IRDCRP







Environmental Screening Report and Environmental Management Plan

Construction of Turnout Structure in Nellikanaththa RB -02 Canal in Radella Scheme in Pottuvil Division

15th August 2026

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1. Background and Objectives the Project

The proposed project to construct a turn out structure in NelliKanatha Right Bank – 02 Canal in the Radella Scheme in Pottuvil Division and to improve the Nellikanaththa Anicut Access Road about a section of 225m length from the turn out structure toward the anicut comes under the purview of the Irrigation Department.

The objective of the construction of the turnout structure is to enhance the productivity and efficient management of the water diverted from the Nellikanaththa Anicut located across the anabranch of the Heda Oya, by regulating such diverted water that supplies to the adjacent paddy fields.

In addition, the improvement of the Nellikanaththa Anicut Access Road is proposed to enhance road conditions for the safety and convenience of road users.

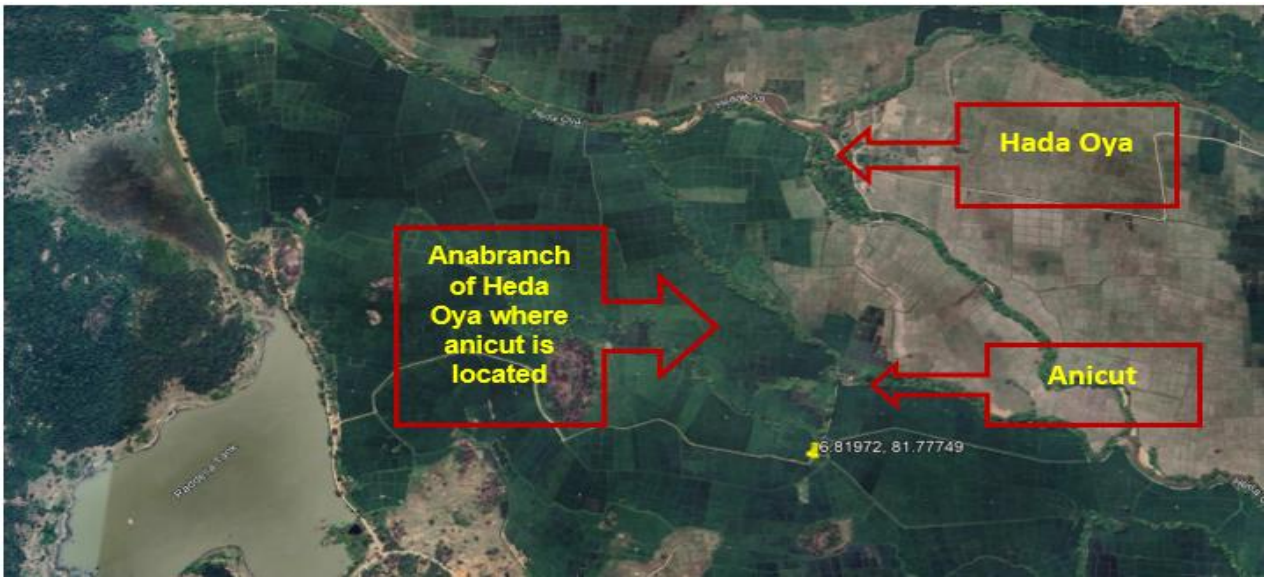
Further, all construction works of the project will be carried out by the Irrigation Department by means of direct contract.

2. Location of the Project

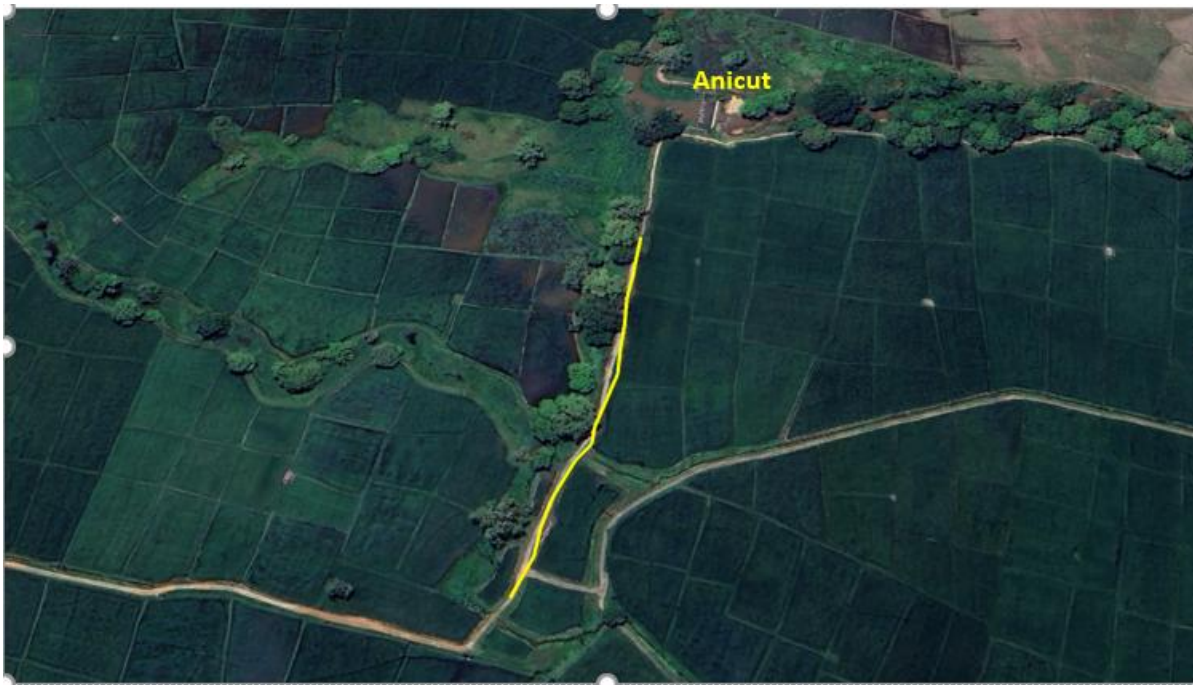
The location of the Project is given in Table 01 and Map 01 and Map 02 below.

