PLEASE Project
Plastic Free Rivers and Seas for South Asia

South Asia Co-operative Environment Programme (SACEP) Plastic free Rivers and Seas for South Asia (P171269)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN FOR PROJECT: PLASTIC ZERO INITIATIVE - EMPOWERING INSTITUTIONS AND COMMUNITIES FOR SUSTAINABLE CHANGE

GRANTEE: SAVE A LIFE - SRI LANKA

Implemented by: SACEP
Supported by: UNOPS
Supported by: WORLD BANK GROUP

Environmental and Social Management Plan (ESMP)

1. Subproject Information

Subproject Title:	Installation of trash barriers under the sub project - plastic zero initiative, focused on empowering institutions and communities for sustainable change, by Save Life Sri Lanka
Estimated Cost:	120,000 USD
Start/Completion Date:	October 2024 - May 2025

2. Site/Location Description

Under the PLEASE project intervention, this subproject focuses on the installation of seven trash barriers at pre-identified locations along drainage channels. These channels are either directly or indirectly connected to the sea or lagoon. Detailed descriptions are given below.

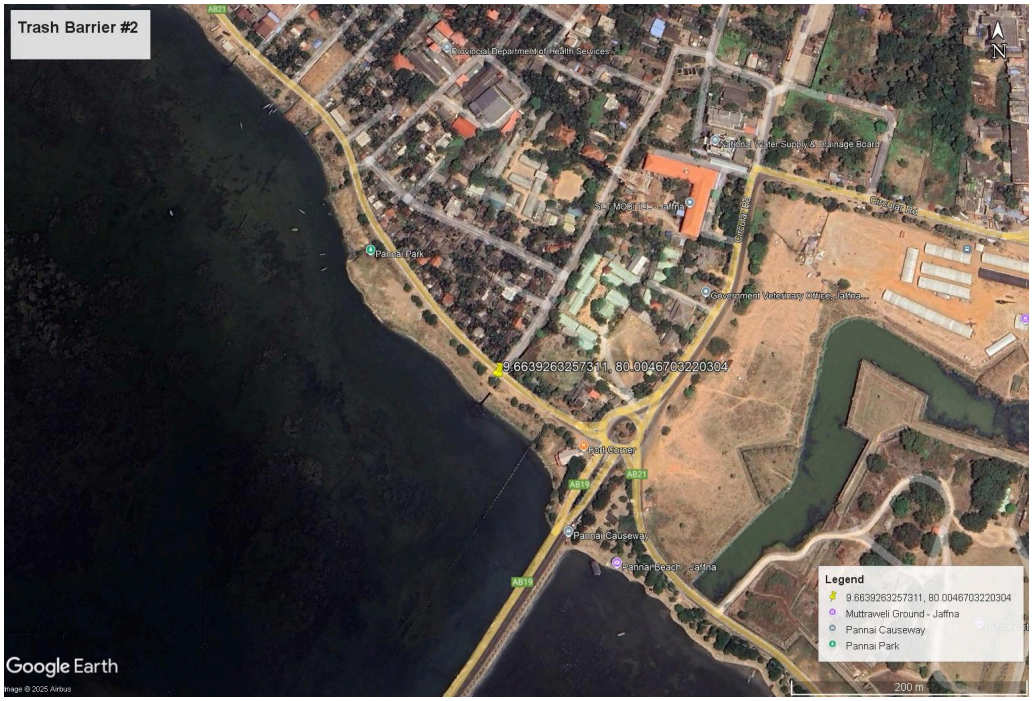
All the selected drainage channels are located within the Jaffna municipal area, near the Jaffna Lagoon. While two of these channels open indirectly into the sea, the remaining ones flow directly into it. Situated along the coastline in areas such as Kurunagar, Pannai, Koddadi, and Navanthurai, these channels are at high risk of plastic waste entering the water bodies. Urban and institutional zones, including those near the Old Jaffna Prison and Pommaiveli MOH, require effective waste management and regular monitoring. Additionally, market areas like Navanthurai generate substantial waste, emphasizing the need for consistent drainage maintenance to prevent blockages and reduce pollution risks. The details of the locations are as follows.

#1 Drainage channel in Pommaiveli Junction

The drainage channel located in Pommaiveli serves as an interception waterway, facilitating the separation of rainwater and wastewater to ensure efficient drainage under typical weather conditions. The channel discharges into the Rajavinkulam Pond. The surrounding area is characterized by a flat topography with minimal slope, which increases its susceptibility to waterlogging, particularly during heavy rainfall events. The dimensions of the drainage channel are approximately 5 feet in width and 0.5 feet in depth.

