PLEASE Project

Plastic Free Rivers and Seas for South Asia

Building a Circular South Asia: Innovations, Inclusion, and Policy Pathways

28 November 2024

Westin Josun Busan, Republic of Korea

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Implemented by: SACEP

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Opening Remarks

Norbu Wangchuk

Director General
South Asia Cooperative Environment Programme (SACEP)

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Introduction to PLEASE project

Anjalie Devaraja

Project Director, Project Implementation Unit (PIU)
South Asia Cooperative Environment Programme (SACEP)

Implemented by: SACEP

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Project Overview

Implemented by South Asia Cooperative Environment Programme (SACEP)
Supported by United Nations Office for Project Services (UNOPS)

- **Regional initiative** to strengthen innovation and coordination of circular economy solutions to plastic pollution flowing into South Asian Seas
- Fosters **regional cooperation** and addresses **cross-border issues**
- Implemented in **8 nations of South Asia**: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka
- **Funded by the World Bank**
  Budget: $37,000,000

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Project Components

Supporting Competitive Block Grant Investments to Reduce Plastic Waste

1.1 Investing in Circular Solutions to Reduce Plastic Waste

- In total, **28 grants** have been awarded through the project, consisting of **12 Regional Block Grants (RBGs)** and **16 Innovation Grants (IGs)** in **Bangladesh, Bhutan, Maldives, Nepal, Pakistan** and **Sri Lanka**

Regional Block Grants (RBGs)

Innovation Grants (IGs)

Project Components

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Supporting Competitive Block Grant Investments to Reduce Plastic Waste

1.2 Promoting Knowledge Exchange and Public Awareness

- **Grants Management Support Workshops** were conducted across all six countries targeting public communications and advocacy
- Participation to **relevant high profile global events**, i.e. INC, COP, engage discussions and organize side events and active participation to **advocacy activities** organized at the country level by Ministries and other relevant stakeholders
- Production of **documentaries and video snippets**
- Organization of a **Regional Hackathon** to engage the youth in South Asia around sustainable and innovative practices in January-February 2025
- **Final Symposium** at the end of the project to facilitate knowledge exchange among grantees in May 2025


Nepal Grantee Workshop ©UNOPS


Bhutan Roundtable Discussion ©UNOPS


UNOPS Programme Management Advisor, PLEASE Project Director, Director General of SACEP ©UNOPS

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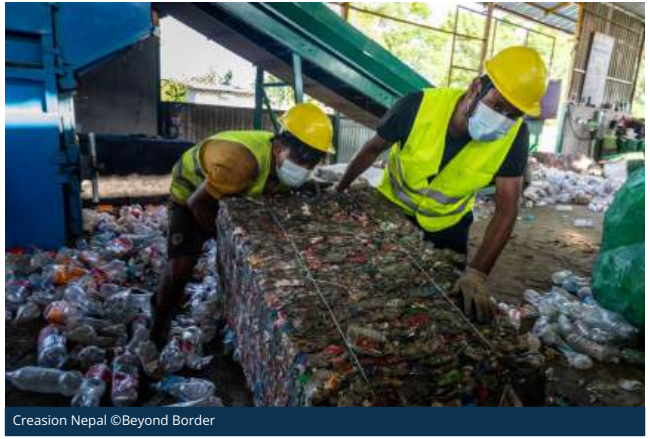
Grant-supported projects implemented impactful activities, such as…

- Construction of Recycling Business Units (RBUs) and conducting market scoping in **Bangladesh**
- Development of strategies and partnerships and sign boards for waste management centers in **Bhutan**
- Production and distribution of reusable cloth bags in the **Maldives**
- Distribution of Waste Smart Club Kits and initiating Waste Smart Schools in **Nepal**
- Commissioning of the development of the plastic sorting facility in **Pakistan**
- Conduct waste hotspots survey in **Sri Lanka**
- Grant Management System (GMS) was introduced to all grantees to report progress against targets, and a dashboard was developed to provide regional, national, and project-level snapshot


Red Orange Communications Bangladesh ©BeyondBordersMedia


Creasion Nepal ©Beyond Border


Eco Waste Solutions Bhutan ©BeyondBordersMedia

Grants Contribution under the PLEASE Project

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- 12 RBGs and 16 Innovation Grantees enrolled

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Project Components

Leveraging Public and Private Sector Engagement and Solutions

2.1 Enabling Policies, Standards, and Analytics

- Supporting development of enabling Policies, Strategies, Action Plans, developing database for plastic life cycle analysis through **Technical Assistance (TA)** addressing on the requirements of the national government, the Ministry/Department of Environment
- **7 TAs -** 1 completed, 3 ongoing, 2 in the pipeline

BANGLADESH	Training Program on Plastic Waste Reduction and Single Use Plastic (SUP) Alternatives and SUP Value Chain Study, Including Dissemination Workshops and Report Publication
BHUTAN	**Nationwide GIS mapping of waste facilities, data collection of waste streams and GHG emissions from waste sector, including plastic waste** [20 November 2024 to 30 June 2025)
MALDIVES	**Design & Development of end-to-end smart solid waste management system in Maldives** *[1 March 2024 – 31 Dec 2024]*
NEPAL	**Preparation of Plastic waste inventory of Nepal** *[4 October 2024 – 4 May 2025]*
PAKISTAN	**Development of a National Plastic Waste Management Plan and Establishment of IT- based Monitoring and Reporting Mechanism for Pakistan** *[23 Oct 2023 – 30 Nov 2024]*
SRI LANKA	**Public awareness campaign on 3R based plastic waste management** *[9 May 2023–8 Nov 2023–extended-30 Apr'24]*
	Development of a Master Plan for controlling Plastic Pollution in selected Rivers in Sri Lanka

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Project Components

Leveraging Public and Private Sector Engagement and Solutions

2.2 Enabling Regional Public and Private Engagement

- **Supporting circular use of plastic in the economy** through meetings of representatives from public and private sectors at Round Table Discussions
- **6 National High-Level Roundtable Discussion** in **Sri Lanka, Nepal, Pakistan, Maldives, Bangladesh, Bhutan**






- **Marine Litter Consultations** with fisheries communities, coastal tourism & hospitality sector, representation from coastal communities to discuss challenges related to marine plastic litter, share insights, and develop actionable strategies to mitigate its impact on marine ecosystems and local livelihoods through citizen engagement approach
- 16 such consultations targeted: Consultations in Bangladesh and Maldives completed


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Project Components

Strengthening Regional Integration Institutions

3.1 Building SACEP's Institutional Capacity:

SACEP HQ new building

- New SACEP Regional HQ (1,610 square meters) highlights **regional collaboration and environmental stewardship.** A state-of-the-art office space designed to achieve the Gold Certification of Leadership in Energy and Environmental Design (LEED)

Visual model for SACEP HQ in Colombo, SL ©UNOPS

SACEP HQ Construction plans ©UNOPS

SACEP HQ Construction in Colombo, SL ©UNOPS

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Project Components

Strengthening Regional Integration Institutions

3.1 Building SACEP's Institutional Capacity:

SACEP Institutional and Capacity Building

- Capacity building assessment is starting
- Aim at facilitating SACEP to fully implement its mandate as a regional environmental institution and enhance its Secretariat

Regional Capacity Building Programme on Marine Pollution Responses in the South Asian Seas Region ©SACEP

16th Meeting of the Governing Council of SACEP in June 2024 ©SACEP

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THANK YOU

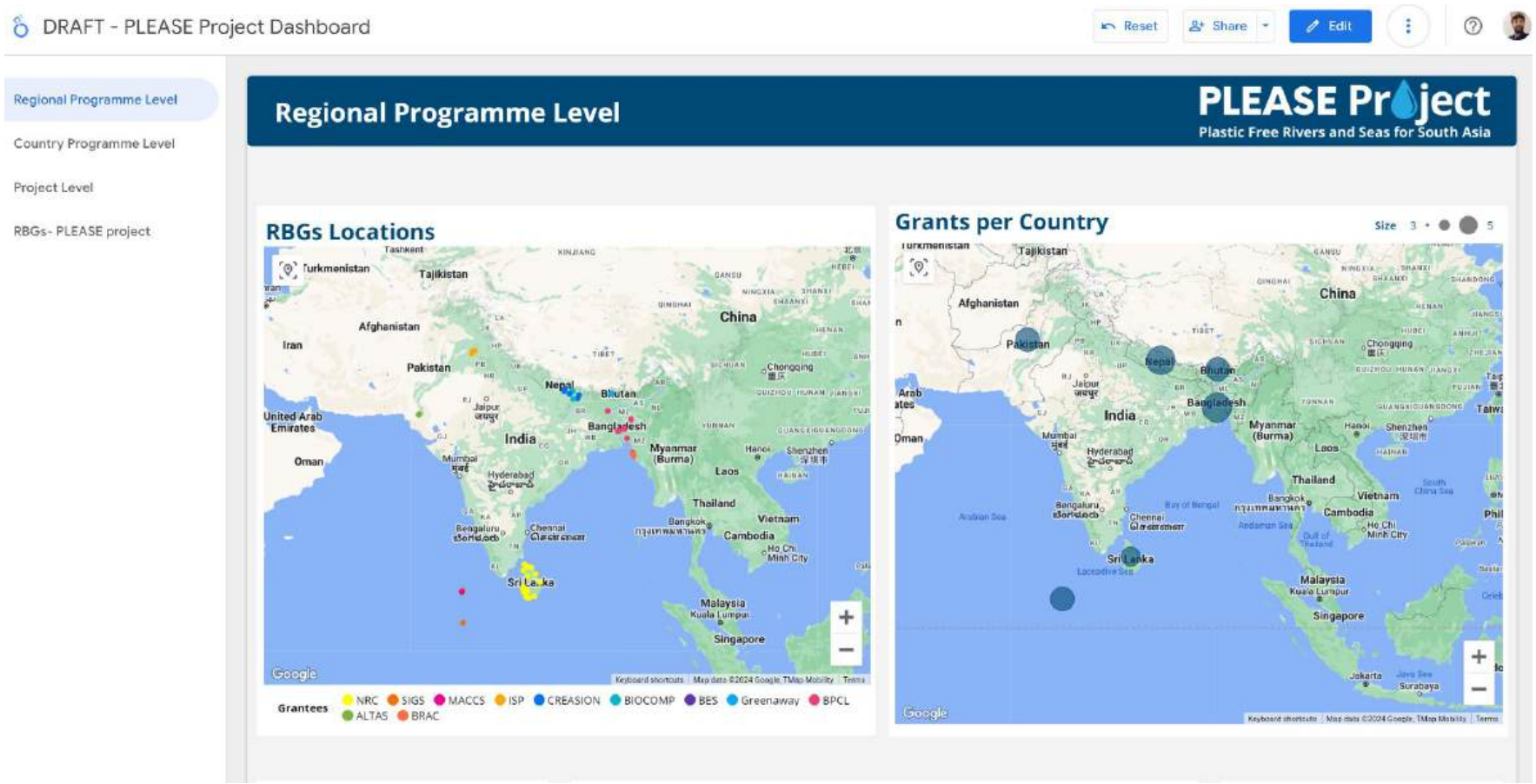
Chakra Suthra Sri Lanka ©BeyondBordersMedia


Greener Way Bhutan ©BeyondBordersMedia


©BPCL

Grants Activities

- 12 RBGs and 16 Innovation Grantees enrolled



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Section I:
Reimagining Plastic: Transformative Innovations for a Cleaner South Asia

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RELEASE Project

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Overview of PLEASE Approach to Innovations

Sivakumaran Sithamparanathan

Technical Specialist - Environment, PLEASE Project, UNOPS

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DEFINITION OF THE INNOVATION

NEW APPROACHES, TRANSFER OR ADAPTATION OF EXISTING AND/OR PROVEN APPROACHES TO NEW CONTEXTS AND/OR GEOGRAPHIES, NEW POLICIES, NATIONAL AND REGIONAL STRATEGIES, STANDARDS, ETC.

