



PRESENTATION OF MANILA CITY ACTION PLAN FOR PLASTIC CIRCULARITY

Mr. Vincent Aloysius

Team Lead and Circular Economy Specialist, Seureca

The views expressed in this presentation are the views of the author/s and do not necessarily reflect the views or policies of the Asian Development Bank, or its Board of Governors, or the governments they represent. ADB does not guarantee the accuracy of the data included in this presentation and accepts no responsibility for any consequence of their use. The countries listed in this presentation do not imply any view on ADB's part as to sovereignty or independent status or necessarily conform to ADB's terminology.

ADB

SEURECA  VEOLIA

Roadmap for Plastic Circularity Manila City Action Plan & Recommendations



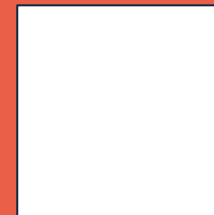
DT Global

*PROMOTING ACTION ON PLASTICS POLLUTION FROM SOURCE TO SEA IN ASIA AND PACIFIC
SUBPROJECT 2: PRIORITIZING AND IMPLEMENTING ACTIONS TO REDUCE MARINE PLASTIC POLLUTION*

TA-6669 REG

10/02/2025

In Consortium with



CONSULTING ENGINEERS



Content

01



Baseline Study Findings

02



Challenges & Opportunities

03



Alignment with Other Action Plan & Strategies

04



Recommendations

Action Plan for Manila City Methodology

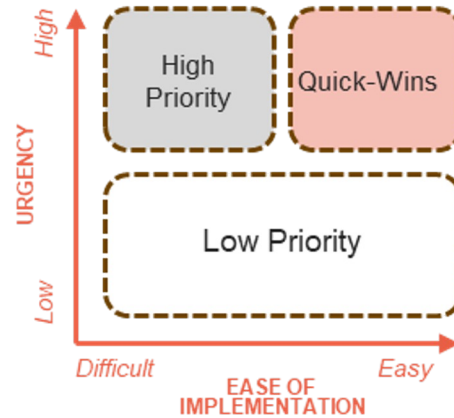
Gap Analysis and Identification of Challenges



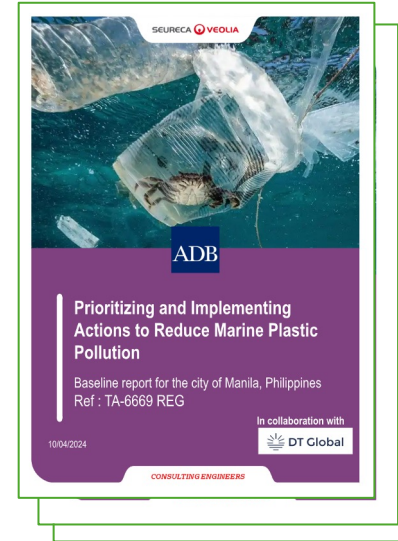
Opportunities



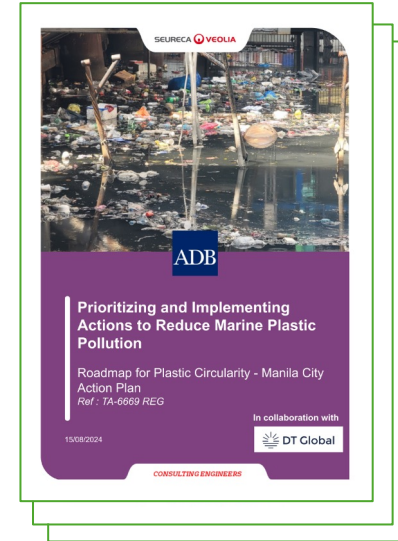
Recommendations and Tactical Activities to Implement



