

GEF-8 PROJECT IDENTIFICATION FORM (PIF)

TABLE OF CONTENTS

GENERAL PROJECT INFORMATION	3
Project Summary	4
Indicative Project Overview	5
PROJECT COMPONENTS	5
PROJECT OUTLINE	9
A. PROJECT RATIONALE	9
B. PROJECT DESCRIPTION	22
Project description	22
Coordination and Cooperation with Ongoing Initiatives and Project	38
Core Indicators	40
Risks to Project Preparation and Implementation	44
C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES	47
D. POLICY REQUIREMENTS	48
Gender Equality and Women’s Empowerment:	48
Stakeholder Engagement	49
Private Sector	53
Environmental and Social Safeguard (ESS) Risks	53
E. OTHER REQUIREMENTS	53
Knowledge management	53
ANNEX A: FINANCING TABLES	53
GEF Financing Table	53
Project Preparation Grant (PPG)	54
Sources of Funds for Country Star Allocation	55
Indicative Focal Area Elements	55
Indicative Co-financing	55
ANNEX B: ENDORSEMENTS	57
GEF Agency(ies) Certification	57
Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):	57
ANNEX C: PROJECT LOCATION	58
ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING	60
ANNEX E: RIO MARKERS	60
ANNEX F: TAXONOMY WORKSHEET	60

General Project Information

Project Title

Shifting to Zero Waste Against Pollution (SWAP) Initiative

Region

Global

GEF Project ID

11211

Country(ies)

Global

Sierra Leone

Tunisia

Türkiye

Uruguay

Type of Project

FSP

GEF Agency(ies):

UNDP

GEF Agency ID

9654

Executing Partner

Ministry of Environment of Uruguay

Ministry of Environment of Tunisia

Environment Protection Agency of Sierra Leone

Avfall Sverige

Ministry of Environment, Urbanisation and Climate Change of Türkiye

Executing Partner Type

Government

Government

Government

Government

Others

Government

GEF Focal Area (s)

Chemicals and Waste

Submission Date

4/12/2023

Project Sector (CCM Only)

Taxonomy

Twinning, Knowledge Exchange, South-South, Field Visit, Peer-to-Peer, Capacity, Knowledge and Research, Training, Knowledge Generation, Course, Workshop, Focal Areas, Climate Change, Climate Change Mitigation, Sustainable Urban Systems and Transport, Chemicals and Waste, Waste Management, Industrial Waste, eWaste, Hazardous Waste Management, Emissions, Disposal, Pesticides, Persistent Organic Pollutants, New Persistent Organic Pollutants, Polychlorinated Biphenyls, Unintentional Persistent Organic Pollutants, Best Available Technology / Best Environmental Practices, Green Chemistry, Sound Management of chemicals and waste, Eco-Efficiency, Open Burning, Industrial Emissions, Plastics, Mercury, Cement, Influencing models, Demonstrate innovative approach, Transform policy and regulatory environments, Convene multi-stakeholder alliances, Strengthen institutional capacity and decision-making, Deploy innovative financial instruments, Stakeholders, Civil Society, Community Based Organization, Trade Unions and Workers Unions, Non-Governmental Organization, Academia, Local Communities, Private Sector, Individuals/Entrepreneurs, Capital providers, Financial intermediaries and market facilitators, SMEs, Large corporations, Communications, Education, Behavior change, Strategic Communications, Awareness Raising, Public Campaigns, Type of Engagement, Information Dissemination, Participation, Partnership, Consultation, Beneficiaries, Gender Equality, Gender Mainstreaming, Women groups, Gender-sensitive indicators, Sex-disaggregated indicators, Gender results areas, Participation and leadership, Access to benefits and services, Knowledge Generation and Exchange, Capacity Development, Access and control over natural resources, Integrated Programs, Sustainable Cities, Integrated urban planning,

Municipal waste management, Learning, Indicators to measure change, Theory of change, Adaptive management, Enabling Activities, Targeted Research, Innovation

Type of Trust Fund	Project Duration (Months)
GET	60
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
26,700,000.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)
2,403,000.00	0.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
29,103,000.00	216,691,545.00
PPG Amount: (e)	PPG Agency Fee(s): (f)
300,000.00	27,000.00
PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)
327,000.00	29,430,000.00

Project Tags

CBIT: No NGI: No SGP: No Innovation: No

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? (iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”. (max. 250 words, approximately 1/2 page)

Waste management is complex, being a systematic and cross-cutting issue impacting many aspects of society and the economy, requiring a high level of governance capacity particularly at municipality level. Global production and processing of commodities makes waste management and circularity more challenging given the lack of information transparency and incentives in the commodity value chain. Zero waste is a desired long-term objective but relevant knowledge, practices, strategy, and planning towards this vision are severely lacking in emerging economy and Least Developed Countries whose practices are dominated by landfill, incineration, and open dumping at present with limited recycling and reuse of valuable materials.

The proposed Shifting to Zero Waste Against Pollution (SWAP) Initiative aims to reduce chemical pollution in the value chain, and wasting of resources, by supporting pilot cities in emerging economies and Least Developed Countries towards a zero-waste vision in line with green chemistry, circular economy, and waste hierarchy principles for sustainable production and consumption. The comprehensive approach of the Initiative will be implemented in five cities: Freetown (Sierra Leone), Kocaeli (Türkiye), Montevideo (Uruguay), Tunis (Tunisia) and one additional city to be determined at the PPG stage. The Initiative foresees interventions to:

- Enable conditions and coherent policies to promote integrated planning and programming at city level towards a long-term vision of zero waste and zero pollution.
- Explore special and diverse legal, fiscal and financial steering instruments to promote sustainable investment and cost recovery to address the financial challenges for the transition to a zero-waste city.
- Enhance sustainable production and consumption by encouraging the private sectors adopting BAT/BEP to eliminate harmful chemicals in products, promoting eco-design, sustainable consumption and services, building ecosystem from upstream to downstream for circularity of materials.

- Make information and knowledge accessible for raising awareness to every key stakeholder in the key value chains including producers, retailers, consumers, citizens, waste workers through a whole-of-society approach.
- Build global networks and partnerships on zero waste, provide policy and technical advice through its clearing house, facilitate knowledge sharing, and raise awareness across countries and regions.

Through its key interventions the Initiative will positively contribute to decouple economic activities from waste generation, increase resource efficiency, prevent pollutions of the solid wastes and harmful chemicals to land, water, and air, and generate significant and sustainable global environment benefits for the reduction of hazardous chemicals, greenhouse gas emissions, and protection of human health and ecosystem. The SWAP Initiative will be very closely related and seeking synergy with the following GEF-8 Integrated Programmes: Sustainable Cities, Supply Chain and Circular Solutions to Plastic Pollution.

The SWAP Project will directly benefit 4,902,665 people (2,476,271 women; 2,426,394 men) and will evidence results in the following Global Environmental Benefits: 8.15 Mt CO₂e mitigated (0.4% of GEF-8 targets), 11,410 MT of POPs/Hg containing waste reduced (3.8% of GEF-8 targets) and 954,144 MT of plastic waste avoided; 1,320 gTEQ avoided (22% of GEF-8 targets).

Finally, it will influence from a global perspective, by providing useful insights into practical and effective solutions to inspire, replicate and scale-up in different urban contexts, leveraging transformative change in existing structures towards the attainment of the Sustainable Development Goals for a healthy planet and healthy people. This in turn will positively impact to combat the Triple Planetary Crisis.

Indicative Project Overview

Project Objective

Reduce chemical pollution in the value chain and wasting of resources, by supporting pilot cities in emerging economies and Least Developed Countries towards a zero-waste vision in line with green chemistry, circular economy, and waste hierarchy principles for sustainable production and consumption.

Project Components

Component 1. Integrated planning and programming

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
2,980,000.00	24,397,863.00

Outcome:

A. Zero waste framework and action plan implemented by municipalities.

Output:

- A1. Waste Management Plan, Zero Waste Strategy and Governance Structure established.
- A2. Capacity built in cities/municipalities/institutions related to the life cycle management of chemicals and wastes.
- A3. Green procurement guideline developed and implemented.
- A4. Policy, legal and regulatory framework to support waste management and uptake of circular economy principles improved.

Component 2. Financing instruments

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)

5,060,000.00

41,131,265.00

Outcome:

B. Sustainable Investment and Financing instruments promoted.

Output:

Output B.1. Financial and Fiscal Incentives for the transition to a zero-waste city assessed.

Output B.2. Investment plan and Public-Private Partnerships (PPP) to cover the city waste management developed.

Output B.3. Green finance mechanisms established for supporting green production and consumption, and circular business.

Output B.4. EPR schemes developed in key sectors with associated capacity building of stakeholder. Market for recyclables created.

Output B.5. Replication and Scale up Strategy, with associated market-oriented financial mechanisms.

Component 3. Sustainable Production and Consumption and Material Management.

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
12,173,572.00	98,623,321.00

Outcome:

C. Enhanced sustainable production and consumption through clean production Certifications and eco-labelling of sustainable products and services.

Output:

Output C.1. "hotspot" sectors of unsustainable consumption and production assessed and associated circular economy opportunities identified.

Output C.2. Capacity built in industries, designers, and producers based on green chemistry and circularity principles, and demonstration of cleaner production to design/phase out chemicals of concern and waste.

Output C.3. Feasibility studies and piloting activities carried out to increase recycling and reuse of materials in key value chains. Circular business models developed.

Output C.4 Demonstration activities on innovative tools to foster sustainable consumption in public and private sectors, and consumers.