Table 01: Location of the Project

Name of the Project	Province	District	Divisional Secretariat	Grama Niladari Division	**GPS Location**
Construct a Turnout Structure in NelliKanatha Right Bank – 02 Canal in the Radella Scheme	Eastern Province	Ampara	Pottuvil	No. PP04 Panama North	N 6.81985 E 81.77752

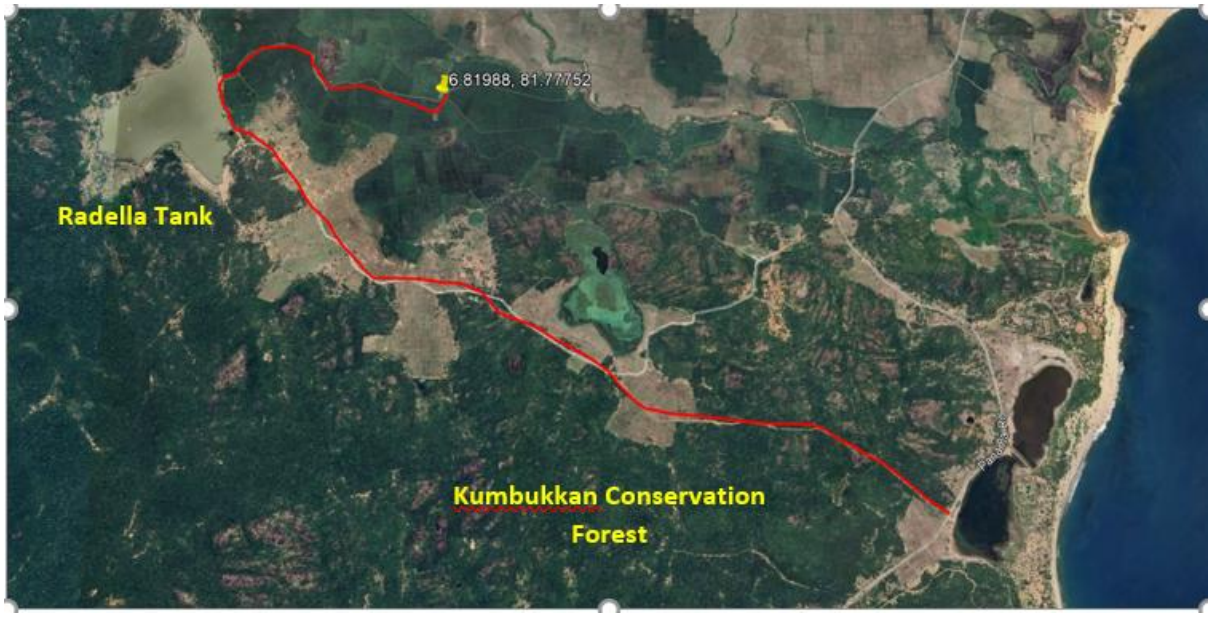


Map 01: Project Area (Source: Google Earth)



Map 02: Anicut Access Road to be Rehabilitated (Source: Google Earth)

The project site is accessible via the Pottuvil–Panama (B374) Road, turning right onto the gravel road located approximately 07 Kms from Arugambay City and follow it about 09 Km (Map 03). This gravel road passes through the Kumbukkan Conservation Forest (Kumbukkan Conservation Forest), paddy fields, the initial section of the Radella Tank bund, and additional paddy fields. (Map 03 and Figure 01).



Map 03: Access Roads to the Project Site (Source: Google Earth)




Conota
763
05.08.2026 16:48
6.80590, 81.78099 (±4m)
Altitude: -75m
E


Conota
760
05.08.2026 16:42
6.81250, 81.76884 (±4m)
Altitude: -61m
SE



Figure 01: Access Road to Project

3. Description of the Existing Environment

The existing physical, biological, and socio-economic environment of the proposed project, gathered by reviewing literature, inspecting the site, and consulting officers from the Irrigation Department and Farmers Organization, are summarized below.

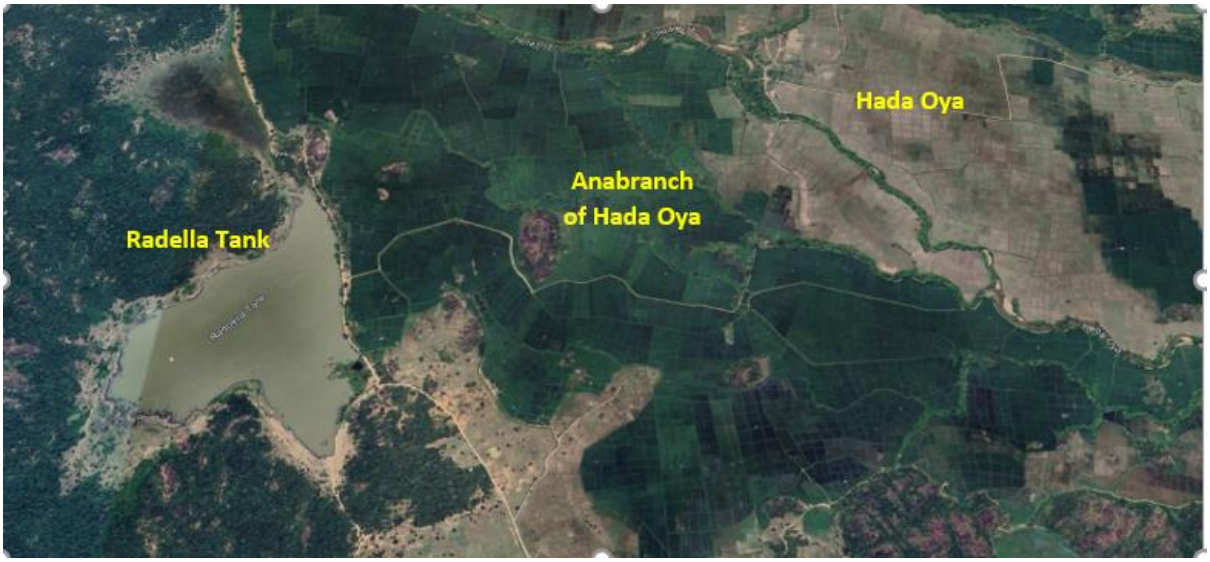
3.1. Physical environment

The entire project falls within the eastern part of the country, belonging to dry zone, with hot temperatures year-round, averaging around 28°C to 30°C, and seasonal rainfall driven heavily by the Northeast Monsoon (November to February). The most hot, dry, and sunny weather is experienced from May to September.

The terrain of the project area and the access road are predominantly flat along with an Inselberg (isolated rock) about 01 km from the project site. The geology of the Pottuvil-Panama area belongs to the Vijayan Complex, characterized largely by granitoid gneisses and migmatites (https://amazinglanka.com/wp/forests-and-other-vegetation-types/). The soil types exist in the project area, includes basically reddish-brown earths (RBE) with low-humic gley soils.

The water environmental attributes close to the project are as follows.