FINALIZE CITY ACTION PLAN



Baseline Study Report

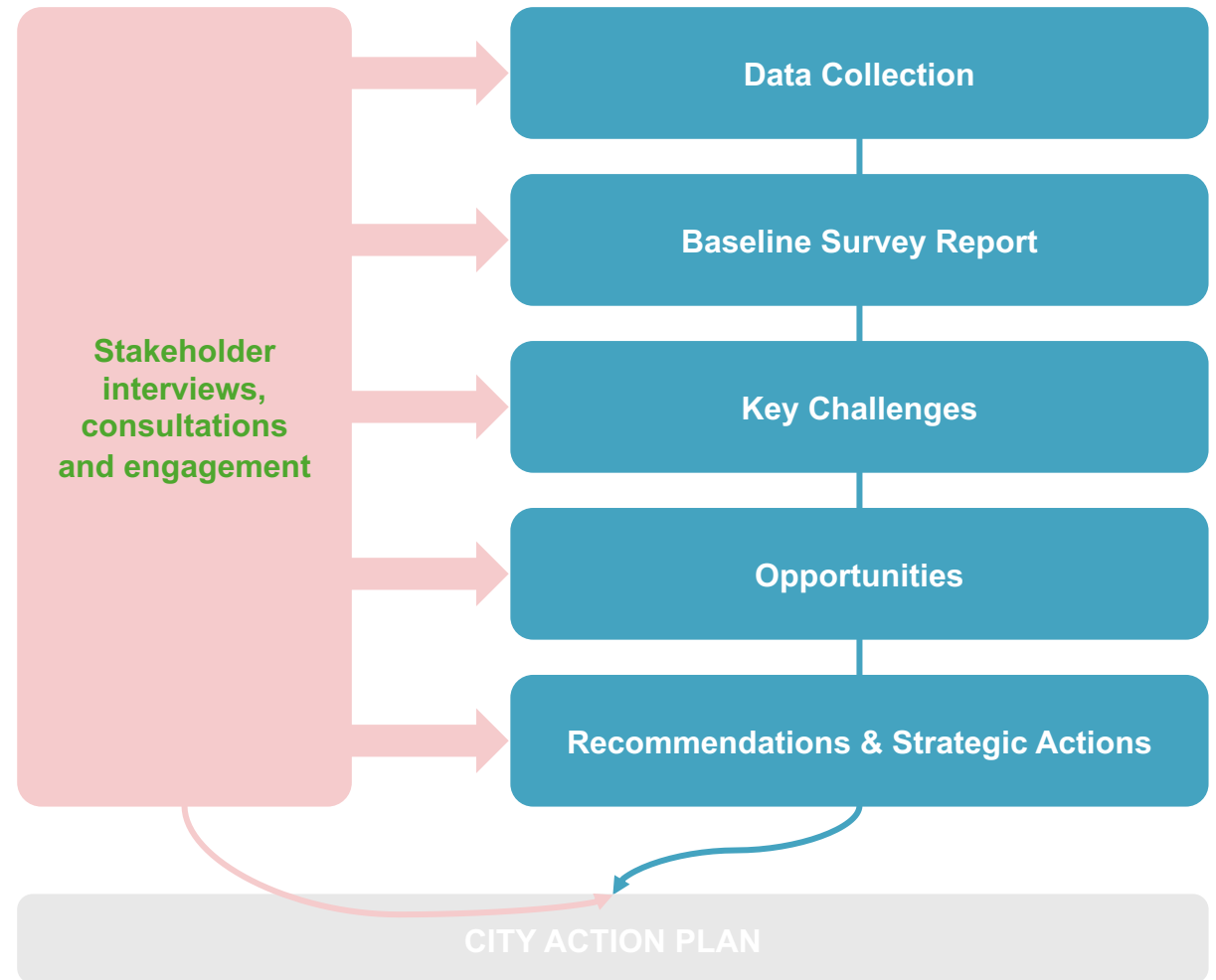


Roadmap for Plastic Circularity Manila City Action Plan

Action Plan for Manila City

Flow of the project

This presentation highlights Manila City Action Plan - Roadmap towards tackling plastic pollution and achieving circularity.



