



NATIONAL PLASTIC WASTE

MANAGEMENT STRATEGY AND ROADMAP (2024-2034)



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ACRONYMS

3R	Reduce, reuse, recycle
CRGE	Climate Resilience Green Economy
CSOs	Civil Society organizations
EEPA	Ethiopian Environmental Protection Authority
EPR	Extended Producers Responsibility
HDPE	High Density Polyethylene
M&E	Monitoring and Evaluation
NDC	Nationally Determined Contribution
PDCA	Plan-Do-Check-Action
PETs	Polyethylene terephthalate
PMP	Project Performance Management
PP	Polyethylene
PVC	Polyvinyl Chloride
PW	Plastic Waste
rPET	Recycle Polyethylene
SUP	Single Use plastic
SWOT	Strength, Weakness, Opportunities, Threats
ToT	Transfer of Technology





DEFINITION OF TERMS

Definition of terms	
Plastic	Material which contains as an essential ingredient a high polymer such as polyethylene terephthalate, high density polyethylene, Vinyl, low density polyethylene, polyethylene, polystyrene resins, multi-materials like acrylonitrile butadiene styrene, polyethylene oxide, polycarbonate, Polybutylene terephthalate
PW	Any plastic discarded after use or after their intended use is over
Extended producer's responsibility	Extended producer responsibility (EPR) is environment policy approach in which a producer's responsibility for a product is extended to the manufacturers, importer, whole sellers and retailer of the plastic product.
Recyclability	Potential to be recycled, based on design and service consideration of finishing methods and materials of plastic products
Recycle	Transform a product or component into its basic materials or substance and reprocess them into new materials
Circularity	Using plastic more efficiently by keeping the material in use for as long as possible, getting the most we can from the material during its use, and then recovering it to make new products.
Single Use Plastics	Plastic products made of, or containing, or packaged in plastics to be used only once within a short time.
Re-use	The repeated use of a product or component for its intended purpose without significant modification
PW management	The sorting, storage, collection, transportation, and environmentally sound management of plastic waste and additional measures to avoid potential impacts of discarded plastic include avoiding, reducing, reuse, recycling and incinerating for energy production and volume reduction
Source separating/sorting	The segregation of specific materials at the source for separate collection
Reducing	The practice of using less plastic material and to minimize quantities of generated plastic waste and preserve natural resources. These practices include innovative solutions to prevent plastic materials from becoming waste before they reach the recycling state and re-using plastic products two and more than two times
Recyclables	Materials that still have useful physical or chemical properties after serving their original purpose and therefore can be re-manufactured. Some have positive economic value as well (e.g., rigid PE, PET bottles).
Landfilling	Is the process of getting rid of large amounts of plastic waste by burying it in a trench, whole or depressed area of land.
Circular economy	The circular economy is defined as an economic model in which resources like plastics are used more efficiently through the three guiding principles of "reduce, reuse and recycle" to close the loop. Shifting to such a system has economical as well as social and environmental benefits through reduced import dependency, employment creation, reduced littering, less resource extraction as well as improved human health conditions.
Incineration	Incineration is the burning of a substance or material in the presence of oxygen, and under controlled conditions to treat waste or to reduce volume or and for energy and heat production





H.E. Engineer Lelise Neme

Director General



FORWARD

Plastic pollution has emerged as a significant environmental issue, posing severe risks to our planet. The extensive utilization of plastic and its improper disposal adversely affect both human health and the environment, creating a precarious situation. Due to its nature, plastic finds applications across numerous industries and consumer products, infiltrating nearly every facet of life. However, its non-degradable property and poor disposal practices result in substantial amounts of plastic waste infiltrating the environment, persisting for decades or even centuries.

Ethiopia's burgeoning population exacerbates the impact of plastic pollution, presenting a considerable developmental challenge. The country's plastic consumption has been rising steadily over the years, with over 60% of plastic waste remaining inadequately collected. This underscores the urgent need for effective plastic waste management and enhanced recycling initiatives to prevent lasting ecological damage.

The National Strategy and Roadmap for Plastic Waste Management 2024-2034 outlines Ethiopia's approach to effective plastic waste management, in alignment with global commitments such as the Sustainable Development Goals (notably Goals 3, 12, 13, and 14), Africa's Development Agenda 2063, and the Paris Agreement. Through the implementation of this strategy, Ethiopia seeks to transform its plastic waste management infrastructure and drive progress at both local and national levels.

The Ethiopian Environmental Protection Authority (EPA) spearheads the challenge of reducing plastic waste in the country. This document presents a comprehensive approach, integrating short-term strategies to reduce waste with long-term efforts to identify and replace hazardous plastics. The adoption of this strategy represents a significant step towards sustainable plastic consumption and production across the nation.

Ethiopia aspires to set a leading example in plastic waste management in Africa by 2034, demonstrating its commitment to environmental sustainability. This objective will be pursued through collaborative efforts involving national and international stakeholders, focusing on awareness-raising initiatives and the development of market systems. The strategy aims to establish an integrated value-chain management that will benefit the environment, enhance human health, promote job creation, and support climate change adaptation efforts. Additionally, this approach underscores the challenges faced in plastic waste management and the necessity for improved market linkages and innovation. Clear strategic directions are provided to ensure alignment with Ethiopia's national policies and initiatives, including the actions under the Climate-Resilient Green Economy (CRGE) strategy and the Green Legacy program, initiated by His Excellency Dr. Abiy Ahmed, the Prime Minister of Ethiopia. Therefore, I urge all stakeholders to collaborate effectively to implement this roadmap and achieve our national development vision.

With Sincere Regards,

H.E Engineer Lelise Neme
Director General,
FDRE Environmental Protection Authority





EXECUTIVE SUMMARY

Plastic waste is becoming a global problem that devastates the ocean, land, and human beings. In developing countries like Ethiopia, the issue is dire due to the growing urban population, poor recycling practices, inadequate waste management infrastructure, and regulation. The total global plastic production in 2020 was over 400 million tones (UNEP, 2021a). Plastic consumption in Africa in 2015 was 16 kg per person, compared to the global average of 45 kg per person and 136 kg per person in Western Europe (Statista, 2016).

The global estimate of plastic waste (PW) in 2021 accounted for approximately 13% of total waste generated. In Ethiopia where the number of urban population has been increasing each year, the waste generation has increased from 9,700 tons/day in 2015 to 12,200 tons/day in 2020 and it is likely the current generation will be doubled by 2030 and the plastic waste share contains 6% of the total household waste 2020. The increase in population, rapid expansion of urbanization and economic development has a high impact on general waste and plastic generation, on plastic consumption and subsequent waste generation, along with the additives and toxic chemicals. Notably, Ethiopia's plastic import surged from 86,000 tons in 2007 to 386 tones (58.2% of the total plastic were imported for packaging by) 2022 and this shows a 421 % increase in the 20 years.

The share of plastic waste that is successfully recycled globally is projected to rise to 17% in 2060 from 9% in 2019, while incineration and landfilling will continue to account for around 20% and 50% of plastic waste respectively.

According to the study in Ethiopia cities like Hosanna, Addis Ababa, Bahir Dar, Hawassa and Dire dawa only 9% of all plastic waste produced is recycled, with 12% incinerated and a staggering 79% accumulating in open dumping, landfills or open dumping or the environment. According to Euro-map 2022, Ethiopia's per capita consumption of plastics has grown exponentially from 0.6kg in 2007 to 2.6kg in 2021. This has positioned Ethiopia as the second-largest importer of plastic in East and Central Africa spending 17m euros per year on plastic packaging imports. About 51% of the plastic is used in packaging, while the remaining is used in construction, electronics, etc.