Component 4. Training, education, advocacy, and evaluation at city and national level

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
1,785,000.00	14,726,341.00

Outcome:

D. Lessons learned captured and disseminated, awareness raised, and project results monitored.

Output:

Output D.1. Communication strategy implemented and awareness raised to encourage behavior change.

Output D.2. Technical Assessment of informal sector integration and formalization.

Output D.3. M&E and adaptive management applied to assess activity performance and GEB impact.

Output D.4. Experiences exchanged at city networks for scale-up of good practices in other cities of the country and region.

Component 5. Coordination, communication, technical assistance at global level

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
2,200,000.00	17,656,348.00

Outcome:

E. Clearing house on Zero Waste Operated.

Output:

Output E1: Technical and finance advice to the municipalities for the development and implementation of zero waste strategy provided.

Output E2: Global Zero Waste City Finance Platform and Zero Waste Partnerships strengthened

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
1,230,000.00	9,952,418.00

Outcome:

M&E and adaptive management applied to assess activity performance and GEB impact.

Output:

Output 1: Inception Workshop organized; Monitoring of indicators in project results framework; Independent Mid-term Review (MTR); GEF Tracking Tool; and Terminal Evaluation (TE).

Output 2: A gender assessment undertaken with collected data disaggregated by sex in every project area.

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
Component 1. Integrated planning and programming	2,980,000.00	24,397,863.00
Component 2. Financing instruments	5,060,000.00	41,131,265.00
Component 3. Sustainable Production and Consumption and Material Management.	12,173,572.00	98,623,321.00
Component 4. Training, education, advocacy, and evaluation at city and national level	1,785,000.00	14,726,341.00
Component 5. Coordination, communication, technical assistance at global level	2,200,000.00	17,656,348.00
M&E	1,230,000.00	9,952,418.00
Subtotal	25,428,572.00	206,487,556.00
Project Management Cost	1,271,428.00	10,203,989.00
Total Project Cost (\$)	26,700,000.00	216,691,545.00

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

Waste management has been a longstanding public concern due to its impact on human health, the environment and socio-economic development. Currently the world is on a path where waste generation will drastically outpace population growth by more than double by 2050. The linear economy paradigm has resulted in increasing consumption of products made of virgin material and low level of recycling or reuse of important resources. According to the latest estimates from the World Bank in 2018^[1], waste generation will increase from 2.01 billion tonnes in 2016 to 3.40 billion tonnes in 2050. In addition, it is estimated that in 2016 1.6 billion tonnes of carbon dioxide (CO₂) equivalent greenhouse gas (GHG) emissions were generated from solid waste treatment and disposal. GHG emissions result from inadequate waste collection, uncontrolled dumping, and burning of waste. This represents about 5% of global emissions. Solid waste-related emissions are anticipated to increase to 2.6 billion tonnes of CO₂-equivalent per year by 2050 if no improvements are made in the sector^[2]. Furthermore, the uncontrolled burning of waste creates particulate and persistent organic pollutant emissions that are highly damaging locally and globally.

City waste generation per capita is strongly correlated with national income. As economies continue to grow rapidly in low- and middle-income countries (due to increasing population and improvements in living standards), it can be expected that per capita waste generation will continue to increase steadily, and waste composition change significantly. This represents a greater challenge for those cities which do not have adequate systems in place to manage these transformations. The impacts of poor waste management are dire and fall disproportionately on the poor and most vulnerable segments of societies, who are often unserved or have little influence on the waste being disposed of formally or informally near their homes. Poorly managed waste is also contaminating the world's oceans, clogging drains and causing flooding, transmitting diseases via breeding of vectors, increasing respiratory problems through airborne particles from burning of waste, harming animals that consume waste unknowingly, and affecting economic development, such as through diminished tourism.

It can be estimated that more than two billion people still lack access to waste collection^[3] and three billion people do not have access to controlled waste recovery or disposal facilities. Globally, at least 33% of this waste is mismanaged through open dumping or burning. About 37% of waste is disposed of in some type of landfill, 33% is openly dumped, 19% undergoes materials recovery through recycling and composting, and 11% is treated through modern incineration. Intentional waste burning may be often the only household or community level waste management method available, and it can be intentional practice at landfills or illegal dump sites to create space^[4]. Waste burning also happens intentionally along the informal recycling chain, for instance to get rid of the mixed low-value or non-recyclable materials or during the informal recycling of e-waste. Spontaneous burning can also occur in landfills due to ignition by methane from decomposing organic waste. Open waste burning practices are responsible for the emission of persistent harmful pollutants such as polychlorinated dibenzo dioxins (PCDDs) and polychlorinated dibenzo furans (PCDFs).

When analyzing waste composition at global level^[5], figures show that 78% of global waste corresponds to the following categories: food and green waste (44%) and dry recyclables (38%). Dry recyclables can be disaggregated in paper and cardboard (17%), plastic (12%), glass (5%) and metal (4%). Waste composition varies considerably by income level. Moreover, MSW now increasingly contains relatively small amounts of hazardous substances which prevented recycling of the materials. Often known as household hazardous waste (HHW), typical sources may include mineral oils such as motor oil; asbestos products such as roofing and heating blankets; batteries; waste electrical and electronic equipment (WEEE or e-waste); paints and varnishes; wood preservatives; cleaning agents such as disinfectants; solvents such as nail varnish; pesticides such as rat poison; cosmetics such as

hair dyes; photo lab chemicals such as developer; and unused or expired household medicine[6]⁶. Statistics are unavailable on the percentage of household hazardous waste in MSW on a global basis. However, estimates suggest a percentage of household hazardous waste in MSW of less than 1%, but up to 5% if e-waste is included[7]⁷.

Global food loss and waste (FLW) accounts for a significant proportion of food and green waste. The latest FAO study conducted in 2011[8]⁸, estimated that that FLW is near 1.3 billion tonnes per year (30% of all food globally). The causes of FLW vary across the world and depend on specific local conditions. Improving coordination among actors along the different stages of the supply chain could address some of the FLW issues globally. In addition to decreasing FLW along the supply chain, discarded food could also be managed productively for composting and energy recovery.

In 2016, plastic waste represented 12% of all MSW. Recent updated figures from OECD show that plastic waste increased to 353.3 million tonnes in 2019[9]⁹ and is expected to reach 1,231 million tonnes in 2060 in the absence of bold new policies. The growth is expected to be the fastest in developing and emerging countries in Africa and Asia. The report also projects that plastic leakage to the environment will double to 44 million tonnes a year. It is estimated that about 80% of ocean plastic comes from poorly operating MSW management systems, due to practices such as open dumping, open burning, and disposal in waterways. Waste dumping and the open burning of plastic generate POP emissions, contribute to climate change and lead to impacts on health, such as respiratory illnesses and the spread of infectious and vector-borne diseases (e.g. malaria, dengue). Even when plastic waste is collected, many countries lack capacity to process the waste. Most plastics that are recycled are shredded and reprocessed into lower-value applications; only 2% are recycled into products of the same or similar quality[10]¹⁰.

E-waste is one of the fastest growing domestic waste streams, fueled mainly by higher consumption rates of electric and electronic equipment, short life cycles, and few options for repair. In 2019 the large majority of e-waste generated (82.6%) was most likely not formally collected and not managed in an environmentally sound manner[11]¹¹. This waste stream is likely dumped, traded, or recycled inappropriately by the informal sector. Hazardous chemicals used in the manufacturing process of e-products (fluorinated greenhouse gases (GHGs), flame retardants, mercury and lead, among others) impact workers' health and lead to a trail of toxicity. In particular, the rudimentary e-waste recycling practices used in informal settings lead to the release of these chemicals including dioxins and furans, which in turn impact human health and cause substantial air, water and soil pollution. At the same time, such recycling practices result in the loss of valuable resources.

Other common city waste streams include industrial waste, agricultural waste, construction and demolition waste, hazardous chemical waste, and healthcare waste. Some waste streams, such as industrial waste, are generated in much higher quantities than municipal solid waste. For the countries with available industrial waste generation data, the trend shows that globally, industrial waste generation is almost 18 times greater than municipal solid waste[12]¹². The generation of industrial waste rises significantly as income levels increase. Global agricultural waste production is more than four and a half times that of municipal solid waste[13]¹³. Construction and demolition waste may compete with municipal solid waste for disposal space in landfills[14]¹⁴. Healthcare waste is another waste stream which has become more important especially due to the impact of the recent global pandemic. In general, 80% of healthcare waste is similar to household waste while 20% of it is hazardous waste[15]¹⁵ such as sharps, materials contaminated with bodily fluids, protective clothing, body parts, chemicals and pharmaceuticals, medical devices and radioactive materials. The latest available data from 2019 (<https://www.who.int/publications-detail-redirect/9789240017542>) indicate that 1 in 3 healthcare facilities[16]¹⁶ globally do not safely manage healthcare waste. The COVID-19 pandemic has led to large increases in healthcare waste, straining under resourced healthcare facilities and exacerbating

environmental impacts from solid waste. Consequently, the volume of this waste stream has increased by up to 40%^[17]¹⁷, increasing also hazardous waste production.

If managed and disposed of properly, these other waste streams are typically treated in specialized facilities, including chemical processing plants, incinerators, autoclaves, and disassembly centers, respectively. Unfortunately, when cities do not have a strong municipal solid waste management systems and infrastructure, frequently these waste streams are subjected to similar undesirable practices, increasing the risks poses to health and the environment.