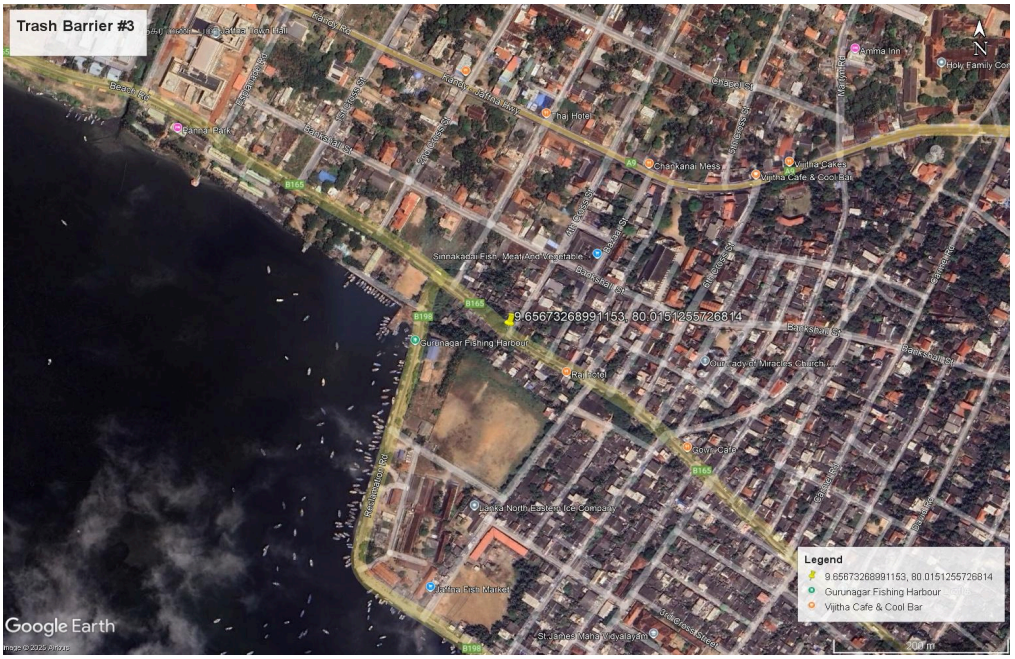
#2 Drainage channel in Pannai Junction

Pannai Junction, located near Jaffna Fort and the lagoon, is strategically positioned close to the causeway leading to Kayts. The area's drainage and water flow are significantly influenced by tidal movements and road construction. Due to its proximity to the lagoon, there is a heightened risk of plastic waste entering the marine ecosystem. The junction is a vibrant commercial hub, with numerous shops, vendors, and public offices, resulting in substantial waste generation, particularly plastic, from markets and food stalls. The drainage channel, which discharges directly into the sea, has dimensions of 2.5 meters in width and 0.5 meters in depth.



#3 Drainage canal near the Kurunagar Siddha Dispensary

Kurunagar is a low-lying coastal area in Jaffna City, situated near the Jaffna Lagoon, which makes it highly susceptible to water stagnation and tidal influences. The region experiences strong marine winds and is at risk of saline water intrusion. The drainage channel in this area measures 1.5 meters in width and 0.75 meters in depth.



#4 Drainage channel near to the Jaffna Prison

The area near the old Jaffna Prison is an urban setting characterized by institutional buildings and flat terrain. The interconnected drainage system flows toward the lagoon, with potential impacts from waste generated by nearby institutions and residential areas. Solid waste accumulation is common due to the presence of markets and public spaces in the vicinity. The drainage channel measures 0.75 meters in width and 0.75 meters in depth.

#5 Drainage channel at Kodadi Junction

Koddadi Junction, located near the Jaffna coastline and close to beach areas and fishing docks, has narrow streets that complicate effective drainage management. The area is at high risk of plastic waste entering the sea, largely due to fishing activities. Drainage systems

are frequently clogged with fishing gear waste and urban runoff. The drainage channel in this area measures 1.7 meters in width and 1.7 meters in depth.

#6 Drainage channel near to Navanthurai Market

Navanthurai, a fishing village near Jaffna city and the lagoon, has drainage channels that impact marine water quality. Waste from fish markets and packaging materials pollutes these channels, with inconsistent maintenance causing blockages. The community's waste, including organic and plastic materials, requires better segregation, processing, and disposal. The size of the channel is 1.6m width and 0.5 m depth.