The PW poses a significant threat to our environment, contributing to pollution through improper disposal methods such as littering, drainage blockage, and water source contamination. Environmental degradation extends to soil and water pollution, biodiversity loss, and greenhouse gas emissions. As per UNEP contemporary evidence, approximately 98 percent of single-use plastic items originate from fossil fuel or "virgin" materials. The anticipated rise in greenhouse gas emissions linked to the manufacturing, utilization, and disposal of traditional fossil fuel-derived plastics is projected to reach 19 percent of the worldwide carbon allocation by 2040. Furthermore, poor PW management jeopardizes public health by creating breeding grounds for disease vectors and releasing harmful pollutants through open burning.





A national PW management strategy and roadmap are imperative to mitigate these adverse effects. By promoting responsible PW management practices, we can safeguard our environment and public health. Moreover, inefficient PW management practices have substantial economic repercussions, including infrastructure damage and high cleanup costs. Embracing a circular economy approach not only addresses these economic challenges but also fosters job creation and business opportunities.

Ethiopia has developed diverse policy and legal instruments to manage solid and liquid wastes. Emphasizing the paramount importance of prioritizing the 3R model and striving for Zero Landfill, Ethiopia actively participated in the regional Switch Africa initiative, dedicated to fostering sustainable consumption and production. Through this initiative, invaluable knowledge, experiences, goals, and targets have been shared and advocated over the last five years.

The National Strategy and roadmap on Plastic Waste Management is crafted with a preventive philosophy, anchored in the principles of the 3Rs (Reduce, Reuse, and Recycle) waste hierarchy. Aligned with existing national policies, this model resonates with Ethiopia's National Policy on Climate-Resilient Green Economy (CRGE), Homegrown Economy Reform Strategy, National Ten Years Development Strategic Plan and Green Legacy that was initiated by his excellence Dr Abiy Ahmed.

Effective plastic waste management hinges upon industry stewardship, wherein the application of 3Rs and strategies like 'Cleaner Production' are paramount. While innovative measures are used to reduce plastic consumption and production, sustained measures employed to enhance end life management plastic wastes, with approximately 25% of plastic waste materials recycled. However, challenges persist, primarily due to the unsorted and soiled nature of collected waste, rendering a fraction unsuitable for reutilization. To meet market demands and ensure quality, recycled materials need thorough cleaning and grading processes.

Central to the Strategy and roadmap's objectives are the facilitation of segregated plastic waste collection and profitable recycling ventures, aimed at producing high-quality materials for the plastic industry. Guided by national policies and informed by extensive consultative processes involving relevant stakeholders, this document sets overall strategic directions and goals, translate strategy into actionable plans, timelines, and deliverables, paving the way for sustainable plastic management in Ethiopia.





1. INTRODUCTION

1.1. BACKGROUND

The increasing use of plastic products in various industries has contributed to sustainable socio-economic development. According to data from the United Nations Comtrade database, global plastic imports have increased by 19% over the past five years (2017-2021), while Ethiopia's plastic imports have increased by 34.8%. According to a recent study, Ethiopia's annual total plastic consumption ranges from 280,000 to 300,000 tons, with single-use plastic comprising 70 percent of this figure (Addis Ababa Solid Waste Management Agency, 2020). Furthermore, the rapid expansion of the spring water industry, trade, and services has hastened the production of plastic bottles (Massreshaw, 2018).

On the other hand, the amount of plastic waste (PW) generated globally and in Ethiopia has also been dramatically mounting. According to the 2018 Africa Waste Management Outlook Report, plastic waste accounted for 13% of the municipal solid waste in sub-Saharan Africa. In Ethiopia a decade ago, single-use plastic products accounted for only 3 percent, and recent data shows it has increased to 6 percent of the total solid waste generated in the cities. In 2021, PW was estimated to be around 13% of total waste generated globally and 6% in Ethiopia.

Plastic waste has become a major environmental concern in recent years, with its detrimental impact on the environment and human health being recognized globally. Governments, organizations, and individuals worldwide have acknowledged the need to develop effective strategies and action plans to address this critical issue. A well-developed plastic waste management strategy and roadmap can bring several benefits, including improved environmental sustainability, public health benefits, economic benefits, and social benefits. Effective management of plastic waste can help reduce pollution of water bodies, protect wildlife, and promote environmental sustainability. Proper waste management practices can help reduce health risks associated with unmanaged plastic waste. Recycling and waste reduction initiatives can create new economic opportunities and reduce waste disposal costs. Therefore, the Ethiopian Environmental Protection Authority with the consultation of diverse stakeholders here with adopted a comprehensive plastic waste management strategy and roadmap that promotes circular economic principle.












1.2. PLASTICS AND TYPES OF USED IN ETHIOPIA

Plastics are man-made organic materials that are produced from oil and natural gas as raw materials. Polymers such as polyethylene (PE), polystyrene (PS), and polyvinyl chloride (PVC) are the end products of the process of polymerization. According to WWF Global assessment report in developed countries, literally hundreds of plastic materials are available commercially and less developed countries however, fewer types of plastics tend to be used. In Ethiopia four types of plastics that are most used and reprocessed or recycled such as polyethylene (PE), polypropylene (PP), polystyrene (PS) and polyvinyl chloride (PVC). The three polyethylene (PE) families low, high and liner density polyethylene extensively used and recycled in packaging films, particularly in products such as grocery bags and small household appliance

However, Polypropylene because of its more rigid property than PE. It is used and recycled for chairs, high-quality home ware, domestic appliances, suitcases, crates, pipes, fittings, rope, woven sacking, carpet backing netting, nursing bottles, only little portion of polystyrene (PS) and polyvinyl chloride (PVC) used and recycled in Ethiopia

Figure 1: Plastic Types

Symbol	Abbreviation	Polymer name	Use
	PETE, PET	Polyethylene terephthalate	Water bottles, drink bottles, cooking oil containers
	HDPE	High-density polyethylene	Buckets (pails), detergent bottles, food containers
	PVC	Polyvinyl chloride	Food trays, pipes, chairs
	LDPE	Low-density polyethylene	Carrier bags, bread bags, food storage containers
	PP	Polypropylene	Straws, shampoo bottles, bottle caps
	PS	Polystyrene	Vending cups, packing peanuts, CD cases
	Other	Any other plastics	Melamine, packaging made from mixed plastics



1.3. CURRENT INITIATIVES IN PW MANAGEMENT

The effort to tackle pollution that arise from plastic waste in Ethiopia has been installed in the national solid waste management proclamation that aimed the reduction plastic waste goes to the landfill, however various studies have demonstrated that the existing legal framework unable to effectivity reduce the plastic waste throughout the country.

On the other hand, the corporate industry has taken a proactive initiative towards sustainable plastic management and circular economy development in 2019. This has resulted in the establishment of voluntary producers' responsibility organization (VPRO), which collaborates with member corporations and partners to intervene in policy documents, recycling operations, and industry and public education. Addis Solid Waste Agency and other stakeholders established Addis Ababa Partnership for Circular Value Chains.