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INNOVATION IN REGIONAL BLOCK GRANT

INNOVATION IN REGIONAL BLOCK GRANTS CONT.....

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Bhutan

BES	❑ UR Bricks (Useful Recycled Bricks) using plastic waste for constructing temporary structures. ❑ Installing waste traps/ waste interceptors systems in Bhutan
Greenerway	❑ Introducing and Establishing Waste Banks in Bhutan ❑ Developing and introducing the waste bank mobile app as a virtual waste bank

Innovations in RBG Con.....

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Bangladesh

BRAC	❑ Behavioral Nudge Innovation: Testing and Scaling Using the TESTS Model (Target, Exploration, Solution, Test, Scale) ❑ Integrated Modular Innovation: Combining Extrusion and Compression Molding for Versatile and Sustainable Recycling Solution ❑ Open Sourcing Product Design and Development
BPCL	❑ Establishment of Recycling Business Units (RBUs) to bypassing intermediaries. ❑ Blockchain-Enabled Supply Chain Tracking and Comprehensive Database for Plastic Waste Management ❑ Digital Payment Gateway to facilitate transparent and secure transactions for waste workers, ensuring timely and fair compensation

Innovations in RBG Con.....

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Maldives

SIGS	❑ Launch of Biodegradable Bag Pilot Production Facility in the Maldives ❑ Exploring Local Raw Materials for Bioplastic Production by testing local Resources ras raw materials ❑ Establishing a quality testing laboratory for Bioplastic Bags ❑ The Kids innovation TV Show- to explore the innovative and inventive minds of children
MACCS	❑ Inclusive Awareness Programs: Engaging Women, Medical Professionals to Promote Awareness of Sustainable Menstrual Products

Innovations in RBG Con.....

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Nepal

BIOCOMP	❏ Production and introduction of composite boards made from low-grade plastics and used beverage cartons in Nepal ❏ Ensuring safety and effectiveness in collection of Used Beverage Carton packaging and low-grade plastics incorporating barrier analysis report.
Creasion	❏ Recycling colored PET waste into straps through industrial manufacturing ❏ Segregating Machinery-Induced Air and Water Contaminants to Prevent Environmental Pollution

Innovations in RBG Con.....

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Pakistan

ALTAS	❑ Establishment of a PE plastic film waste recycling plant in Pakistan ❑ Manufacturing recycled manhole covers made from waste plastic
ISP	❑ Installation of reverse vending machines in identified hotspots across Pakistan ❑ Development of a mobile application connected to reverse vending machines ❑ Introducing the production of eco-bricks in Pakistan from recycled plastic waste

Innovations in RBG Con.....

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Sri Lanka

NRC	❑ New River Barrier Design with environmentally friendly materials ❑ Development of the Wood Plastic Composite (WPC) material with compositions of - 57%, saw dust or coir dust 40%, 3% non recyclable ❑ Fully functioned individual Woman owned Material Recovery Facilities (MRFs)
ICI	❑ Development of quality standard for the recycled plastic pallets that could be mixed with virgin resin to produce packaging for FMCG product in Sri Lanka

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INNOVATION IN INNOVATIONS GRANTS

INNOVATION IN INNOVATIONS GRANTS CONT.....

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Bangladesh

Arannayk Foundation	❏ Digital registration for waste workers and , recording and monitoring system.
IMS	❏ ALDFG hotspots identified and mapped by awareness and knowledge sharing sessions with marine fishers
RedOrange	❏ Installation of Barriers which provide improved interception methods to stop waste efficiently

INNOVATION IN INNOVATIONS GRANTS CONT.....

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Bhutan

Clean Bhutan	❑ Transforming PET Plastic Waste into Sustainable Polyester Wool for Local Product Development
Green Road	❑ Conversion of recycled plastic into flower pots and 3D printing filaments
Eco waste solution	❑ High-Efficiency Sorting System for Optimal Waste Recovery

INNOVATION IN INNOVATIONS GRANTS CONT.....

Nepal

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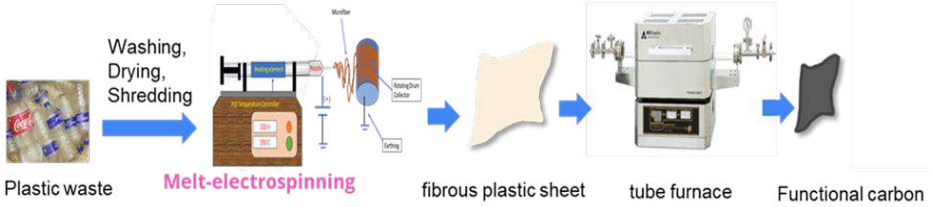
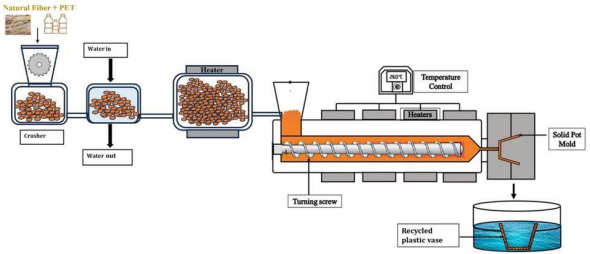
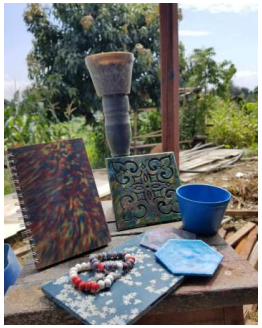
Doko Recyclers	❑ Semi-automatic mechanized sorting of waste materials in the Materials Recovery Facility (MRF)
CIUD	❑ Upcycling of low value plastic waste in to a furniture ❑ Installation of Thrash Broom (catchment net) at the Balkhu river to collect waste low value plastic waste
University of Tribhuvan	❑ Injection molding mixture of waste plastic and natural fiber into a porous composite material ❑ Using melt electrospinning technology to process PET plastic into micro fibers and then carbonization into advanced functional material







INNOVATION IN INNOVATIONS GRANTS CONT.....

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Maldives

Clean Maldives	❑ Innovation and Knowledge Platform ❑ Prototyping furniture of the plastic furniture from the recycled plastics
CEL	❑ Testing the Installation of water purification machines to the Fishing Vessels

INNOVATION IN INNOVATIONS GRANTS CONT.....

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Pakistan

Davaam Life	❑ Refill Stations as a new method of retailing ❑ Smart Innovations in Sanitary Napkin Machines
Otium consultant	❑ Digital marketplace for plastic waste trade ❑ Digital Data to Shape Plastic Credit Policy

INNOVATION IN INNOVATIONS GRANTS CONT.....

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Sri Lanka

INSEE	❏ Develop Eco Friendly recycle packaging material for Homecare Product
Chakrasuthra	❏ Setup and operation of 10 Trash2Cash units for PET ❏ Establish an eZ Cash platform and register10 shops onto it after it is established
Save a Life	❏ Banana Fiber Products: Single-use cups, lunch sheets, and sanitary pads made from banana fiber

INNOVATION IN REGIONAL BLOCK GRANTS & INNOVATION GRANTS

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Redorange Bangladesh ©BeyondBordersMedia

Innovations

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Social Innovation	❑ Women Owned MRF facilities ❑ Sustainable Menstrual Products from silicon ❑ Waste bank for plastic waste ❑ Behavioral Nudge Innovation ❑ Recycling business unit ❑ Use of reverse vending machine connected to mobile application ❑ Standards for recycled pallet to produce FMCG products

Innovations

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Technological Innovation

- Combination of **extrusion and compression** molding
- **Open source product design** from the plastic waste to plastic product
- Blockchain-Enabled **Supply Chain Tracking and Comprehensive Database** for Plastic Waste Management
- **Digital payment/ online / Crypto currency** for the plastic waste business
- **Bio degradable bags** from waste rice, Corn and Cassava
- Recycled **brick / Interlocks**
- New material for the **waste trap / trash broom** in lagoon / channels / river
- **Composite board** from used beverage cartoon Eg. Furniture
- **PET strips from coloured PET plastic** through industrial manufacturing process
- **Automated segregation system**
- **Manhole cover** for plastic film

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Technological Innovation

- **Digital registration for waste workers** and , recording and monitoring system.
- **ALDFG** hotspots **identified and mapped** by awareness and knowledge sharing sessions with marine fishers
- Transforming PET Plastic Waste into Sustainable **Polyester Wool** for Local Product Development
- Conversion of recycled plastic into **flower pots** and **3D printing filaments**
- Production of **composite compound - Porous and non porous product**
- Melt electrospinning technology to process PET plastic into **micro fibers and then carbonization into advanced functional material**
- Testing the Installation of **water purification machines to the Fishing Vessels**