01 Baseline Study Findings

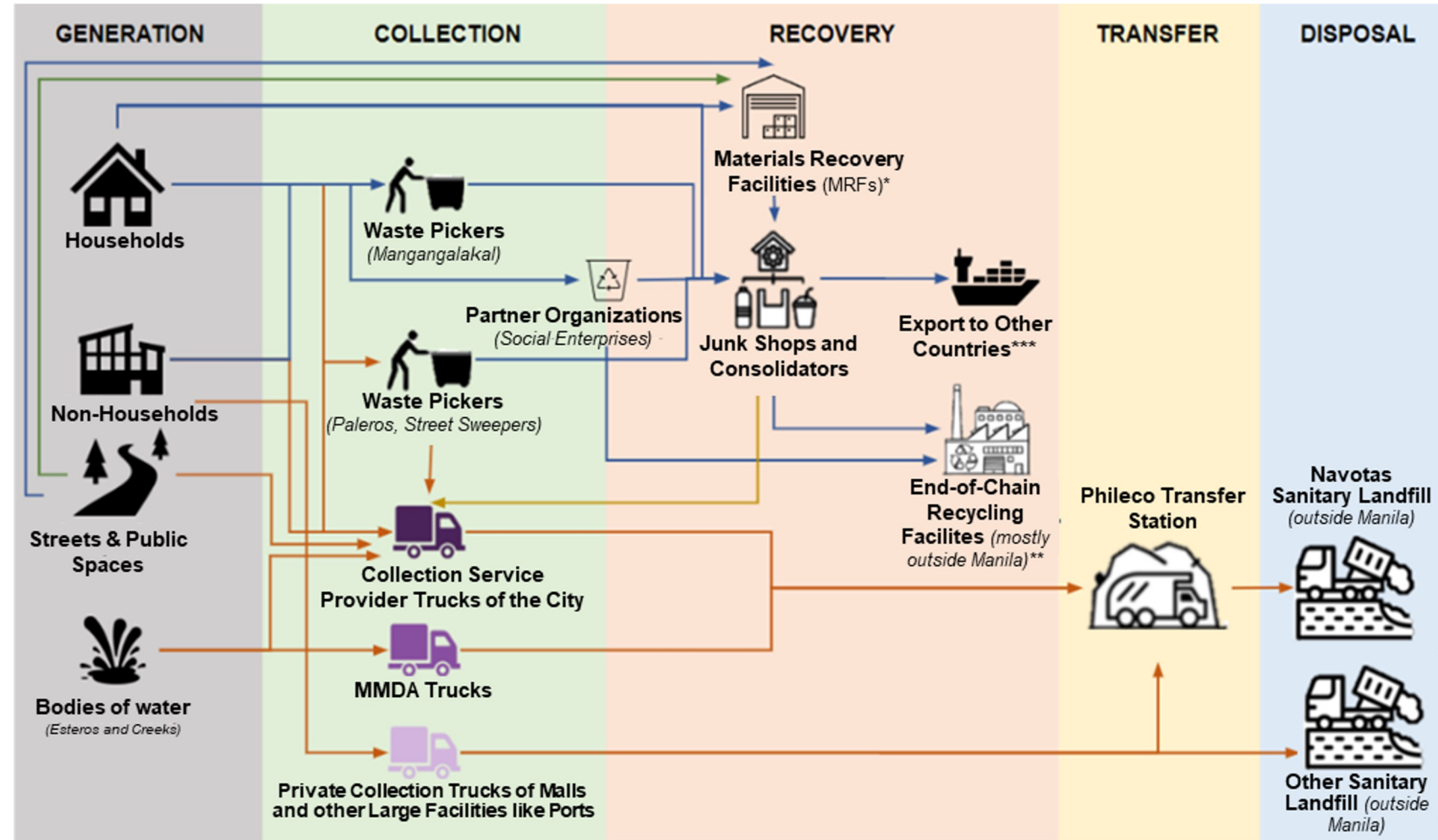


Context and Background Manila City Municipal Solid Waste Management System

Assessment of Manila City's MSWM System

Understanding the present situation concerning MSWM and Plastic Pollution in Manila City, including the legal and institutional framework, overall organization, financial aspects, and behaviors towards PW.

1. **Waste Generators**
 - a. Households
 - b. Small Business
2. **Formal Waste Management Infrastructure**
3. **Plastic Waste Market**



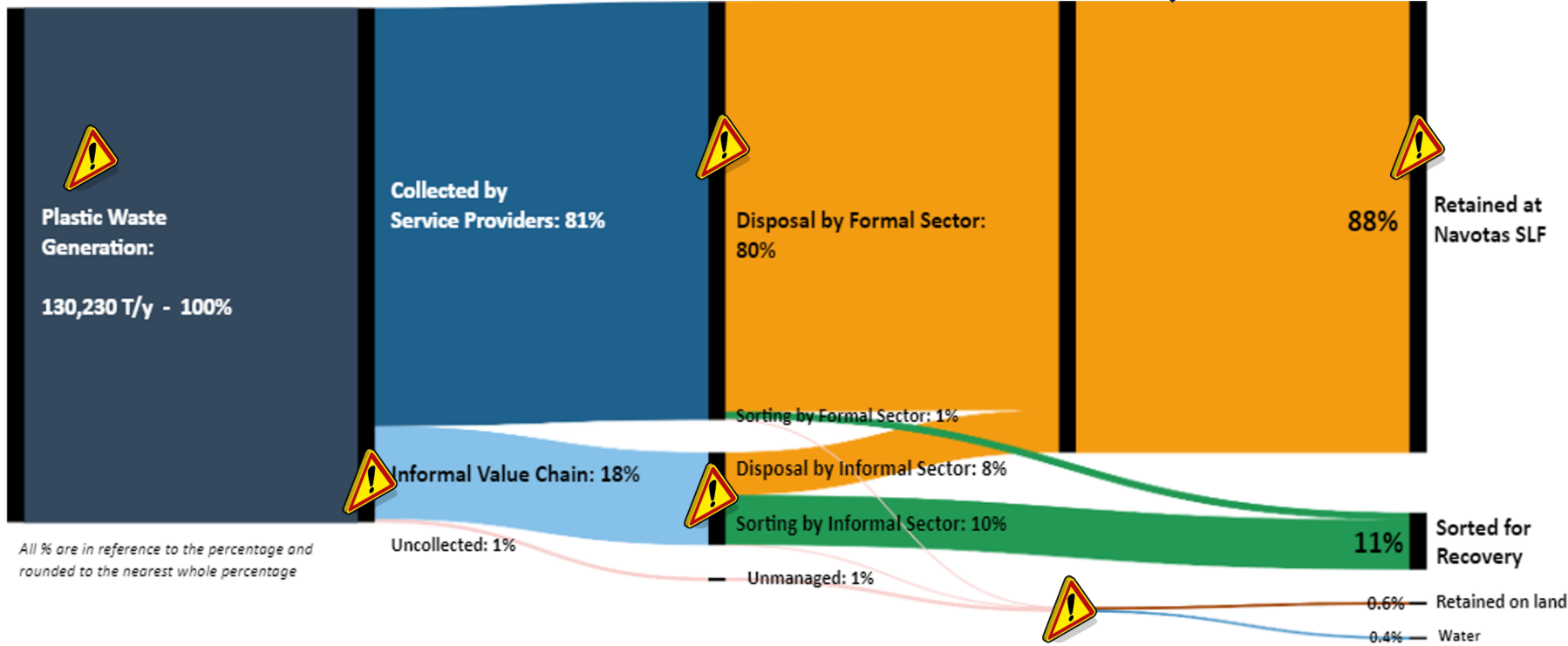
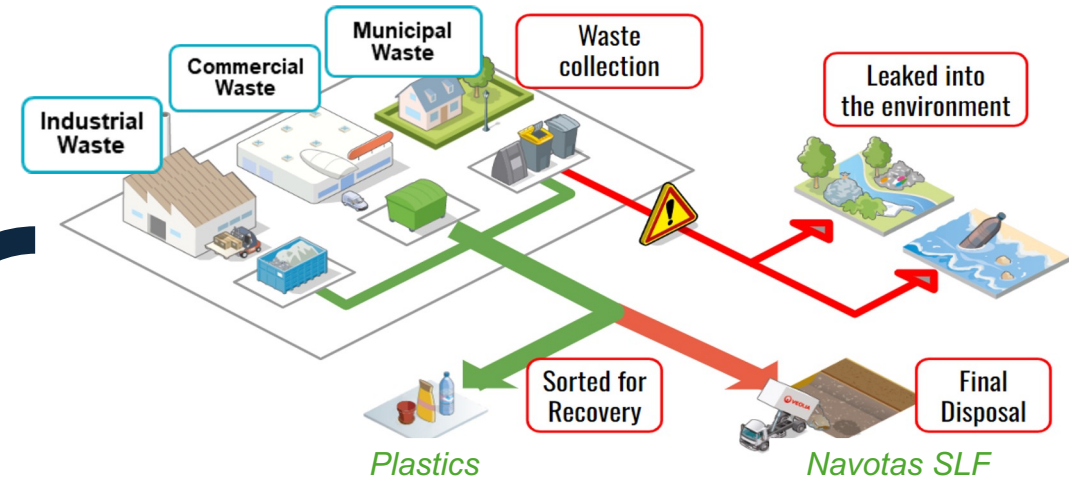
- ➔ Residual
- ➔ Recyclable
- ➔ Organic Waste
- ➔ Mixed Waste