In addition, various initiatives are underway to promote the recycling industry through policy development, actual collection, and awareness and education efforts. One such initiative is the preparation of plastic end-to-end regulation for food-grade materials, which will standardize plastic recycling for food grade. Furthermore, digital platforms are developed to serve as knowledge hubs and market linkages for the plastic recycling industry. Encouragingly, there is growing discussion among corporates regarding the introduction, implementation of extended producer responsibility (EPR), plastic credits and the existence and functionality of some collocation facilities and recycling industries is promising.

1.4. POLICY AND LEGAL FRAMEWORK

The Ethiopian Climate Resilient Green Economy Strategy, launched in 2011, aims to promote sustainable development through the adoption of green economic practices, including innovative waste management. The strategy recognizes the need to reduce PW and increase recycling rates as part of a broader effort to reduce greenhouse gas emissions and resources wastages. Ethiopia has also committed to contribute towards limiting the temperature increase to 1.5 degrees Celsius above pre-industrial levels as a signatory to the Paris Agreement on climate change. In line with this commitment, Ethiopia has submitted its updated Nationally Determined Contribution (NDC) to the UNFCCC, outlining efforts to reduce greenhouse gas emissions and adapt to the impacts of climate change. Our country's updated NDC includes a target to decrease emissions by 68.8% by 2030 compared to business-as-usual scenarios, with support from the international community. Ethiopia also aims to increase the share of renewable energy to 100%, promote sustainable land use practices, and strengthen other climate resilience measures, including sustainable plastic waste management.

To achieve sustainable plastic waste management, the regulatory options available are enhancing efficiency in the plastic products, sustainable consumption, and production, banning, promoting durable plastic products, promoting alternative plastic use, reuse, and recycling model. The Constitution of the Federal Democratic Republic of Ethiopia





Proclamation No. 1/1995 imposes obligation on the government to protect environment. It recognizes ‘the People of Ethiopian as a whole, and Nation, Nationality and People in Ethiopia have the right to improved living standards and the right to sustainable development.’ Likewise the constitution pledges ‘the basic aim of development activities shall be to enhance the capacity of citizens for development and to meet their basic needs.’ Under Article 44(1) the constitution recognizes environmental rights, ‘all persons have the right to a clean and healthy environment.’ This means, everyone has the right to an environment that is not harmful to their health and wellbeing. Environmental right is a right that allows humans to live in an environment that fulfils the enjoyment of life. The constitution also imposes obligation that the ‘Government shall endeavor to ensure that all Ethiopians live in a clean and healthy environment.’

Subsequently, after the adoption of the Constitution, in 1997, Ethiopia introduced the environmental policy of Ethiopia (EPE) to guide the environmental governance system in Ethiopia. The overall policy goal of the policy is ensuring sustainable development by improving and enhancing the health and quality of life of all Ethiopians through a sound management and use of natural, human-made, and cultural resources and the environment. It also aims to improve and enhance the health and quality of life of all Ethiopians. The policy sets the following objectives and principles among others that improving and enhancing ‘[t]he health and quality of life of all Ethiopians and to promote sustainable social and economic development through the sound management and use of natural, human-made and cultural resources and the environment to meet the needs of the present generation without compromising the ability of future generations to meet their own needs’.

The policy also provides a government policy direction with respect to environmental concerns, including sludge waste management. The EPE promotes waste minimization processes, including the efficient recycling of materials wherever possible and require create by law an effective system of control, distribution, utilization and disposal after use or expiry of chemicals, biological organisms or fragments of organisms that could be hazardous but are required for use.

Based on the Environment Policy, Ethiopia promulgated “Environmental Pollution Control Proclamation No 300/2002” under Article 3 it provides for a rule for polluter pay principle. It states in that; “[a]ny person engaged in any field of activity which is likely cause pollution or any other environmental hazard shall, when the Environmental Protection Authority or the relevant regional environmental agency so decides, install a sound technology that avoids or reduces, to the required minimum, the generation of waste and, when feasible, apply methods for the recycling of waste.”





Likewise, the Solid Waste Management Proclamation No 513/2007 deals with solid wastes, including plastic waste. The legislation aims to prevent possible adverse effects that might arise from the mismanagement of solid waste while promoting economically and socially beneficial assets out of solid waste through following 3Rs model. This proclamation is the first national law on solid waste management in Ethiopia and its main objective is to enhance the capacity to prevent adverse impacts of solid waste at all social levels while creating economically and socially beneficial assets from solid waste.

The proclamation mainly covers the general obligations of urban administration, solid waste management planning, the inter-regional movement of solid waste, the management of household solid waste, waste collection and storage, transportation, recycling, incineration, disposal, and auditing of solid waste disposal sites. It also addresses the significance of community participation in its mission. The solid waste management action plans designed by and implemented at local urban administrative levels help ensure community participation.

Despite the existence of policies and laws aimed at minimizing plastic pollution such proclamation 513/1997, which banned the production and import of plastic bags with thickness of less than 0.03mm, it lacks strong enforcement in place so far. The Ethiopian Solid Waste Management Proclamation No.513/2007 Article 8, states that it shall be unlawful to put on the market any plastic bag that is not labeled to show whether and how it is biodegradable. It also prohibits granting permits for the manufacture of any nonbiodegradable plastic bags with a wall thickness of 0.03mm or less. However, A study conducted on the compliance level showed that fourteen out of twenty-one companies inspected were producing below the required 0.03-mm thickness. In addition, most plastic bags used in the country don't have any labels on them.

EPA has formulated a draft legislation on solid waste sustainable management -which includes plastic wastes. The document aims to revise existing solid waste management proclamation and expected to include the issue of plastics. Two self-standing provisions are addressed about plastics and bottles, cans, and water bottles. The manufacturer, importer, whole seller and retailer of plastics shall develop and implement a system that enables it, on its own or through other persons, to collect and recycle them. Hence, the law aspires to regulate life-cycle management plastics from manufacturing to end-life management.

On the other hand, hazardous waste management and disposal is governed by a separate legal regime. These kinds of wastes need to follow massive procedure and scientific rules to manage them. The Hazardous Waste Management and Disposal Proclamation No. 1090/2018 was introduced with rules that regulate all waste of hazardous nature. Under Article 4(2) the proclamation defines the scope of application to “any person, who generates, reuses, recycles, stores, transports, or disposes hazardous waste in all parts of Ethiopia. The proclamation promotes cleaner production principles by obliging producers to minimize or avoid release of hazardous waste.





The legislation provides monitoring of the production process as one mechanism to reduce hazardous waste release during production. The proclamation under article 6 sets the collection, segregation, and disposal of hazardous wastes as the responsibilities of generator. It also places a responsibility on hazardous waste generator to keep records about hazardous waste transactions (Article 6 (3)). In addition, the generators shall ensure that hazardous wastes are appropriately labelled and packed during transactions. In its provision of article 16 it declares the reuse and recycling take precedence over disposal of hazardous waste.

Despite the formulations of numerous policy and legal frameworks, their effectiveness is compromised by weak, uncoordinated, and unprioritized implementation and enforcement. The failure to prioritize compliance and enforcement further exacerbates the situation, leading to a disconnect between policy intentions and real-world outcomes. Consequently, the intended benefits of these frameworks remain largely unrealized, leaving gaps in governance and impeding societal development. To address this issue, there is a pressing need for comprehensive strategy and roadmap development that focuses not only on policy and legislation formulation but also their effective implementation and enforcement.