INNOVATION IN INNOVATIONS GRANTS

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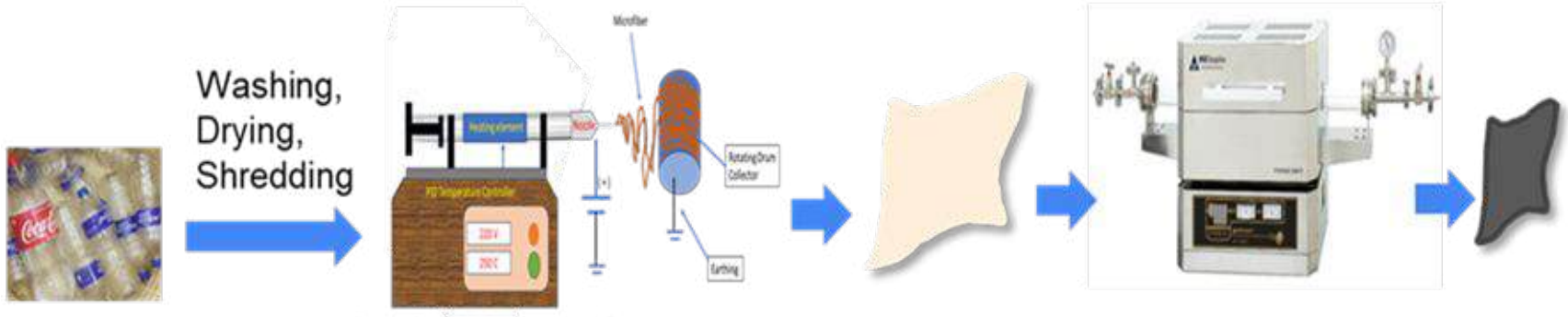
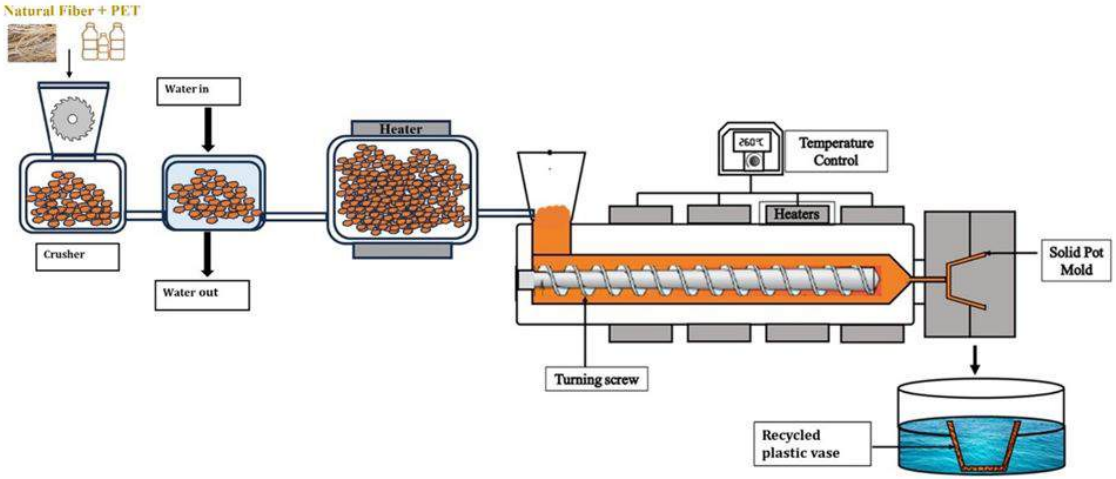
Technological Innovation	❑ Setting up **refilling station for products** like edible products, ❑ **Digital market for plastic waste** and **Digital Data to Shape Plastic Credit Policy / eZ Cash platform** ❑ Production of **FMCG packaging materials** Eg. Paint containers ❑ **Banana Fiber Products: Single-use cups, plates and etc**


life
New Mall Facility
Elevating Her Convenience!
SANITARY
NAPKIN
VENDING STATION
DolmenMall
#YourComfortFirst


Washing,
Drying,
Shredding
Microfiber
Rotating Drum Collector
Earthing
Plastic waste
Melt-electrospinning
fibrous plastic sheet
tube furnace
Functional carbon


Natural Fiber + PET
Water in
Heater
260°C
Temperature Control
Heaters
Crusher
Water out
Solid Pot Mold
Turning screw
Recycled plastic vase


ri Lanka ©BeyondBordersMedia

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Spotlight Talks:
Inspiring Solutions and Stories

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Bangladesh Petrochemical Company Limited (BPCL)

Bangladesh

Implemented by: SACEP

Supported by: UNOPS

Supported by: WORLD BANK GROUP

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KHADEM MAHMUD YUSUF

MANAGING DIRECTOR & CEO
BANGLADESH PETROCHEMICAL COMPANY LIMITED

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

Bangladesh Petrochemical Company Limited

Who We Are

The only Bangladeshi company fulfilling global standards of food grade plastic recycling. We have collected and recycled over 28,000+ MT of PET bottles

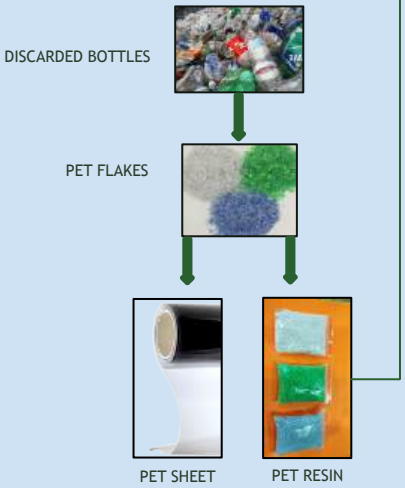
Till today BPCL has earned $ 25+ million in revenue from 50+ local customers and export sales

We have customers and partners like PepsiCo, Coca-Cola & Unilever

We will 4x our capacity by 2026 to meet the growing demand of rPET in Bangladesh

Our Products

Our Process



Implemented by: BPCL, PLEASE Project, SACEP

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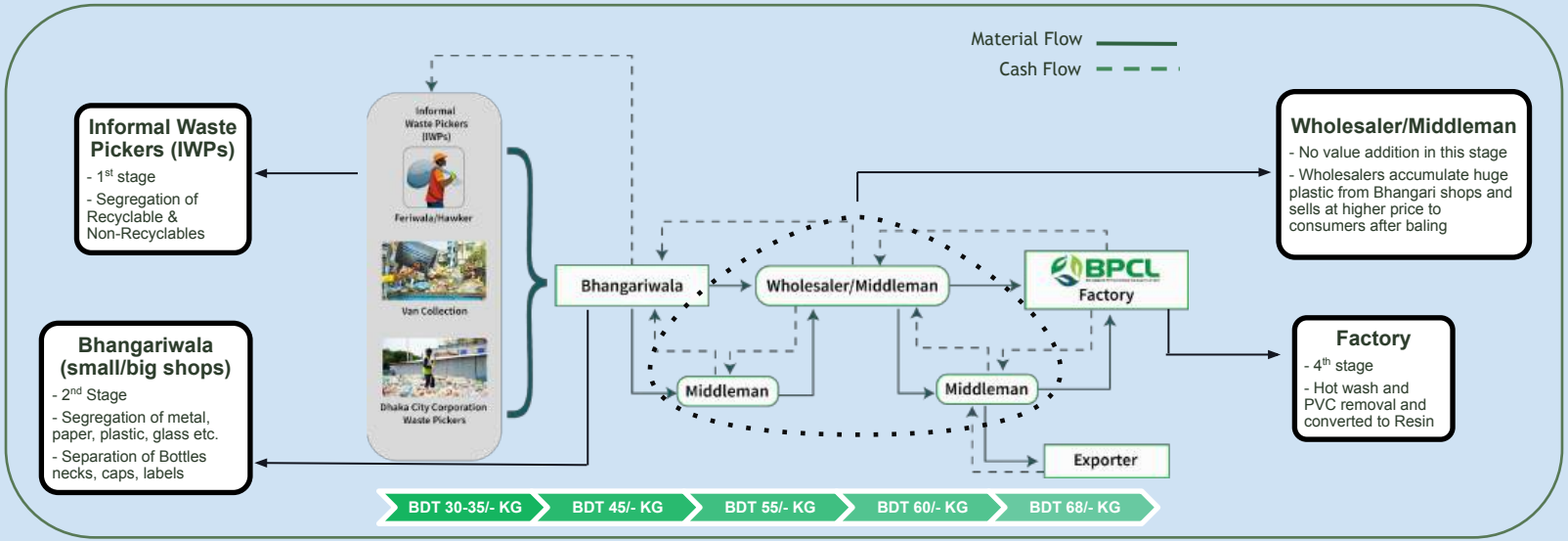
Current Plastic Supply Chain in Bangladesh

Problem in Supply Chain

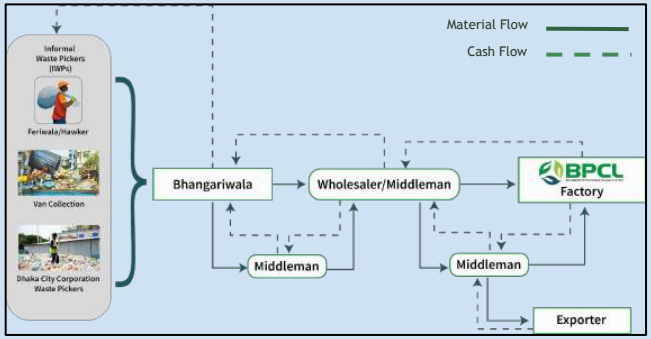
- **Fragmented Collection Chain:** Inefficient & non-transparent
- **Multiple Layer of Middlemen**
- **Untracked Cash Transactions**
- **Inadequate Financial Inclusion and Fair Compensation**
- **Environmental Leakage:** Plastic in landfills & waterways
- **Unsafe Working Conditions:** Hazardous environment
- **Economic Exploitation:** Low wages, no social security

Current Plastic Supply Chain Tiers in Bangladesh

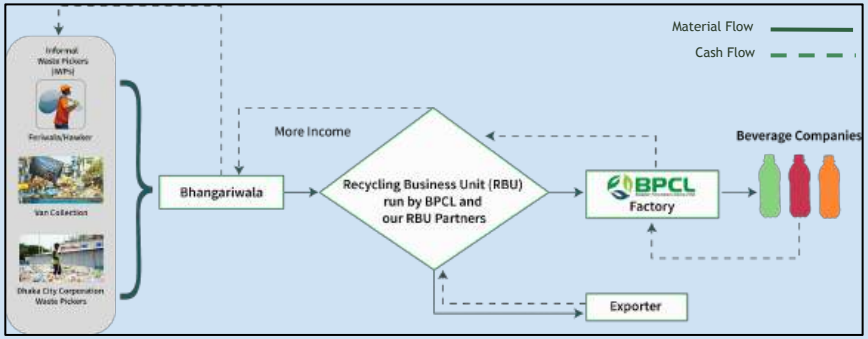


Innovation 01: Collecting plastic waste from informal waste collectors intervening the influence of middleman

Why Recycling Business Unit (RBU)?



Plastic Value Chain to be Intervened



Simplified Plastic Value Chain with Fully Functional RBU

Recycling Business Unit (RBU) and its functions

RBUs are independent social ventures formed in partnership with BPCL, Local Entrepreneurs and CDIP (an NGO) to increase the collection and also to bring fairness into the chain of recycling.

RECYCLING BUSINESS UNIT (RBU)

Run by BPCL and its Local Partner

Local Partner

- ✔ Operation, running and management of RBUs
- ✔ Sell HDPE, PP, LDPE to local established recycling companies

BPCL

- ✔ Set-up RBUs and provide logistic support
- ✔ Ensure quality of recyclables
- ✔ 100% PET buy back

- ✔ Financial support
- ✔ Health improvement programs
- ✔ Education support for the deprived community

BPCL PLEASE Project UNDP WORLD BANK GROUP

Innovation 02: App-Based Supply Chain Tracking System with Integrated Digital Payment Gateway

The supply chain tracking system currently utilizes KoboToolbox and Google Sheets for data collection and management using a single integrated app

Enhance Efficiency:

Streamline data collection, tracking, and payment processes.

