

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

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
FOR RECYCLING FACILITY

GRANTEE: CENTRE FOR INTEGRATED URBAN
DEVELOPMENT - NEPAL

Implemented by:



Supported by:



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Environmental and Social Management Plan CIUD

1. Sub-project Information

Subproject Title:	Establishment of the Plastic Recycling and Upcycling Center (PRUC) by the Centre for Integrated Urban Development, Nepal
Estimated Cost:	USD 55,368 (Technologies from the project) NPR. 25-30 Lakhs i.e ~ 18,000 - 21,600 USD (Infrastructure from the Kirtipur Municipality)
Start/Completion Date:	June 2024- April 2025

2. Site/Location Description

2.1 Project Description:

The "Using Innovative Technology to Establish Plastic-Managed Communities and Rivers in Kirtipur Municipality and Adjacent Wards of Neighboring Municipalities in the Kathmandu Valley" project, in collaboration with Kirtipur Municipality, aims to tackle plastic waste through innovative recycling and upcycling technologies. The project focuses on establishing a state-of-the-art plastic recycling and upcycling center (PRUC), which will play a crucial role in addressing plastic pollution while empowering local communities, particularly women, to engage in waste-based entrepreneurship. The Kirtipur Municipality has committed to investing in the necessary infrastructure for the center, entering into a Memorandum of Understanding (MOU) with CIUD for its establishment. This project will also implement key interventions including source-segregated plastic waste collection from households, training for women's groups on efficient waste management, and introducing sustainable practices for plastic upcycling.

The PRUC will employ cutting-edge methods such as shredding, dehumidification, and extrusion to process plastic waste into valuable materials, such as plastic lumber, which will be used to create products like furniture. Through the integration of advanced technologies, the project seeks to minimize plastic leakage and waste while ensuring safe and environmentally responsible practices. The project will distribute collection pouches to households and provide large collection bags for community-level plastic waste collection, which will be managed by private stakeholders in collaboration with the municipality's waste management systems. The processed plastic materials will then be utilized to create recycled products for sale, providing both economic opportunities and addressing the issue of plastic pollution in the area.

This initiative is grounded in the AIR (Avoid, Intercept, Redesign) framework. The project will emphasize "Avoid" by promoting awareness about plastic use reduction and encouraging the adoption of reusable alternatives. "Intercept" efforts will focus on intercepting low-quality plastics that are typically used in everyday products, advocating for a transition to more sustainable materials through community campaigns. "Redesign" strategies will focus on the innovation of new recycling technologies to handle complex plastics like MLPs (multi-layer plastics), which are often difficult to recycle, and will produce marketable products like furniture.

This project will address critical gaps in plastic recycling by creating an efficient collection system, providing valuable recycling services, and reducing the open burning of plastic waste. The initiative

will contribute to the long-term sustainability of the region by developing a local recycling ecosystem that will continue to serve Kirtipur and neighboring municipalities even after the project's completion.

2.2 Site Description:

Kirtipur Municipality is located in Kathmandu District, on the southern-western side of the Kathmandu Valley. It was established as a municipality in 2053 B.S. Kirtipur municipality is divided into ten wards, with a total size of 14.76 square kilometers. The municipality is surrounded by Kathmandu Metropolitan City(KMC) to the north, Chandragiri Municipality and Nagarjun Municipality to the west, Lalitpur Metropolitan City (LMC) to the east, and Dakshinkali Municipality to the south. The Balkhu River separates the municipality from Chandragiri and Nagarjun in the west and the KMC in the north. Similarly, the Bagmati River, one of the major rivers outflowing from the valley, separates the LMC in the east.

It can be noted that the establishment of the plastic recycling and upcycling center (PRUC) is an important element of the project that must be owned by the Kirtipur Municipality, and has taken the responsibility of establishing the infrastructure. However, following many debates, plans, and designs for the establishment of infrastructure in Ward 2, the municipality failed and so relocated this new space near to the current transfer station at Ward number 10, near the BP Koirala Memorial Planetarium (East), WASH center in the West and open land and the road in the North and Kirtipur Municipality's waste Transfer station in the South. The coordinates of the location are 27°40'34.36"N and 85°17'0.12"E. The total area is 364 square meters.