1.5. KEY CHALLENGES OF PW MANAGEMENT

One of the major challenges facing Ethiopia's efforts to address plastic waste is the lack of comprehensive strategic direction and roadmap on the plastic reduction, reuse, recycle, and action plan that sets short-term, mid-term and long-term targets and interventions. Without a clear strategy and roadmap for how to tackle the issue, it can be difficult to coordinate efforts and measure progress. Additionally, conventional practices in Ethiopia tend to promote a linear model of consumption and production, which does not prioritize reduction, reuse, and recycling over disposal.

Another challenge is the underdeveloped market linkages across the plastic waste value chain. This makes it difficult for businesses and individuals to find sustainable solutions for their plastic waste and limits the potential for economic opportunities in emerging circular economy. Additionally, there is a lack of pre-defined plastic wastes hotspot and clusters, as well as institutional support and infrastructure to support the recycling industry.

Coordination and linkage among stakeholders across the value chain is also lacking, which can lead to inefficiencies and missed opportunities for collaboration. There is also a low investment flow into the recycling industry, with few options for PW reuse and recycling industries. This is compounded by deficiencies in data and information generation and management on PW generation, collection, and recycling. The lack of updated data on PW generation, collection, reduction, reuse, and recycling makes it difficult to accurately assess the scale of the problem and track progress towards targets. Furthermore, most processing activities are done by enterprises with limited options for knowledge and innovation, which can limit the potential for sustainable solutions.





There is also a low perception for PW collection, sorting, segregation, as well as reduce, reuse, and recycling of products. This is compounded by a low awareness among communities and industries of proper waste management systems. Finally, there is a lack of proper PW collection, segregation, and sorting systems in place, which can make it difficult to effectively manage plastic waste.

1.6. JUSTIFICATION FOR A NATIONAL PW MANAGEMENT STRATEGY AND ACTION PLAN DEVELOPMENT

The negative impacts of plastic waste (PW) on the environment, human health, and biodiversity are a growing concern globally. Ethiopia, like many other countries, faces significant challenges in managing PW due to its mismanagement. Without a proper strategy and action plan, sustainable PW management may not be achievable, leading to adverse negative effects on socio-economic development and environmental sustainability for present and future generations. One of the major challenges facing Ethiopia is how to reverse the linear plastic usage practices that have severely impacted the natural resource base for decades.

The issue of plastic bag and bottles waste presents significant environmental and health concerns globally, with particularly acute challenges evident in developing nations such as Ethiopia. This is exacerbated by the comparatively underdeveloped state of solid waste management systems in Ethiopia compared to more advanced countries. The commonplace practice of discarding plastic bags in streets, rivers, drains, and public spaces, notably in urban areas, amplifies the problems addition to the single use plastic products used and discarded urgent measures are also warranted to address Used Lead Acid Batteries (ULAB) and e-waste, containing valuable plastics alongside toxic additives.

Currently, there is no comprehensive plastic waste management strategy and roadmap to control and administer PW sustainably in Ethiopia, resulting in the degradation of the nation's resources and unprecedented damage to the environment. Developing a national PW management strategy and action plan is crucial for Ethiopia to contribute its sustainable development and fulfill its international obligations. Such a plan shall provide guidance on how to reduce, reuse and recycle plastics wastes throughout the value chain, facilitate informed decision-making, and balance short-term economic benefits with sustainable use of resources.

This comprehensive document aims to provide an integrated approach to addressing plastic waste challenges throughout the country by implementing in all levels and sectors. By implementing this strategy, Ethiopia seeks to establish a framework for effective plastic waste management practices, ensuring consistency and coordination across diverse geographical areas. The document is intended to serve as a catalyst for subsequent introduction of new legal instruments, planning and coordination efforts, laying the foundation for achieving targeted objectives.





1.7. GUIDING PRINCIPLES

The following are the guiding principles considered during the development of the national strategic action plan.

Circular Economy against Linear Economy	Actions will support circular economy thinking and development in research, innovation, and infrastructure.
Preventative and Precautionary Approach	Take preventive actions to avoid and arrest any processes that could harm nature and human beings.
Participatory & Consultative Process with Stakeholders, and Ensuring Transparency	Communication, stakeholder consultation including public consultation and participation, integrated into the planning, implementation, and monitoring mechanism.
Products Stewardship	Those involved in production, importation, marketing and selling, usage and disposal should ensure that they are managed throughout the life cycle minimizing adverse effect to the environment.
Polluter-Pays	The cost of pollution and/or damage to the environment should be borne by the person who pollutes environment.
Extended Producer Responsibility	a crucial policy tool for promoting a circular economy and reducing the environmental impact of consumer goods, while also fostering greater accountability among producers for the products they introduce into the market
Sustainability	Maintain sustainability in terms of environment, economy, and society
Cost-Benefit Principle	The cost-benefit principle, a cornerstone of economics, posits that actions should only be pursued if their benefits outweigh the associated costs. This principle underscores the inherent trade-offs inherent in decision-making processes.
Public Private Partnership	Involve partnership between the public sector and private sector to achieve common goals and sustainable development.
3R Principle (Reduce, Reuse, & Recycle)	The strategy will prioritize waste reduction, responsible use of resources and repurposing/recycling to create a more sustainable and circular economy that benefits both people and the planet.

1.8. SCOPE OF APPLICATION

The strategy and roadmap encompass the life cycle management of all types of plastics. it applies c across Ethiopia's regions and city administrations from 2024 to 2034.





2. VISION, GOAL, STRATEGIC OBJECTIVES, AND TARGET

2.1. VISION

- To see enhanced circularity in all type of plastic products uses in Ethiopia by 2034.

2.2. MISSION

To serve as strategic direction and implementation framework through promoting resource efficiency, environmentally sound plastic waste management and, enhanced stakeholders and partners collaboration.

- sound management of plastic waste through efficient and effective

2.3. GOAL

- Strengthen national circularity system in plastic waste sector through promoting circular economy principles and initiatives.

2.4. STRATEGIC OBJECTIVES

The following are the key strategic outcomes expected to be delivered by this strategy and roadmap.

Reduce	SO1: Improve PW reduction Mechanisms Throughout the Country
Reuse	SO2: Enhance awareness of Community, Industry Actors, Institutions, Service Providers, and Media on Responsible Plastic Waste Management
Recycle	SO3: Create an Enabling Environment for the PW Value-Chain Actors
Crosscutting	SO4: Enhance Livelihood Improvement through Decent Job Creation
	SO5: Strengthen/Initiate Multisectoral Coordination Mechanisms Among All Stakeholders in The Pw Value Chain
	SO6: Reduce Risks to Public Health, Environment, And Ecosystem and Improve Levels of Occupation Health and Safety of Waste Handlers.
	SO7: Strengthen Data and Evidence Generation and Utilization in the Sector





2.5. SHORT-TERM, MID-TERM AND LONG-TERM INTERVENTIONS

To successfully meet the objectives, a forward-thinking strategy is imperative. Thus, a meticulously designed action plan for sustainable plastic management is being proposed for execution in Ethiopia, segmented into short-term (2024–2026), medium-term (2027–2030), and long-term (2031–2034) phases. This phased approach accommodates the constraints posed by financial resources and institutional capabilities, ensuring a pragmatic implementation.