Real-Time Monitoring:

Enable real-time supply chain tracking for improved decision-making and transparency.

Scalability:

Support growing supply chain operations and a user base without system lags.

Digital Payments:

Provide secure and instant payment processing to reduce transaction delays.

Operational Efficiency: A 30% reduction in time spent on manual data entry and reconciliation.

Cost Savings: An estimated 20% decrease in operational costs due to automation.

Environmental Benefits: Reduced reliance on paper-based processes, lowering the carbon footprint.

User Satisfaction: Improved accessibility and usability for supply chain stakeholders.

BPCL, in partnership with NAGAD, is enabling waste pickers without access to banking to become financially included through Mobile Financial Services (MFS).

BPCL PLEASE Project UNOPS WORLD BANK GROUP

Innovation 02: DATA-FLOW, ANALYTICS, DIGITAL PAYMENT

"TOKAI" (WASTE PICKER)

"FERI-WALA" WASTE BARTER

MUNICIPAL, VAN WASTE COLLECTOR

"BHANGARI-WALA" (Small Scrap Shop, Waste Trader)

ANALYTICS

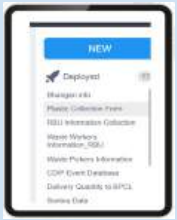
KoboToolbox

নগদ

REGISTRATION

COLLECTION

TRACKING



INPUT

DIGITAL PAYMENT

Implemented by

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Negombo Recycling Club (NRC)

Sri Lanka

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DAMITHA SAMARAKOON

PROJECT MANAGER - BLUECAP PROJECT
NEGOMBO RECYCLING CLUB

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NRC

Redesign:Sustainable Material Innovation: Project

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Small Island Geographic Society (SIGS)

Maldives

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DR. MIZNA MOHAMED

DIRECTOR, SCIENCE & INNOVATION
SMALL ISLAND GEOGRAPHIC SOCIETY

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

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REMoving PLAstics from our Coastal Environment (REPLACE)

SIGS Website

REPLACE Project updates

COMMERCIAL TESTING HUB

SIGS will be setting up a pilot production of plant-based bioplastic bags to potentially replace plastic bags. The performance and physical properties of these bags will be tested, as well as researching locally sourced materials.

SIGS

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BIO COMP

Nepal

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MAARTEN NIJHOF

CHIEF EXECUTIVE OFFICER - BIOCOMP NEPAL

BIOCOMP® NEPAL

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The Problem

- 600 tons plastic daily in Nepal.
- Low-grade plastics are not recycled
- No collection value chain

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BIOCOMP® NEPAL

People in Need

Clean up Nepal

RECLAIM® NEPAL

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Technology Used

- First facility in Nepal
- All types of plastics
- Scalable

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Recycled Composite Boards

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Davaam Life

Pakistan

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SALMAN TARIQ

CHIEF EXECUTIVE OFFICER - DAVAAM LIFE

Implemented by: SACEP

Supported by: UNOPS

Supported by: WORLD BANK GROUP

DAVAAM life

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The Insurmountable Peak

3.9 million tons of plastic waste in Pakistan equivalent to twice the height of K2

If left unchecked this waste is estimated to reach 12 million tons by 2040

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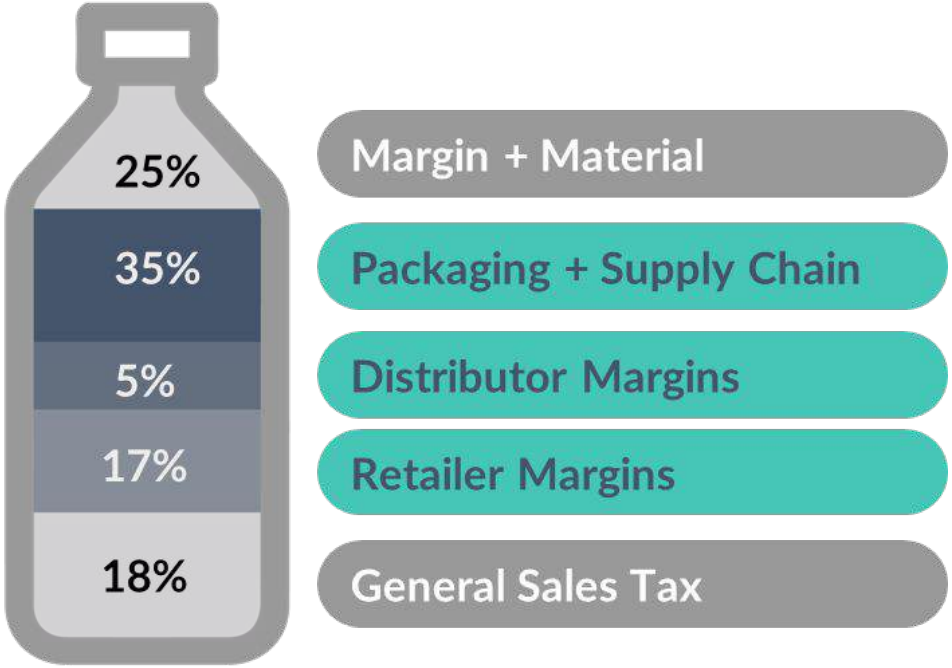
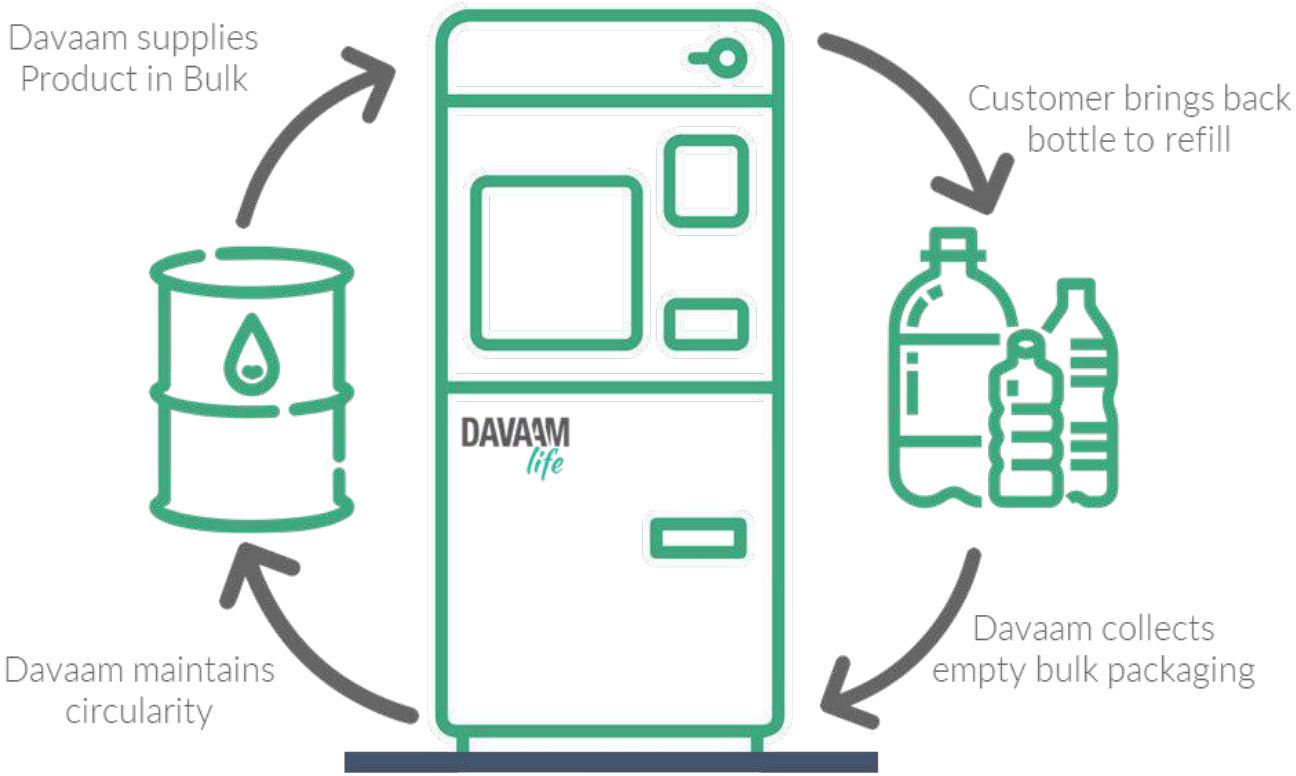
The Financial Cost



More than 1/3 of the price of any product can just be the packaging, which is discarded after one use

Avoidance: Key to Circularity



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Refill & Save

Refill stations can be placed for purchase of everyday necessities:

- Hand Wash
- Shampoos
- Cleaning Detergents
- Cooking Oil

Multi-Purpose Liquid Dispensing

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Early Success: Refill at Workplaces

Textile Factory: 200 textile laborers and 18 management staff refill 3 liter each (~650 liters a month) every month.

(annual estimated waste avoidance of **200kg** from one machine + consumer behavior change)

PLEASE Project

60 refill stations

manufactured and deployed
under the PLEASE project

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The Green Roads

Bhutan

Implemented by: SACEP

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RIKESH GURUNG

FOUNDER & MANAGING DIRECTOR - THE GREEN ROAD

The Green Road
"Environment friendly & Socially responsible"

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

The Green Road

"Environment friendly & Socially responsible"

THE GREEN ROAD

The Green Road is Bhutan's first recycling company that utilizes waste plastic in construction of durable and environment friendly roads. started in October 2014, the company has blacktopped **159 kilometers** of road and reused **844 tonnes** of waste plastics and replaced the same in the consumption of bitumen.

OUR SOLUTIONS

Proper disposal of waste plastic

Better and durable roads

Import substitution of bitumen

Cost saving in repair & maintenence

Plastic roads cuts CO2 emissions by upto 72% compared to conventional paving. Primum/ Netherlands Enterprise Agency/UNEP.

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Plastic Free Rivers and Seas for South Asia

Open Discussion

Implemented by: SACEP

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PLEASE Project

Plastic Free Rivers and Seas for South Asia

Section II:
Empowering Communities: Inclusive Solutions and Decent Job Creation

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Inclusive Solutions and Decent Job Creation

Lian Zhang

Programme Management Advisor
UNOPS

Implemented by: SACEP

Supported by: UNOPS

Supported by: WORLD BANK GROUP

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What PLEASE tries to achieve...

- Promote circular economy innovations with impacts on **job creation for vulnerable groups** within recycling, upcycling, and waste management sectors.
- Prioritize the allocation of Regional Competitive Innovation and Block Grant investments to **women-led organizations and community-based organizations (CBOs)**.
- Ensure minimum of **30%** coverage of business development **support for women** through the PLEASE project.
- Ensure minimum **30% women participation** at PLEASE project and grants activities in all levels.
- **Empowering citizens** with knowledge on mitigation strategies, conducting consultations with stakeholders, and implementing a grievance redress mechanism.
- Ensure inclusion and social protection especially for **women and children** across the plastic waste value chain.