Map: Proposed Location for Plastic Upcycling and Recycling Center

The location is full of open space near the city's entry point, yet because the landscape is close to the city's residential regions, there are no difficulties from the neighboring community.

2.3 Institutional Arrangement

The project has signed an [MOU with the Kirtipur Municipality](#) with Kirtipur Municipality to establish waste recycling and upcycling infrastructure. The project team from CIUD has taken this as an opportunity to collaborate with the municipality in ensuring the proper construction of the facility with minimal risks to the surrounding environment and community. The project aims to encourage women entrepreneurs to operate their enterprises independently, thereby closing the loop in the circular plastic value chain

The Environmental and Social Management Plan (ESMP) should be applied throughout both the construction and operation phases to ensure environmental and social safeguards. During the construction phase, the mitigation measures and monitoring will be ensured by the contractor through the committee oversights by the Kirtipur municipality. Similarly, in the operational phase, the implementing partners and CIUD will be in charge of carrying out the mitigation measures and monitoring, with sufficient oversight provided by the ESMP Officer (consultant) and UNOPS Country Team. All parties concerned are committed to following the ESMP and taking the required steps to reduce environmental and social risks in conformance with the national environmental and social safeguarding regulatory standards, procedures, and protocols.

3. Subproject Description and Activities

The ESMP aims to ensure that the project's activities are carried out in an environmentally and socially responsible manner, promoting sustainable practices for waste management, particularly plastic waste, through innovative technologies. The plan covers both soft components, including training, community engagement, and capacity building, and infrastructural components, such as the establishment of the plastic recycling and upcycling center.

The activities outlined in this ESMP are categorized into two distinct phases:

Project Planning, Design, and Pre-Activity Phase

The pre-activity phase focuses on project planning, stakeholder engagement, and initial assessments. Key activities include:

- Initial workshops and coordination meetings with project stakeholders, including women's groups, informal waste workers, local communities, and municipal authorities.
- Mapping and engaging the key beneficiaries, primarily women's groups (Mahila Samuha, Misa Pucha, etc.) and informal waste workers (IWWs).
- Conducting baseline surveys and assessments to understand the training requirements of women groups and informal waste workers in waste management and business development.
- Site assessment and design for the upcycling and recycling center, in coordination with Kirtipur Municipality.

Project Construction and Operation Phase

This phase will focus on implementing the project interventions and activities aimed at waste management, capacity building, and community empowerment. It can be noted that Kirtipur Municipality will do the construction of the facility to establish a [plastic recycling and upcycling](#)

[center](#) ([27°40'35.1"N 85°16'59.9"E](#)) and the project funds to be equipped with innovative technologies and run. This contains the following sub-activities in the budget heading of the Product Development (Hardware Activities).

During the Operation and Maintenance (O&M) phase, additional activities will include the continuous operation and upkeep of the recycling plant to ensure its long-term sustainability. This phase will cover the costs associated with supplying necessary materials, equipment, and fixtures for the center, as well as the repair and maintenance of the plant, which is crucial for its effective operation. Further, the design of the recycling plant will be finalized and validated, ensuring it meets the operational requirements. To support the safe and efficient processing of waste plastics, safety equipment will be provided for workers involved in the collection, handling, and recycling of materials. The PRUC (Plastic Recycling and Upcycling Center) will be provided with funding for the collection of waste plastics as extra raw materials, which will be crucial for the continuous production and upcycling processes at the center. These activities will ensure the ongoing functionality and success of the recycling operations within the community.

Key activities include:

1) Waste Management and Plastic Collection:

- Training women groups to collect waste plastic at the household level using designated pouches and bags. Women will also be trained on plastic waste recycling and upcycling technologies, and supported in setting up waste-based enterprises.
- Integrating informal waste workers into the waste collection and processing chain, ensuring their safety through proper safety equipment and training.
- Distributing collection bags/pouches in the community and implementing source segregation of plastic waste.