The action plan serves as a roadmap to attain **SEVEN** interconnected and mutually reinforcing strategic objectives. These objectives are integral to the broader strategies aimed at addressing the entire plastic life cycle. By meticulously charting these milestones, the plan endeavors to usher in transformative changes within the plastic management landscape of Ethiopia. To achieve sustainable plastic waste (PW) collection mechanisms throughout the country, a multi-pronged approach will be implemented.

In the short term, we will focus on improving collection by identifying hotspots, creating clusters, and supporting waste collector associations. Additionally, informal collectors will be legalized, and a permit system will ensure proper PW transportation and storage. Public awareness campaigns will target all stakeholders, with educational materials, media engagement, and community outreach promoting responsible waste management, reduction, reuse, and recycling. A waste separation guideline will be distributed, and regular clean-up events will be organized.

To empower actors in the PW value chain, stakeholder platforms, sorting bins, and a digital platform will be established. Job creation for women, youth, and marginalized communities will be promoted through training and market linkages. Finally, data collection will be strengthened through stakeholder registration, policy reviews, and a national steering committee. This comprehensive plan will lead to a more sustainable PW management system.

In the medium term, better technology, skill development, dedicated workspaces, energy/water access, and incentive programs for collectors, aggregators, and recyclers will be promoted. Additionally, regulations will ensure proper PW transportation. Public awareness will be heightened through model communities showcasing best practices, curriculum integration, and educating producers on recyclable design. The plan fosters an enabling environment through support for eco-investment, policy development, broker regulation, financial resource mobilization, access to finance for PW businesses, and regulations promoting plastic alternatives. It also incentivizes waste separation, standardizes recycling businesses, and promotes green procurement.

Livelihood improvement will be achieved through job creation, training, and market linkages for targeted groups. Multisectoral collaboration will be strengthened through digital platforms, federal and regional coordination bodies, and joint planning/monitoring. Public health and environmental risks will be reduced by tackling plastic pollution in water bodies and banning/reducing single-use plastics. Finally, data collection will be continuous, encompassing PW generation, collection, recycling, and untapped PW wealth. Information dissemination will support informed decision-making.





The long-term intervention will promote recyclable alternatives to non-recyclable plastics and encourage responsible waste management practices across all sectors. This includes controlling imports of unrecyclable plastics and offering tax incentives for sustainable PW businesses. Additionally, multisectoral collaboration will be strengthened through joint planning and monitoring. To minimize environmental and health risks, the plan promotes plastic alternatives, green certifications for industries, and reducing plastic bags/packaging. Finally, data collection on PW generation, collection, and recycling will be emphasized, along with information dissemination for informed decision-making.

A comprehensive plan tackles plastic waste (PW) across short, medium, and long terms. Short-term efforts focus on improving collection, public awareness, and empowering PW value chain actors. Medium-term goals involve improving collection infrastructure and regulations, promoting responsible waste management practices, and fostering an enabling environment for PW businesses. Long-term interventions encourage plastic alternatives, responsible production, and multisectoral collaboration to minimize environmental and health risks. Data collection and information sharing are crucial throughout for informed decision-making.

As the plan progresses into the long term, the objective is to achieve lasting systemic changes in plastic management practices. This phase will involve scaling up successful initiatives, investing in advanced technologies, and fostering innovation in materials design and production processes. By prioritizing sustainability and circularity, Ethiopia aims to emerge as a global leader in responsible plastic management.





Table 1: Summary of Action Plan for sustainable plastic management indicating strategies and key actions.

Strategic Objective	Short term (2024-2026)	Medium Term (2027-2030)	Long Term (2031-2034)
Objective 1: Improve PW reduction Mechanisms Throughout the Country	<ul style="list-style-type: none"> • Identification PW hotspots and establishment of collection clusters • Support establishment and strengthening of new and existing PW collection associations. • Promote legalization of informal PW collectors, and aggregators • Introduce a special permit system for PW transportation and storage. • Promote the availability and use of personal protective equipment 	<ul style="list-style-type: none"> • Promote provision of best available technologies and skill development • Facilitate and promote the provision of working premises. • Facilitate the provision of energy and water services. • Introduce and implement incentive mechanisms for PW collectors. • Support the issuance and regularization of PW transportation. 	
Objective-2: Enhance awareness of all community, industry actors, institutions, service providers, and media on responsible waste management individuals and collectively	<ul style="list-style-type: none"> • Raise public and stakeholders’ awareness on sustainable PW management and value of waste. • Promote the strengthening of environmental groups on proper waste management. • Strengthen media to engage in public awareness and sensitization of proper PW management. • Design, produce, and disseminate the Social Behavioral Communication Change (SBCC) materials. • Provide information about PW management in religious places, educational institutions, etc. • Promote PW reduction at source, reuse, repair proper PW management and green consumption. • Develop a waste separation guideline and disseminate it to the public and private institutions. • Promote regular campaigns, big cleaning days and exhibitions. 	<ul style="list-style-type: none"> • Develop model communities for proper PW management and scale up best practices. • Promote the inclusion of proper waste management in curriculum. • Enhance producer awareness on designing for recyclability 	<ul style="list-style-type: none"> • Promote the introduction and substitution of non-recyclable plastics materials by recyclable alternatives
Objective 3: Create an enabling environment for the pw value-chain actors.	<ul style="list-style-type: none"> • Develop and introduce stakeholder coordination platforms. • Support the provision of sorting bins, and related materials in the community. • Develop digital platform for the PW value-chain linkage. 	<ul style="list-style-type: none"> • Support for Eco-investment. • Develop policy and regulatory instruments. • Create a system to regulate brokers to create direct linkage between PW collectors and recyclers. • Mobilize resource (finance, technical, human, etc.,) • Facilitate access to financial services for PW value-chain actors. • Develop regulatory rules to promote plastic alternatives. • Increase fees on persons that failed to comply with waste separation at source. • Develop a standard for the recycling business and offer a fair fee for those businesses meeting the developed standards. • Promote green procurement 	<ul style="list-style-type: none"> • Control the import of unrecyclable plastic from abroad. • Develop tax incentive schemes to promote sustainable PW management business.
Objective 4: Enhance livelihood improvement	<ul style="list-style-type: none"> • Promote job creation for women, youth, and marginalized community. 	<ul style="list-style-type: none"> • Promote job creation for women, youth, and marginalized community. 	





through decent job creation	<ul style="list-style-type: none"> Support hands-on capacity building training on Basic Business Skills, and PW collection, sorting and recycling. Create and facilitate market linkage. 	<ul style="list-style-type: none"> Support hands-on capacity building training on Basic Business Skills, and PW collection, sorting and recycling. Create and facilitate market linkage. 	
Objective-5: Strengthen/Initiate multisectoral coordination mechanisms among all stakeholders in the pw value chain	<ul style="list-style-type: none"> Identify and map stakeholders periodically. Establish a national and regional steering committee and working groups. 	<ul style="list-style-type: none"> Develop digital platform for networking, market linkage and information sharing. Develop a federal and regional platform that establishes enhanced working relationships. Joint planning, implementation, and monitoring 	<ul style="list-style-type: none"> Joint planning, implementation, and monitoring
Objective 6: Reduce risks to public health, environment, and ecosystem and improve levels of occupation health and safety of waste handlers.	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Reduce significantly plastic deposits (single use plastic, bottles, bags, etc..) in and around water bodies, lakes, and rivers. Ban, reduce and prevent single-use plastics and littering. 	<ul style="list-style-type: none"> Promote plastic alternative and green certification for industry actors. Reduce plastic bags and unnecessary packaging in retail shops.
Objective 7: Strengthen data and evidence generation and utilization in the sector	<ul style="list-style-type: none"> Register PW producers, collectors, segregators, recyclers, and public service providers. Conduct legal and policy reviews and institutional setups regularly. 	<ul style="list-style-type: none"> Collect continuous data on the amount of generated, collected, and recycled PW. Generate data on the untapped PW wealth. Publish and disseminate information. 	<ul style="list-style-type: none"> Collect continuous data on the income PW collectors in the value-chain





2.6. CORE STRATEGIC TARGETS

The strategic plan intends to achieve the following objectives framed in short-term, medium-term, and long-term timelines.