- Radella Tank - An ancient reservoir that built to accommodate the drainage of water from its own catchment and it supplies water to 405 ha of paddy fields (https://amazinglanka.com/wp/radella-reservoir/).
- Hada Oya- the Hada Oya flows some distance away from the project site, and it is a vital river in the Eastern Province of Sri Lanka, that flows through Hulannuge and the Lahugala region in the Ampara District, feeding local reservoirs, supporting wildlife in Lahugala Kitulana National Park, and holding ancient archaeological value (https://amazinglanka.com/wp/heda-oya-stone-anicut/). The turnout structure of this project will be constructed for the diverted water from the anicut that has been constructed across the anabranch of the Heda Oya.



Map 04: Water Environments Close to the Project Site (Source: Google Earth)

In addition, the project area is surrounded by man-made environments especially paddy fields and irrigation structures.

3.2 Biological Environment

The project area is fallen within the dry zone of the country and the vegetation therein is classified as dry mixed evergreen forest. A protected forest known as Kumbukkan Conservation Forest is located about 3.5 Kms radius from the actual footprint of this project. However, some parts particularly, the project access road runs through some sections of this forest. This forest is administered by the Forest Department (Map 03).

The Kumbukkan Conservation Forest is dominated by tree species such as *Drypetes sepiaria (weera), Manilkara hexandra* (palu), *Berrya cordifolia* (halmilla), *Vitex pinnata (milla), Chloroxylon swietenia* (burtha), C*assia fistula, etc.* along with many shrub species such as *Ziziphus oenopolia* (eraminiya), *Flueggea leucopyrus (k*atupila), etc.



Map 05: Conservation Forests and Water Environments in the Project Area

Aside from the conservation forest, no other forests exist near the project site, other than few isolated *Terminalia arjuna* (kumbuk) trees near the Nellikanaththa R/B 02 earthen canal, which was constructed to divert water from the anicut. In addition, a considerable speared of Salvinia ***(Salvinia molesta),*** which is invasive, was observed in this canal.





Kumbukkan Conservation Forest Either Side of the Access Road



Kumbuk trees along the Nellikanaththa RB -02 Canal



Speared of Salvinia (*Salvinia molesta*) in the Nellikanaththa RB -02 Canal



Elephant observed in the Radella Tank Catchment Feeding on Grass

Figure 02: Biological Environment in and Around the Project Footprint

According to Farmers Organization and existing literature, the project area supports a variety of fauna, including the Sri Lankan elephant (*Elephas maximus maximus*), toque macaque (*Macaca sinica*), sloth bear (*Melursus ursinus*), Sri Lankan leopard (*Panthera pardus kotiya*), spotted deer (*Axis axis*), sambar deer (*Rusa unicolor*), mugger crocodile (*Crocodylus palustris*), mongoose species (*Herpestes* spp.), and a diverse range of snakes.

3.3 Socio-economic and cultural Environment

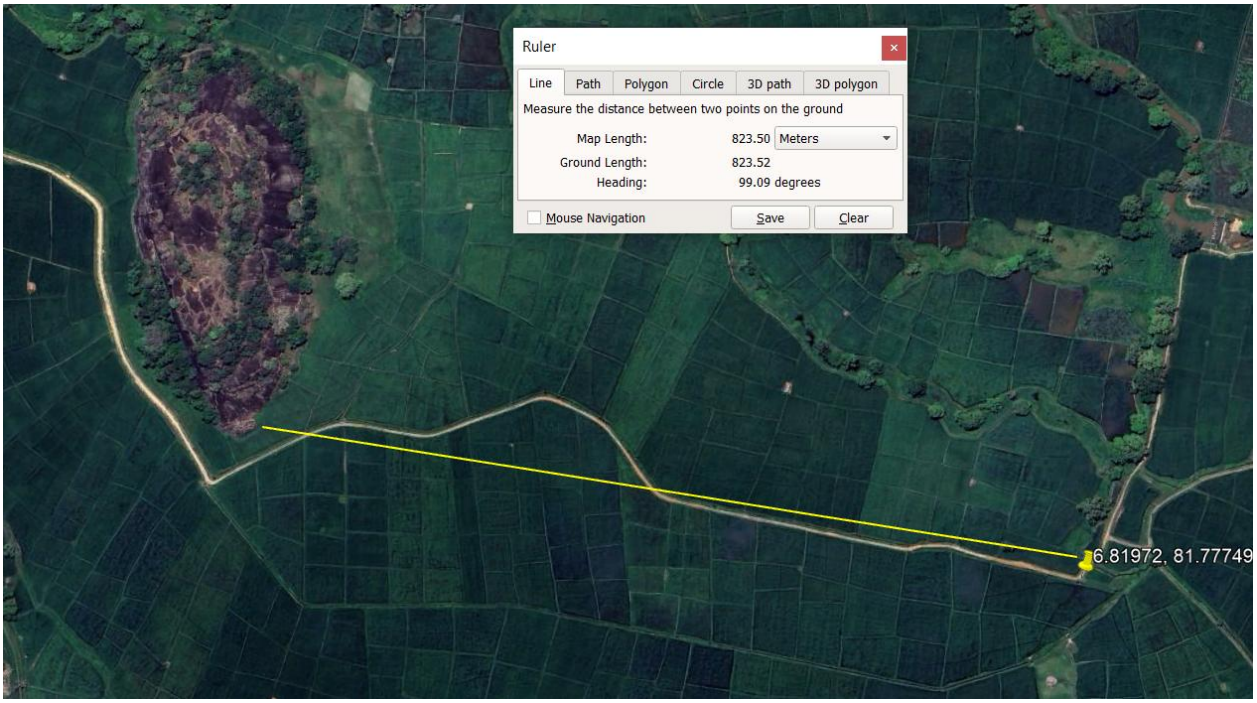
Apart from paddy farming, there are no other socio-economic or residential activities in or around the immediate project area. According to the Farmers' Organization, the project will directly benefit 46 farming families involve in paddy cultivation under the Nellikanaththa Right Bank (R/B) Canal 02, under the project context.

Nevertheless, the project area is culturally very important as of location of archaeological sites in the vicinity to the project area. Accordingly, the ancient sluice, tank bunt and breakwater (ralapanawa) of the Radella Tank and the inselberg have been declared as protected archaeological sites in the Gazette issued on 10th October 2014 (https://amazinglanka.com/wp/radella-site-i/) - (See Map 06, & Map 07, below).



Map 06: Archaeological Sites in the Vicinity to the Project Site.