2) Recycling and Upcycling Center Development:

- Kirtipur Municipality will provide the site for the center, while the project will focus on setting up the necessary recycling technologies (e.g., shredders, crushers, molding machines).
- The project will use the collected waste plastics from the source through two private stakeholders (Neat Clean Green Nepal P. Ltd; Swachha watawaran Sanrakshyan Kendra), and once they extract and send for recycling, the project will use the residue low-value plastics. As a result, the project intends to preserve the following [technologies](#) in the plastic recycling and upcycling center.
 - Shredding machine- 1 set
 - Dehumidifier Machine- 1 Set
 - Extrusion Machine- 1 set
 - Injection molding Machine – 2 sets
 - Heat press machine- 3 sets
 - Molds- 10 sets (including Lumber making, sheet making, flower vase, and others), Design, develop collection pouches/bags, and provide to the Community women's groups

- Installing machinery and providing hands-on training for workers to operate recycling and upcycling technologies efficiently.
- Women's groups will manufacture products such as pressboards, weaving bags, and fiber products from recycled plastics. They will also receive capacity building in branding, marketing, and business development.

3) Community Engagement and Awareness:

- Conducting community awareness programs in schools, communities, and institutions on waste segregation and plastic recycling.
- Dissemination of project results through print media, case studies, and social media. Organizing events like plastic melas(exhibitions) to showcase the recycled products and raise awareness about the project's success.

4) Development of a real-time database to track plastic waste and M&E:

- Monitoring waste collection efforts, plastic recycling processes, and product manufacturing to ensure project goals are met. Conducting impact assessments through joint visits with municipal and community stakeholders.
- Development of plastic waste Information Management System (PWIMS): a real-time database to track waste generation, collection, processing, and product production, aiding in decision-making and increasing transparency.

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

It can be noted that this ESMP covers both the design, construction phase and operations phases within one environmental and social risks identification and mitigation and monitoring matrix. It covers the environmental and social risks pertaining to the construction of the plastic recycling and upcycling center (which is the responsibility of the Kirtipur Municipality) and the operationalization of the facility by the provision of the technology for waste recycling that mainly includes the provision of the shredders, crushers, molding machines in the plastic recycling and upcycling centers (that falls in the scope and is funded under the PLEASE project). However, it is worth noting that Kirtipur Municipality holds primary responsibility for the infrastructure development of this subproject and follows its established practices, which will be implemented through the formation of a local committee. The municipality is committed to ensuring that construction is carried out safely. However, the project team from CIUD will take proactive measures to address the identified environmental and risk-related activities, ensuring compliance with field actions during construction. Some of the significant social and environmental risks are identified herewith along with oversight management and oversight monitoring to ensure environmental and social safeguards are in conformance with national regulations, procedures, and standards.

Table 1 : ESMP for the Design, Construction Phase and Operational Phase

Anticipated E&S Risks and Impacts	Risk Mitigation and Management Measures	Impact Mitigation		Impact/Mitigation Monitoring			Cost for Mitigation and Monitoring Measures (USD)
		Location/Timing/Frequency	Responsibility	Parameter to be monitored	Methodology, including Location and Frequency	Responsibility	
<p>Risk of Delays in Approval for Land Use, Property, and Construction from Kirtipur Municipality Board</p>	<p>1. Presentation of the project concept, design of the shed (infra) development, and the method of using the space, etc., to the Kirtipur Municipality board.</p> <p>2. The project should ensure that the Municipality's Forest, Environment, and Disaster Management Committee has assessed the pre-feasibility of plastic recycling/upcycling in terms of land use and technology harnessed and its potential</p>	<p>Project Location/Before construction begins</p>	<p>Focal Person, PLEASE Project, Kirtipur Municipality and Project coordinator, PLEASE Project, CIUD</p>	<p>Compliance with the conditions of applicable public hearing minutes and municipal approval documents.</p>	<p>Provide a compliance matrix. Monitoring period: Before the start of building activity.</p>	<p>Technical Expert - Environment or Project Manager Mobiliser,, CIUD</p>	<p>Cost estimated 75¹</p>