Table 2: Summary of strategic short-term, medium-term, and long-term targets

No	Target	Relevance to SO
1.	Introduce rules and standard requirements to operationalize EPR and a pilot implementation for Selected Products by 2026	SO1, 3,4
2.	Inventory and monitoring mechanisms for all entries and exits of plastic in the country by 2026	SO7
3.	make the inventory dataset available by 2028	SO7
4.	Phase out identified single-use plastic items by 2026 and	SO1,3,6
5.	achieve 25% reduction of production and consumption of selected single use plastic (SUP) by 2028	
6.	Achieve 50% collection of recyclable, non-recyclable plastics and e-waste containing plastics	SO1, 4,6
7.	ensure 100% sorting and treatment of collected PWs by 2029.	SO1, 4,6
8.	Achieve 30% reduction of plastic in packing by 2029.	SO2,3,5
9.	Increase PW recycling from 9% to 25% ensuring quality, health, and safety requirements	SO1,3,4,5, 7
10.	Achieve 25:75 ratios for recycled virgin input composition by 2034.	SO1,3,4,6
11.	Enhance knowledge management and competency in PW management of relevant stakeholder groups by 2032.	SO2, 7
12.	Establish a financing mechanism to facilitate the need for improvement in the PW management sector in consultation with private sector participation by 2028	SO2,3,5
13.	National reward schemes in place for PPP initiatives by 2028	SO3,5
14.	Ensure occupational health and safety requirements are met and risk management mechanisms are in place for all PW handlers for all genders by 2033	SO3,5,6
15.	Local authorities start to design and implement a scheme to use voluntary community participation in addressing value chain stages to successful waste management by 2033	SO2, 3, 5,6





3. SWOT ANALYSIS

The following Strengths-Weaknesses-Opportunities-Threats analysis evaluates the status quo of the Ethiopian PW value chain.

3.1. STRENGTHS

Strengths abound for advancing circularity in various sectors, buoyed by existing institutional support across public, private, civil society organizations (CSOs), and research entities. This robust need provides a solid foundation for fostering circular practices and innovation.

Furthermore, the presence of a substantial youth cohort and grassroots associations presents a dynamic force eager to engage and drive change. Their energy and fresh perspectives inject vitality into circular initiatives, enhancing their reach and impact.

Both the public and private sectors exhibit a growing consensus on the necessity of Extended Producer Responsibility (EPR) and other regulatory measures. This shared commitment underscores a conducive environment for implementing policies that incentivize circularity and sustainability.

Moreover, certain fractions of the recycling value chain, such as PET, HDPE, PVC, and PP, have demonstrated functional individual recycling pathways. Leveraging and expanding these established chains can accelerate progress towards a more circular economy by optimizing resource utilization and minimizing waste.

In Ethiopia, there are already existing initiatives focused on the post-consumer waste (PW) value chain. Collaborative efforts within this realm can yield significant strides, particularly in joint decision-making regarding product design and actions. By harnessing collective expertise and resources, these initiatives have the potential to drive tangible changes within the country, fostering a culture of circularity and environmental stewardship.

3.2. WEAKNESSES

Weaknesses within the current landscape of waste management in Ethiopia are evident, posing significant challenges to the advancement of circularity and sustainable practices:

- The infancy of policies, regulations, and organizational structures surrounding waste management hinders cohesive and effective action.
- Weak enforcement of existing waste management regulations undermines compliance and perpetuates unsustainable practices.
- The value chain for waste management is weak, disorganized, and fragmented, exacerbating inefficiencies and hindering progress.
- A convoluted and lengthy value chain, influenced by middlemen, adds complexity, and increases costs, impeding streamlined operations.





- The absence of a tradition of waste segregation and sorting at the household level contributes to pollution and undermines recycling efforts.
- Limited awareness and cultural norms around proper waste management perpetuate harmful behaviors among the public.
- The widespread use of plastic packaging coupled with limited local recycling infrastructure and high transportation costs exacerbates environmental pollution.
- Outside of Addis Ababa, there is minimal experience with formalized waste collection systems, limiting progress beyond urban centers.
- The concentration of recyclers in and around Addis Ababa exacerbates inequalities in access to recycling facilities and services.
- A lack of skilled labor and a general apathy towards waste management further impede progress.
- Insufficient waste management infrastructure, including a lack of waste bins, transportation, storage, and energy facilities, hinders effective waste disposal.
- The private sector lacks awareness and incentives to adopt smarter post-consumer waste management practices, perpetuating unsustainable practices.
- Ambiguity in roles and responsibilities, along with overlapping duties among stakeholders, leads to inefficiencies and coordination challenges.
- Poor coordination among actors involved in post-consumer waste management exacerbates disjointed efforts and limits progress.
- A lack of comprehensive data and knowledge management systems hampers informed decision-making and strategic planning efforts.

3.3. OPPORTUNITIES

The key opportunities exist within the waste management sector, offering avenues for sustainable development and economic growth:

- **Massive waste generation as an untapped resource:** The sheer volume of waste generated presents an opportunity to harness it as a valuable resource rather than a burden, promoting a circular economy approach.
- **Encouraging initiatives and partnerships supporting the waste-to-wealth economy:** There is a burgeoning network of initiatives and partners eager to collaborate on transforming waste into valuable resources, fostering innovation and entrepreneurship.
- **Existing policy framework and regulatory rules:** Solid waste management policies, along with initiatives like the Climate-Resilient Green Economy (CRGE) and updated Nationally Determined Contributions (NDCs), provide a supportive regulatory environment for sustainable waste management practices.
- **Growing market demand for plastic packaging and post-consumer waste:** The increasing demand for plastic packaging and post-consumer waste presents opportunities for businesses to capitalize on recycling and upcycling initiatives.
- **Expanding global market for recycled post-consumer waste:** With a growing awareness of environmental issues, there is a rising global market for recycled post-consumer waste, offering lucrative opportunities for waste management enterprises.





- **Rising plastic credit and carbon markets:** The emergence of plastic credit and carbon markets incentivizes sustainable waste management practices, providing financial rewards for businesses that reduce their environmental footprint.
- **Availability of alternatives to ban/reduce unrecyclable plastic packaging:** Innovations in materials science offer alternatives to traditional plastic packaging, creating opportunities for sustainable packaging solutions and reducing reliance on non-recyclable materials.
- **High demand for employment in waste management:** The need for labor in collecting, sorting, and recycling waste presents a ripe opportunity for job creation, particularly in communities where employment opportunities are scarce.
- **Adaptation of circular economy concepts for "green jobs":** Embracing circular economy principles can spur the creation of "green jobs" focused on sustainable resource management, contributing to both economic development and environmental conservation.