- * MRF by definition according to RA9003, shall include composting facilities. However, due to lack of space in the city, only few barangay MRFs and the Centralized MRF in Manila Zoo have composting facilities.
- ** There is only one existing recycler in the city – the San Miguel Yamamura which collects plastics and bottles in the city.
- *** For example, PET flakes exported to Taiwan, China and metals exported China.

Key Findings

Plastic Waste Material Flow - Manila City

A Holistic Approach to understanding Plastic Pollution



Identification of Challenges

Key Findings

Challenges Identified



Regulatory



Collaboration



Operational



Infrastructure



Waste Management



Plastic Waste Market



Challenges in the Plastic Waste Value chain of Manila City

- **Regulatory:** Current policies and incentives for businesses to use less plastic and develop sustainable packaging solutions could be strengthened.
- **Collaboration:** Limited collaboration between various stakeholders (government, private sector, informal sector, NGOs) hinders resource sharing,
- **Operational:** Low levels of segregation at source of Municipal Solid Waste prevents the diversion of plastic waste.
- **Infrastructure:** Inadequate infrastructure for plastic segregation and recycling within the city contributes to high volumes of landfill bound plastic waste.
- **Waste Mismanagement:** Though collection rates are high, large portion of plastic waste ends up in the landfill.
- **Plastic Waste Market:** The plastic waste market is affected by limited and irregular rates of collection.

02 Challenges & Opportunities



Action Plan for Manila City

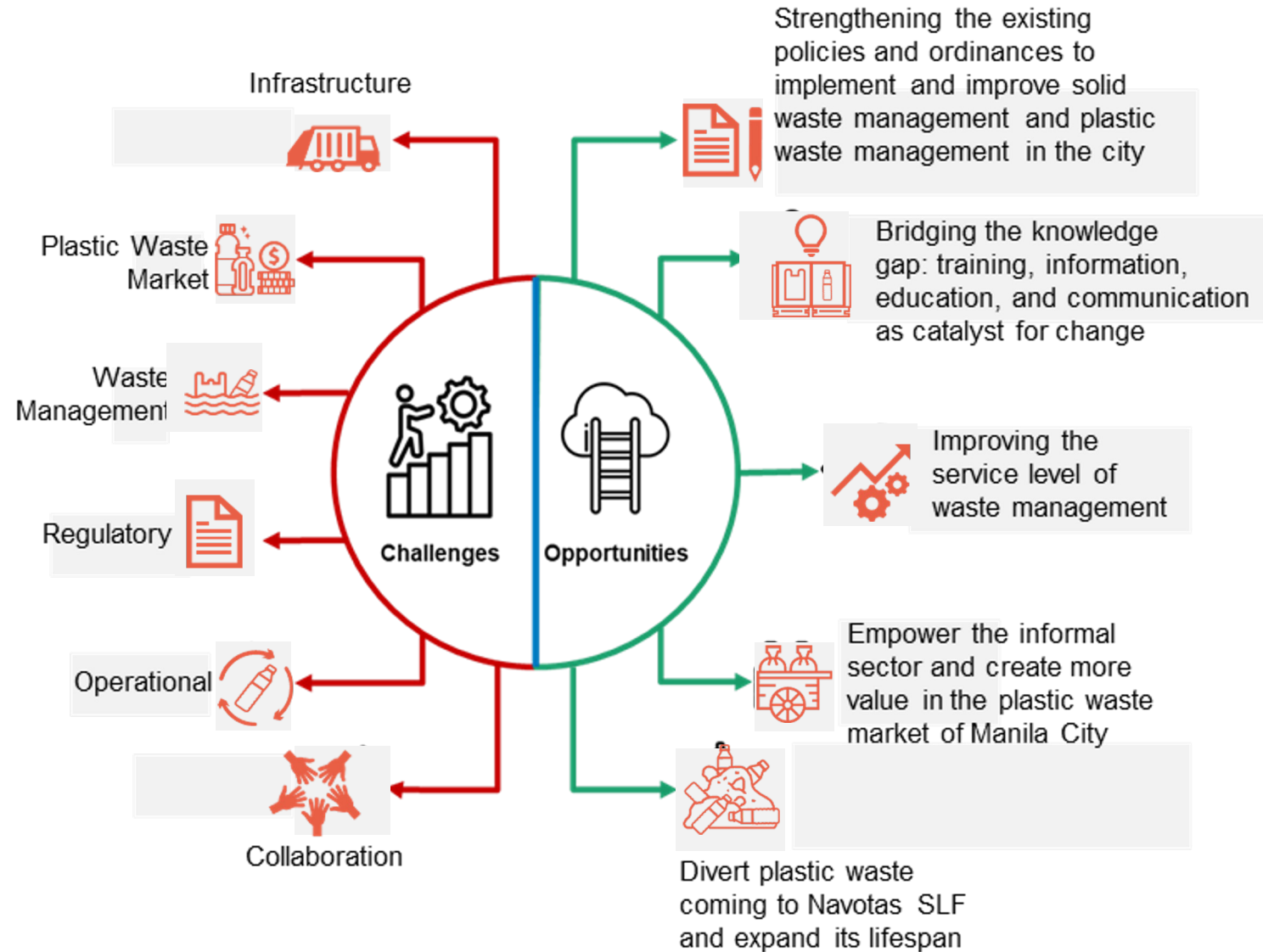
Strategy based Opportunities for Manila City

