Kokilaranjan	Cheddipalayam - North	880211153V	0759826841	
11	Thampirasa Elango	Cheddipalayam - North	810161213V	0771037927	
12	Thiyagarasa Thevasuthan	Cheddipalayam - South	801691293V	0756746910	
13	Palasuntharam Kugan	Cheddipalayam- South	683041386V	0758250781	
14	Kumarasamy Kopalasingam	Murukan Kovil Rd,cheddipalayam -North	721024466V	0752487993	
15	Venuthas Kiruthika	Public ground Rd	937702418V	0756678941	
16	Sivalinkam Ravindran	Midwife Rd, Cheddipalayam- South	690913682V	0759530942	

17	Nadarajan Vivekanantharajah	Kaddupillaiyar Kovil Rd,Cheddipalayam -South	830592938V	0753024592	
18	Rakupathi Kandeepan	Main Rd, Cheddipalayam - South	781891703V	0758761252	
19	Sivalinkam Pathmavathy	Murugan Kovil Rd,Cheddipalayam- South	735910710V	0752081712	

Beneficiaries Name	Address	NIC No	Contact no	
Kanapathipillai Thillaiyampalam	Somasuntharam Rd,Kaluthavalai- 04	602222861V	077535952	
Elayathampi Rathinasingam	Vanniyar Rd west,Kaluthavalai -Central	582482497V	0754265512	
Alakuthurai Pirunthapan	Pirathesasabai Rd,Kaluthavalai- 05	972000078∨	0752829838	
Thevarasa Kalaiselvi	Vanniyar Rd west,Kaluthavalai -Central	790062990∨	0752607088	
Ponnuthurai Suntharalinkam	Vipulanantha Rd,Kaluthavalai- Central	593213749V	0758251853	
Kumrasamy Sothinathapillai	Beach Rd,Kaluthavalai- 04	672543673V	0770832236	
Kanthaiyah Perinpanayagam	Church Rd,Kaluthavai - 03	603373185V	0757006818	
Velupillai Murugesu	Somar Rd,Kaluthavalai- 03	641722731V	0758106366	
Velmurugu Yoganathan	Beach Rd.,Kaluthavalai- 03	743201930V	0754644677	
Samithampy Nesarasa	Main Rd,Kaluthavalai- 02	573274202V	0778436546	
Sothilinkam Kunasunthari	Main Rd,Kaluthavalai- 04	587242710V	0779766393	
Sinnathampi Amirthalinkam	Kaanady Rd,Kaluthavalai- 01	692434030V	0771308504	
Rasaiyah Veerasingam	Vasakasalai Rd,Kaluthavalai -	620733768V	0768805564	
	Beneficiaries Name Kanapathipillai Thillaiyampalam Elayathampi Rathinasingam Alakuthurai Pirunthapan Thevarasa Kalaiselvi Ponnuthurai Suntharalinkam Kumrasamy Sothinathapillai Kanthaiyah Perinpanayagam Velupillai Murugesu Velupillai Murugesu Velupillai Murugesu Velupillai Murugesu Samithampy Nesarasa Sothilinkam Kunasunthari Sinnathampi Amirthalinkam	Benchciaries NameAddressKanapathipillai ThillaiyampalamSomasuntharam Rd,Kaluthavalai- 04Elayathampi RathinasingamVanniyar Rd west,Kaluthavalai -CentralAlakuthurai PirunthapanPirathesasabai Rd,Kaluthavalai- 05Thevarasa KalaiselviVanniyar Rd west,Kaluthavalai- 05Thevarasa KalaiselviVanniyar Rd west,Kaluthavalai- 05Ponnuthurai SuntharalinkamVipulanantha Rd,Kaluthavalai- CentralKumrasamy SothinathapillaiBeach Rd,Kaluthavalai- 04Kanthaiyah PerinpanayagamChurch Rd,Kaluthavalai- 03Velupillai MurugesuSomar Rd,Kaluthavalai- 03Velmurugu YoganathanBeach Rd,Kaluthavalai- 03Sothilinkam KunasunthariMain Rd,Kaluthavalai- 03Sothilinkam KuasunthariMain Rd,Kaluthavalai- 03Samithampy NesarasaMain Rd,Kaluthavalai- 03Samithampy NesarasaMain Rd,Kaluthavalai- 03Samithampi Rd,Kaluthavalai- 03Main Rd,Kaluthavalai- 03Samithampi Rd,Kaluthavalai- 04Main Rd,Kaluthavalai- 04Sinnathampi AmirthalinkamMain Rd,Kaluthavalai- 01Rasaiyah VeerasingamVasakasalai Rd K aluthavalai- 01	Beneficiaries NameAddressNIC NoKanapathipillai ThillaiyampalamSomasuntharam Rd,Kaluthavalai- 04602222861VElayathampi RathinasingamVanniyar Rd west,Kaluthavalai- -05582482497VAlakuthurai PirunthapanPirathesasabai Rd,Kaluthavalai- -05972000078VThevarasa KalaiselviVanniyar Rd west,Kaluthavalai- -05972000078VPonnuthurai SuntharalinkamVipulanantha Rd,Kaluthavalai- -Central593213749VKumrasamy SothinathapillaiBeach Rd,Kaluthavalai- -04672543673VKumrasamy SothinathapillaiChurch 	Beneficiaries NameAddressNIC NoContact noKanapathipillai ThillaiyampalamSomasuntharam Rd,Kaluthavalai- 04602222861V077535952Elayathampi RathinasingamVanniyar Rd west,Kaluthavalai -Central582482497V0754265512Alakuthurai PirunthapanPirathesasabai Rd,Kaluthavalai- 05972000078V0752829838Thevarasa KalaiselviVanniyar Rd west,Kaluthavalai -Central970062990V0752607088Ponnuthurai SuntharalinkamVanniyar Rd west,Kaluthavalai- Central593213749V0758251853Kumrasamy SothinathapillaiBeach Rd,Kaluthavalai- 03672543673V0770832236Velupillai MurugesuSomar Rd,Kaluthavalai- 03641722731V0758106366Velupillai MurugesuSomar Rd,Kaluthavalai- 03641722731V0758106366Sothilinkam YoganathanMain Rd,Kaluthavalai- 02573274202V0778436546Sothilinkam KunasunthariMain Rd,Kaluthavalai- 02587242710V0779766393Sothilinkam KunasunthariMain Rd,Kaluthavalai- 02692434030V0771308504Rasaiyah VeerasingamVasakasalai Rd Kaluthavalai- 01620733768V0768805564

ESR – Dry Chilli collection center in Batticaloa

S.N	Beneficiaries Name	Address	NIC No	Contact No	G.N Division
01	Yoganantharasa Megala	Sri murugan kovil Rd,Kurukkal madam, North	637051792V	0755623621	Kurukkal madam, North
02	Sabarethenam Thangamma	Kurukkal madam, North	675523584V	0758552120	Kurukkal madam, North
03	Theyagarasa Vanaja	Kurukkal madam, North	736973367V	0755319822	Kurukkal madam, North
04	Thavarasa Deluxan	Kurukkal madam, North	931003054V	0776919576	Kurukkal madam, North

Annex 5: Consent letter from DS







Annex 6: Distribution of water bodies in Batticaloa district

Annex 7: Protected areas of Batticaloa district