Within city waste management, informal waste recycling plays a key role being a livelihood for the urban poor in low- and middle-income countries. About 1% of the urban population, or more than 15 million people, earn their living informally in the waste sector by collecting, sorting, and selling materials^[18]¹⁸. While in some countries, waste pickers provide the only form of solid waste collection, these people are often a vulnerable demographic and are typically women, children, the elderly, the unemployed, or migrants. They generally work in unhealthy conditions, lack social security or health insurance, are subject to fluctuations in the price of recyclable materials, lack educational and training opportunities, and face strong social stigma. When properly supported and organized, informal recycling can create employment, improve local industrial competitiveness, reduce poverty, and reduce municipal spending on solid waste management, pollution prevention, healthcare, and social services.

Waste Management Regulation

While municipal solid waste management is typically a locally operated service supported by local governments (such as cities, prefectures, and states) which are responsible for creating more specific local regulations, national governments are typically responsible for developing laws and regulations that establish guidelines, national performance targets, and operational and environmental standards. Both national and local regulations are foundational aspects for planning and sustainable waste management. Planning allows all stakeholders, including different government agencies, citizens, associations, and the private sector, to be coordinated and allows investments to be made in an efficient and targeted manner. Enforcement of these laws is a common challenge mainly due to limited financing, low staff technical capacity, and ambiguity in the policy's guidelines.

Investment and Financing

Waste management is an expensive service and requires substantial investments in physical infrastructure and long-term operations. Despite the substantial share of solid waste management expenditures in municipal budgets, low- and middle-income countries often face budget shortfalls for waste services and thus reduction of costs and recovery of fees is often integral to the development of the sector. Municipalities providing waste management services generally experience two broad categories of expenditures: (1) capital expenditures, which are typically associated with infrastructure investments; and (2) operational expenditures, often associated with service provision and equipment maintenance. Planning around these two types of expenditures generally differs. The largest financial challenge for cities is usually the coverage of operational expenditures for labor, fuel, and the servicing of equipment.

Operating costs are almost always substantially higher than capital costs for investments and are often the most challenging to sustain. Even when capital costs are accounted for (often funded separately, for example, with national government subsidies), operational expenditures can easily account for 70% or more of total required budgets. Across collection and disposal operations, waste collection typically accounts for 60–70% of total costs^[19]¹⁹. However, disposal costs have risen with more advanced sorting and materials recovery choices.

Financing waste management systems is often one of the greatest concerns for municipalities. Cost recovery is essential to avoid reliance on subsidies from own-source revenues^[20]²⁰ or from national or external sources. Waste management investment costs and operational costs are typically financed differently.

Early steps to improve solid waste management focus on both extending collection coverage and phasing out uncontrolled disposal, while subsequent steps gradually increase the environmental standards of treatment and disposal. This inevitably increases the total costs. By definition, uncontrolled waste is not 'managed' and thus not measured, making it difficult to estimate either the size of the problem or the scale of the associated costs. However, evidence suggests that in a middle- or low-income city, the costs to

society and the economy are perhaps 5-10 times what sound solid waste management (SWM) would cost per capita^{[21]²¹}, being noticeably cheaper to manage waste now in an environmentally sound manner than to clean up in future years.

Zero Waste Approach and Circularity

The current global waste management context and its associated negative effects require interventions, and increased efficiency and sustainability of investments for its integrated improvement. It is essential to move from a linear take-make-dispose system, where waste management is a “last resort” solution, to a circular economy system that focuses on managing resources sustainably and ensures products and materials are used as long as possible and kept at their highest possible value, preventing the waste generation as much as possible. The zero-waste concept emerges in view of the need for shifting from unsustainable linear patterns to circular economy. The proposed approach to support countries and cities in achieving their Zero Waste targets (the lowest possible generation of industrial and residual waste that ultimately requires incineration, landfilling or dumping), as part of realizing a Circular Economy, is based on the waste management hierarchy.

As the first step in the waste hierarchy, waste prevention should be the top priority, which has substantial benefits as it reduces carbon emissions and the use of natural resources and mitigates impacts on human health and the environment. Preventing waste means both reducing waste volumes and reducing the number of hazardous substances in the waste. The municipalities play an important role in this work together with manufacturers and producers who must also consider prevention when designing their products. The governments should support the design of appropriate policies and regulations. Waste prevention is achieved through more sustainable production and consumption practices. In that sense, a transformation will be needed in the way goods are produced and used in the economy.

Currently, the presence of hazardous substances in products, whether intentional or unintentional, including through recycling, thus poses challenges to circularity and the implementation of the waste hierarchy, which emphasizes sources reduction, reuse, and recycling. A coherent approach to the sound management of chemicals and waste in a circularity context implies that undesired substances are not used in consumer products, and that potential cross-contamination and related exposures or releases to the environment are avoided. A challenge for all actors engaged in the supply chain is therefore to effectively address potential trade-offs between increasing recycling rates on the one hand, and consumer and environmental exposure associated with cross-contaminated products on the other. At the same time, these considerations create a driver and opportunity for the chemical and engineering sciences to provide the basis for innovative products that can be reused and recycled without sustainability trade-offs.

The phase-out of chemicals of concern should go beyond replacing chemicals with safer alternatives and improving the management of chemical and waste stockpiles. Although such interventions are important in the short term, the focus should be redirected towards the redesign of products, production processes, services, and consumption, so that none of these requires chemicals of concern, and pollution and waste are designed out entirely^{[22]²²}. The supply chains that stand to benefit the most from greening efforts to achieve circularity include those for agriculture, textiles, e-products, plastics, construction, secondary metals, and waste management since they are resource-intensive and use a large variety of chemicals of concern.

Putting in place sustainable production and consumption patterns in combination with waste prevention and material/product reuse, repair, recycling, recovery, and sound waste disposal practices, can bring significant benefits to human and environmental health, including preventing future build-up of hazardous chemicals and waste in the environment as well as climate change mitigation. Combined such interventions would contribute to a zero-waste society which is an essential part of a circular economy and pollution-free environment.

COVID-19

Recently, the world has been going through a global pandemic which undoubtedly posed another major waste management challenge for the cities. At the onset of the COVID-19 pandemic and with little warning, municipalities suddenly faced: massive upticks in daily waste volumes combined with curtailed garbage collection and cutbacks in recycling. While workplace waste production fell at the pandemic’s height, household waste rose to a degree that offset the decrease in commercial waste. With the exponential increase in the number of ill patients needing treatment, medical waste volumes surged as well. Regions with poor waste management infrastructure were least able to handle the rapid influx of additional waste, which in many cases overwhelmed existing dump sites or landfills, amplifying negative environmental and social impacts. Additionally, increased generation of municipal waste has made it financially and physically challenging for municipalities to cope. Increased healthcare and social protection costs related to COVID-19 have strained municipal budgets at a time when municipal revenues are also substantially impacted.

The experience of COVID-19 proved that adaptability to such pandemics has become a necessity in waste management systems and requires an accurate understanding of the challenges that have been arising. A Zero waste vision, in line with waste management hierarchy and circularity according to local conditions, provides suitable strategies for gaining flexibility and adaptability of the waste management system and strengthening cities for future challenges.

BARRIERS AND CAUSES

The following preliminary list of challenges and barriers were identified to address waste management and circularity approach in cities:

- (i) Lack of clear and consistent governance, policy, regulatory and institutional frameworks;
- (ii) Lack of political will, social consensus or ownership, effective coordination among stakeholders, and enforcement of pollution prevention laws;
- (iii) Limited abilities of local authorities to administer waste management due to their limited resources and capacity for planning, contract management, operational monitoring.
- (iv) Lack of infrastructure of waste management. The scarcity of evidence-based data hinders the development of waste management strategies and constrains investment decision-making in infrastructure and service expansion.
- (v) Difficulties of cost recovery for waste collection, transportation, and treatment;
- (vi) Lack of financial instruments to fund material recycling and recovery, waste to energy and resource facility, or other sustainable solutions;
- (vii) Lack of regulations or incentives for circularity for companies and individuals which make difficult the redesign of processes resulting in sustainable products as well in citizens' ability to adopt sustainable consumption practices;
- (viii) Lack of suitable alternatives for concerning materials such as plastics which make difficult their substitution and reduction in use;
- (ix) Lack of markets for recyclables and lack of suitable alternatives;
- (x) Lack of know-how, expertise, training, and communication; and
- (xi) Lack or scarcity of data on how much waste is generated (volume) and the types of waste being generated, this has not allowed local governments to select appropriate management methods (for eg: targets for diversion of waste, track progress, waste generation patterns change), assess and acquire suitable technologies, consider strategic partners for service provision and plan for future demand (preventing informed and careful planning).

The main root causes that underlie all the problems listed above can be described as follows:

a) Inappropriate waste management planning and lack of consistent policy, regulatory and institutional frameworks.

A foundational aspect of sustainable waste management is proper planning and oversight from central and local authorities. While waste management is typically a locally operated service, both national and local governments play a role in defining the regulatory framework within which solid waste management services can be developed, and this can affect private sector engagement. Policy, regulatory frameworks, and incentives play an incredibly important role in reducing waste generation rates, increasing recycling rates or improving the sound management of residual waste.

National governments are typically responsible for establishing environmental standards for waste management and for creating rules for fair and transparent procurement of services from the private sector. National laws encourage local governments to adhere to common social and environmental standards, and local governments also establish rules and regulations that guide households and institutions on the proper management and disposal of waste.

Emerging economy and Least Developed Countries are more likely to lack specific laws on waste management. On the other hand, while most of the countries have developed an official national law or guidelines for waste management, these laws can usually range from broad environmental rules to targeted interventions. Implementation and enforcement of these laws remain a common

challenge since it requires adequate staffing, implementation of fees or other penalties, and cultural alignment with legislative goals^[23]²³.