Objective

- Minimize the use of plastic and disposable plastic
- Reduce marine pollution
- Support shift to circular economy for plastics
- Aligned with the objectives of the national plan of action on marine litter (NPOA-ML) and the implementation of EPR Laws

Approach

- Develop strategies based on opportunities
- Recommendations targeting plastic waste pollution and leakages into the environment.



Opportunity 1: Strengthening the existing policies and ordinances to implement and improve solid waste management and plastic waste management in the city



Challenges Targeted



Plastic Waste Market



Regulatory



Waste Mismanagement



Coordination and Collaboration

Impacts

- Reducing plastic consumption
- Decreasing plastic waste generation in the city
- Minimizing mismanaged plastic waste
- Fostering collaboration and involvement of stakeholders



Opportunity 2: Improving the Service Level of Waste Management



Challenges Targeted



Waste Mismanagement



Infrastructure



Regulatory



Coordination and Collaboration



Operational



Plastic Waste Market

Impacts

- Improving collection, diversion, and recovery activities in the city
- Increasing revenue streams from sales of recyclables
- Expanding coverage and raising collection rates
- Reducing the amount of uncollected plastic waste
- Improving working conditions for waste management personnel
- Strengthening monitoring of waste management data



Opportunity 3: Empower the informal sector and create more value in the plastic waste market of Manila City



Challenges Targeted



Infrastructure



Operational



Plastic Waste Market



Regulatory



Waste Mismanagement



Coordination and Collaboration

Impacts

- Enhancing Plastic Waste collection for recycling
- Increasing Plastic Waste diversion rate
- Improving income for informal sector workers
- Elevating the value of plastic waste in the market
- Reducing mismanaged plastic waste
- Fostering collaboration among stakeholders
- Enhancing working conditions for informal workers



Opportunity 4: Divert plastic waste coming to Navotas SLF and expand its lifespan



Challenges Targeted



Infrastructure



Plastic Waste Market



Waste Mismanagement



Regulatory



Operational



Coordination and Collaboration

Impacts

- Diverting plastic waste & extending the lifespan of the landfill
- Minimizing mismanaged plastic waste
- Creating value within the plastic waste chain



Opportunity 5: Bridging the knowledge gap: training, information, education, and communication as catalysts for change



Challenges Targeted



Waste Mismanagement



**Coordination
and Collaboration**

Impacts

- Enhancing practices and behaviors related to plastics and waste
- Fostering collaboration between communities and the city
- Encouraging stakeholder involvement
- Minimizing mismanaged plastic waste



Opportunities and Recommendations



Strengthening the existing policies and ordinances to implement and improve solid waste management and plastic waste management in the city



Improving the service level of waste management through financial support and mechanisms



Empower the informal sector and create more value in the plastic waste market of Manila City



Divert plastic waste coming to Navotas SLF and expand its lifespan



Bridging the knowledge gap: training, information, education, and communication as catalysts for change

R#1 - Capturing and Monitoring Data for Better Plastic Waste Management

R#2 - Streamlining and Harmonizing Ordinances

R#3 - Establishment of City Environment and Natural Resources Office (CENRO)

R#4 - Developing Awareness Engagement and Behavioural Change

R#5 - Formalisation and Institutionalization of Informal Groups in Manila City

R#6 - Establishment of a Dedicated Waste Sorting and Transfer Station for Manila

R#7 - Assessment of the Adequacy, Efficiency and Effectiveness of the City's MRFs and Developing a Budgetary and Implementation Plan

R#8 - Study and Install Mechanised and Automated Equipment and Systems to Capture Marine Litter