Such archaeological important Radella Tank is located about 02 km radius of the actual footprint whilst the inselberg lies about 850 m radius, showing that such attributes are away from the project influence zone.



Map 07: Rock Inselberg Declared as Archaeological Site

4. Brief Description of the Proposed Project Activities

The activities/components of the proposed project with the quantities are given in the Table 02, and site features are shown in Figures, below.

Table 02: Project Components, Sub Activities and Quantities

#		Items	Quantity	Units
1.0	**Construction of turn out structure**			
	1.1	Site clearing	1	1/day
	1.2	Earth excavation in foundation and refilling	14.00	m^3
	1.3	1:3:6 (40mm) Cement concrete works	18.19	m^3
	1.4	1:2:4 (20mm) Cement concrete works	6.26	m^3
	1.5	Furnishing making fixing and removing of form works film face fly wood sheet	110.30	m^3
	1.6	Furnishing, cutting, bending and laying of TOR steel reinforcement	429.92	Kg
	1.7	Furnishing, laying and jointing 600mm Hume pipes including excavation and backfilling	7.32	1m
	1.8	Furnish and installing of 600mmcast iron gates including lifting arrangements for gear wheel systems	1.00	Set
	19	Providing guard stones as per the site condition	8.00	Nos.
	1.10	Dealing with water using 50mm of water pump	56.00	Hrs.
	1.11	Furnishing approved earth spread and compacting around the structures using 0.5 to-1.0-ton vibratory roller including watering by tripper.	39.66	m^3
2.0	**Improvements of Nellikanaththa Anicut Assess Road at STN 0+300 to STN 0+525**			
	2.1	Striping top soil cutting thickness from 75mm to 150mm and spoil to waste haul 30m by machinery	129.02	m^3
	2.2	Furnishing approved earth and filling bund including compaction watering and picking uproots haul 8 km by tipper or rear duper	1217.65	m^3
	2.3	Cutting and planting of turf on slope of bund including watering, transport 04km by farm tractor	441.770	m^3
	2.4	Tiding up site after construction	Allow	Item



Upstream of Turnout Structure



Downstream of turnout structure



Figure 03: Location of Turnout Structure



Figure 04: Nellikanaththa Anicut Access Road



Figure 05: Nellikanaththa Anicut Across Anabranch of the Heda Oya

5. Environmental Screening

An environmental screening was conducted for the proposed project using the screening format agreed for the IRDCRP. The results of this screening are presented in Table 03 below.

Table 03: Results of Environmental Screening - Turnout Structure on the Nellikanatha RB-02 Canal Within the Radella Scheme

No	Screening Question	Yes/No	Scale of Impact	Remarks
1.	Will the proposed project involve the construction of new physical infrastructure or the rehabilitation of existing infrastructure? Or; Will the project involve any of the following?	Yes	Minor	See below.
	1.1. Construction of new physical infrastructure (e.g., buildings, roads, anicuts, canals, sluice gates, pipelines *etc.*).	Yes	Minor	The proposed project involves construction of a turnover structure in Nellikanaththa Right Bank – 02 canal as a new physical infrastructure.
	1.2. Rehabilitation, expansion, or upgrade of existing physical infrastructure.	Yes	Moderate	The proposed project aims to rehabilitate the existing anicut access road to a length of 225 m provided with new Hume pipe culvert to divert the water to the turnover structure across the access road.
	1.3. Will the project activities involve changes to the original design levels of the headworks (Raise the height of tank bund? And/or raise the height or length of existing spill?) that could lead to the inundation of new areas within the catchment?	Yes	Minor	As per the ID Officers, the Nellikanaththa anicut access road will be raised with trufing the embankment slope of the access road.
	1.4. Dredging of the tank bed and the subsequent disposal of dredged materials?	No	N/A	

	1.5. If yes, will the dredged material be disposed of on-site or off-site??			
	1.6. Other (Please specify): (Please attach designs and/or BoQs if possible).	Yes	Moderate	Striping of the Nellikanaththa anicut assess road for rehabilitation, and excavation for construction of the turnout structure and hume pipe culvert may generated unsuitable material which is to be disposed properly in designated disposal sites.
2.	Will any of the planned improvements necessitate an artificial lowering of the reservoir's water level? * If the water level will be artificially lowered, please specify the anticipated duration and magnitude of the draw down.	N/A		
3.	If the water level will be artificially drawn down, please assess the potential impacts on:	N/A		
	3.1. Surface Water: Will the draw down alter water flows in nearby streams, rivers, or canals, particularly during the dry season?	N/A		
	3.2. Groundwater: Will the draw down affect the groundwater table or flow in local wells, especially during the dry season?	N/A		
	3.3. Ecology: Is there a risk that this activity will affect the ecology of the tank bed or other important wetlands around and canal systems that depend on it?	N/A		

	3.4. If a risk is identified, please describe the specific potential impacts on the ecosystem (e.g., impact on aquatic life, changes to vegetation, effects on migratory birds and other fauna).	N/A		During construction of the turnover structure the Nellikanaththa anicut will be close to prevent diverting the water to the canal. Such closing is not only relevant to project but a general phenomenon that is practiced during the off season of the paddy cultivations.
4.	Will the project cause localized flooding and/or poor drainage during construction?	No		
5.	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.*)	No		All proposed physical construction works under the project are minor; thus, no significant changes to the physical attributes of the project area are anticipated.
6.	Will construction work of the project cause soil erosion within the site due to steep grade or soil content?	Yes	Minor	The excavated soil and borrow soil may be eroded if the project activities are being carried out during rainy season, unless if not adopted appropriate measures control erosion of such material or avoid rainy season. However, other than paddy fields, there are no environmental attributes close to the project sensitive to such soil erosion.
7.	Will the project release pollutants or any hazardous, toxic or noxious substances to	Yes		See below.

	7.1. air?	Yes	Moderate	Exhaust emissions are expected from material hauling trucks and heavy machinery. However, these emissions will not cause significant impacts, as there are no residential activities within or near the project footprint. Nonetheless, proper maintenance of all trucks and heavy machinery prior to deployment is essential to control emissions and prevent broader air pollution.
	7.2 Nearby surface or groundwater sources?	No		There are no groundwater sources within project foot print and or close to the project footprint.
	7.3 Soil?	Yes	Minor	Storing, handling, and refueling of lubricants and fuel at site in an improper manner may cause soil contamination due to spillage. Therefore, such activities shall be done by adopting measures to prevent spillage and also contain such spillages.
8.	Will the proposed activities cause	Yes		See below.
	8.1 Noise?	Yes	Minor	The primary source of noise generation will be the operation of heavy machinery. However, as the project is located in a remote area surrounded by paddy fields, the resulting noise impact on both local communities and wildlife will be minor or negligible.