Because responsibility for executing solid waste management systems typically falls on local governments, local rules and regulations are commonly required. Local regulations are not always comprehensively developed within cities to cover specific aspects of waste management, including source separation, household and commercial fees, disposal sites, material recycling, and concerned institutions and agencies that are responsible for implementing waste operations and initiatives locally.

Coordination is required to ensure consistency between the different levels of government. Many governments also struggle with overlaps in responsibilities across agencies or gaps in responsibilities, since activities related to solid waste management often cut across multiple departments.

The challenge is further increased due to the absence of high-quality data on waste volumes, composition, and waste treatment. The available estimates are diverse, not verified or reliable, and often rather dated without standard methodologies for measurement. Thus, transforming waste data into effective and reliable waste management strategies has proven to be difficult.

In order for countries and municipalities to implement a realistic and feasible waste management plan, waste planning and strategies need to be backed up by waste related laws and regulations that can be and are enforced, as well as financial incentives (e.g. through taxes) that, for example, encourage waste avoidance and reduction, waste diversion from landfilling and increase recycling rates.

b) Lack of adequate resources invested in waste management and infrastructure.

It is essential to promote investment and economic sustainability in the sector. Financing waste management systems is often one of the greatest concerns for municipalities and a key element of the sustainability of waste management schemes. Frequently, direct and indirect costs of waste management are ignored by municipalities, investments are insufficient and there are deficiencies in the schemes for charging for services.

Cost recovery is essential to avoid reliance on subsidies from own-source revenues or from national or external sources. On the one hand, waste management investment costs and operational costs are typically financed differently. Given the high costs associated with infrastructure and equipment investments, capital expenditures are often supported by subsidies or donations from the national government or international donors, or through partnerships with private companies. On the other hand, operational expenditures typically require a solid cost-recovery system for long-term sustainability. The starting point for many municipalities is a standard user fee, which is charged to users for services delivered. User fees may be fixed or variable to encourage reduced waste generation or to provide affordability for lower-income residents. In most countries and cities, the cost of integral waste services (collection, transport, treatment, and disposal) cannot be fully recovered from user fees and requires subsidies through government transfers or external budget support.

In addition, allocation of waste management budget usually must compete with other priorities that consume large resources in cities administration (health, poverty reduction, drinking water supply, infrastructure, etc.). If not properly known and highlighted, the cost of inaction (in relation to health, environment, and development impacts) on waste management can be underestimated^[24]²⁴. Funding measures (such as Public Private Partnerships (PPP)) to support municipalities/cities/governments in securing larger scale investments for infrastructure (transfer stations, sanitary landfills, waste-to-energy plants, hazardous waste interim storage facilities, industrial recycling plants, etc.) is essential. In addition, developing financial mechanisms to generate sufficient operating resources to manage waste and recyclables on a day-to-day level are key. The following alternatives can be considered as suitable financial mechanisms: tariff setting for waste collection, landfill/disposal taxes, Extended Producer Responsibility (EPR) mechanisms, deposit return schemes, import taxes or bans on products that are challenging to recycle, etc.

c) Lack of a holistic approach in dealing with the life cycle management of resources and adoption of circularity principles.

When working on the improvement of waste management systems, usually municipalities tend to focus on the collection, transport, treatment, and disposal of different waste streams available in their cities. However, one of the main improvements of solid waste management with long-term sustainability comes from the adoption of life cycle assessment of materials and/or products. With proper upstream design, many products could be circulated by being maintained, shared, reused, repaired, refurbished, remanufactured, and recycled. This can begin to close the materials' loop and turn off the tap that is currently sending a torrent of

waste into landfills, and incinerators every day. However, the drivers of unsustainable production are challenging to overcome. Frequently supply chains are complicated and long. Effective circular business model is yet to be established by connecting actors from upstream to downstream in the value chain with a shared vision and coordinated approach for sustainability. The opportunity of circular business model is larger in the cities that have sizable manufacturing sectors than those cities whose economy are mainly in the servicing sectors.

The role of governments is essential for enabling the environment through the development and introduction of policies and regulatory measures that encourage companies to design production processes and produce goods and services that require lower energy and natural resource inputs throughout the value chain. An example of this can be green procurement measures. In emerging economy and Least Developed Countries 30% of GDP is spent by governments on national procurement^[25]²⁵. Pursuing green procurement, starting with the public spending of government entities including cities, could start to drive new markets for greener products and services that will avoid waste or generate less (harmful) waste. Government entities and cities have considerable purchasing power, employ a large workforce, and operate facilities across the city. Their size and operations make these entities a contributor to the amount of waste generated and an influencer in the community. Through developing appropriate policies, government entities and cities can influence others wishing to sell products or services, which can lead to a reduction in waste, efficient resource management and shifting of their own facilities to achieve zero waste and zero pollution targets.

Companies (manufacturers, producers, brands, etc.) should also engage to apply life cycle assessment to analyze impacts throughout the value chain; harness innovation for the design and scale-up of safer, more sustainable products and production processes (using best available technologies and more efficient, cleaner production processes); and provide services to improve resource efficiency (energy, water, materials) in production and product reusability or recyclability, including through sustainable materials management (recycled or renewable content) and phasing out chemicals of concern to reduce impact of processes, products and services. By applying sustainable and green chemistry and cleaner production approaches, companies can develop and demonstrate alternative processes, materials and/or chemicals with desired properties that avoid using substances of concern.

The undeniable responsibility of society in sustainable consumption should be also highlighted and can be further understood in the following and last identified root cause.

d) Lack of awareness and incentive for change in individual and communities' behavior

Another deeply rooted cause for the persistence of poorly managed waste in cities is the difficulty of building the necessary capacity and disseminating knowledge to citizens. Environmental education and communication comprise relevant aspects that must be taken into account to help raise awareness about the importance of proper purchasing and waste management to ensure the behavioral change required.

The success of sustained solid waste management is critically linked with public engagement and trust. Waste managers rely on citizens to consciously reduce the amount of waste they generate, separate, for them to manage specific waste types at home, dispose of waste properly, pay for waste management services, and approve new disposal sites. To motivate this support, governments must gain the trust of citizens. Cities and countries need to engage the public by providing high-quality services that earn approval and trust and that, in turn, motivate citizens to pay for services, be environmentally aware, and comply with guidelines and regulations.

Consumer behavior also plays a key role in the shift towards a circular economy and usually offers resistance against learned (purchasing) behavior. The establishment of a new economic order with a clear focus on the recovery on material flows instead of generating excessive amounts of waste, will require consumer acceptance of redesigned products (e.g., durable eco-friendly products) using recycled materials, the phase-out of single use items, reverse business models, waste sorting at source and re-use, re-manufactured and upgraded products.

Although changing citizen behavior can take time, the benefits of a strong relationship with the public are invaluable to a waste management system. Any city waste management system needs to be aligned with community expectations and needs. We must consult users such as community leaders, households, small businesses etc., as ultimately these are the people who would have to start paying for collection services to make them sustainable in the long run. Community associations and civil society should be encouraged to participate in planning and decision-making processes through local committees or regular consultations, but also

should have opportunities to learn the benefits of a good city waste management system through education and awareness-related activities.

The Shifting to Zero Waste Against Pollution (SWAP) Initiative is emerging in view of the need to support emerging and least developed countries in adopting effective and sustainable waste management models with a gender-responsive and inclusive approach, while promoting the shift from unsustainable linear patterns to a clean and circular economy. The Global Initiative identifies the following cities to start promoting the Zero Waste vision: Tunis (Tunisia), Freetown (Sierra Leone), Montevideo (Uruguay), and Kocaeli (Türkiye). The selection was based on the following criteria and consultation with concerned central governments: Potential contribution to the Global Environmental Benefits; Demonstrates political willingness towards zero waste vision (strategy, target, policy, etc.); Geographic balance with representation in different regions; Size (inhabitants) and volume of waste generated in the baseline and BAU by 2030; Ambition and target on the waste collection, sorting, recycling, and conversion in the mid-term (5 years) against the baseline, including social impact; Potential for public-private partnership and intermunicipal partnerships where applicable; Efforts in greening the production and consumption in the business operations to avoid the harmful chemicals, reduce the waste generation, and facilitate the safe recycling of materials; Existing and planned infrastructure and capacity for hazardous waste management; Innovation in fostering the circular business and diverting the waste streams from open dumping, open burning, (non-sanitary) landfills, and incineration without energy recovery and emission control measures; Co-financing from public and private sectors.

While Zero Waste is still a new approach, it is also increasingly recognized on the global scene, as demonstrated by the recent adoption in December 2022 of an International Day for Zero Waste, upon a proposal of Türkiye to the UN General Assembly. The International Day, which was established on March 30, is being celebrated for the first time in 2023. Türkiye is the leading country in promoting “Zero Waste” Initiative within the UN to combat climate change for sustainable development.

The participating cities have all confirmed their commitment and dedication to take on the long-term goals of Zero Waste. The following table summarizes baseline information for each of them.

Table 1. Summary of preliminary baseline information for the participating cities.