¹ The cost for approvals, interaction with government agencies and relevant departments and field visits for site preparation will be covered by Kirtipur Municipality, however PLEASE project team will assist the KM focal person to deliver technical presentations for government officials and will incur no additional cost for this activity

	environmental impact before approval.						
Risk of Ecological Disturbance and Vegetation Loss Due to Construction Activities	<ol style="list-style-type: none"> 1. Implement fencing or protective barriers around trees and sensitive vegetation to prevent damage during construction 2. Plan construction activities to limit unnecessary clearing of vegetation and disturbance to the surrounding ecosystem. 3. Restore the area by planting native trees, shrubs, or other greenery after construction is complete. 	Project Location during and after Construction period	Focal Person, PLEASE Project Kirtipur Municipality	<ol style="list-style-type: none"> 1. Percentage of vegetation lost compared to initial area (if any) 2. Number of trees/vegetation preserved during construction 1. Number of trees/plants replanted after construction 2. Area (in square meters or hectares) of green cover maintained over time. 	Direct Observation during the construction Before and after pictures documented during field visits	Community Mobiliser, PLEASE Project, CIUD	Cost estimated 500 ²
Risk of Disruption to Adjacent Stakeholders During Construction	<ol style="list-style-type: none"> 1. Inform nearby residents and community in advance about construction schedules, and potential disruptions through notices, or public announcements. 2. Ensure proper signage, alternative 	Project Location during and After Construction period	Focal Person, PLEASE Project, Kirtipur Municipality	<ol style="list-style-type: none"> 1. Number of public meetings, notices, or announcements issued before and during construction. 2. Number of complaints received 	Conduct interviews with nearby residents and the community Review of GRM register for complaints	Community Mobiliser, PLEASE Project, CIUD	100

² The Kirtipur Municipality will cover this cost during the construction phase for site preparation and after construction to ensure the maintenance of the green spaces

	<p>routes, and safe pedestrian pathways to reduce inconvenience to nearby stakeholders.</p> <p>3. Establish a clear system GRM mechanism e.g., a helpline or complaint register) for stakeholders to report concerns and receive timely responses during construction.</p>			and resolved within a specified time			
<p>Occupational Health and Safety Risks (to construction workers and to waste workers during recycling and sorting of plastic waste)</p>	<p>1.1 Ensure that all workers are equipped with appropriate PPE such as helmets, gloves, safety boots, goggles, and high-visibility vests to minimize physical injuries during the construction phase</p> <p>1.2 Conduct safety training programs</p> <p>1.3 Provide group accidental insurance to laborers/employees/ waste workers</p> <p>1.4 Provide necessary Emergency Health care and First Aid Kits to both</p>	<p>Project Location/Construction and Operational period/weekly</p>	<p>Contractor/ ESMP (consultant)</p>	<p>Number of incidents, Training records; Verification of health and safety plan and records, etc</p> <p>-Availability of first aid, fire extinguisher, PPE, etc</p>	<p>Direct Observation, review the records of the incidents, referral to healthcare centers, etc</p> <p>Onsite interviews and spot checks</p>	<p>Focal person, PLEASE Project, Kirtipur Municipality and Community mobilizer, PLEASE Project, CIUD</p>	<p>Cost estimated 375 (for the safety equipment, etc)</p>

<p>Lack of understanding of EHS risks and impacts, and mitigation measures, leads to accidents and health impacts</p>	<p>construction workers and waste workers 1.5 Ensure Fire Extinguisher is available at the recycling facility 2.1 Assess the construction company's capacity in OHS (hired by Kirtipur Municipality) Train construction workers on OHS</p>	<p>Construction site/weekly Operational site/ Weekly</p>	<p>Project Manager and OSH consultant during construction. Project Manager and OSH focal person at the facility</p>	<p>Percentage of construction companies whose OHS capacity has been assessed Number of toolbox talks conducted Number of incidents, Training records; Verification of health and safety plan and records</p>	<p>spot checks at the construction site and interviews with the construction workers spot checks at the operation site and interviews with the waste workers</p>	<p>Technical Expert environment UNOPS PLEASE Project Nepal and Kirtipur Municipality Technical Expert environment UNOPS PLEASE Project Nepal and Kirtipur Municipality</p>	<p>100 for OSH training 500 for PPEs</p>
<p>Risk of Injuries from Shredding, Extrusion, and Heat Press Machines in Plastic Recycling</p>	<p>3.1 Earplugs from the noise from shredding and extrusion machines, N95 masks to reduce inhalation of plastic fumes and dust from a dehumidifier, extrusion, and heat press, safety goggles, heat resistant aprons for protection against heat and burns during heat press,</p>						