PLEASE Project
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What PLEASE tries to achieve...

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- Ensure inclusion and social protection especially for **women and children** across the plastic waste value chain.

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What PLEASE has achieved...

Women Participation and Leadership

- **60%** (N= 28) of grant investments allocated for women-led organisations across the countries in the region.
- **36%** of business development supports allocated for women.
- Adopt **gender and PSEA policies and guidelines** across all grantees, MRF facilities, recycling facilities, and other settings where women are engaged.
- Established **7** women-owned MRF facilities and aggregator facilities in **Sri Lanka and Nepal**
- Women have been recruited in **decision-making** roles at the PLEASE project, as well as in grants management, monitoring and evaluation (M&E), finance, environment, communications, and engineering.

Engagement of Youth and Children

- Launch Regional Hackathon encouraging **youth** innovators in the region.
- **Youth leadership** in conducting awareness and clean-up campaigns in **Nepal and Sri Lanka**.
- **Resource provision and educational sessions** in implementing AIR framework at Schools in all 6 countries.
- **Childcare facilities** for IWW, MRF and Recycling facility workers.
- Engagement of **university students** in implementing AIR framework in **Nepal, Pakistan**.

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What PLEASE has achieved...

Empowering vulnerable communities and citizen engagement.

- Supported **2,545** IWWs (**36%** women) by introducing digital platforms that allow transparent trade for plastic waste, thereby contributing to fair price; providing waste sorting skills, enhancing occupational health and safety and ensuring access to social protection schemes in **Pakistan, Nepal, Bhutan and Bangladesh**
- **Improved access** for business and individuals on the plastic waste value chain by sharing plastic waste information, through introducing mobile applications in **Pakistan, Nepal, Bhutan and Bangladesh**
- Included **fisheries communities** in stakeholder consultations on marine litter actions in **Sri Lanka, Bangladesh, Maldives and Pakistan**
- **36,627** people from diverse communities reached through in person awareness and capacity building activities in the region
- Promotion of **menstrual hygiene** through introducing vending machines, and distributing menstrual hygiene products in **Maldives and Pakistan**.

Job creation and livelihood opportunities

- **372** decent jobs created in the plastic value chain.
- Ensure **equal pay** for women and men at PLEASE grants, MRFs, and recycling units.
- Introduction of accessible, incentivized plastic **waste collection platforms** through initiatives like reverse vending machines, waste banks, MRF facilities, and mobile applications.
- **Training, provision of tools and technology** for producing alternative products in **Nepal, Maldives**

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Highlights from PLEASE grantees

- Community-driven clean-ups, waste segregation, women's empowerment, upcycling, youth engagement, and stakeholder collaboration to **create a sustainable waste management system** in the Rohingya camps by **BRAC** and **BPCL** in Bangladesh
- **Women friendly infrastructure facilities** in MRFs and Recycling facilities of **CREATION** and **BIOCOMP** from Nepal, **NRC,INSEE** from Sri Lanka, **ISP** from Pakistan, **BES** from Bhutan
- Plastic Free Rivers Hackathon, 22 teams from across western Bhutan, including students with disabilities and the monastic body, came together to tackle the pressing issue of plastic waste by **BES** from Bhutan.
- Formation of Waste Smart Clubs in 10 schools, with both male and female students receiving training, e-libraries , Waste Smart Kits, and the installation of a Waste Smart museum by **CREASION** from Nepal.
- Youth engagement in R&D activity of Tribhuvan University Nepal in producing microfiber and converting them into functional materials through carbonization.
- Greener way, Bhutan has successfully established 10 Waste Banks, with 4 additional Waste Depository Houses currently under construction, total of 21 BWB Managers and Scale Operators (comprising 20 females and 1 male) have been hired and trained along with the launch of the Bhutan Waste Bank App is imminent.
- Integrating Gender inclusion into Standard Operating Procedures (SOPs) for MRFs and Recyclers by **ICI** from **Sri Lanka**
- Train 76 women to produce reusable bags from second-hand clothes and support them in establishing links with shops and businesses for sustainable market opportunities by **MACCS** from **Maldives**

Project Achievements

Activity 7 : Establishment of 12 Waste Smart Schools

अनुसन्धान तथा विपो विकास केन्द्र नेपाल (क्रिएसन)
र
श्री आदर्श माध्यमिक विद्यालय
बीच द्विपक्षीय समझदारी पत्र

तिखिलम् धागमती प्रदेश, काठमाडौं जिल्ला, काठमाडौं महानगरपालिका ०४, बालुवाटारमा कार्यालय रहेको अनुसन्धान तथा विपो विकास केन्द्र नेपाल (Center for Research and Sustainable Development Nepal, संक्षेपमा CREASION) (यसपछि पहिलो पक्ष भनिने) र धागमती प्रदेश, धादिङ जिल्ला, गजुरी गाउँपालिका वडा नं ५, श्री आदर्श माध्यमिक विद्यालय (यस पछि दोस्रो पक्ष भनिने) बीच निम्न लिखित शर्तको अधिनमा रही तपसिलमा उल्लेखित उद्देश्य प्राप्तीका लागि निम्न अनुसारका कार्यक्रम तथा क्रियाकलाप सञ्चालन गर्ने गराउने हेतुका साथ विद्यालय परिसरमा बसी आपसी सहमतीमा यो द्विपक्षीय सम्झौता पत्रमा हस्ताक्षर गरी एक/एक प्रति भुम्का लिनी दिनी ।

१. परियोजनाको सम्बन्धमा :

CAP परियोजना (Collaborative Approach For Preventing Plastic Leakages in Rivers of Nepal-CAP) क्रिएसनद्वारा सञ्चालित परियोजना हो, जसले प्लास्टिकको फोहोर सङ्कलन संयन्त्रलाई सुदृढ गर्ने र प्राविधिक नवप्रवर्तन सार्थक रिसाइकिलमा प्रयासहरूलाई थप्नाले नदीहरूबाट प्लास्टिकको फोहोरलाई उत्पादन मूल्य श्रृंखलामा मोडाने लक्ष्य राखेको छ। यस परियोजनाले सरोकारवालाहरूबीच साझेदारीमा नदि एक विकास प्रणाली निर्माण गरी प्लास्टिकजन्य फोहोरमैलालाई थप मूल्य श्रृंखलामा (Value Chain) जोड्ने काम गर्नेछ । CAP परियोजना नेपालमा PLEASE (प्लास्टिक फ्री रिभर्स एण्ड सीज अफ साउथ एशिया) को एक प्रमुख आयोजनाको रूपमा रहेको छ भने UNOPS र विश्व

MoUs with Schools

Training and Workshop of Waste Smart School to Teachers and Students

E-Library Setup and Orientation to the teachers and students on its application

Project Achievements

Activity 7 : Establishment of 12 Waste Smart Schools

Badge Distribution to the Waste Smart Club

Oath Taking Ceremony to formalize the established Waste Smart Club

Waste Smart Kit Handover to the Waste Smart Schools

Plastic Free Rivers Hackathon, 22 teams from across western Bhutan, including students with disabilities and the monastic body, came together to tackle the pressing issue of plastic waste by BES from Bhutan

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ZWAS Session at Schools

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Implemented by: SACEP

Supported by: UNOPS, THE WORLD BANK, BIOCOMP, People in Need, RECLAIM

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Spotlight Talks:
Inspiring Solutions and Stories

Implemented by: SACEP

Supported by: UNOPS

Supported by: WORLD BANK GROUP

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Plastic Free Rivers and Seas for South Asia

Small Island Geographic Society (SIGS)

Maldives

Implemented by: SACEP

Supported by: UNOPS

Supported by: WORLD BANK GROUP

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Plastic Free Rivers and Seas for South Asia

DR. MIZNA MOHAMED

DIRECTOR, SCIENCE & INNOVATION
SMALL ISLAND GEOGRAPHIC SOCIETY

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

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SIGS Website

REPLACE Project updates

KIDS INNOVATION TV SHOW

To increase awareness, and actively engage children and youth in addressing the SUP issue, an innovation TV show is planned. Children can pitch their ideas for solutions to plastic pollution and will be given the opportunity to develop their pitch into a prototype.

SIGS

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Davaam Life

Pakistan

Implemented by: SACEP

Supported by: UNOPS

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SALMAN TARIQ

CHIEF EXECUTIVE OFFICER - DAVAAM LIFE

Implemented by: SACEP

Supported by: UNOPS

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DAVAAM life

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Lack of Access to Menstrual Hygiene

According to UNICEF

44%

of girls DO NOT have access to menstrual hygiene facilities at home, workplace or school

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Sanitary Napkin Vending Machine

1. Malls
2. Universities & schools
3. Corporate offices
4. Industries & factories
5. Public places (sports facilities)

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Access to Menstrual Hygiene

Enabling Inclusive Facilities

More than **25** locations providing access to **~3,000** women

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Plastic Free Rivers and Seas for South Asia

Corporate Napkin Allotment Program

Davaam machines provide a tangible DEI initiative:

Corporates can place the machine and allocate napkins to their female employees free of cost.

6 organizations have already enrolled in the program with a growing list

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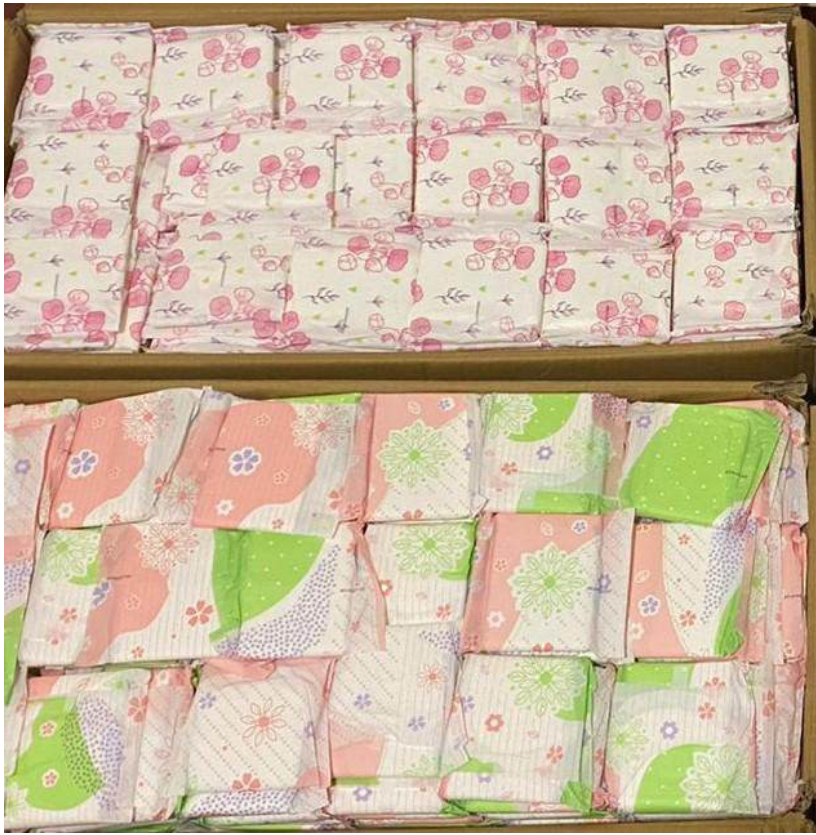
Improving Circularity

Avoided Multi-layered Plastic (MLP) packaging;

Upstream intervention at the supplier level

30

Machines will be installed under the PLEASE Project



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Plastic Free Rivers and Seas for South Asia

Bangladesh Petrochemical Company Limited (BPCL)

Bangladesh

Implemented by: SACEP

Supported by: UNOPS

Supported by: WORLD BANK GROUP

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Plastic Free Rivers and Seas for South Asia

KHADEM MAHMUD YUSUF

MANAGING DIRECTOR & CEO
BANGLADESH PETROCHEMICAL COMPANY LIMITED

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

Impact on Marginal Communities, Women Participation, Improved Livelihood

Goal: Contribute to inclusive and efficient plastic recycling in Bangladesh.