#7 Drainage channel nearby to the Tilkco Hotel

The drainage channel near Tilkco Hotel originates from the surrounding commercial and residential areas, collecting runoff and waste from the neighborhood. It flows toward and eventually discharges into the Pullukulam Ponds. Proper management and maintenance of this drainage channel are crucial to prevent pollution and safeguard the water quality of the ponds. The drainage channel measures 2.7 meters in width and 1.5 meters in depth.

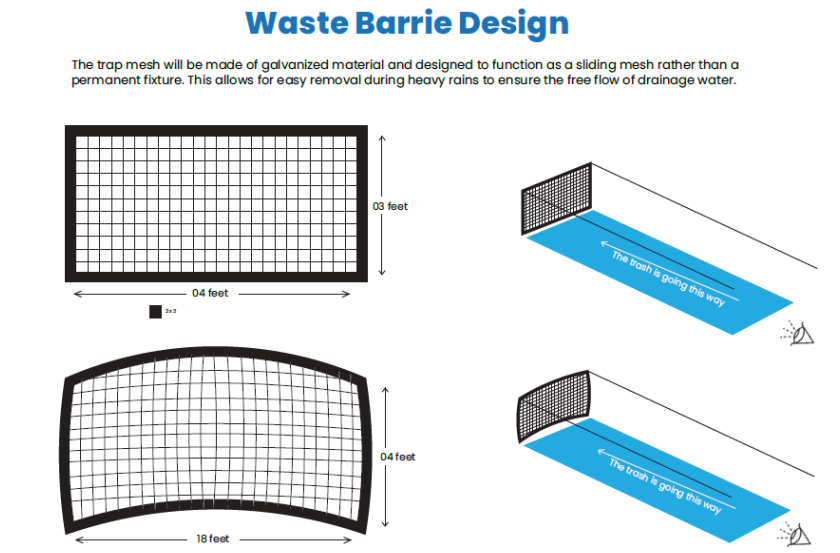
3. Sub-Project Description and Activities

The subproject under the PLEASE project focuses on the installation of plastic waste traps in key drainage channels to prevent plastic waste from entering water bodies, the lagoon, and the Sea.

The following steps will be undertaken:

- **Hotspot Mapping and Site Assessment**: A comprehensive mapping and site assessment will be conducted to identify key areas where plastic waste accumulates, considering factors such as waste flow, accessibility, and environmental impact. This process will ensure the optimal placement of the waste traps.
- **Consultation with Local Authorities**: Consultation with the local municipal council will be essential to secure necessary permissions for the installation of the plastic waste traps. This will ensure compliance with local regulations and guarantee support for the ongoing maintenance of the traps.
- **Installation of Waste Traps**: The waste traps will be installed at the identified hotspots. These traps will be permanent, fixed structures equipped with a sliding mesh made of galvanized metal, designed to efficiently capture plastic waste before it reaches water bodies.
- **Establishment of a Maintenance Plan**: A systematic maintenance plan will be developed, outlining regular inspection and cleanup routines. The municipality will assume responsibility for ensuring the traps are cleaned regularly, removing accumulated debris and properly disposing of it in line with local waste management practices. This will help prevent overflow and ensure the traps continue to function effectively over time. Recovered PET bottles will be directed to the Material Recovery Facility (MRF) of Save a Life for further processing.

- **Effectiveness Monitoring**: The effectiveness of the plastic waste traps will be regularly monitored by tracking the quantity and types of waste collected. Necessary adjustments will be made to improve the performance of the traps over time.



4. ESMP Matrix: Risk and Impacts, Mitigation, Monitoring

Anticipated E&S Risks & Impacts	**Risk Mitigation & Management Measures**	**Impact Mitigation**		**Impact/Mitigation Monitoring**			Mitigation and Monitoring Cost USD
		Location/ Timing/ Frequency	**Responsibility**	**Parameter to be monitored**	**Methodology, including Location & Frequency**	**Responsibility**	
Risk of accidents or injuries to personnel during installation, maintenance, and waste collection of the barrier	1. Provision of necessary PPE 2. Provide basic safety training to all personnel, focusing on safe practices 3. Ensure access to necessary tools and equipment 4. Ensure a basic first aid kit is available at the work site 5. Provide workers with emergency contact numbers and basic instructions 6. Placing Sign boards at strategic locations	Throughout the project period, during installation, maintenance, and collection	Environment expert- Save life	Use of PPE and availability of basic first aid kit Number of accidents reported Availability of sign boards	Regular Monitoring at the installed sites	PM - Save a life Technical Expert(Envt) Country team	$540
Risk of disruption to aquatic flora and fauna due to the barrier	1. Conduct a preliminary environmental and ecological assessment before installation 2. Ensure the barriers are designed and positioned to minimize alterations to water flow and avoid	Before and after installation	Environment expert- Save life	Availability of assessment report Check reports	Regular Monitoring at the installed sites	PM - Save a life Technical Expert(Envt) Country team	$270