City Waste and composition	City Waste Treatment & Disposal	Institutional & Policy/Legal Framework	Highlights and Challenges
Freetown – Sierra Leone (1,268,757 inhabitants)			
<p><u>City waste:</u></p> <p>MSW: 550,000 tonnes/y</p> <p><u>Composition:</u></p> <p>80-85% organic/compostable</p> <p>11.5% plastic</p> <p><u>E-waste:</u> 635 tonnes/y (0.5 kg/capita)</p> <p><u>Healthcare waste (HCW):</u> 292 tonnes/y</p> <p><u>Industrial Waste:</u> 7,300 tonnes/y</p> <p><u>Available Industries:</u> PVC manufacturer; Electricity suppliers; Gas production; Beverage’s industry; Beauty and Cleaning Industry; Plastic</p>	<p><u>Collection Rate:</u> 30-35%</p> <p><u>Not collected/Not appropriately disposed of:</u> 65-70%</p> <p><u>Landfill:</u> 1%</p> <p><u>Recycling:</u> no data available (although recycling activities are being conducted in the city.)</p> <p><u>Incineration:</u> only for Healthcare Waste.</p>	<p><u>Institutions:</u></p> <ul style="list-style-type: none"> - Environment Protection Agency (EPA)– Sierra Leone. - Ministry of Environment and Climate Change. - Ministry of Local Government (Municipal and District Councils) - Ministry of Health and Sanitation. - Freetown City Council, Western Rural District Council, Tribal Chiefs and Headmen- - Private sector players are involved in waste collection/recycling (e.g., Masada, Mr Klin, Klin Salone) <p><u>Policy/Legal:</u></p> <ul style="list-style-type: none"> - National Policy Roadmap on Integrated Waste Management: outlines the roles and responsibilities of different 	<ul style="list-style-type: none"> - Waste management is grossly inadequate in Freetown and waste that is not collected is disposed of in open dumpsites (~70%). - Waste is often mixed at source. - Insufficient waste treatment and disposal facilities. - The two main dumpsites in Freetown are amongst the largest in the world and pose a health risk to waste pickers living on the dumpsite as well to the neighboring communities. - Limited or non-existent formal recycling facilities. Limited awareness about recycling. - Limited dedicated funding to Local Government for operationalizing waste collection services; difficult terrain for collection vehicles to reach most parts of the city.

City Waste and composition	City Waste Treatment & Disposal	Institutional & Policy/Legal Framework	Highlights and Challenges
Industry; Cement Manufacturer.		stakeholders and aims at tackling waste by reducing the volume of waste generated as well as using waste as a resource for energy generation and other materials. - Sierra Leone has ratified the major MEAs: Basel, Rotterdam, Stockholm and Minamata Conventions, and participates in the ICCM / SAICM process.	<ul style="list-style-type: none"> - Weak institutional involvement and coordination. - Poor data and information capacity for planning.
Grand Tunis – Tunisia (2,800,000 inhabitants)			
<u>City waste:</u> MSW: 923,235 tonnes/y <u>Composition:</u> 63.2% organic/compostable 10.9 % plastic 9.9 % paper and cardboard 1% glass 1.9% metal <u>E-waste:</u> 15,120 tonnes/y <u>HCW:</u> 4,359.8 tonnes/y <u>Demolition Waste:</u> 1,960,000 tonnes/y <u>Industrial waste:</u> 2,512 tonnes/y <u>Available Industries:</u> Agro industry; Textile and clothing; Electric and Electronics; Plastics; Mechanical and metal industry: metals treatment, construction (cement); Mechanical and metal industry: non-ferrous metals; chemicals.	<u>Collection Rate:</u> 84% <u>Not collected/Not appropriately disposed of:</u> 16% <u>Landfill:</u> 75% <u>Recycling:</u> 4% <u>Composting:</u> 5%	<u>Institutions:</u> <ul style="list-style-type: none"> - ANGED – National Waste Management Agency (decree-law 2005), under the supervision of the Ministry of Environment - Governorates, Communes, the Ministry of Environment <u>Policy/Legal:</u> <ul style="list-style-type: none"> - The National Strategy for the Integrated and Sustainable Management of Household and Assimilated Waste (2020-2035) was developed as part of the country's environmental and sustainable development policy. - National Programme for Sustainable Cities in Tunisia. - Waste management in Tunisia is governed by two pieces of legislation: i) The 2018 Local Government Code, Article 240, which stipulates that the collection, sorting and transport of household and similar waste to controlled landfills are the responsibility of the municipalities.; ii) Law No. 96-41 of 10 June 1996 on waste and the control of its management and disposal, based on three main principles (reduction of waste production, recovery of waste, and burial in controlled landfills.) - Recovery channels set for the following waste streams: plastic packaging; lubricating oils; vegetable oils; batteries; tires; EEE: organic and green (for composting). 	<ul style="list-style-type: none"> - 75% of city waste is disposed of controlled landfills. - Limited governance coordination of stakeholders across the 38 Communes comprising Grand Tunis in order to address the environmental degradation. - Although recovery channels are officially set for different waste streams, recycling rate remains low (4%). - The National Strategy for the Integrated and Sustainable Management of Household and Assimilated Waste 2020-2035 sets a series of specific objectives in terms of waste prevention and management: - Reduce the amount of household and similar waste (HWW) produced per capita by 10% in 2035, compared to the figures for the year 2020. - Increase the material recycling rate of household and similar waste to 20% by 2035. – Gradually increase the amount of waste that is organically or energetically recovered, reaching a rate of 40% by 2035. – Reduce landfilling by 60% of WAS by 2035. - To achieve the objectives, one of the measures to be put in place is to introduce national legislation for the reduction of waste at source. This national directive requires the promulgation of a new law on the circular economy following the example of Law N°2020/30 of 30 June 2020, relating to the social and solidarity economy, or failing that, the integration of the concept of the circular economy into Law N°1996-41 – when it is revised.

City Waste and composition	City Waste Treatment & Disposal	Institutional & Policy/Legal Framework	Highlights and Challenges
			- The City of Tunis is the highest emitter of national greenhouse gases. There are several NDC Actions set within waste sector.
Kocaeli – Türkiye (2,079,072 inhabitants)			
<p><u>City waste:</u></p> <p>MSW: 652,054 tonnes/y</p> <p><u>Composition:</u></p> <p>54.27 % organic/compostable</p> <p>14.16 % plastic</p> <p>5.45 % paper and cardboard</p> <p>4.26 % glass</p> <p>1.21 % metal</p> <p><u>E-waste:</u> 21,206 tonnes/y (10.2 kg/capita)</p> <p><u>Healthcare waste (HCW):</u> 3,040 tonnes/y</p> <p><u>Industrial Waste:</u> 41,320 tonnes/y</p> <p><u>Available Industries:</u> vehicles and sub-industry, chemicals and petrochemicals, machinery, plastics and iron and steel sector.</p>	<p><u>Collection Rate:</u> 98%</p> <p><u>Landfill:</u> 89%</p> <p><u>Recycling:</u> 3%</p> <p><i>(Kocaeli has 405 facilities for the recovery/recycling of hazardous waste, non-hazardous waste, packaging waste, end-of-life tires and other special wastes)</i></p> <p><u>Incineration:</u> 6%</p> <p><i>(Kocaeli has a facility with an incineration capacity of 5,400 kg/hour and combustible plastic wastes, used oils, pharmaceutical and cosmetic wastes, petrochemical wastes, PVC, solvents, paint wastes, adhesives and adhesives, treatment sludge, etc. hazardous wastes and pathological wastes are disposed in this facility. The amount of disposed is 38,838 tons/year waste in 2022.)</i></p>	<p><u>Institutions:</u></p> <ul style="list-style-type: none"> - National Authority: Ministry of Environment, Urbanization and Climate Change. - Local Authorities: i) Provincial Directorate of Environment, Urbanization and Climate Change; ii) Metropolitan Municipality; iii) District Municipalities. <p><u>Policy/Legal:</u></p> <ul style="list-style-type: none"> - National Waste Management Action Plan (2016- 2023). - Ministry of Environment, Urbanization and Climate Change, Strategic Plan (2019-2023). - Law on Waste Management - Law on Zero Waste - Law on Packaging Waste Control - Law on the Management of Waste Electrical and Electronic Equipment - Law on General Principles of Waste Pre-treatment and Recovery Facilities - Law on Control of Waste Batteries and Accumulators - Law on Recovery Contribution Share - Law on Control of Medical Wastes - Local Plans: <u>Provincial Zero Waste Management Plan</u>; Medical Waste Management Plan; Marine Litter Provincial Action Plan; Management Plan of Waste from Ships; Kocaeli Greenhouse Gas Inventory and Climate Change Action Plan. 	<ul style="list-style-type: none"> - Kocaeli is the most industrialized city in Türkiye, where there are many sectors that produce hazardous waste as well as many products. - The biggest challenge of the city is continuing need for hazardous waste management capacity at the same time to foster circular economy through excluding hazardous waste from material cycles. - There is a high potential to circulate secondary raw materials among other manufacturing processes in case its non-contamination with toxic chemicals can be ensured. - 95% of waste is currently being disposed of in landfills (89%) or incinerated (6%). - Although there are several recycling facilities, recycling rate remains low (3%). - Kocaeli accounts for approximately 13% of Türkiye's total industrial production. - There are 2,500 important industrial investments, 274 of which are foreign capital. - There are 15 organized industrial zones, 4 technoparks and R&D centers, 2 free zones and 2 universities in total. Most of these OIZs are specialized: TOSB Automotive Sub-Industry Specialized OIZ, Chemists OIZ, Machinery OIZ, Plastics OIZ, Kömürcüler OIZ. This offers significant potential for waste management and zero waste applications. - To promote the zero-waste vision, the chemical and waste management processes of the industries operating in Kocaeli