Outcome 1: Improved occupational health and wellbeing of IWPs, Hawkers and Bhangari through decent work.

Outcome 2: Enhanced recyclable plastic supply system, processes and profitability.

Targets

23,775
Beneficiaries

7620
Waste Pickers

7
Collection Hubs (RBUs)

≃385 MT/Month
Collection

1500
Bhangari (small collection shop)

Marginal community in plastic waste sector

- Waste workers in the RBUs and in Bhagari (Collection shop)
- Women in waste management
- IWP (Informal Waste Pickers)
- Children in waste picking
- Migrant workers
- Elderly people
- Slum dwellers

Implemented by: BPCL, PLEASE Project, SACEP
Supported by: UNOPS
Supported by: WORLD BANK GROUP

Empowering Marginalized Waste Workers

Key Strategies for Empowerment

Improved Working Conditions and Income Stability :

- Provided 250 safety gears & health services to 344 workers.
- Ensured fair wages, fair value for the plastic waste.

Capacity Building and Skill Development :

- Training in waste sorting, accounting, & entrepreneurship.
- Provided tools for productivity.

Building a Robust Worker Networks :

- Awareness programs & health tracking.
- Created worker associations.
- Promoted entrepreneurship.

Empowerment fosters dignity—transform Waste Workers into proud Waste Professionals

Implemented by: BPCL, PLEASE Project, SACEP
Supported by: UNOPS
Supported by: WORLD BANK GROUP

Empowering Women in Waste Management

Key Focus Areas

Promoting Gender Equity:

- Fair income & reduced wage gaps.
- Promoted women in leadership.

Creating Safer Workplaces:

- Anti-harassment policies.
- Toilets, Sanitary napkin support, childcare & changing rooms.

Driving Impact

Boosted women's workforce participation.
Empowered communities & improved livelihoods.
Promoted entrepreneurship for sustainability.

BPCL
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SACEP
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Impact on Marginal Communities

Inclusion & Job Creation
Formalized IWPs and Bhangaris, Provided skill-building opportunities

Health & Safety:
Access to Healthcare, Clean Toilet, Changing Room with Sanitary napkin.

Economic Upliftment:
Fair Wages, Fair Value for the collectibles. Skill enhancement Training

Life Skill Based Education

5 trainings provided.
Total participants -119 (Female 57) in 3 RBUs

Target: 1400 IWPs, Waste Workers through 56 Training (per training 25 participants)

Health Camp

7 Health camp completed,
Total participants- 344 (Female: 173)

Target: 28 (per hub 4) health camp for 1400 IWPs and Waste Workers.

Staff Development Training

12 trainings provided
Total participants -156 (Female: 71) in 3 RBUs

Target: 700 IWPs and Waste Workers through 28 trainings (per training 25 participants)

PPE Distribution

250 sets of PPE & First Aid Boxes were distributed to Waste Workers and IWP

Target: 1400 PPEs for the factory workers, Bhangari shops employees and IWP

Job Creation

Jobs created -133 till October 31 with 68 women in 3 RBUs

Target 1400 in 7 RBUs (per hub 200 direct waste workers, IWPs and Bhangari owners.

BPCL
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Implemented by: SACEP
Supported by: UNOPS
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Negombo Recycling Club (NRC)

Sri Lanka

Implemented by: SACEP

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Plastic Free Rivers and Seas for South Asia

DAMITHA SAMARAKOON

PROJECT MANAGER - BLUECAP PROJECT
NEGOMBO RECYCLING CLUB

Implemented by: SACEP

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NRC




GREEN PRODUCTS






Project BLUECAP: Building a Blue Lanka by Uplifting

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The Green Roads

Bhutan

Implemented by: SACEP

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RIKESH GURUNG

FOUNDER & MANAGING DIRECTOR - THE GREEN ROAD

The Green Road
"Environment friendly & Socially responsible"

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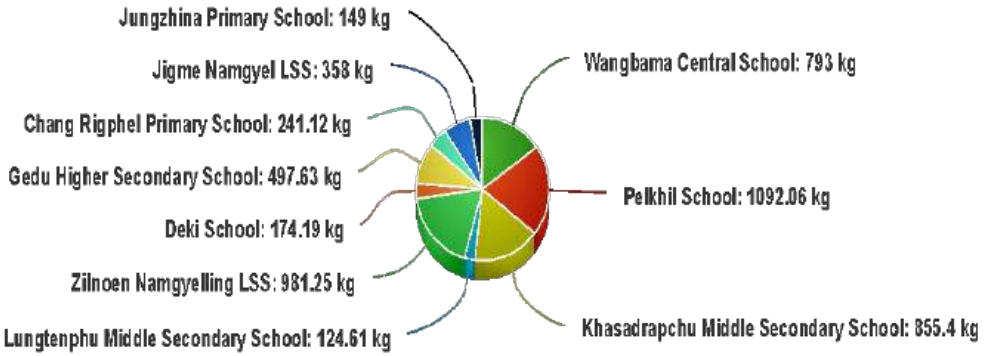
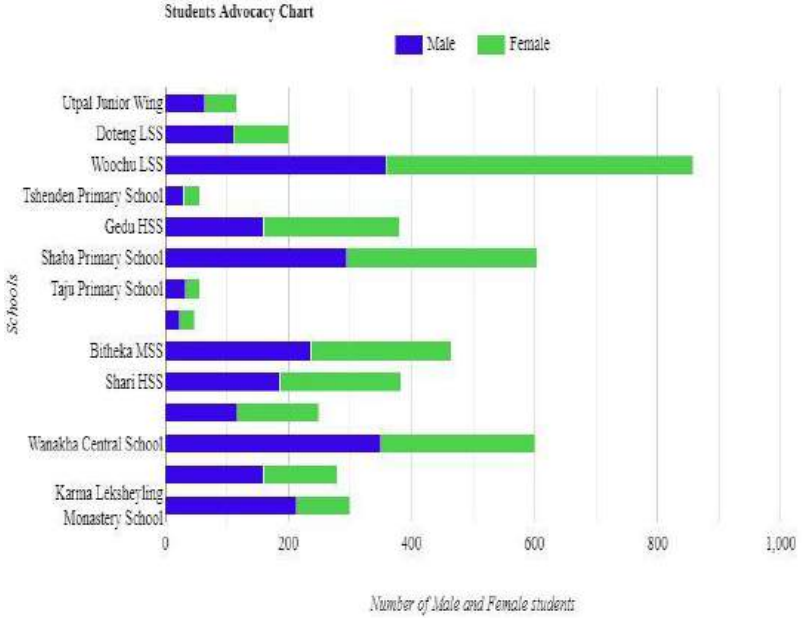
PLASTICS COLLECTED FROM DIFFERENT SCHOOLS

The Green Road



August- September.
Total = 5276.56kgs

meta-chart.com



Total students - 5230
Female - 2397
Male -2469

Collaboration & New Projects

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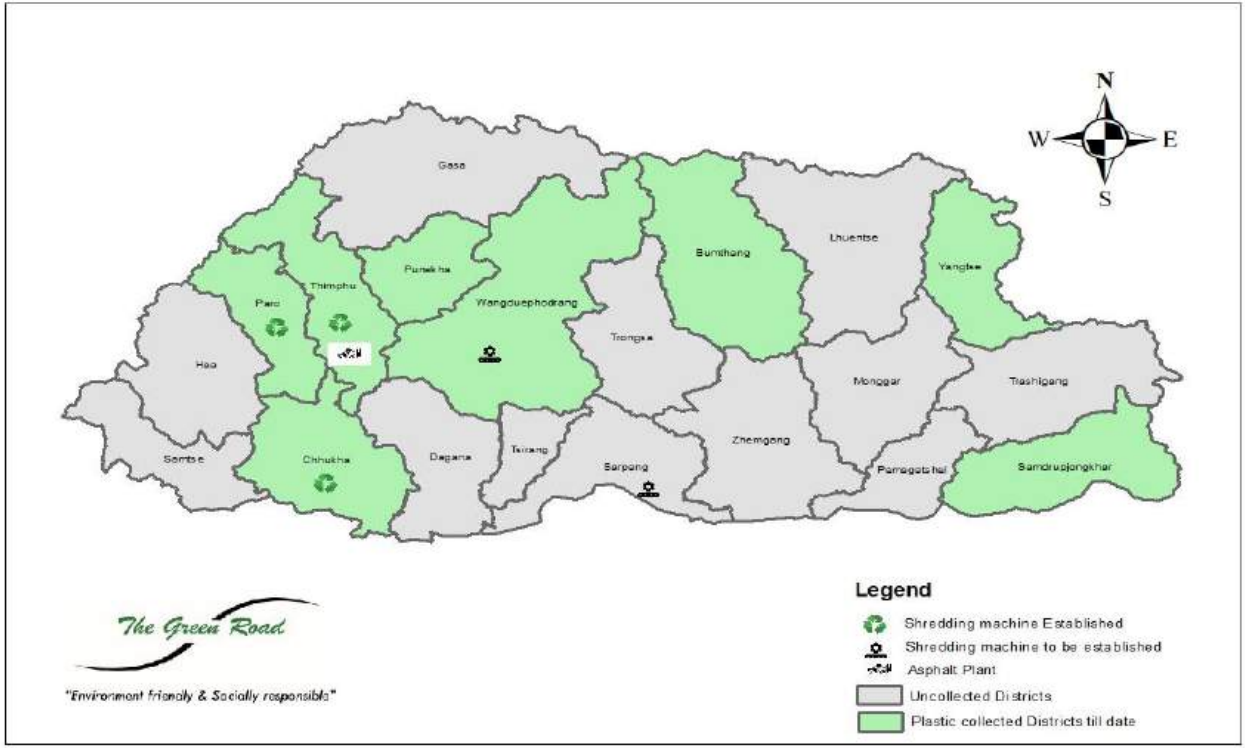
Plastic Free Rivers and Seas for South Asia