Anticipated E&S Risks & Impacts	Risk Mitigation & Management Measures	Impact Mitigation		Impact/Mitigation Monitoring			Mitigation and Monitoring Cost USD
		Location/ Timing/ Frequency	Responsibility	Parameter to be monitored	Methodology, including Location & Frequency	Responsibility	
	obstructing migration paths for aquatic species 3. Carefully select installation points to ensure they do not disturb habitats or sensitive flora. 4. Scheduled and on-demand waste collection will minimize water clogging in the barriers, which could otherwise obstruct the movement of aquatic fauna 5. Conducting periodic checks to confirm that there is no disturbance to aquatic fauna and flora						
The design of barriers may not be effective in capturing waste or may not withstand environmental conditions, leading to inadequate waste interception and	1. Conduct pilot studies and iterative testing of barrier designs under varying conditions. 2. Collect feedback and data to refine designs, ensuring they meet functional and	During the testing, before scaling up the installations	Environment expert- Save life	Availability of data from the pilot studies and refined designs	Regular Monitoring at the installed sites	PM - Save a life Technical Expert(Envt) Country team	$100

Anticipated E&S Risks & Impacts	Risk Mitigation & Management Measures	Impact Mitigation		Impact/Mitigation Monitoring			Mitigation and Monitoring Cost USD
		Location/ Timing/ Frequency	Responsibility	Parameter to be monitored	Methodology, including Location & Frequency	Responsibility	
increased pollution in water bodies.	environmental requirements before full-scale deployment.						
Barriers may dislodge due to stability issues, especially during high water flows and flooding events, leading to plastic and waste debris re-entering the water bodies, thereby exacerbating pollution.	1. Designing of Sliding barriers firmly anchored using iron pegs and stone boulders to prevent displacement 2. Conduct regular checks on stability during waste collection and ensure ongoing maintenance to address any potential issues.	During the installations	Environment expert- Save life	Stability and effectiveness of barriers after the highflow event	Regular Monitoring at the installed sites	PM - Save a life Technical Expert(Envt) Country team	$ 210
Accumulated waste can further degrade water quality, contributing to unpleasant odors and creating a public nuisance, while clogging the barrier can lead to flooding.	1. Collecting waste accumulates due to barriers on a set schedule 2. On demand waste collection - Regular monitoring of the barriers, and the frequency of waste collection will be adjusted based on the observed level of waste accumulation	Throughout the project period, after installation at the sites	Environment expert- Save life	Checklist and record of waste collection Record from GRM	Regular Monitoring at the installed sites	PM - Save a life Technical Expert(Envt) Country team	$100

Anticipated E&S Risks & Impacts	Risk Mitigation & Management Measures	Impact Mitigation		Impact/Mitigation Monitoring			Mitigation and Monitoring Cost USD
		Location/ Timing/ Frequency	Responsibility	Parameter to be monitored	Methodology, including Location & Frequency	Responsibility	
	3. Establishment of GRM for communities						
Theft-related issues	1. Engage the nearby community for support in monitoring the site 2. Display contact details for reporting any theft or security concerns at sites	Before and after installation	Environment expert- Save life	Incident report The availability of displayed information at the sites	Regular monitoring at the installed sites	PM - Save a life Technical Expert(Envt) Country team	$ 20
Risks of Sexual exploitation and abuse (SEA) and sexual harassment (SH) among workers and between workers and community members at the facility	1. Provide a workers' grievance redress mechanism (Workers' GRM), incorporating SEA/SH Focal Points for both genders and an effective referral mechanism 2. Provide an anonymous reporting system, along with protection measures for individuals who report 3. Provide referrals to SEA/SH service providers as required 4. Provide training on recognizing, preventing,	At the sites	Gender officer - Save Life	Availability of workers' GRM and SEA/SH Focal Points Availability of reporting system Number of SEA/SH awareness sessions for a) workers, and b) surrounding communities Availability of CoC	Monthly site audits	PM - Savelife Technical Expert-UNOPs Sri Lanka Country team	$200