3.4. THREATS

Several threats loom over the waste management sector, posing challenges to its sustainability and growth:

- **Unpredictable regulatory frameworks, politics, institutions, and market:** Fluctuations in regulatory policies, political landscapes, institutional stability, and market dynamics create uncertainty for businesses and investors, hindering long-term planning and investment decisions.
- **Risky environment for investment due to policy uncertainty:** The lack of clarity and consistency in future policy directions creates a risky environment for investment, deterring potential investors from committing resources to sustainable waste management projects.
- **Uninformed opinions within industry and stakeholders:** Misinformation and lack of awareness among industry players and stakeholders may impede the adoption of effective waste management strategies and hinder collaborative efforts towards sustainable solutions.
- **Unhealthy material flow and lack of organized take-back schemes:** disorganized material flows and the absence of structured take-back schemes contribute to inefficient waste management practices, leading to environmental pollution and resource depletion.
- **Unhealthy market competition and unpredictable inflation:** Intense market competition and unpredictable inflation rates pose challenges for waste management businesses, affecting their profitability and operational stability. This volatility may deter investment and hinder the growth of the sector.





4. PREPARATION, IMPLEMENTATION, MONITORING, AND EVALUATION

4.1. IMPLEMENTATION PARTNERS

The strategy is developed by realizing the importance of PW industry, the inevitable growth of the plastic industry, production and consumption which needs to be more responsible. For successful implementation, understanding and networking with existing players for the PW management, stakeholder engagement and clearly defining their roles is crucial. The Ethiopia Environmental Protection Authority and its line regional structures are responsible for leading and coordinating the implementation of this National Plastic Strategy and Action Plan. The following Table summarized key actors in the implementation process.

Table 3: Stakeholder Engagement

Sectors	Organization	Roles
Government Sector	Environmental Protection Authority	<ul style="list-style-type: none"> - Lead the implementation of the strategy and roadmap - Coordinate resource mobilization. - Foster enabling environment. - Monitoring and evaluating progress. - Organize data generation and knowledge management
	Ministry of Trade and Regional Integration	<ul style="list-style-type: none"> - Partner, facilitate, regulate plastic manufacturing, -
	Ministry of Education	<ul style="list-style-type: none"> - Lead human capital development. - Promote public awareness and - Facilitate curriculum development
	Ministry of Industry	<ul style="list-style-type: none"> - Promote sustainable (environmental sound) plastic production practices and invest to reduce plastic pollution. - Support plastic waste recycling companies
	Ministry of Urban and Infrastructure	<ul style="list-style-type: none"> - Support sorted collection of plastic waste for reuse and recycling.
	Ministry of Finance	<ul style="list-style-type: none"> - Promote economic policy instruments for recycling of plastic wastes (EPR Schemes, User fees and Taxes) - Support the allocation of budget for plastic waste management
	Ministry of Water and Energy	<ul style="list-style-type: none"> - facilitate the provision of energy and supply of water
	Ministry of Innovation and Technology	<ul style="list-style-type: none"> - Promote the development and transform of plastic waste recycling and recovery technologies - Support the development new alternatives to plastic
	Ministry of Health	<ul style="list-style-type: none"> - Support the safe and efficient handling of hospital plastic wastes. - Promote awareness about the impacts of plastic waste on health.
	Institute of Ethiopian Standards	<ul style="list-style-type: none"> - Coordinate the development of Plastic bottles, plastic packaging, plastic bags and other plastic related standards
Ethiopian Food and Drug Authority	<ul style="list-style-type: none"> - Regulate the implementation of plastic food packaging, recycling standards 	
Ethiopian Conformity Assessment Enterprise	<ul style="list-style-type: none"> - Control plastic products meeting required standards 	





Sectors	Organization	Roles
	Trade competition and Consumers Protection Authority	- Control unfair trade practices in plastic sector
	Manufacturing Industry Development Institute	- Support the development of environmentally sound plastic manufacturing industries
	Ethiopian Investment Commission	- Support environmentally sound plastic manufacturing and recycling investment
	Ethiopian Custom Commission	- Control plastic import and export at exit and entry point
	Regional Environmental Protection Authority	- Provide public awareness about plastic waste - Enforce the management of plastic waste of industrial, commercial, and institutional sector - Monitor and control plastic waste management - Data generation
	Regional Municipalities	- Lead waste collection, separation, and disposal - Legalization of informal waste collectors - Facilitates the provision of necessary logistics and infrastructures
	Regional Trade bureau	- Facilitate and regulate national plastic standard -
	Regional Industry bureau	- Support plastic industry and ensure it compliance with environmental standards
CSOs	Multilaterals (UN, World Bank, EU, AU, UNDP, Etc.,)	- Resource mobilizes (Human, finance, technical, etc.,) - Technical guidance Strategic leadership - Establish monitoring and evaluation frameworks
	Bilateral (USAID, NCA, GIZ, etc.,)	- Technical and resource - Resource mobilization - Coordination and partnership building - Capacity building
	International NGOs	- Resource mobilization - Technical capacity building - Market linkage
	Local CSOs	- Implementation - Local resource mobilization - Community mobilization - Technical Capacity building - Establishing collection center and hotspots - Data Generation and Knowledge management - Market linkage fostering
	Community Based Organization	- Community mobilization - Public awareness - Skill Transfer facilitation
Private	SMEs, aggregators, Converters/Recycler, etc.,	- Technology transfer - Value-chain - Collection, sorting and recycling
Universities and Research Institutes		- Conduct demand driven research on plastic alternative, circularity and plastic recycling





Sectors	Organization	Roles
Banks	-	Facilitation of loans and special financing window for plastic recyclers, alternative developers, and investors.
Manufacturing Associations	-	Facilitate cooperation between government and producers/ Influence both manufacturer and consumers towards environmental sound plastic manufacturing and recycling
Producers (suppliers)	-	Develop and market plastic alternative Encourage consumers towards Environmentally sound Management and recycling of PW Establish or organize themselves in PROs
Consumers (Demand groups)	-	Influence the demand for sustainable products, recycle plastic waste, or reduce their plastic consumption. Appropriately use and dispose of plastic products.
End-of-life waste management entities	-	Responsible for collecting, sorting, and disposing of plastic waste. Provide recycling services and educate consumers on proper waste management practices

4.2. MONITORING AND EVALUATION IMPLEMENTATION

Preparation, implementation, monitoring, and evaluation are essential functions to ensure that actions defined in the strategic plan are implemented as planned against stated objectives and desired results. M&E tools such as M&E plan and Project Performance Management (PMP) will be developed. A baseline will also be documented at the commencement of the intervention. The strategic action plan will be planned, implemented, monitored, evaluated, and revised via the PDCA (Plan-Do-Check-Action) cycle.

PLAN

- Preparation and drafting Action Plan
- Form a core team and coordinate a baseline study to understand the challenges and gaps.
- Conduct consultation meetings and workshops with relevant stakeholders; draft the action plan with relevant goals, targets with the appropriate period in line with existing policies and regulations.
- Identify relevant organizations and institutions for implementation of these goals within the allocated time.

DO (Implement)

- Implementation and Monitoring the Action Plan
- Formalize the action plan through appropriate administrative process.
- Disseminate the action using various outreaches.
- Mobilize resources (financial, technical, human, and political) and deepen collaboration with relevant partners towards implementation of the action plan.

- Conduct regulation monitoring to check the progress and record such for future evaluation and review.