City Waste and composition	City Waste Treatment & Disposal	Institutional & Policy/Legal Framework	Highlights and Challenges
			<p>province need to be reviewed and optimized.</p> <ul style="list-style-type: none"> - Transportation (land, railway and maritime) results a key advantage of Kocaeli.
Greater Montevideo – Uruguay (1,947,232 inhabitants)			
<p><u>City waste:</u> 710,655 tonnes/y</p> <p><u>Composition:</u> % 45.29 organic/compostable 9.9 % plastic 13.8 % paper and cardboard 3.4 % glass 3.6 % metal</p> <p><u>Industrial Solid Waste:</u> 332,019 tonnes/y</p> <p><u>Healthcare waste (HCW):</u> 6,170 tonnes/y</p> <p><u>E-waste:</u> 22,393.2 tonnes/y (11.5 kg/capita)</p> <p><u>Available Industries:</u> Canelones: Slaughtering (except poultry)</p> <p>Dairy industries</p> <p>OSE</p> <p>Paper and cardboard manufacturing</p> <p>Montevideo: Milling</p> <p>Other food industries</p> <p>Foundry</p> <p>Ports and airports</p> <p>San José:</p>	<p><u>Collection Rate:</u> 98%</p> <p><u>Not collected/Not appropriately disposed of:</u> 5%</p> <p><u>Landfill:</u> 75 %</p> <p><u>Recycling:</u> 11.6% (~80,000 tonnes/y)</p> <p><u>Composting:</u> 8.4% (60,000 tonnes/y)</p> <p><u>Incineration:</u> only hazardous waste: healthcare waste, medicine waste and chemical products (~1650 tonnes/y)</p>	<p><u>Institutions:</u></p> <p>National Authority: Ministry of Environment</p> <p>Departmental Authority:</p> <p>Municipality of Montevideo</p> <p>Municipality of Canelones</p> <p>Municipality of San José</p> <p><u>Policy/Legal:</u></p> <p>Integrated Waste Management Law (Nº 19829), which, among other things, promotes the circular economy, the waste hierarchy, emphasizing the minimization of generation at source.</p> <p>National Waste Management Plan (2021)</p> <p>National Strategy for the Prevention and Reduction of Food Waste and Losses (under development)</p> <p>Sustainable Public Procurement Law: (art. 23 of Law 18,834 and Decree 402/018) Defines the policy of Sustainable Public Procurement with the objective of promoting, through government procurement and contracting, the production of goods, services and works with the best possible economic, social and environmental performance.</p> <p>Law 17849 on packaging recycling and the Decree 260/007 that requires post-consumer management plans for all non-returnable containers.</p> <p>Law 19655 prevention and reduction of the environmental impact derived from the use of plastic bags.</p> <p><u>Decree 182/013</u> of the Law 19829 “General Law for the protection of the environment”, defines technical standards for the</p>	<ul style="list-style-type: none"> - The Ministry of Environment targets to close all open-air landfills by 2025, as established in the National Waste Management Plan. Montevideo: sanitary landfill / Canelones: Empalme Olmos: semi-controlled landfill / San José: San José de Mayo: Semi-controlled landfill; Delta de Tigre and Villas (sub-neighborhoods): open dump site. - Support required to effectively achieve material circularity through interventions in the main material flow chains associated with waste: metals, plastics, cellulosic and organic matter as established in the National Waste Management Plan. - The National Waste Management Plan targets to reduce to less than 40% the waste disposal. - Need of capacities to achieve sustainable management based on a circularity approach (regulatory adequacy, economic sustainability of actions, structural transformations in the main sectors of activity, promotion or disincentive instruments, etc.). - Institutional strengthening and deepening of inter-institutional coordination between the public and private sectors. - To achieve an active participation of the whole society through a cultural change. - Reducing informal labor by promoting the social integration of sorters in waste management processes is an important challenge, since this activity represents a means of access to livelihood for many people living in poverty, with high levels of

City Waste and composition	City Waste Treatment & Disposal	Institutional & Policy/Legal Framework	Highlights and Challenges
<p>Cold storage</p> <p>Dairy industry</p> <p>Breeding (feedlot)</p>		<p>management and prevention of solid industrial and similar wastes.</p> <p>Decree 586/009 on environmentally sound management of healthcare waste.</p> <p>Agrochemical containers: Decree 152/2013 Regulation of Law 17.283: Management of waste derived from the use of chemical or biological products in agricultural, horticultural and forestry activities.</p> <p>Pneumatic tires: Decree 358/2015 Regulates the environmentally sound management of out-of-use tires and inner tubes in Uruguay.</p> <p>Tire Management Plans (Private REP)</p> <p>Batteries: Decree 373/2003 Establishes the EPR principle to the importer/manufacture for management carried out through master plans approved by the Ministry of Environment. Therefore, the importer/manufacture is responsible for the design, implementation, follow-up and financing of the management of these batteries. Likewise, obligations are established for the different actors involved in the commercialization chain.</p> <p>Mercury: Decree 15/019 for the environmentally sound management of lamps and other waste containing mercury through the extended responsibility of the manufacturer or importer.</p> <p>WEEE: They are considered a special waste according to Article 5, paragraph H of Law 19829 (“Integral Waste Management Law”) and the EPR principle to the manufacturer or importer is applied. The regulations for the integral management of waste electrical and electronic equipment (WEEE) are in the process of being approved.</p> <p>Plan Vale: this is an initiative presented by the Chamber of Industries to the national Government to harness the opportunities arising from the waste challenge to have 50% of all plastics recycled after 3 years^[1]</p>	<p>informality or high socioeconomic vulnerability.</p> <ul style="list-style-type: none"> - Formalization of waste marketing chains. - Materials traceability. - Valorization possibilities. High-quality recycling to reinsert materials into high-value chains. - The following policies are planned for the following years: <ul style="list-style-type: none"> • WEEE Management Plan (Private REP) • Battery Management Plans (Private REP) • Departmental waste recovery and management plans • National Circular Economy Strategy • Uruguay’s NDC1 and ND2 • Stockholm Convention National Plan

[1] See: <https://medium.com/@undp.innovation/renewing-the-socio-economic-fabric-of-montevideo-through-waste-8556c4d6f337>

- [1] “What a waste 2.0. A Global Snapshot of Solid Waste Management to 2050”. World Bank. [A Global Snapshot of Solid Waste Management](#).
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- [10] “The New Plastics Economy: Rethinking the future of plastics”. Ellen MacArthur Foundation. [The New Plastics Economy: Rethinking the future of plastics](#)
- [11] “The Global E-waste Monitor 2020”. UN University (UNU), the International Telecommunication Union (ITU), and the International Solid Waste Association (ISWA). [The Global E-waste Monitor 2020](#)
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- [18] “What a waste 2.0. A Global Snapshot of Solid Waste Management to 2050”. World Bank. [A Global Snapshot of Solid Waste Management](#).
- [19] “What a waste 2.0. A Global Snapshot of Solid Waste Management to 2050”. World Bank. [A Global Snapshot of Solid Waste Management](#).
- [20] Own-source revenue is defined as money communities collect from business ventures, property taxes or other activities, including commercial leasing and tax revenues.
- [21] Global Waste Management Outlook 2015. UNEP – ISWA. <https://www.unep.org/resources/report/global-waste-management-outlook>
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- [25] “Scaling up voluntary sustainability standards through sustainable public procurement and trade policy”. UNFSS. https://unctad.org/system/files/official-document/unfss_4th_2020_en.pdf
- [26] See: <https://medium.com/@undp.innovation/renewing-the-socio-economic-fabric-of-montevideo-through-waste-8556c4d6f337>

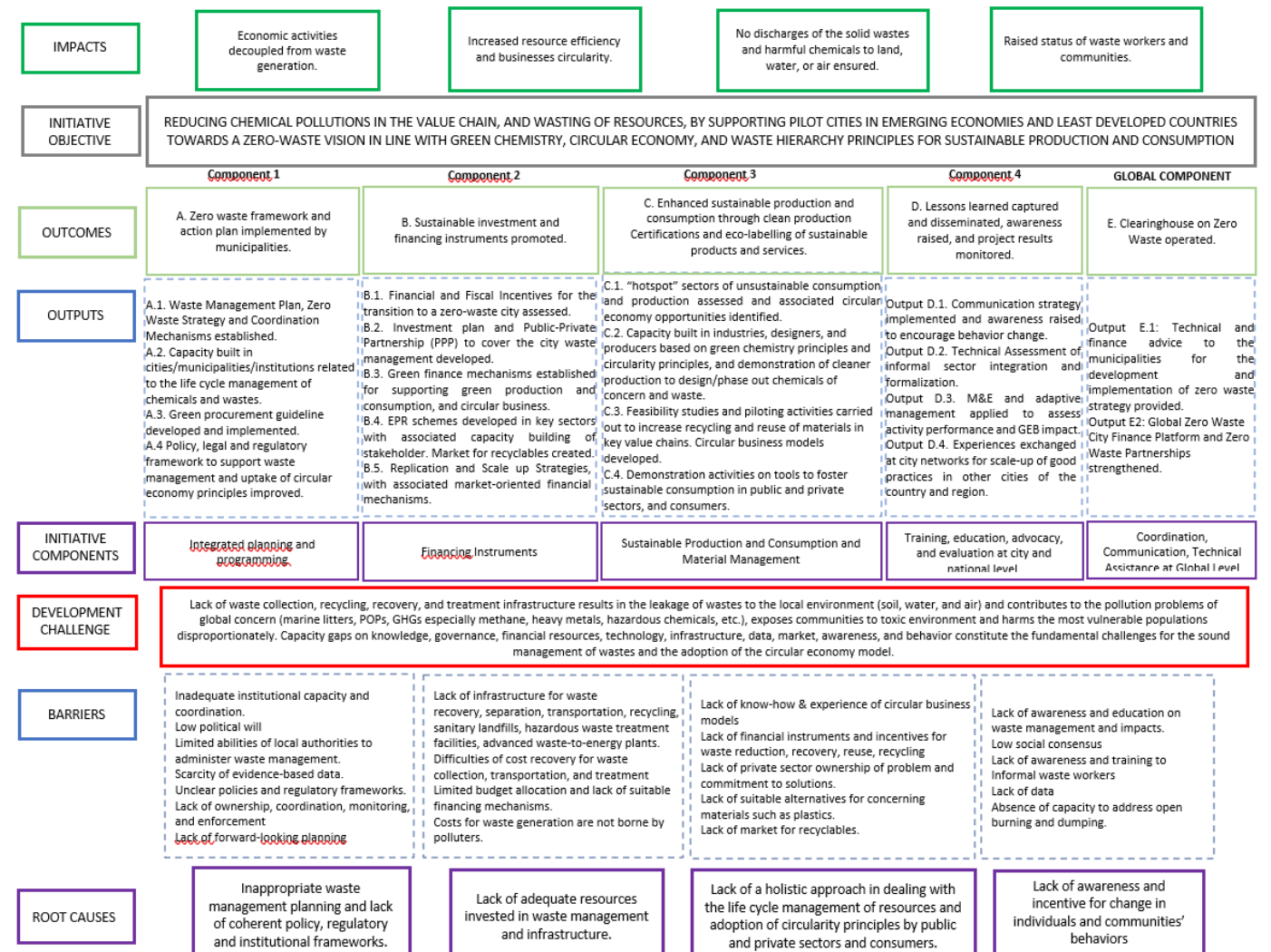
B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

