Integrated Approach Towards Sustainable Plastics Use and Marine Litter Prevention in Bangladesh

UNIDO
UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Norway

Towards a Circular Economy for Sustainable Plastics Management

Bangladesh is facing a growing challenge from plastic pollution due to rapid urbanization, increased consumption, and inadequate waste management systems. Plastic waste leakage into rivers, canals, and coastal ecosystems continues to threaten biodiversity, public health, livelihoods, and marine environments. In response, the Government of Bangladesh launched the project *"Integrated Approach Towards Sustainable Plastics Use and Marine Litter Prevention in Bangladesh"* to strengthen sustainable plastics management through policy reform, consumer awareness, industry transformation, recycling system development, and innovation.

Implemented by the **Department of Environment (DoE)**, under the **Ministry of Environment, Forest and Climate Change (MoEFCC)**, with technical support from the **United Nations Industrial Development Organization (UNIDO)** and financial support from the **Royal Norwegian Embassy, Dhaka**, the project adopts a circular economy approach to reduce plastic waste generation, strengthen recycling systems, and prevent marine litter across Bangladesh.

Project Objectives

- Strengthen policies and institutional capacity for sustainable plastics management
- Reduce littering and single-use plastic consumption through consumer awareness and behavioural change
- Support industries in adopting Resource Efficient and Cleaner Production (RECP) and Design for Environment (DfE) practices
- Improve plastic recycling, recovery, and environmentally sound disposal systems
- Foster cleantech innovation and entrepreneurship for circular economy solutions

Key Achievements

Strengthening National Policies and Regulatory Frameworks

The project has played a key role in advancing Bangladesh's policy landscape on plastics and waste management. Major milestones include:

- Finalization and submission of the **Extended Producer Responsibility (EPR) Guidelines** for plastics
- Updating the **Biomedical Waste Management Rules (2008)**
- Drafting the **Rapid Baseline Assessment on Plastic Waste Management in Bangladesh**
- Formation of a Technical Working Group with 17 members
- Development of **Voluntary Environmental Agreements (VEA) and Industry Covenants**

The project also organized multiple technical seminars and policy dialogues involving government agencies, industry representatives, academia, development partners, and civil society organizations to strengthen national coordination on plastics management.

Mobilizing Communities and Driving Behavioural Change

The project has implemented large-scale awareness and cleanup campaigns across urban, coastal, rural, and ecologically sensitive areas of Bangladesh.

Impact Highlights

- **46 cleanup** campaigns nationwide
- **17,000+** volunteers mobilized
- **15+ community partnerships** established
- School, university, and fisher community engagement programmes implemented
- **Source segregation practices** initiated in urban, rural, and coastal settings

Through school-based initiatives, inter-school and inter-university debate competitions, university workshops, and coastal cleanup campaigns, the project has actively engaged youth and local communities in promoting sustainable plastics use and marine litter prevention.

Cleanup campaigns conducted across locations including Cox's Bazar, Saint Martin, Sylhet, Sundarbans, Chattogram, Barishal, Bhola, Patuakhali, and other coastal regions collectively removed thousands of kilograms of plastic waste from environmentally vulnerable areas.

Supporting Sustainable Industry Transformation

The project has supported industries in adopting cleaner production methods, improving operational efficiency, and promoting environmentally responsible product design.

Industry Achievements:

- **40 plastic industries** selected for RECP and DfE implementation
- **20 industries** completed RECP assessments
- **11 domestic** trainings and **2 international** trainings completed
- Biomedical waste treatment facility operationalized in Sirajganj

Resource Efficient and Cleaner Production (RECP) trainings and assessments have helped industries identify opportunities to reduce waste generation, optimize energy use, and improve resource efficiency. Simultaneously, Design for Environment (DfE) trainings introduced industries to lifecycle thinking, safer materials, eco-design principles, and circular production approaches.

The project also supported the establishment of a pilot biomedical waste management treatment facility in Sirajganj, including installation and testing of autoclave and incinerator systems, technical trainings, and development of operational procedures in collaboration with the Directorate General of Health Services (DGHS).

Advancing Recycling Systems and Cleantech Innovation

To strengthen Bangladesh's recycling ecosystem and circular economy transition, the project supported recycling capacity-building, technology development, and entrepreneurship initiatives.

Recycling and Innovation Highlights:

- 643 cleantech applications received nationwide
- 25 innovators shortlisted through the accelerator programme
- 2 model recycling precincts developed
- 140+ informal and semi-formal recyclers trained
- Recycling Technology Compendium drafted

The Cleantech Accelerator and Commercialisation Programme, implemented in partnership with SME Foundation, supports innovators and entrepreneurs working on sustainable recycling, circular design, bio-based materials, and resource-efficient technologies.

The project also developed the Recycling Precinct Manual and Plastic Waste Recycling and Processing Technology Compendium to support structured recycling systems, stakeholder coordination, and environmentally sound recycling practices in Bangladesh.

Communications, Digital Engagement and Outreach

The project has significantly expanded public outreach and visibility through communications, media engagement, and digital platforms.

Outreach Highlights

- 150+ media features published
- 6.5 million social media reach achieved
- 9.8 million viewers reached through TV and print media
- PlasticPath website and mobile application developed

PlasticPath, the project's digital knowledge and engagement platform, is being developed to serve as a national hub for sustainable plastics management, policy resources, awareness materials, and stakeholder engagement in Bangladesh.

Looking Ahead

As the project moves into its final implementation phase, key priorities include:

- Official launch of the PlasticPath website and mobile application
- Nationwide mass media campaign on sustainable plastics use
- Finalization and approval of policy and technical documents
- Expansion of source segregation practices
- Rollout of the National Solid Waste Management Award framework
- Completion of cleantech accelerator activities and innovation support
- Strengthening industry adoption of circular economy practices
- Through an integrated and multi-stakeholder approach, the project continues to support Bangladesh's transition toward a more resource-efficient, circular, and environmentally sustainable future.

Snapshots


Seminar on Biomedical Waste
Treatment Facilities in


Sustainable Plastics Use in the Secretariat


International Plastic Free Day 2026
Source Segregation Practice
Inaugration Ceremony & Discussion Session
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