Total waste plastics collected from Private sectors including Druk Trash Solutions= 30504 kgs

26th september 2024

DRUK TRASH SOLUTION

The Green Road
"Environment friendly & Socially responsible"



Social Media/ Advocacy/10th Foundation Day

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Open Discussion

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Section III:
Policy Pulse: Shaping a Sustainable Future

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Plastic Free Rivers and Seas for South Asia

Key Insights and Recommendations on Plastic Policy from the High-Level Roundtable on Plastic Waste Management

Prakriti Kashyap

Plastic Expert, PIU, SACEP

Implemented by: SACEP

Supported by: UNOPS

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6 High-Level Roundtable Discussions (RTD) on Plastic Waste Management Challenges and Solutions in South Asian Countries

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Sri Lanka Round Table Discussion, 15 March 2024

44 participants

Nepal Round Table Discussion, 8 May 2024

63 participants

Pakistan Round Table Discussion, 22 July 2024

72 participants

Maldives Round Table Discussion, 20 August 2024

75 participants

Bangladesh Round Table Discussion, 30 September 2024

72 participants

Bhutan Round Table Discussion, 8 October 2024

77 participants

High-Level Roundtable Discussions (RTD) on Plastic Waste Management Challenges and Solutions in South Asian Countries

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PLEASE High Level Round Table Discussion is a **truly multi-stakeholder gathering** to

- enable **policy discussion and dialogues**,
- **share measures/interventions/innovations undertaken** by different stakeholders to tackle plastic pollution, and
- **explore synergies and collaboration opportunities and**

With a long-term outcome to provide insights for policymakers donors and private sectors to **strategize solutions to challenges, prioritize future interventions**, including catalyzing policy revisions and **generate greater impact**

A High Level Participation with a typical profile of RTD participants including

- National Government representation of policy makers and policy enforcement agencies - Minister, Advisor to the Minister, Secretary from the Ministry and Department of Environment, Ministry of Industry, and Ministry of Finance
- Local Government representation from Department of Environment, local councils/municipalities, Provincial Environmental Protection Agency and state-owned waste management service providers
- Donors and Development partners with waste management and plastic pollution management projects, and ambassadors representing the donor countries
- Corporates, recycling companies and alliances / networks of producers and manufacturers, and other private sector actors in the plastic value chain
- Civil society organizations and community based organization representatives
- Research and academic sector representatives

Policy Pulse : at High-Level Roundtable Discussions

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RTD - a moderated discussion with **three thematic** sessions:

1. Policy and Regulatory matters related to plastic waste management and and plastic pollution control
2. Initiatives by Bilateral & Multilateral Development Partners
3. Showcasing initiatives by private sector, civil society, and PLEASE Grantees in plastic waste management

POLICY as cross-cutting theme across the session,

- **Measuring policy pulse -** existing policies, policy enforcement, and future policy direction

- **Churning out the way forward, and prospects for collaborations**

SAR plastic policy landscape - insights from the High-Level RTDs

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- **All South Asian countries started its plastic policy journey with ban and phase out of single use plastic (SUP) items,** especially with the plastic shopping bag, gradually adding other SUP items
- But, with **rare enforcement success** due to lack of human resources, financing to monitor the compliance as well as failure to provide cheaper alternatives to plastics; **still a policy favourites**

Afghanistan	**Plastic bag ban (2011):** In 2011, ban was announced for the import and usage of plastic bags in all shops in the cities and provinces across the Country. However, the ban did not last more than three days, with plastic bags sold openly in the market. Recently, **on 15 August 2023,** the Ministry of Finance has once again announced **prohibition on import of any kind of plastic bags** in the country.	Maldives	**Single-Use Plastic Phase Out Regulation, 2020:** involved controlling the production, import, and consumption of specific 14 SUPs, as well as promoting sustainable alternatives. The Plan was able to phase out 13 out of the 14 identified SUPs. F**rom 18 April 2023, Regulation on Collecting Plastic Bag Fee b**y Persons Registered for GST, charges (MVR) Maldivian Rufiya 2 per single-use plastic shopping bag (non-woven reusable bags are exempted from the levy). The levy collected goes to the Maldives Green Fund.
Bangladesh	**Notification ban on polyethylene bags (2002):** ban polyethylene plastic shopping bags (below 55 microns) . The ban had limited results, mainly because of the lack of institutional resources and absence of cost-effective alternatives **High Court order in Single-use-plastic products (2020):** On 6 January 2020, the High Court ordered ban on 6 SUP (drinking straws, cotton swabs, food packaging, food containers, bottles, plates, plastic cutlery, plastic bag) in coastal areas and all hotels and motels across the country. The High Court also reinforced the previous plastic bag ban through strict monitoring. **Bangladesh enforced a ban on polyethene shopping bags starting with Supermarket chains from the 1st of October 2024.** It further plans to extend such prohibition to other single-use plastic (SUP) products eventually and making Saint Martin's Island, Kuakata beach, and the Sundarbans free from SUP.	Nepal	After the unsuccessful implementation of the plastic ban two times earlier (in 2015, 2018), Nepal Government has reinforced a complete ban on plastic bags below 40 microns by publishing a notice in the Nepal Gazette on 15 September 2021. **The Action Plan for Ban on Plastic Bags, 2022 was recently approved by the Council of Ministers that empowers the monitoring committees of all three levels of government (Federal, Provincial, and Local) to confiscate plastic bags from firms, companies or persons that produce, collect, sell,** distribute or store plastic bags below 40 microns. However, the plan has not been enacted as of now
Bhutan	**Notification on the Ban of the Use/Sale of Plastic Carry Bags, Doma Wrappers and Homemade Ice Cream (Pepsi) Pouches letter No. MTI/VIII-3/427 (April 20, 1999):** but failed due to lack of strict enforcement and provision of alternatives to plastic bags. Bhutan reinforced the ban once again in 20025,2009, and recently in 2019. **April 1, 2019 announcement fines BTN 500 for the initial offence and BTN 1000 for the second offence and cancellation of the business license if business owners found selling plastic carry bags.** However, there still are abundance of plastic bags in the market	Pakistan	**The Single-Use Plastics (SUP) (Prohibition) Regulations 2023 - Import and Use of Single-use Plastics Banned in Islamabad effective 1 August 2023.** **Sindh Environmental Protection Act, 2014 (No. VIII of 2014):** - No person shall import, manufacture, stockpile, trade, supply, distribute or sell any scheduled plastic product which is non-degradable. The scheduled plastic products must be oxo-biodegradable and the pro-degradant used must be approved by the Agency or any other department or agency and in such manner as prescribed
India	**Plastic Waste Management (Amendment) Rules, 2021, 2022:** prohibits identified SUP items which have low utility and high littering potential [ear buds with plastic sticks, plastic sticks for balloons, plastic flags, candy sticks, ice-cream sticks, polystyrene/Thermocol for decoration; plates, cups, glasses, cutlery such as forks, spoons, knives, straw, trays, wrapping or packaging films around sweet boxes, invitation cards, and cigarette packets, plastic or PVC banners less than 100 micron, stirrers] by the year 2022	Sri Lanka	**Regulations on Polythene & Plastic Management 2017:** •Prohibition of Polythene or any polythene product of 20 micron or below in thickness (Order No. 2034/33) (2017) •Prohibition of food wrappers from polythene (Order No. 2034/34) (2017) •Prohibition of high-density polyethylene bags (Order •No. 2034/35) (2017) •Prohibition of food containers, plates, cups and spoons from expanded polystyrene (Order No. 2034/38) (2017)

Policy gaps - Lack of plastic recycling standards in SAR

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- Plastic recycling is picking up in SAR, however, there is **lack of recycling processes and products standards ensuring safe recycling** including

- **Lack of harmonized standards and certifications** for traceability of plastic collection, and recycled content product certification scheme

  - A national standard for plastics recycling helps **resolve confusion that exists around the plastics recycling process**, and ensure that measured and reported recycling rates, targets, and policies used by regulators and governments are accurate

  - Recycling standards and certifications **adds confidence of consumers** to use recycled plastic products and strengthen and stabilize market demand for post-consumer resin (PCR) and other recycled plastic products

  - Such certifications for traceability of plastic collection and recycled content helps **transparent implementation of EPR ad Plastic credit schemes**

SAR plastic policy pathways : Extended Producer Responsibility

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- SAR countries are looking for advanced policy approach like **Extended Producer Responsibility (EPR)** to make producer responsible for collection and management of their plastic waste
- Out of eight South Asian countries, only **India has recently implemented mandatory EPR schemes** including plastics packaging
- **Maldives has drafted the EPR framework – EPR Regulations and EPR Roadmap are under review** - by 2028, the Maldives aims to establish a sustainable, safe, and cohesive national waste and resource management system along with implementing EPR
- The **EPR policy in Bangladesh is currently it is with the Ministry of Law for review**
- Central Environment Authority (CEA) **Sri Lanka has announced plans to introduce new laws** that will make companies using plastic packaging and bottles under EPR scheme
- Nepal, Pakistan, Bhutan are positive about EPR as one of the policy solutions to plastic pollution

SAR plastic policy pathways : Plastic credits

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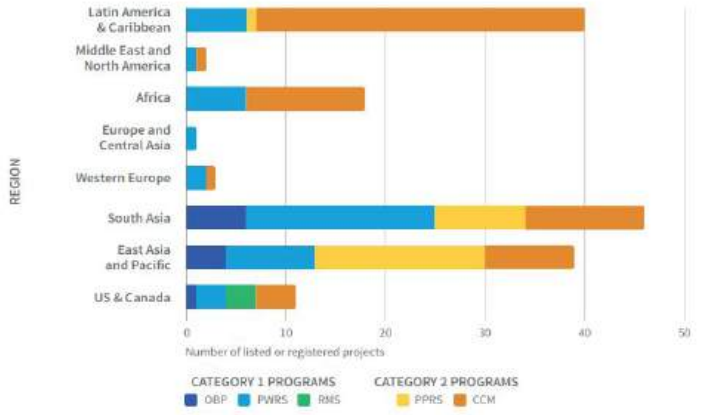
- Plastic credits are being seen as **innovative finance mechanism** that allow companies to make downstream investments in new or expanded plastic waste collection and recycling infrastructure, adding value to plastic waste
- **Plastic credits are issued per metric ton or per kilogram and are primarily issued under a plastic crediting program**. Programs are initiatives run by standard setting organizations such as
  - Verra Plastic Waste Reduction Standard (PWRS);
  - GreenBlue Recycled Material Standard (RMS);
  - Zero Plastic Oceans Ocean-Bound Plastic (OBP) Neutralization Certification
  - PCX Solutions Plastic Pollution Reduction Standard (PPRS)
  - BVRio Circular Credits Mechanism (CCM)
  - These organizations provide the rules, standards, procedures and methods to measure, monitor, and verify the results of plastic pollution interventions
- The plastic credit market is at a **very early stage of development**

FIGURE 1: Distribution of Registered and Listed Plastic Credit Projects across Programs and Regions



Source: Verra n.d.; OBP, n.d.; BVRio n.d.; PCX n.d.; RMS n.d.[17]

Source: World Bank, 2024. UNLOCKING FINANCING TO COMBAT THE PLASTICS CRISIS Opportunities, Risks, and Recommendations for Plastic Credits

From discussion to innovation: Potential for plastic policy innovation in SAR

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Is South Asia's late start of plastic policies like EPR, plastic credits and Recycling standards and certifications an opportunity to policy innovations?