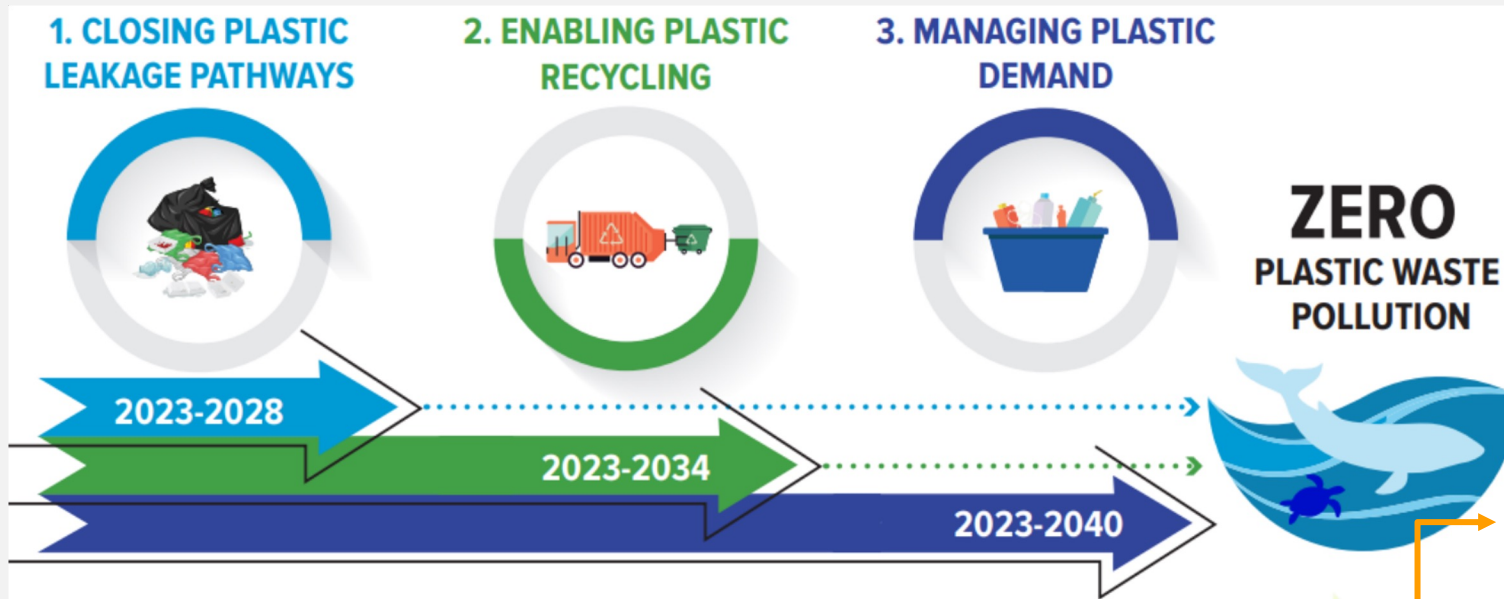
R#9 - Conduct a Pilot Study on Barangay Clustering in Manila City for the Establishment of Additional MRFs

The Opportunities and recommendations have been designed using a Gender Equality and Social Inclusion (GESI) informed approach.

03 Alignment with Other Action Plan & Strategies

Alignment with existing City Action Plan Strategies

Roadmap for the Management of Plastic Waste and Reduction of Non-Recyclable Single-Use Plastics in the Philippines



2023 2028 2034 2040

M1.1 SUPs are Phased Out			
M1.2 Plastic Recovery from Existing Facilities is Increased			
M1.3 Complementary SWM Legislation is Enacted			
M1.4 National Database on Recycling and SWM is Set up and Operationalized			
M1.5 Technical Guidelines on a Cost-recovery Mechanism for Plastics and SWM are Adopted and Enforced			
M2.1 LGUs' Capacity to Carry Out Plastic and Solid Waste Management is Developed			
M2.2 Informal Sector is Incorporated into the LGUs' SWM Systems			
M2.3 Production of Good Quality Plastic Recyclates is Increased			
M3.1 Measures for Eco-design, Eco-labelling, SUP Alternatives, and Green Public Procurement are Adopted and Enforced			
M3.2 Private Sector is Engaged in Plastics' Reduction and Waste Management			
M3.3 Support for Nurturing In-country Innovation and Incentivizing Information Exchanges is Strengthened			

Roadmap for the Management of Plastic Waste and Reduction of Non-Recyclable Single-Use Plastics in the Philippines, World Bank, 2024

R#1: Capturing and Monitoring Data for Better Plastic Waste Management

R#2: Streamlining and Harmonizing Ordinances

R#3: Establishment of City Environment and Natural Resources Office (CENRO) under a Newly Formed Department of Manila City

R#7: Assessment of the Adequacy, Efficiency and Effectiveness of the City's MRFs and Developing a Budgetary and Implementation Plan

R#8: Study and Install Mechanised and Automated Equipment and Systems to Capture Marine Litter

R#6: Establishment of a Dedicated Waste Sorting and Transfer Station for Manila-Wide Plastic Waste Sorting, Recycling and Recovery

R#9: Conduct a Pilot Study on Barangay Clustering in Manila City for the Establishment of Additional MRFs

R#5: Formalisation and Institutionalization of Informal Groups in Manila City

R#4: Developing Awareness Engagement and Behavioural Change

04 Recommendations



Recommendations

R#1: Capturing and Monitoring Data for Better Plastic Waste Management



Objective

To establish a systematic approach towards the collection and analysis of plastic waste data, for accurate tracking and management of plastic waste within Manila City. Enable compliance to EPR Law on plastic generation, collection, recovery, diversion, and offsets initiatives.