Anticipated E&S Risks & Impacts	Risk Mitigation & Management Measures	Impact Mitigation		Impact/Mitigation Monitoring			Mitigation and Monitoring Cost USD
		Location/ Timing/ Frequency	Responsibility	Parameter to be monitored	Methodology, including Location & Frequency	Responsibility	
	and responding to SEA/SH for workers and communities 5. Prepare a Code of Conduct for workers at the facility that includes reference to SEA/SH 6. Ensure workers at the facility sign a Code of Conduct (CoC)			Percentage of workers that have signed the CoC			
Potential for social issues related to labor influx	1. Prioritise the local community in the recruitment 2. Worker grievance meetings 3. Awareness on communicable diseases, Training on gender based violence	Throughout the project period.	Gender officer - Save Life	Availability of meeting and training records	Monthly site audits	PM - Save a life Technical Expert-UNOPs Sri Lanka Country team	$210
Non-compliance with the local regulatory requirement and workers' dissatisfaction due to extensive work requirements	1. Provide workers' GRM 2. Pay wages in accordance with national laws	Throughout the project period	Gender officer - Save Life	Number of workers' grievances filed Payrolls	Monthly site audits	PM - Save a life Technical Expert-UNOPs Sri Lanka Country team	$ 00

Anticipated E&S Risks & Impacts	Risk Mitigation & Management Measures	Impact Mitigation		Impact/Mitigation Monitoring			Mitigation and Monitoring Cost USD
		Location/ Timing/ Frequency	Responsibility	Parameter to be monitored	Methodology, including Location & Frequency	Responsibility	
Risk of child labor and forced labor at the facility	1. Comply with minimum age requirements of national laws and document age of workers upon hiring 2. Verify age of workers with communities where required 3. Provide workers' GRM and access to Project GRM 4. Raise awareness in communities	Throughout the project period	Gender officer - Save Life	Availability of meeting and training records	Monthly site audits	PM - Savelife Technical Expert-UNOPs Sri Lanka Country team	$ 70
Gender discrimination in job opportunities and wages	1. Preparation of non-discriminatory guidelines for the recruitment process and operations affecting all levels of workers 2. Equal wages for male and female workers	Throughout the project period	Gender officer - Save Life	Availability of HR Policy Grievance Redress Mechanism	Monthly site audits	PM - Save a life Technical Expert-UNOPs Sri Lanka Country team	$ 00
Complaints Due to Project (Lack of a Grievance Redress Mechanism)	1. Establish the approved Project's Grievance Redress Mechanism (GRM) and actions for the GRM	Throughout the project period	Environment expert-Save life	Grievance Redress Mechanism, Complaint log and implementation	Site visits Monthly	PM - Save a life Technical Expert-UNOPs	$ 50

Anticipated E&S Risks & Impacts	Risk Mitigation & Management Measures	Impact Mitigation		Impact/Mitigation Monitoring			Mitigation and Monitoring Cost USD
		Location/ Timing/ Frequency	Responsibility	Parameter to be monitored	Methodology, including Location & Frequency	Responsibility	
	2. Publicize the existence of the Project's GRM through campaigns, websites, billboards, etc. 3. Ensure that the contact details are placed on the notice boards 4. Install complaint box			Availability of a complaint box		Sri Lanka Country team	

5. Capacity Development & Training

- Provide training to relevant staff on workplace safety and basic first aid.
- Conduct training on Grievance Redress Mechanism (GRM) for barrier construction workers, waste collectors, and surrounding communities.
- Deliver training on recognizing, preventing, and responding to Sexual Exploitation and Abuse (SEA) / Sexual Harassment (SH) for both workers and communities.
- Organize capacity-building workshops for waste collectors on effective and safe waste management practices.
- Offer training on safe waste collection, waste segregation, and eco-friendly disposal techniques for municipal waste collectors.
- Conduct knowledge-sharing sessions for waste collectors on communicable and non-communicable diseases, emphasizing the importance of hygiene management.

6. Implementation Schedule and Cost Estimates

	Timeline						
	Jan	Feb	Mar	Apr	May	Jun	Cost - USD
Provision of PPES							$ 150
Provide basic safety training to all personnel, focusing on safe practices							$150
Provision of necessary tools and equipment							$150
Basic first aid kit							$ 100
Conducting a preliminary environmental and ecological assessment before installation							$50
Design measures							150
Scheduled and on-demand waste collection coordination							$120
Pilot studies and iterative testing of barrier designs under varying conditions.							$200
Collect feedback and data to refine designs, ensuring they meet functional and environmental requirements before full-scale deployment.							$40
Monitoring cost							$160
Community engagement for the monitoring support							$20
Security related measures							$10
Provide training on recognizing, preventing, and responding to SEA/SH for workers and communities							$200

Awareness on communicable diseases, Training on gender based violence							$150
GRM and related trainings							$150
Total							$ 1770

7. Attachments

Environmental and Social screening report
Photographs of the locations
MOU with Northern Provincial Council to install barriers in the Drainage
PSEA