- ❏ What can south Asian countries learn from other countries and regions who have walked the EPR path?

- ❏ Can EPR in Asia add upstream innovations to existing EPRs and Plastic credits? Such as incentivize producers to rethink their production by embracing upstream solutions by including design for reuse and recycle for reuse and design for reuse and recyclable packaging in EPR, and adding Avoidance credits (e.g., avoidance of plastic, substitution for alternative materials), plastic innovation credits, in Plastic Credit mechanisms?

- ❏ How can SAR develop inclusive and innovative plastic pollution prevention, control and management polcies that
  - Puts people first
  - Accelerates positive change through policy enablers
  - Celebrates wins and innovates policies

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Panel Discussion:
Policy Pathways: Driving Changes

Moderator:

Janaka De Silva
Senior Programme Coordinator
IUCN

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Panelists: Policy Pathways: Driving Changes

Thierry Sanders
Director, BVRio Institute
Brazil

Angeline Callista
Founder and CEO, Sirsak
Indonesia

Hemantha Withanage
Chairperson, Center for Environmental Justice,
Sri Lanka

Dr. Hyo-Sun Kim
Vice Chair, Korea Carbon Finance Association
Republic of Korea

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PackFee for South Asia

UNOPS meetup - 14 NOVEMBER 2024 - THIERRY SANDERS - THIERRY@KOLEKT.COM

South Asia (excl India) is leaving **USD 7.6 bn per year** on the street !

	Afghanistan	Pakistan	Bangladesh	Sri Lanka	Bhutan	Nepal	Maldives	Total
The Challenge...								
MSW (MTA) 2023	7.7	71.0	52.5	7.0	0.3	9.0	0.2	**148**
MSW (MTA) 2030	9.4	81.3	59.1	7.1	0.3	10.2	0.2	**167**
% change MSW 2023-30	22%	15%	13%	1%	6%	13%	13%	**13%**
The Opportunity...								
PackFee 2026 ($ mln)	**137**	**3,128**	**3,484**	**551**	**23**	**335**	**25**	**7,684**
Total Infra Investm. 2023-2030	636	16,869	19,982	2,679	120	1,834	134	**42,254**
The Price ...								
PackFee $ / KG avg packaging	0.09	0.16	0.21	0.25	0.27	0.15	0.39	**0.19**
$ increase of a bottle of Coke 500ml	0.002	0.003	0.004	0.005	0.005	0.003	0.007	**0.004**
The Impact on ...								
Recovery / Collection								
MSW Recovery % 2023	13.75%	15.17%	45.93%	47.86%	48.13%	14.77%	50.56%	
MSW Recovery % 2030	37.50%	37.50%	55%	78.43%	78.92%	37.50%	83.52%	**+16%**
Recycling								
MSW Recycling % 2023	0.75%	2.17%	2.93%	4.86%	5.13%	1.77%	7.56%	
MSW Recycling % 2030	3.39%	9.75%	13.20%	21.88%	23.09%	7.95%	34.04%	**+9%**
Jobs								
New Jobs in WM 2026-2030	83,571	659,353	453,497	91,468	1,435	82,981	498	**1,372,804**


JOR
ISR
IRQ
IRN
KWT
BHR
PAK
EGY
QAT
BGD
SAU
ARE
IND
MMR
SDN
OMN
THA
YEM
ERI
DJI
SOM
MDV
LKA
MYS
KEN
SGP
SYC
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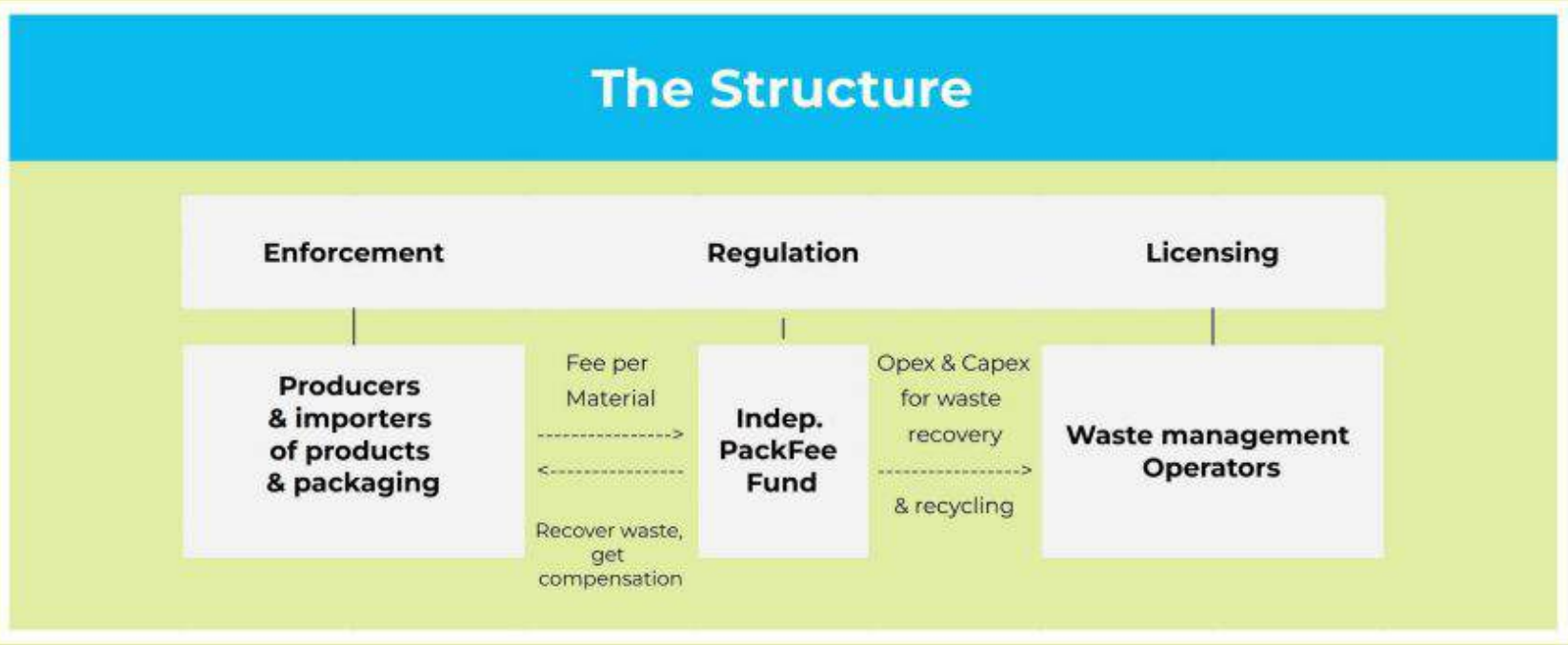
Practical, fast, top-down, independent fund & 100% is the only EPR target.



EPR in 2-4 years, not 10-15 years.

The Roadmap

	Steps	*Duration*
1	**Diagnostics**	Up to 3 months
2	**Legislation development**	12 - 24 months
3	**Organisation, system, fund localization**	6 - 12 months
4	**Communications & Implementation**	6 - 12 months
5	**Company trial period**	Starting at 24 - 48 months after Step 1
6	**Operation & full revenues**	Up to 3 months

Contact us for a detailed breakdown of the PackFee Roadmap

Our hidden gem: the IT Systems & Team

The PackFee System

Kolekt App & Dashboard

The Advisory, Legal & Tech Team

Thierry Sanders
EPR & Tech Strategy
NL, Indo, Moz. Vietnam
Founder Kolekt

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Pedro Moura Costa
Policy Strategy
Brazil, Malaysia
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Specialist &
Project Mgmt
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Krishna Jothis
CTO
India
80 strong Tech team

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Strategy
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Venture builder
Agile Expert

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Marcus Gover
EPR Strategy
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Former Director
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ex-CEO, Wrap, UK

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Mauricio Moura Costa
Environmental Law
Brazil, Mexico
Director at BVRio

Linkedin

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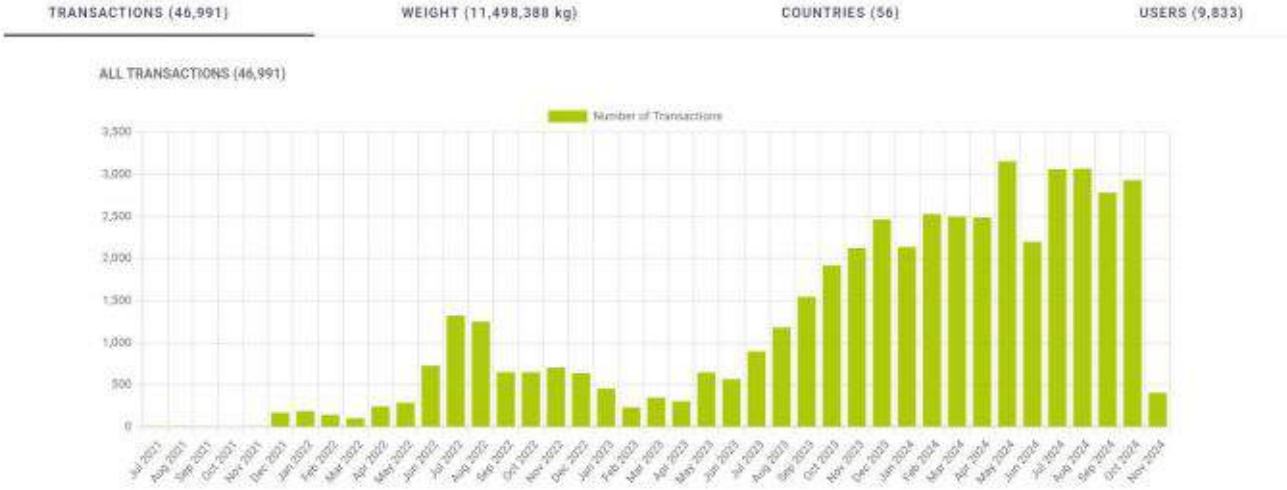
Making the world cleaner by connecting corporations with waste collectors around the globe.

200 transactions per day
47,000 transactions since Dec 2021
11,500 tonnes recovered
10,000 users in 56 countries
8,000 waste pickers served, 70% women



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How can we help you ?

Let's explore the possibilities !

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Closing Remarks

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Senior Environmental Specialist
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Announcement: HACKATHON

Implemented by: SACEP

Supported by: UNOPS

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PLEASE Hack

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COMING SOON

Implemented by: SACEP

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