	<p>injection and molding, safety shoes, cut-resistant gloves, protective clothing against physical injury from the shredder, molds, and extrusion machines</p> <p>3.2 First aid kits and emergency health care/insurance</p>						
<p>Risks of Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH) between Project workers, and between Project workers and local community members</p>	<p>1. Implementation and adoption of existing 'protection from sexual exploitation and abuse' policy and strategy</p> <p>2. Appoint the PSEA focal person on site.</p> <p>3. Conduct awareness training on recognizing, and preventing SEA/SH for employees, project workers (construction and waste workers)</p>	<p>-training and awareness conducted before commencement of work.</p> <p>-Implementation of Focal Points and signing of CoC at the site during the construction period</p>	<p>Focal Person, PLEASE Project, Kirtipur Municipality/ ESMP Consultant</p>	<p>-Number of training sessions provided to workers and nearby residents on GRM</p> <p>-Percentage of workers who have signed the CoC</p> <p>Number of SEA/SH Focal Points appointed</p> <p>-Availability of a complaint box</p>	<p>Review of GRM records and review of feedback from workers and communities.</p>	<p>Technical Expert environment UNOPS PLEASE Project Nepal</p>	100

	<p>4. Request all Project workers to sign a Code of Conduct (CoC) including instructions for SEA/SH prevention</p> <p>5. Provide specific SEA/SH response mechanism as part of the Project GRM, including referral to SEA/SH services</p>			on-site and actions taken in response to a complaint			
Lack of compliance with labor laws and labor management procedures	<p>1. Construction laborers will be trained and made aware of the (GRM).</p> <p>2. A complaint box and the contact number of both construction contractors and site engineers from KM and the recycling facility focal person will be visibly displayed on-site.</p> <p>3. Workers will have the option to raise concerns anonymously, either by phone or through the complaint box</p> <p>4. Development and implementation of a code of conduct in line with national</p>	On-site Monthly during construction and operations	Focal Person, PLEASE Project, Kirtipur Municipality	<p>-Number of workers' grievances filed.</p> <p>-Availability and implementation of the Code of Conduct.</p> <p>-Availability of payrolls.</p> <p>-Site visits and review of received complaints</p>	Review of GRM registry or complaint box for any labor-related issues reported	Technical or Expert environment UNOPS PLEASE project - Nep	100

	labor laws and ESF of the PLEASE Project especially for the recycling facility workers 5. Wages will be paid in accordance with Labor Management Procedures (LMP)						
Risk of child labor	1. All recruitments will be conducted in accordance with the minimum age requirements of the municipal procurement conditions protected. 2. Ensure that KM conducts a track record search of the construction contractors (including records of health and safety violations, fines, consult public documents related to workers' rights violations, GBV/SEA/SH issues, etc.)	At the site, throughout the construction and operation phase/ Monthly	Contractor and focal person, PLEASE Project, Kirtipur Municipality	Number of workers' grievances filed Number of track record searches conducted	Monthly monitoring Implementation of Child safeguarding policy and taking formal undertaking with waste workers to ensure that no child is engaged in construction and waste recycling facility	Focal person, PLEASE Project, Kirtipur Municipality	50
Risk of forced labor	1. Included in the Municipality's contract to the contractor, 2. Ensure there is a well-established confidential and accessible Grievance	Throughout the construction and operation phase / Monthly	Contractor and focal person, PLEASE Project, Kirtipur Municipality	Number of grievances filed in workers' GRM	Review of GRM registers or complaints	Focal person, PLEASE Project, Kirtipur Municipality	50