	8.2 Vibration?	Yes	Minor	The main source of vibration is the operation of heavy machinery, particularly during soil compaction using a roller. However, there are no public structures within or near the project footprint that may be affected by vibration. Furthermore, because the Radella Tank is located some Kms away from the project footprint, vibrations will not impact the stability of the tank bund.
	8.3 Dust emission?	Yes	Moderate if not prevented	Fugitive dust emission may occur during material transporting on roads, if not the trucks are properly covered to prevent escape of dust. Particularly the public resides at such roads may affected from such dust. Moreover, the access road via Kumbukkan Conservation Forest and paddy fields is unpaved and thus, fugitive dust emission when operating material hauling trucks along this road is more likely and difficult to suppress as measures such as watering is not practical. However, there are no human activities/settlements along this road.
	8.4 Release of light?	No		
	8.5 Heat energy?	No		
	8.6 Electromagnetic radiation?	No		

9.	Does the proposed location fall within or border any gazetted protected areas (PAs) designated by the Forest Department (FD) or the Department of Wildlife Conservation (DWC), Department of Archaeology or any other?	Yes	Minor	The project footprint does not fall within or adjacent to the protected areas designated by DWLC or FD. The forest reserve known as Kumbukkan Conservation Forest is located about 3.5 km radius of the actual project footprint. Nevertheless, some sections of the access road from the Pottuvil-Panama Road falls via the Kumbukkan Conservation Forest which is administered by the Forest Department. Although existing literature indicates the presence of archaeologically important sites near the project footprint, the project will not impact these locations, as works will not extend into those areas.
10.	Is the proposed project location known to contain any species protected under the Fauna and Flora Protection Ordinance, or any other sensitive species of fauna or flora? If yes, please provide details on the species and why they are considered sensitive (e.g., critical for breeding, migration routes, *etc.).*"	Yes	Minor	The Kumbukkan Conservation Forest supports flora and fauna typical of the country's dry zone forests. Furthermore, the Radalla Tank, located close to the project area, is an important water source for wild animals, particularly elephants. Aside from the elephants, which are endangered, no other endangered/protective species were recorded/reported in the project area.
11.	Will the proposed project activities will cause negative effects on wildlife habitats, populations, corridors or movement?	No		All project activities will be carried out within man-made environments, with the exception of material hauling along the existing road that falls through some portions of the Kumbukkan Conservation Forest.

12.	Will the proposed project activities cause negative effects on impact on fish migration and navigation?	No		
13.	Will the proposed project activities cause increased risk of wildlife poaching and forest fires?	Yes	Minor	According to Farmers Organization, there are no records of poaching wild animals in the project area.
14.	Are there any areas or features of high landscape or scenic value on or around the location which could be affected by construction activity?	No		The project site is situated on relatively flat terrain surrounded by paddy fields, except for the nearby inselberg of archaeological significance, as noted above.
15.	Any invasive fauna or flora presents in the tank or surrounding area?	Yes	Substantial Risk	The Nellikanaththa R/B – 02 Canal is infested with *Salvinia*, a recognized invasive species. There is a risk that disposal materials could spread this species to uninfected areas if contamination is not properly mitigated during handling and removal of disposal material.
16.	Present of archeological monuments or archeological protected areas within the project impact zone?	No	---	See chapter 3.3 and item No.9 of this Environmental Screening Format.

N/A- Not Applicable

6. Laws and Regulations Applicable for the Project

The prosed construction of turnout structure in Nellikanaththa RB-02 canal in Radella scheme is not a prescribed activity which should undergo EIA/IEE under the provisions of the National Environmental Act as contained in the Gazette No. Gazette Extraordinary No. 772/22 dated 24.06.1993, 859/14 of 23.02.1995 and Gazette Extraordinary No. 1104/22 dated 05.11.1999.

However, the following laws, regulations, policies are applicable for the project.

- Mining licenses obtained from the Geological Survey and Mines Bureau for operation of borrow pits and metal quarries to obtain required construction material.
- Environmental Protection Licenses (EPLs) for metal quarries, concrete batching plants, aggregates, etc.

- Shop & Office Employees Act (regulation of employment and remuneration) of Sri Lanka.
- Factories Ordinance of Sri Lanka to ensure adequate site amenities and safe working conditions.
- Gender equity within the project, as per the National Policy on Gender Equality and Women's Empowerment in Sri Lanka.

7. Anticipated Environmental Impacts

The environmental impacts anticipated from project implementation are minimal, as the site is located in a remote area at a considerable distance from environmentally sensitive receptors, such as the Kumbukkan Conservation Forest, Radella Tank, Hada Oya, etc. and protected archaeological sites (specifically the rock inselberg), i.e. such attributes are away from the project's influence zone.

Furthermore, the low significance of these anticipated environmental impacts is supported by the following:

- **Scope of Work:** The project scale is limited to the construction of a turnout structure and the rehabilitation of a 225-meter access road with drainage structures at one location.
- **Modified Environment:** All project activities are confined to a man-made environment, specifically paddy fields.
- **Zero Tree Removal:** Tree removal is neither included in the project scope nor required for executing project activities.
- **Construction method:** The project implementation will be carried out via a direct contract by the project owner, the Department of Irrigation, which bears high responsibility for conducting all project activities in an environmentally and socially acceptable manner.
- **Conflicts with wildlife:** As per the Framers Organization no human elephant conflicts damaging to both parties have been reported/recorded to date, even though elephants are highly frequent in the project area.
- **Other**:
  - The waterbodies such as Hada Oya, Radella Tank is totally outside the project influenced zone.
  - No land acquisition.
  - No tree removal is anticipated for the implementation of the project.
  - Other than material hauling the Kumbukkan Conservation Forest is outside the project's influence zone. Also, this access road is already established one which is used by public.
  - The archaeological sites, especially the rock inselberg are located approximately 01 Km away from the actual project footprint, i.e., outside the project's influence zone**.**

Nevertheless, in general, some of negative environmental impacts are anticipated as detailed below, and these impacts are mainly short-term and arise only during construction period.

Such negative impacts are;

- dust emission during material hauling,
- soil erosion if construction activities are carried out during rains and/or not adopted appropriate measures to control soil erosion
- haphazard disposal of construction wastes/unsuitable wastes
- generation of domestic solid wastes due to workforce
- possible oil/lubricant spillage
- impacts to wildlife
- wildlife attacks, snake bites, etc.
- occupational health and safety issues
- injuries to the workforce
- road accidents
- interruption to public access
- possible spread of Salvinia (*Salvinia molesta)*
- etc.