The proposed Shifting to Zero Waste Against Pollution (SWAP) Initiative aims to reduce chemical pollution in the value chain and wasting of resources by supporting pilot cities in emerging economies and Least Developed Countries towards a zero-waste vision in line with green chemistry, circular economy, and waste hierarchy principles for sustainable production and consumption. The project is designed as a cost effective and efficient way to address the safe and environmental sound management of daily generated waste in the cities, diverting them away from dumping, open burning, landfilling and incineration without energy recovery, whilst working on upstream, midstream interventions by phasing out chemicals of concerns, designing out waste, promoting sustainable consumption and material recycling towards a circular economy.

The following project's theory of change has been developed which takes into account and include previously identified barriers and challenges to deliver proper interventions and effective actions to address them, for the achievement of the project's objective:



Based on the previous analysis, the Zero Waste Against Pollution (SWAP) Initiative is proposed to be structured through four main Components and a Global Component as described below:

COMPONENT 1: Integrated planning and programming

This project component's objective is to enable conditions to promote the integrated planning of city waste management towards zero waste cities. The interventions within this component will support the development of policies and governance strategies for city waste management based on reliable and accurate data and incentives to achieve zero waste going to landfills. And consequently, promote and support the adoption of circularity approaches in value chain for different waste streams.

Through this component the project aims to address current waste challenges faced by the cities, but with focus on designing a clear pathway to a zero-waste municipality by building institutional capacity, appropriate governance structure and designing suitable policies, strategies and regulatory frameworks that encourage concrete actions towards sustainable production and consumption, circular economy business models, waste reduction, green procurement, sustainable material management, among others.

OUTCOME A: Zero Waste framework and action plan implemented by municipalities.

Output A.1. Waste Management Plan, Zero Waste Strategy and Governance Structure established.

Through this Output the project will support each of the cities in developing and implementing Waste Management Plans based on local context assessment. Waste Management Plans (WMP) are key to identifying waste flows and their composition, setting, and defining targets for waste reduction and recycling, and identifying and clarifying the various responsibilities for each of the involved stakeholders (public and private). In a Waste Management Plan the waste management system in place must be described as detailed and complete as possible, in order to identify existing challenges, problems, obstacles, as well as opportunities for improvements. Waste management planning is complex as it includes financial, institutional, organizational, and social aspects that need to be addressed simultaneously. Furthermore, for a waste management plan to become successful it is necessary to clearly define its implementation plan and ensure close follow-up throughout by monitoring progress.

Based on previous assessment and Plan, the project will also support the cities in developing its Zero Waste Strategy which will contribute to set the detailed pathway towards zero-waste cities. Within the strategy, clear and thoughtful targets, metrics, timelines, and direction will be established to industry and government can better align motivations and behaviors towards the goal of zero waste. Maturing measures of success beyond diversion rates to those which measure a reduction in total waste generated might be considered, to shift community focus to reducing unsustainable consumption patterns. Further, greater emphasis on reuse and resource circularity measures, targets and directions will be introduced, which prioritize the use of resources to their highest best use in line with waste hierarchy principles, instead of defaulting to landfill and energy recovery options. The development of the strategy will also consider expected growth rates in the city, potential changes in city waste composition, gender dimensions as well as informal sector linked to waste management integration.

This activity will also promote and enhance institutional coordination for zero waste under the mayor's leadership. For this purpose, a steering committee will be established, and suitable coordination mechanisms will be defined. This committee will improve cooperation and coordination among local and national key stakeholders and will serve as a mechanism for the exchange, collection, and analysis of information for the development of the Waste Management Plan and the Zero Waste Strategy, enabling also the execution of the related action plans. The Committee may also act as the informing body for the development of the required policy, legal and regulatory framework to support waste management and the uptake of circular economy principles under Output A.4.

Community Associations and Civil Society engagement will be sought during the plan and strategy development in order to enhance a strong relationship and build trust. In addition to develop correct plans and effective monitoring, accurate data is needed. For that purpose, cities will define indicators and data collection mechanisms that ensure information availability and transparency.

Output A.2. Capacity built in cities/municipalities/institutions related to the life cycle management of chemicals and wastes.

Through this Output the project will contribute to build capacity of key stakeholders to ensure their technical capacity and expertise to support necessary interventions for shifting to the zero-waste and zero-pollution society. Training and capacity building need to be provided on a regular basis to ensure that those personnel responsible for policy making, project review, processes monitoring, technology innovations, products design, law enforcement, and waste management have updated knowledge, data and tools for improvement of the management. This will result in strong institutions that will be able to address challenges and root causes in the waste management.

Specific activities under this Output may include stakeholders' training on green chemistry principles and BAT/BEP for cleaner production and material recycling, education programmes of international treaties on chemicals and waste, sustainable cities and services, knowledge transfer through City Twinning and clearing house, learning of public-private partnership models in the waste management, and certifications for green products, green facilities (such as factories, hotels, hospitals, super market), eco design, digital platform facilitating circular business and waste recycling, etc.

Cities may carry out inventory of new POPs in manufacturing and servicing sectors and develop targeting regulations and action plans to eliminate harmful chemicals and waste. An on-line registration and management platform might be established to collect, manage and track the information of mobility and treatment of the chemicals and products of concerns. Laboratory chemical waste might be included in the inventory and treatment plan.

Output A.3. Green procurement guideline developed and implemented.

Through this Output the project will develop regulations and standards at national and city level to introduce green procurement practices with sustainable products and services.

Pursuing green procurement, starting with the public spending of public entities including cities, could start to drive new markets for greener products and services that will avoid waste or generate minimal waste. Government entities and cities have considerable purchasing power, employ a large workforce and operate facilities across the city. Their size and presence make these entities a contributor to the amount of waste generated and an influencer in the community. Through developing appropriate policies, government entities and cities can influence others wishing to sell green products or services, which can lead to a reduction in waste, efficient resource management and shifting their own facilities and operations to achieve zero waste targets.

Additionally, green procurement within the private sector (manufacturing and services industries) will be also encouraged. Purchasing serves as a boundary-spanning function within firms and provides an advantageous position based upon which a firm can create conditions for innovation and behavior change aligning with Environment, Social and Governance principles.

Output A.4. Policy, legal and regulatory framework to support waste management and uptake of circular economy principles improved.

Through this Output the project will support the development of the required policy and regulatory frameworks, which play an essential role in reducing waste generation rates, increasing recycling rates, promoting circular economy business models, and improving the sound management of residual waste. Both national and local governments play a role in defining the regulatory framework within which solid waste management services and circular economy approaches can be developed and promoted in a complementary and coherent manner. This is obviously key in triggering private sector engagement. Coordination will be ensured to guarantee consistency between the different levels of government and stakeholders.

Specific activities under this Output may include:

- Developing or improving national/local waste management and recycling related policies, regulations, guidelines, emission standards for priority waste streams (industrial hazardous waste, organic waste, construction waste, healthcare waste, appliances, electronics, plastics, vehicle repair and scrapping, etc.). Waste Management and Recycling Policies will also include and highlight waste sorting at source requirements.
- Developing policies, regulations, and standards to phase-out chemicals of concern in products, discourage imports of second-hand products and/or near end of life which contains chemicals of concern.
- Developing incentive policy to support eco-design, certification, and eco-labeling.
- Developing policies, regulations and incentives that promote reuse and high-quality recycling of materials and support the creation of a competitive market for secondary raw materials (versus virgin materials).

COMPONENT 2: Financing instruments

This project component's objective is to explore different legal and financial steering instruments to address the financial challenges for the transition to a zero-waste city, including the introduction of extended producer responsibility and the use of economic instruments such as different forms of taxes, cost recovery methods, incentives and differentiated waste tariffs. It will also analyse optimal financing instruments to cover the cost of municipal solid waste management, focusing on ways to create an ecosystem in the value chain, foster circular business models and public-private partnerships, covering investments in the key infrastructure and daily operational costs. Municipalities will be encouraged to develop green finance mechanism and issue green bonds when appropriate, to support necessary investments in the infrastructure towards zero waste and circular business. In addition, bring in strategic investors including international, regional, and national financial institutions, bilateral donors, and impact investors. Lastly, it will support developing an investment plan and engage with stakeholders and investors for the partnerships.