Stakeholders to Engage

- Government agencies
- Waste management companies
- Technology providers
- Community organizations
- Academic institutions, researchers, and experts in waste management
- General public

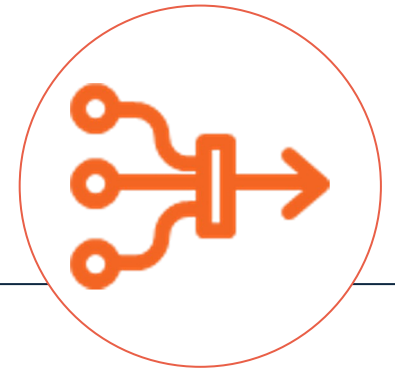
Strategic Activities

- 1.1 Establishment of Centralized Data Management System (CDMS)
- 1.2 Develop User Manual (UM) for the CDMS
- 1.3 Presentation to Manila City Concerned Offices for Feedback
- 1.4 Finalize CDMS and USER Manual and submit to the City Council for Mayor's Approval and Adoption
- 1.5 Personnel Training on the New CDMS
- 1.6 Information, Education, and Communication for Public Awareness
- 1.7 Monitoring and Evaluation on the Use of the Program



Recommendations

R#2: Streamlining and Harmonizing Ordinances



Objective

To harmonise ordinances across different regulatory (local and national) platforms, ensuring consistency, eliminating redundancy on implementing roles, closing of gaps and grey areas in the regulations for waste management.

Stakeholders to Engage:

- Government agencies
- Metro Manila Development Authority
- Business community
- Civil society
- Barangay officials

Strategic Activities

- 2.1 Conduct a detailed analysis to identify inconsistencies and gaps in existing ordinances and standards
- 2.2 Develop Harmonisation Framework
- 2.3 Develop the harmonised policies and standards
- 2.4 Conduct Training Programs for Local Authorities on the Updated Ordinances by developing and implementing comprehensive training programs for local authorities on the updated ordinances
- 2.5 Launch an Information, Education, and Communication (IEC) campaign to promote awareness of the updated ordinances
- 2.6 Conduct Continuous Monitoring of the New Ordinance Implementation



Recommendations

R#3: Establishment of City Environment and Natural Resources Office (CENRO)



Objective

To establish a department within the proposed Environment and Natural Resources Office (CENRO) of Manila City dedicated to addressing the city's growing environmental concerns related to plastic waste management.

Stakeholders to Engage

- CENRO of Manila City
- Various Department Heads of Manila City
- Private sector

Strategic Activities

- 3.1 Creation of the CENRO
- 3.2 Develop Operations Policies and Guidelines
- 3.3 Submit the plan to the Council for a comprehensive review of the required budget and resource allocations, and the timeline prior to endorsement to the City Mayor for approval and adoption.
- 3.6 Capacity building and training programs for division staff and other relevant stakeholders will be implemented.
- 3.7 Stakeholder Engagement and Collaboration
- 3.8 Monitoring and Evaluation



Recommendations

R#4: Developing Awareness Engagement and Behavioural Change



Objective

Decrease plastic waste generation and improve waste management practices through practical guidance, education and active participation. Cultivate a culture of awareness, engagement, and behavioural change towards plastic usage and plastic waste management among residents, businesses, and other stakeholders in Manila City.

Stakeholders to Engage:

- Local government units
- Environmental Agencies, EMB DENR, DILG, DOH
- Schools and Educational Institutions
- Businesses and Industry Groups
- Community organisations

Strategic Activities

- 4.1 Public Awareness Campaigns
- 4.2 Community Engagement Initiatives
- 4.3 Provision of Technology and Infrastructure
- 4.4 Educational Programs in Schools, Universities, and Businesses



Recommendations

R#5: Gradual Formalization of Informal Waste Collectors



Objective

To gradually organise and formalise informal waste management groups to enhance their legitimacy, structure, operational capacity, while also providing access to critical benefits such as health insurance and social security. Gender-sensitive safety and health trainings and suitable PPE to be provided.

Stakeholders to Engage:

- LGU Manila City
- HR and legal section of Manila City
- Training Providers
- Informal groups and community organisations
- Formalised Waste Management Groups
- Funding Agencies
- City Waste Management Department
- Barangay leaders

Strategic Activities

- 5.1 Profiling of Environmental-Related Informal Groups
- 5.2 Organizing Informal Groups
- 5.3 Capacity Building and Training
- 5.4 Legal Registration and Support
- 5.5 Establish Partnerships with the LGU Manila
- 5.6 Develop Sustainable Funding Mechanisms
- 5.7 Integrate into City's Waste Management System
- 5.8 Establish and institutionalise partnerships with other formal institutions both public and private

Recommendations

R#6: Waste Sorting and Transfer Station for Plastic Waste Sorting, Recycling and Recovery

Objective

To establish a sorting & transfer station in Manila City for plastic recycling, to capture all types of plastic waste for recycling or RDF prior to transferring waste to the landfill facility. This recommendation will also facilitate low value plastic diversion (i.e., waste-to-energy, recycling) away from the landfill.