Table 4: Impact Matrix Code

Risk Level	Nature of Assessment/Impact Based Criteria	Mitigation Based Criteria
High Risk	The subproject will be classified as 'High risk' if: The sub project is expected to cause significant, severe, long-lasting, or permanent damages on the natural, physical or social environment, cannot be mitigated or; ○ Sub-projects that involve significant conversion or degradation of critical natural habitats such as sensitive ecosystems (e.g., wetlands, primary forests, protected areas). ○ The effects extend beyond the project site, potentially impacting entire regions or even neighboring provinces. ○ The risks of the sub project are novel, complex, or the project involves specialized or hazardous processes that are difficult to manage. ○ Sub projects involving large-scale use of hazardous materials, significant air emissions, or large volumes of untreated industrial waste.	Mitigation necessitates meticulous planning and the implementation of high-tech, costly design solutions. Even with such measures, residual effects are likely to persist.

	○ Sub projects that significantly alter major hydrological systems, such as large dams or barrages, which can affect river flow, aquatic biodiversity, and downstream communities. ○ Sub projects requiring the physical displacement or economic displacement (loss of land, assets, or access to resources) of a large number of people. ○ Sub projects impact on Indigenous Peoples/Vulnerable Groups ○ Sub projects that negatively affect the land, natural resources, culture, or livelihoods of Indigenous Peoples or other significantly vulnerable populations, often requiring Free, Prior, and Informed Consent (FPIC). ○ Major construction activities or infrastructure that poses severe risks to the health, safety, and security of surrounding communities (e.g., large-scale labor influx, major traffic hazards, or structural risks). ○ Destruction or significant damage to nationally or internationally recognized physical cultural resources or heritage sites.	
Substantial Risk	The Subproject will be classified as a substantial risk intervention if it will directly lead to the following; ○ Activities that could lead to invasion or spread of weeds and feral animals or the use of toxic chemicals, intensive use of pesticides. ○ Activities that could dangerously lead to the exposure of sensitive/critical/vulnerable habitats. ○ Construction of large new infrastructure within or directly adjacent (in buffer zones) to protected areas. ○ Illegal Activities as defined specifically under the Forest Ordinance and Fauna and Flora Protection Ordinance. ○ Subprojects, those involve collection of seeds/farming materials from the wild. ○ Sub-projects that may impose changes in land use that restrict access to resources in legally	Mitigation is feasible and effective, requiring only moderate design-based and/or operational planning. Residual effects are expected to be nil, minor, or temporary in nature.

	designated parks or protected areas or other common property resources on which local people may depend for livelihood purposes. In addition, as per the screening the subproject will have a majority of large-scale E&S impacts that will cause irreversible damage to the environment and communities.	
Moderate Risk	The subproject will be classified as 'Moderate risk' if: ○ The subproject will have a majority of reversible, small-medium scale E&S impacts, specifically limited to the civil works phase of the project that can be managed by site specific mitigation measures. ○ Require minor land acquisition or restrictions on land use, as a result of which there will be no significant impact on incomes or livelihoods. ○ Subprojects requiring adoption of Abbreviated Resettlement Action Plan (ARAP), Environmental and Social Management Plans (ESMPs) and or E&S Assessment and require further screening in line with the detailed technical designs of the respective subproject.	Mitigation is straightforward and low-cost, and it is expected to fully address the impact. No residual impacts shall remain.
Low Risk	A subproject will be classified as 'Low risk,' if: ○ The Subproject has low-negligible E&S impacts that can be managed via mitigatory codes of practice that will be defined as part of the contractual agreement/memorandums of understanding with project implementing contractors or operators. ○ The Subproject does not require any land acquisition or lead to any impact on incomes or livelihoods. ○ The Sub-project does not require formal E&S assessment, nor preparation of ESMPs and do not have identifiable negative E&S impacts.	No mitigation required or minimal preventive measures sufficient within O & M.

8. Screening Decision and Recommendations

Considering the following aspects, the project is recommended to implement in compliance with the environmental and social impact mitigation measures as included in the Environmental and Social Management Plan (ESMP) in Annexure 01.

1. The project is not a prescribed activity which should undergo EIA/IEE under the provisions of the National Environmental Act as contained in the Gazette No. Gazette Extraordinary No. 772/22 dated 24.06.1993, 859/14 of 23.02.1995 and Gazette Extraordinary No. 1104/22 dated 05.11.1999.
2. The project includes only a new small-scale construction (turnover structure) and rehabilitation of the culvert and an access road totally within their Right of Ways/foot prints, and no project activities are anticipated to extend into the nearby forested areas, Radella Tank, Heda Oya, archaeologically important places, etc.,
3. The project impacts are minor, temporary, and confined to the construction phase, resulting in a low level of risk, they can be effectively mitigated through the proper implementation of the Environmental Management Plan (EMP) along with adhering legal requirements and monitoring responsibilities stated therein.
4. The Construction of turnover structure will help for the efficient use of the water under control/regulate manner,
5. The entire interventions of the project are restorative in nature.

Name: Sunil Maithripala
Title: Consultant for Environmental Safeguards Management

Signature: 
Date: 15th August 2026

Annexure 01: Environmental and Social Management Plan (ESMP) – Construction of Turnout Structure in Nellikanaththa RB-02 Canal Trincomalee District

No	Potential Environmental and Social Impacts	Key project activities causing the impacts	Mitigation Measures proposed and action to be implemented by the Contractor	Mitigation Cost	Implementation	Compliance Monitoring
1.	GENERAL	**Throughout the project's construction Phase**	Employ an Environment, Occupational Health and Safety Officer (EOHS Officer) by the project implementing agency (Irrigation Department) covering the entire construction Phase as the responsible officer for the implementation of ESMP.	Engineering Cost	Irrigation Department	PMU
			The EOHS Officer shall develop an environmental and occupational health and safety inspection checklist based on the ESMP to monitor the mitigation measures therein regularly to ensure compliance by the Contractor (if any).			
			The Department of Wildlife Conservation (DWLC) shall be informed and coordinated prior to commence construction works of the project. Also, the construction plan should be disclosed to the DWLC before commencing construction works.		Irrigation Department	
2.	COMPLIANCE WITH THE LAWS AND REGULATIONS	**Throughout the project's construction Phase**	Coordinate with the **Farmer Organization (FO)** to avoid construction during peak cultivation times as required to prevent farmers' discomfort/impacts on their livelihood due to such actions.	Engineering Cost	Irrigation Department	PMU

			Avoid child labour under 16 years of age, forced labour, and the engagement of youngers with ages between 16-18 yrs in dangerous work within the project, such as excavation, operating heavy vehicles & machinery, electric works, blasting & explosive work (if any), manual carrying of heavy loaded materials, etc.			
			The Irrigation Department shall ensure compliance with the following regulatory requirements in Sri Lanka. • Shop & Office Employees Act (regulation of employment and remuneration) of Sri Lanka. • Factories Ordinance of Sri Lanka to ensure adequate site amenities and safe working conditions. • Gender equity within the project, as per the National Policy on Gender Equality and Women's Empowerment in Sri Lanka.			
			The Irrigation Department shall obtain mining licenses for the operation of borrow pits and metal quarries to meet the material requirement and road transportation of gravel from the Geological Survey and Bureau in accordance with the Mines and Minerals Act No 33 of 1992.			