CHECK

- Evaluation and Review of the Action Plan
- Based on the monitoring results, analyze the progress in implementation of the action plan in line with the targets and time.
- Review the progress with relevant stakeholders and submit results to an independent evaluation committee.
- Identify and examine areas of success and failure and determine the contributory factors.
- Institutionalize a process and culture for learning and document learnings.

ACTION

- Updating the action plan based on the evaluation.
- Expand and replicate successful cases.
- Revise the action plan and take course actions.





Table 4: Key Performance Indicators

Strategic Objective Statement	Indicator	Baseline	Target	Implementation Period		
				2024-2026	2027-2030	2031-2034
Strategic Objective (SO1): Enhance sustainable pw collection mechanisms throughout the country						
Activity 1.1: Identification PW hotspots and establishment of collection clusters	# Hotspots	5	15			
	# Clusters	No Data	10			
Activity 1.2: Support establishment and strengthening of new and existing PW collection associations; provide working premise and provision of energy and water etc.	# Associations	NA	12,500			
	# Of working premise					
	New	NA	12,500			
Existing	NA	12,500				
Activity 1.3: Promote provision of best available technologies and skill development	# Of technologies	NA	20			
	Transferred					
	# Trainees	-	10,000			
Activity 1.4: Support the legalization of PW Collection, storage, transportation, reuse, recycling and disposal.	# Capacitated associations	NA	25,000			
Activity 1.5: Introduce and implement incentive mechanism for PW collectors	# Incentive mechanism (EPR, in kind incentive)	NA	2			
Activity 1.6: Ban, reduce and prevent single-use plastics and littering	# Regulatory instrument		1			
Activity 1.7: Promote PW reduction at source, reuse, repair proper PW management and green consumption	# HHS	NA	1,000,000			
	# Producer	NA	100			
	# Retailers	NA	10,000			
Strategic Objective (SO2): Enhance awareness of all community, industry actors, institutions, service providers, and media on responsible waste management individuals and collectively						
Activity 2.1: Promote and strengthen the inclusion of proper-waste management in curriculum	# Mainstreamed curriculum (preprimary, primary, secondary, and tertiary)	NA	8			
Activity 2.2: Enhance manufacture awareness on designing for collection, transportation, storage and recyclability (E.g., color, weight, adhesives, labels, etc.)	# Manufacturers	NA	1,000			
Activity 2.3: Promote the introduction and substitution of non-recyclable plastics materials by recyclable alternatives	# Substituted products	NA	500			
Activity 2.4: Raise public and stakeholders' awareness on sustainable PW management	# People	NA	34,720,000			
	# Stakeholders	NA	1000			
	# Women Groups	NA	8750			





Strategic Objective Statement	Indicator	Baseline	Target	Implementation Period		
				2024-2026	2027-2030	2031-2034
Activity 2.5: Promote the strengthening of women and youth groups on proper plastic waste management	# Youth Groups	NA	8375			
Activity 2.6: Provide information about PW management	# Religious place	NA	5,000			
	# Education institutions	NA	40,000			
	# Tourist center	NA	500			
	# Marketplace	NA	2000			
Activity 2.7: Promote regular campaigns, big cleaning days and exhibitions.	# Campaign	NA	120			
	# Big cleaning days	NA	120			
	# Exhibitions	NA	20			
Activity 2.8: Develop model communities for proper PW management and scale up best practices	# model Community	NA	1400			
Strategic Objective (SO3): Create an Enabling Environment for the PW Value-Chain Actors						
Activity 3.1: Develop regulatory instruments	# Policy instruments developed, improved, and amended	NA	2			
	# Regulator instruments	NA	5			
Activity 3.2: Develop and introduce stakeholder coordination platforms	# Platform	NA	15			
Activity 3.3: Mobilize resource (finance, technical, human, etc.)	# Mapping instrument	NA	1			
	Amount of resource	NA	\$500,000,000			
Activity 3.4: Facilitate access to financial services for PW value-chain actors	# Financial service institution	NA	1			
Activity 3.5: Avail sorting bins, and related materials in the community.	# HHs	NA	2,529,600			
	# Entities	NA	5,000,000			
Activity 3.6: Develop a national standard for the recycling business	# Standards	NA	1			
Activity 3.7: Support for Eco-investment	# Regulatory instrument	NA	1			
	# eco-investment	NA	100			
Activity 3.8: Promote legalization of informal PW collectors, and aggregators	# Association	NA	12,500			
Activity 3.9: Introduce special permit system for PW Collection, storage, transportation, reuse, recycling and Disposal.	# Permit System	NA	1			
Strategic Objective (SO4): Enhance Livelihood Improvement through Decent Job Creation						
Activity 4.1: Promote job creation for women and youth, community	# Decent Job created	NA	1,000,000			
	# Women	NA	750,000			





Strategic Objective Statement	Indicator	Baseline	Target	Implementation Period		
				2024-2026	2027-2030	2031-2034
	# Youth	NA	250,000			
Activity 4.2: Create and facilitate market linkage	# Market linkage	NA	300			
Activity 4.3: Support hands-on capacity building training on Basic Business Skills, and PW management	# trainees	NA	1,000,000			
	# Training workshop	NA	50,000			
Strategic Objective (SO5): Strengthen/initiate multisectoral coordination mechanisms among all stakeholders in the pw value chain						
Activity 5.1: Develop National digital platform for networking, market linkage and information sharing	# Digital platform	NA	1			
Activity 5.2: update stakeholders mapping periodically	# Updated stakeholder mapping	NA	10			
Activity 5.3: Develop a federal and regional platform that establish enhanced working relationship.	# Platforms	NA	15			
Activity 5.4: Joint planning, implementation, and monitoring.	# Quarterly meeting	NA	40			
Activity 5.5: Establish a national and regional steering committee, and working groups	# Steering committee	NA	15			
	# Working groups	NA	15			
Strategic Objective (SO6): Reduce risks to public health, environment, and ecosystem and improve levels of occupation health and safety of waste handlers.						
Activity 6.1: Promote the availability and use of personal protective equipment (PPE) for Contaminated Plastic Waste Management.	# Collectors benefited	NA	25,000			
Activity 6.2: Reduce significantly plastic deposit (single use plastic, bottles, bags, etc.,) in the environment and around water bodies, lakes, and rivers	# Cleanup Water bodies		1000			
Activity 6.3: Reduce plastic shopping bags and unnecessary packaging in retail shops	# Regulatory instrument		1			
Activity 6.4: Promote plastic green certification for industry actors	# Regulatory instrument		1			
	# Of industries/communities		1400			
Strategic Objective (SO7): Strengthen data and evidence generation and utilization in the sector						
Activity 7.1: Register PW, collectors, segregator, transporters, recyclers, and public service providers with the amount of waste they manage	# Database	NA	1			





Strategic Objective Statement	Indicator	Baseline	Target	Implementation Period		
				2024-2026	2027-2030	2031-2034
Activity 7.2: Collect continuous data on the amount of generated, imported, collected, transport and recycled PW	# Assessments	NA	5			
Activity 7.3: Conduct legal framework reviews and institutional setups regularly.	# Legal framework review	NA	10			
Activity 7.4 Develop a Plastic waste Management guideline and disseminate.	# Guideline	NA	7			
	# Disseminated	NA	5,000,000			
Activity 7.5: Generate data on the untapped PW wealth	# Inventory	NA	2			
Activity 7.6: Publish and disseminate information	# Publications	0	50			





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