	Redress Mechanism (GRM) for waste workers to report issues at the recycling facility during the operation phase and raise awareness in communities						
Potential Leakage in Collection and Transportation to PRUC	<p>Plastic Source and to</p> <ol style="list-style-type: none"> 1. Ensure plastic is stored in durable sealed bags during plastic waste collection at the source 2. Provide training on proper handling, storage, and transportation to minimize losses. 3. Use covered or sealed transport vehicles to prevent plastic from falling off during transfer. 4. Check collection points, transport routes, and PRUC entry points for any plastic leakage and take corrective action. 	Onsite weekly	Community Women's Groups for waste collection, CIUD, Waste collection private stakeholders	<ol style="list-style-type: none"> 1. Number of reported cases of plastic leakage along the collection and transport routes. 2. Number of complaints from community members or workers regarding plastic spillage 3. Total waste collected from household and safely transported to PRUC 	Collecting is sourced from the community women and delivered to the vehicle utilizing the large safe and sealed durable waste collecting bags. Training and orientation will be given to women with distribution of durable bags and pouches to avoid leakages.	CIUD, Waste collection private stakeholders and Focal Person from PLEASE Project	The cost of waste disposal training and technique is 1000
Challenges in Processing Macro and Mono-Grade Plastics in Furniture	<ol style="list-style-type: none"> 1. Separate space is established for the collecting of plastics and utilizes macro and mono 	Onsite at the recycling facility during	Selected Women Entrepreneurs who operate this PRUC	<ol style="list-style-type: none"> 1. Number of maintenance checks conducted per month 	Regular production of the new furniture items and	CIUD and Mr. Gyan Bajra Maharjan, focal person	Product Development (Hardware

Production as the project turns plastic waste into pressboard for carpentry	grade plastics again in dehumidification and subsequent extruding. 2. Implement scheduled monitoring of equipment functionality and keep detailed logs of production output and material utilization	the operation phase/ Weekly		2. Quantity of Pressboard produced (kg or sheets) per month 3. Frequency of production and utilization data update 4. Percentage of raw plastic waste converted into Pressboard	quality upgradation and Regular data of plastic product manufacturing and maintain the data of the reutilization	from the Kirtipur Municipality. (Attached is the letter issued by Kirtipur Municipality)	budget) 1360 ³ 500 for waste monitoring
Potential Leakage of Microplastics into Drains and Environmental Littering Around the Facility	1. Drainage systems are connected to soak pits, and nets are installed to capture plastic debris in case of outflow from the facility 2 . Conduct scheduled inspections and cleaning of drains, soak pits, and plastic traps to prevent clogging and overflow. 3. Use finer filtration systems in drains to capture microplastics before they reach water bodies.	Onsite at the recycling facility during the operation phase/ Weekly	Women Entrepreneurs who operate this PRUC CIUD and the focal person from the Kirtipur Municipality	1. Frequency of plastic accumulation in nets and soak pits (measured by weight or volume). 2. Number of inspections and cleanings conducted per month. 3. Number of recorded cases of drainage overflow	Waste will be automatically trapped in the net and extracted for reuse. Waste is to be collected once a week and reutilized	CIUD and focal person from PLEASE Project	part of 2500 ⁴ Hardware budget 500 for drain cleaning

³ Cost to be administered by Kirtipur Municipality during site preparation to ensure separate space for waste collection, however the monitoring of waste cost will be covered by the CIUD team

⁴ Repair and Maintenance cost will be part of the product development i.e 2500 (as per the project original budget head) cost under the project and will not need additional cost to capture plastics during outflow in the drainage via safety nets and soaking pits. Only 500 of cost will be required to clean the drains.

	4 . Implement guidelines for proper waste recycling and preventing plastic spillage			or clogging due to plastic waste.			
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5. Capacity Development and Training :

This section covers the comprehensive training plan in both constructional and operational phases in close collaboration with CIUD, Kirtipur Municipality, and private stakeholders to strengthen the capacity of the construction workers, waste workers, and community to minimize environmental and social risks, promote occupational health and safety (OHS), and foster social inclusion in waste-managed communities in Kirtipur Municipality.