			Also, material quarries shall be operated under an Environmental Protection License obtained from the Central Environmental Authority/relevant Local Authority.			
3.	EMPLOYMENT UNDER THE PROJECT	**Improvement of livelihood of the local people**	If hiring outsiders for the workforce of the project, the Irrigation Department should hire them from the community in the project area in priority basis to support and improve their income and livelihoods. Also, both male and female should be hired accordingly ensuring equal basis of all facilities and remuneration, as much as possible.	Engineering Cost	Irrigation Department	PMU
4.	OCCUPATIONAL HEALTH AND SAFETY OF THE WORKERS	**Throughout the project's construction Phase**	The EOHS Officer shall conduct toolbox meetings for the workers to make them aware of the project's environment, occupational health and safety aspects, and road safety aspects before mobilizing in day-to-day activities.	Engineering Cost	Irrigation Department	PMU
			All project workers shall be provided with Personal Protective Equipment (PPE). Also, the EOHS Officer shall ensure that all workers are properly equipped with PPE during work.			
			The project site is located, particularly the project access road some parts within the Kumbukkan Conservation Forest , the presence of wild animals in the project area are highly likely. Thus, the workforce shall be given an initial awareness regarding the presence of wild animals especially elephants, snakes, crocodiles, etc., in consultation with the Department of Wildlife Conservation (DWLC).			

			The workers shall not be entered into the Kumbukkan Conservation Forest at any time for any reason.			
			Prevent attacks from elephants and other wildlife by limiting all construction activities, material hauling, etc. to daytime particularly from 7.00 a.m. to 5.00 p.m., thereby avoiding early mornings and late evenings essentially.			
			In addition, fulfilling the following actions are essential to ensure safety from wildlife attacks.			
			○ **Elephant Sentinel:** A dedicated **elephant sentinel** (or lookout person) with local knowledge of elephant behavior and movement patterns must be mobilized. This person's sole responsibility is to monitor for approaching elephants and alert the workers. ○ **Early Warning System:** The sentinel should be equipped with a communication device (e.g., a horn, whistle, or mobile phone) to provide warning to all on-site personnel. ○ **Emergency Supplies:** A supply of **firecrackers** should be obtained from the DWLC regional office under the recommendation of the Department of Agrarian Development (ID). These are to be used only in emergencies to deter elephants and should be deployed by trained personnel.			

			○ **Temporary Electric Fencing:** If recommended by the DWLC, a temporary electric fence shall be erected around the immediate work area. The fence must be clearly marked and powered by a low-voltage unit designed for wildlife deterrence. ○ **No Harm Principle:** Under no circumstances shall any elephant be harmed, injured, or killed as a result of project activities. All personnel must be briefed on this non-negotiable principle.			
			All attempts shall be made to establish Labour camps away from the project site, but close to existing residential activities to ensure the safety of the workers from wildlife.			
			A temporary workers' shelter shall be constructed near the site (in the tank reservation) to provide a rest area for the workers, also having dining facilities, access to enough drinking water and toilet facilities (mobile toilet).			
			Any timber poles/material for constructing the shelter or any other project requirement shall not be obtained from the Kumbukkan Conservation Forest at any time.			
			A designated person trained in first aid and emergency response should be kept ready on site. Facilities must be established on site for immediate hospitalization of the workers victimized for injuries, snake bites, elephant attacks, etc., to ensure treatment.			

			Keeping a designated vehicle in the project site is compulsory for immediate hospitalization of the above workers.			
5.	WORKERS AND PUBLIC SAFETY DURING SITE ACCESS AND HAULAGE OF MATERIALS	**Throughout the project's construction Phase, during site access and material haulage via public roads.**	Ensure all equipment and vehicles are inspected, well-maintained, and operated only by certified and licensed operators/drivers.	Engineering Cost	Irrigation Department	PMU
			All necessary safety precautions shall be adopted to prevent vehicle-induced collisions/accidents and accidental falls into deep excavations, etc. Erecting essential road signs, necessary warning signs, physical barriers in deep excavations, night visibility, etc. shall be obligatory requirements on the above.			
			All drivers must be formally briefed on defensive driving techniques, strict adherence to national speed limits, and local traffic regulations.			
			Enforce a strict maximum speed limit (e.g., 20–30 km/h) for all project vehicles, particularly along the Pottuvil -Panama Road and access road runs in Kumbukkan Conservation Forest, especially.			
			To minimize congestion and risk, material haulage should be scheduled during off-peak hours (low traffic periods) as much as possible.			

			The designated load limits in the public roads shall not be exceeded at any time. Any damage to such road due to the project activities shall be repaired in consultation with the relevant road authority.			
			No stockpiling of construction material/unsuitable material on the nearby paddy fields.			
			During rehabilitation of the anicut access road and pipe culvert across the access road it should ensure to provide an alternative access for the public within the reservation.			
6.	DAMAGE TO PERIPHERAL VEGETATION AND ENVIRONMENTALLY SENSITIVE RECEPTORS	**Throughout the project's construction Phase**	All construction works should be limited to the Right of Way/footprint/reservations of the worksite.		Irrigation Department	PMU
			Material stockpiling, unsuitable material stockpiling, establishing temporary camps, etc. may be carried out within the reservations of the worksite.			
			Peg the footprints before commencing construction works for the easy identification of construction boundaries and to prevent encroachment of the nearby paddy fields.			
			Gravel material, truff or any other construction material shall not be obtained from the Kumbukkan Conservation Forest at any time.			
7.	EXTRACTION OF CONSTRUCTION MATERIALS	**Material (soil/earth/**	The Irrigation Department shall ensure the source of gravel and rubble materials is from pits/quarries that hold a valid Mining License (IML) and a transport license issued by the GSMB and			