Stakeholders to Engage:

- LGU Manila
- Environmental Agencies
- Community Organisations
- Private Sector and Investors
- Construction Firms and Equipment Suppliers
- Educational and Training Institutions

Strategic Activities

- 6.1 Conduct Feasibility Study and Site Selection Selection
- 6.2 Design and Planning
- 6.3 Secure Funding and Approvals
- 6.4 Construction and Installation
- 6.5 Staff Recruitment and Training
- 6.6 Operational Launch and Monitoring



Recommendations

R#7: Assessment of the Adequacy, Efficiency and Effectiveness of the City's MRFs and Developing a Budgetary and Implementation Plan



Objective

To expand the capacity and capability of current city centralised MRF and other MRFs in the city for enhance waste sorting and recycling. This initiative aims to improve the efficiency of waste management processes.

Stakeholders to Engage

- LGU Manila
- Environmental Agencies (EMB-DENR)
- Community Organisations
- Private Sector and Investors
- Construction Firms and Equipment Suppliers
- Educational and Training Institutions

Strategic Activities

- 7.1 Assessment of the Current City MRF.
- 7.2 Conduct Feasibility Study and Site Selection
- 7.3 Detailed Design and Planning
- 7.4 Secure Funding and Approvals
- 7.5 Construction and Installation
- 7.6 Staff Recruitment and Training
- 7.7 Handover, Operational Launching and Monitoring



Recommendations

R#8: Study and Install Mechanized and Automated Equipment and Systems to Capture Marine Litter



Objective

To implement state-of-the-art and technology-based equipment and systems to effectively capture and manage marine litter in Manila's coastal and marine environments. This initiative aims to reduce marine pollution, protect marine ecosystems, and enhance the overall environmental health of the region.

Stakeholders to Engage:

- Local Government Units (LGUs)
- Government Agencies
- Non-Governmental Organisations (NGOs)
- Private Sector
- International Organisations
- Academic Institutions
- Community Organisations
- Technology Providers
- Environmental and maritime regulatory authorities

Strategic Activities & Timeline

- 8.1 Conduct Feasibility Study and Technology Assessment
- 8.2 Design and Planning
- 8.3 Stakeholders Consultation
- 8.4 Institutional Implementation Arrangement
- 8.5 Secure Funding and Approvals
- 8.6 Procurement and Installation
- 8.7 Staff Recruitment and Training
- 8.8 Operational Launch and Monitoring



Recommendations

R#9: Conduct a Pilot Study on Barangay Clustering in Manila City for the Establishment of Additional MRFs



Objective

To assess the feasibility and effectiveness of establishing additional Material Recovery Facilities (MRFs) through barangay clustering in Manila City, given the limitations in space and resources.

Stakeholders to Engage:

- National Government Agencies (DENR, DILG, MMDA-Solid Waste Management Office)
- Manila City Local Government Unit (LGU)
- Barangay Officials
- Urban Planning and Construction Firms
- Local Community Representatives
- Environmental NGOs
- Waste Management Experts

Strategic Activities & Timeline

- 9.1 Assessment and Selection of Pilot Areas
- 9.2 Resource Allocation and Planning
- 9.3 Securing Approval from the City Mayor
- 9.4 Design and Construction of MRF
- 9.5 Community Engagement and Training
- 9.6 Monitoring and Evaluation

The Logical Framework

Roadmap for Plastic Circularity - Manila City Action Plan



DESIRED IMPACT

Reduction of marine plastic pollution in Manila City through enhanced waste management and circular economy practices

DESIRED OUTCOME

Efficient and integrated waste management system that empowers local communities and strengthens regulatory frameworks

DIMENSIONS

(i) Infrastructure & Operations; (ii) Plastic Waste Market; (iii) Waste Management; (iv) Financial; (v) Regulatory; (vi) Practices and Behaviour; (vii) Coordination & Collaboration

Opportunity 1: Strengthening the existing policies and ordinances

Recommendations to Implement:
R#1 / R#2 / R#3 / R#5 / R#9

Opportunity 2: Improving the service level of waste management

Recommendations to Implement:
R#1 / R#2 / R#3 / R#4 / R#6 / R#8 / R#9

Opportunity 3: Empower the informal sector

Recommendations to Implement:
R#2 / R#3 / R#4 / R#5

Opportunity 4: Divert plastic waste coming to Navot

Recommendations to Implement:
R#1 / R#2 / R#3 / R#4 / R#6 / R#7 / R#9

Opportunity 5: Bridging the knowledge gap

Recommendations to Implement:
R#1 / R#2 / R#3 / R#4

KEY OUTPUTS AND ACTIVITIES

Recommendations

R#1

Capturing and Monitoring Data for Better Plastic Waste Management

R#2

Streamlining and Harmonizing Ordinances

R#3

Establishment of City Environment and Natural Resources Office (CENRO)

R#4

Developing Awareness Engagement and Behavioural Change

R#5

Gradual Formalisation of Informal waste collectors

R#6

Waste Sorting and Transfer Station for Plastic Waste Sorting, Recycling and Recovery)

R#7

Assessment of the Adequacy, Efficiency and Effectiveness of the City's MRFs and Developing a Budgetary and Implementation Plan

R#8

Study and Install Mechanised and Automated Equipment and Systems to Capture Marine Litter

R#9

Conduct a Pilot Study on Barangay Clustering in Manila City for the Establishment of Additional MRFs

Thank you