This training plan focuses on the following key themes and areas:

1. Environmental Safeguards and Compliance
 - Training on waste segregation, handling, and processing to reduce plastic leakage and environmental contamination.
 - Safe and sustainable use of upcycling technologies such as shredding, dehumidification, and extrusion to minimize pollution.
 - Strategies for reducing microplastic discharge into drainage systems and surrounding ecosystems.
 - Compliance with local environmental regulations and best practices in waste management.
2. Occupational Health and Safety (OHS)
 - Training workers on the safe operation of recycling and upcycling equipment, including PPE usage, machine safety, and emergency response.
 - Prevention of physical hazards associated with heat press machines, extrusion, and shredding processes.
 - Implementing safety protocols for fire prevention, chemical handling, and air quality management in the recycling facility.
3. Social Safeguards and Community Engagement
 - Capacity-building sessions for women entrepreneurs and informal waste workers to support their participation in the recycling value chain.
 - Training on ethical waste collection practices, stakeholder collaboration, and fair labor standards to ensure social equity.
 - Engagement with local communities through awareness campaigns on responsible plastic disposal and recycling benefits.
 - SEA/SH Prevention training will also be conducted to ensure workplace safety, prevent gender-based violence (GBV), and promote ethical conduct among workers. These will help to create a safe, inclusive, and respectful working environment while ensuring compliance with international labor and human rights standards.

The proposed training plan includes:

1. Community Orientation Session: A total of 10 orientation sessions were conducted for women's groups in Kirtipur Municipality, covering Wards 1, 2, 3, and 4.
2. Women's Entrepreneurship Training: A 7-day Women's Entrepreneurship and Business Planning training, and selection from there to onboard the entrepreneurs for operating the

plastic recycling and upcycling center(PRUC). The selection will be conducted through the competition and rating from the judging panel (forming the selection committee through the municipality's lead)

3. Technical training for the selected women entrepreneurs for the operation and quality enhancement of the production of the recycling and upcycling product
4. Product branding and marketing training for the women entrepreneurs, along with the staff of the center for the product
5. Use of the data recording system, which enables women entrepreneurs to check the stocks, production ranges, and marketing after the system is integrated into the municipal waste management database system.
6. OSH and Emergency Response: Training 2-day training in both the construction and operation phase
7. Social Safeguards Training (SEA/SH, GRM, Child Labour, etc): 2-day training in both the construction and operation phase

6 Cost and Implementation schedule

Mitigation Measure	Timeline	Responsible entity	Cost in USD
Community Awareness and Community Interactions	July-August 2024	CIUD in collaboration with Waste collection private stakeholders and Kirtipur Municipality	300
Occupational Health and Safety (OHS) Training including the distribution of PPEs during the construction and operation phase	August-Sep 2024	CIUD in collaboration with Waste collection private stakeholders and Kirtipur Municipality	850
Social Safeguards Training & capacity building (workplace safety, labor laws, child labor, GBV and GRM training for all staff and trainees)	July-August 2024	CIUD in collaboration with Waste collection private stakeholders and Kirtipur Municipality	300

Waste Management (collection, sorting, recycling, upcycling, disposal & sorting)) Techniques Training -Distribution of Plastic Collection Pouches	September 2024 -February 2025	CIUD, Waste collection private stakeholders, and Kirtipur Municipality	1000
Regular monitoring and data collection	July 2024- April 2025	CIUD, Waste collection private stakeholders, and Kirtipur Municipality	500
Cleaning of drain nets at PRUC	During Operations from September 2024 to April 2025	PRUC operators	500
Greenery maintenance and approval costs during construction	July-August 2024	Kirtipur Municipality	500 ⁵
Installation of drain nets at PRUC	During the construction of PRUC from July-September 2024	Kirtipur Municipality	1360 ⁶
Repair and Maintenance cost	During Operations from September 2024 to April 2025	CIUD	2500
Total Cost			7810

8. Attachments

[Environmental and Social screening report](#)

[Photos from the surroundings](#)

[PSEA Documents](#)

[MOU between CIUD and Kirtipur Municipality to implement the PLEASE Project](#)

[Approval for Land and information shared from the Kirtipur Municipality](#)

[The design of the shed \(facility\)](#)

⁵ Cost to be administered by the Kirtipur Municipality, responsible for site preparation and construction

⁶ Cost to be administered by the Kirtipur Municipality during the construction of the facility and cleaning cost will be supported under this ESMP