		gravel) Sourcing throughout the project's construction Phase	an Environmental Protection Licence issued by the Central Environmental Authority/relevant Local Authority.			
			Sourcing or purchasing of any material that is sourced from any protected areas and/or designated natural areas is strictly prohibited.			
			If the Irrigation Department intends to operate his own borrow pits and/or metal quarries to meet his material requirement, he should adhere to the legal provisions as given under No. 02 of this ESMP.			
8.	EROSION AND POLLUTION OF WATER BODIES AND LAND	**During stockpiling of construction/ unsuitable /excavated material and handling throughout the project's construction Phase.**	Stripping, filling and compacting of the anicut access road shall be done with required measured adopted to prevent erosion of soil into nearby paddy fields.		Irrigation Department	PMU
			Haphazard stacking of filing material, construction material, excavated soil, construction debris and unsuitable material within the project site is not allowed.			
			Selection of sites for temporary stockpiling of borrow material, excavated soil, construction debris, and unsuitable material within the project site until reuse/dispose of in designated disposal sites shall be done only in adoption of effective measures to control erosion.			
			Site-specific measures shall be adopted associated with material/unsuitable material stockpiles to prevent them from			

			erosion such as covering with tarpaulin sheets to prevent exposure to wind and rain.			
			Sites to dispose of unsuitable materials, construction wastes, and any remaining excavated soil should be selected in consultation with the Divisional Secretary/Grama Niladhari, before commencing construction.			
			Maintenance and repair of the vehicles/equipment shall only be done away from the project area.			
			Refuel heavy machinery and store petroleum shall be done in careful manner to prevent spillage and with provisions to contain any accidental spillage.			
9.	THREAT TO BIOLOGICAL ASPECTS INCLUDING THE RISK OF SPREADING INVASIVE SPECIES.	**Throughout the project's construction Phase**	Poaching of wild animals and/or collecting forest products from the Kumbukkan Conservation Forest is prohibited.	-----	Irrigation Department	PMU
			Ensure construction materials, especially filling material (gravel) and sand that are brought to the project area, are free from invasive species. Close monitoring shall be done for the availability of invasive species in such material before unloading at the project site. If such species is observed, it shall be gathered and destroyed in an area away from the project site immediately.			

10.	ACCUMULATION AND DISPOSAL OF SOLID WASTE	**Throughout the project Phase**	Domestic solid wastes shall be properly segregated and disposed of through the relevant local authority. All actions should be taken to avoid disposing of such wastes in the project area or nearby environments, particularly into Kumbbukkan Forest Reserve.	-----	Irrigation Department	PMU
			Domestic wastes, especially food wastes, shall be removed from the site daily, and until such time, such wastes shall be kept unreachable by the wild animals.			
			Feeding wild elephants or other faunal species in the project site is strictly prohibited.			
			Food waste is to be strictly kept covered so wild animals won't get attracted.			
11.	AIR AND NOISE POLLUTION: IMPACTS RELATED TO DUST, NOISE, AND VIBRATION.	**Operation of equipment and machinery. Material storage and transport.**	Working time for noise/vibration generation activities should be restricted and carried out only from 7.00 am to 5.00 p. m. No nighttime construction works are allowed at any time.	----	Irrigation Department	PMU
			All equipment and machinery should be properly maintained to minimize excessive generation of noise and air emissions.			
			Transporting material on trucks shall be done with tarpaulin sheets covering to prevent dust emission and material spillage on public roads.			

			Material stockpiles susceptible to fugitive dust emission should be properly covered with tarpaulin sheets and watered to suppress dust emission during handling of such material to prevent impacts on the third parties as well as project workers.			
12.	HANDLING OF PUBLIC AND WORKERS' COMPLAINTS	**Road users, vehicles, farmers, residential & commercial community, workers of construction sites - Throughout the project Phase**	A grievance redress committee shall be established comprising of; • PIU representative as a committee coordinator. • EOHS as the Secretary to the committee • Religious Leader as a member and advisor • Garma Niladhari as a member • Representative of a Project Affected People (AP) as a committee member • Farmers Organization as a member.	Construction cost	Irrigation Department	PMU
			The following actions should be taken by the PIU and Contractor. • Display the project's grievance redress mechanism at public places close to the project site. • Assign a focal point to receive public and workers' grievances, written, verbal, or in other media, more fully Irrigation Department as a focal point.			

			• Receive and register the grievances in the Site Grievance Register. • Screen the grievances and investigate by Irrigation Department to verify the issue, and formulate a corrective/resolving action. • Call the GRC if such grievances cannot be resolved at the site level by the Irrigation Department. • Implement the resolving actions/decisions of the GRC. • Inform the resolving actions to the affected party in-writing along with getting his consent for the resolving actions in-writing.. • Post-monitoring of actions of resolving.			
13.	Environmental and Social Safeguards Monitoring	**Throughout the project construction Phase**	The project implementation agency (Irrigation Department) shall adopt a proper mechanism to implement the ESMP.		Irrigation Department	PMU
14.	REPORTING AND DOCUMENTATIO N	**Throughout the project construction Phase**	The Irrigation Department must include a GRM summary in their Monthly Environmental and Social Progress Report to the PMU, detailing the following. • Total grievances received. • Number of grievances resolved at the site level. • Number of unresolved cases escalated to the PMU. • Average time taken to resolve issues.	Engineering cost	Irrigation Department	PMU
15.	ESTABLISH A SOCIAL AUDIT COMMITTEE	**Throughout the project construction Phase**	A social committee shall be established, composed of the Farmers' Organization and the interested parties in the project area to closely monitor the project activities and to obtain	Engineering cost	Irrigation Department	PMU

			their assistance/support for the successful completion of the project.			
16.	REINSTATE OF CONSTRUCTION YARDS, SITES, ROADS AND OTHER PROPERTIES	**At the end of the project construction Phase**	The material hauling paths, yards of material stockpiling and unsuitable material stockpiling, temporary camps, etc. established within the site shall be removed and the site restored to the previous condition immediately after construction.	Engineering cost	Irrigation Department	PMU
			Also, the Irrigation Department shall be fully responsible for the following; • Removing all temporary structures within the project site. • Temporary canals, bypasses (if any). • Temporary sanitation facilities and pits. • Promptly repairing any structural damage caused to public roads and public utilities in consultation with the relevant road authorities/service providers. • Settling all outstanding labor wages, supplier Invoices, and utility payments for host community services consumed during the Construction period.			
			The final bill of payment shall be considered only upon completion of the above activities.			