OUTCOME B: Sustainable investment and financing instruments promoted.

Output B.1. Financial and Fiscal Incentives for the transition to a zero-waste city assessed.

Through this Output the project will support cities in assessing different financial and fiscal incentives for promoting investment favoring the transition to the zero-waste city. In the same way, currently in place incentives will be evaluated and those ones unfavorable will be discouraged or eliminated. These financial and fiscal incentives would lead to the prevention of waste generation, increase in the collection and recycling rate of recyclables, increase the use of recycled materials, encourage circularity models, promote green production and sustainable consumption. The most promising mechanisms and incentives to contribute to the Zero Waste goal will be developed and put in place. Within the assessment and development of incentives the access to finance for the informal sector will be considered and ensured. Such incentives could include Extended Producer Responsibility (EPR), Deposit Return Schemes (DRS), tax incentives for investment, tariff setting for waste collection, landfill/disposal taxes/bans (e.g., organic wastes), import taxes or bans on products that are challenging to recycle. Financial incentives will be part and parcel of the Strategic Waste Management Planning as well as Investment in private sector or publicly owned infrastructure and technologies.

While analyzing the most appropriate financial instruments to support zero waste approaches, the SWAP initiative will build upon lessons learned from UNDP's Biodiversity Finance (Biofin) initiative. This will involve supporting the participating countries and cities with a tested methodological framework to facilitate the identification, development, and implementation of sustainable financing solutions for a transition to zero waste and circular economy in the field of chemicals and waste management. For cities interested in this approach, an adapted methodology/ guidance will be developed based on the proven Biofin methodology which will include the following components : (i) examine the policy and institutional context for chemicals and waste management and circular economy finance in the country and at the city level and determine which stakeholders to involve; (ii) undertake analyses of relevant public and private expenditures at the city level; (iii) undertake a financial needs assessment to estimate the financing required to transition to a circular economy and zero waste; (iv) develop a finance plan that prioritizes financing solutions with the potential to close the finance gap by optimizing current and expanding future investments (public, private, national, international, traditional, and innovative), and develop the business case for the best options; and (v) for cities that opt to do so, and in coordination with their respective national Government, implement the plan enabling cities to implement finance solutions that result in tangible finance results and positive outcomes for human health and the environment, using context-specific finance and economic instruments. A technical committee may be formed to support the development process of the methodology and ensure the technical quality of the guidance materials produced.

Output B.2. Investment plan and Public-Private Partnerships (PPP) to cover the city waste management developed.

Through this Output the project will support each of the cities for the development of an investment plan and funding measures to secure larger scale investments for waste management and disposal infrastructure (transfer stations, sanitary landfills, waste-to-energy plants, hazardous waste interim storage facilities, industrial recycling plants, etc.). This plan will be complemented by an analysis of optimal financing instruments to cover the cost of MSW management, focusing on ways to create sustainable business models, covering investments in the key infrastructure and daily operational costs.

For this purpose, Public-Private Partnerships (PPP) will be encouraged for different waste streams in cities. The main benefit of using a PPP arrangement is that optimal risk sharing with a private partner delivers better value for the public user^{[1]²⁶}. Additionally, it offers policy makers an opportunity to improve the delivery of services and the management of facilities. This Output will support national and local governments to design and set clear conditions for PPP arrangements and projects.

Furthermore, the project will seek to work with bilateral partners and national and international investors, such as International Finance Institutions (IFIs) to support countries and municipalities in complementing larger scale investments for waste-related infrastructure, while encouraging the establishment of inter-municipal partnerships that allow municipalities to join forces and share costs.

Output B.3. Green finance mechanisms established for supporting green production and consumption, and circular business.

This Output will support cities in assessing current barriers that inhibit investment and financial flows from the public, private and not-for-profit sectors to green production and consumption towards a zero waste and zero pollution city; and explore innovative green finance instruments to overcome them. Barriers will be assessed from the perspective of end users, industries, midstream stakeholders (e.g., retailers), recyclers, and public authorities. These mechanisms will aim to foster the development of circular business models, promote innovation for the design of safer and more sustainable products (products reusability, reparability, or recyclability), and optimization of production processes (resource efficiency), as well as greener consumption patterns (segregation at source, eco labeling, etc.).

Potential mechanisms would be blended concessional green loans, municipal green bonds, crowd-financing, performance-based financing, on-bill financing, insurance, among others. Multi-stakeholder partnerships will be promoted to include major actors in

financial markets, banking institutions, national development banks, investors, micro-finance institutions, insurance companies along with public sector.

As a result, suitable and affordable green mechanisms will be recommended and established within the cities, ensuring the proper access by different targeted stakeholders' groups. Complementary measures such as policies, regulations will be considered under Output A.4, and awareness raising activities and behavior change initiatives will be addressed through Output D.1.

Output B.4. EPR schemes developed in key sectors with associated capacity building of stakeholder. Market for recyclables created.

Through this Output the project will conduct technical economic feasibility analysis for the development of EPR schemes for prioritized waste streams. EPR schemes can create a financially sustainable system for the collection, transportation, and recycling of materials, and improve their circularity of materials through modifications in both the upstream and downstream ends of the value chain.

Aligned to the previous assessment, this Output will also support the development and implementation of demonstration activities for the adoption of Extended Producer Responsibility (EPR) schemes to evidence its technical and financial sustainability. It will also ensure that effective processes and infrastructure are in place for collecting, sorting, recycling, and final disposing of materials in different waste streams. The demonstration activities will encourage segregation at source, promote maximum recycling and/or recovering of materials through sound recycling practices, and ensure sound treatment and disposal of non-recoverable ones.

The following value chains were preliminary identified to be supported by the project: end of life vehicles (including tires), electronics waste, batteries, plastics packaging/containers among others. The project will engage key stakeholders within the different value chains and boost public-private partnerships for business models implementation. The pilots will also strengthen stakeholders' technical capacities, provide training and guidance on BAT/BEP.

This activity will also support the development/expansion of national markets for recyclables, through developing industries that are able to turn recyclables into new products and creating markets for the uptake of these recycled products (e.g., adding the requirements of using recycled materials above a minimum percentage, recyclable packaging in the public procurement and practices).

As a result, EPR scheme standards will be developed and recommended for regulations drafting. The implementation of EPR regulations is a powerful measure to improve both the quantity and quality of what gets recycled, as well as extending the useful life of materials, thereby supporting the acceleration to a circular economy.

Output B.5. Replication and Scale up Strategy, with associated market-oriented financial mechanisms.

A replication and scale-up strategy will be defined in each of the cities to support the spread of technical and capacity-building project benefits based on the different pilot activities; to harness compliant treatment facilities and leverage their resources to make a better business case for their operation; to support any potential long-term cooperatives of informal waste collectors and initial processors, along with a mechanism to continue spreading of capacity to perform their activities according to standards; foster circular business models and public-private partnerships; propagate sustainable/green production principles and sustainable consumption; attract initial seed investment, and longer-term private sector investment and public revenue-generating models to sustain a profitable and effective waste management systems in the long term.

The strategy will also undertake an analysis of feasible financing alternatives at national, regional, and global levels to support the replication and scale-up. Performance indicators will be determined to monitor and track effective compliance and the achievement of desired impact.

COMPONENT 3: Sustainable Production and Consumption and Material Management

This project component's objective is to support manufacturers in introducing life cycle assessments (LCA) throughout the value chain and set innovation targets for the design and scale-up of safer, more sustainable products (e.g. eco-design), production processes and services to improve resource efficiency (e.g. sustainable materials management), phase out the use of chemicals of concern and lower the impact of products and processes, including at the end of life.

To sustain changes in production, a proper engagement with civil society organizations at the community level to build knowledge for consumers and help create consumer demand for green and sustainable chemicals and products is required. The sustainable consumption will be also encouraged through the introduction of eco-labelling of products/services, green packaging, and certification tools among others, which ensure products and services meet environmental standards throughout their entire life cycle: from raw material extraction through production and distribution to disposal. These tools, likewise, encourage companies to develop innovative products and services.

This Component will contribute to build the knowledge and the information to be shared with civil society in a timely manner to promote behavioral change (linked to Component 4).

OUTCOME C: Enhanced sustainable production and consumption through clean production Certifications and eco-labelling of sustainable products and services.

Output C.1. “Hotspot” sectors of unsustainable consumption and production assessed and associated circular economy opportunities identified.

Through this Output the project will conduct an assessment in each of the cities to identify current critical sectors where unsustainable consumption and production patterns have been identified. The assessment will identify industries and characterize their processes as well as assess products available in the local market to quantify available harmful chemicals (with focus on POPs and Mercury). The main purpose is to prioritize interventions and identify suitable circular economy opportunities (business models, industrial symbiosis, etc.) aligned to a zero-waste vision. Furthermore, the findings will support enhancement of political actions to reduce waste generation and hazardous substances and more effectively achieve local/national development planning goals by promoting sustainable production and consumption.

Until the economy has achieved partial or complete circularity, residual wastes that continue to be generated will need to be managed in an environmentally sound manner. In view of this transition the project will contribute to identify needs of segregation for different waste streams in cities with focus on those ones containing hazardous chemicals such as POPs/Mercury, Highly Hazardous Pesticides (HHP) or any other chemicals of concern, and evaluate available treatment, and disposal technologies in place. The project will support the introduction/adoption of Best Available Techniques (BAT) and Best Environmental Practices (BEP) to upgrade these treatment/disposal processes and avoid or minimize the emissions of POPs and/or Mercury releases. This Output will work on the improvement of existing treatment and disposal facilities (co-processing, incineration, sanitary/security landfills, etc.) as well as the introduction of alternative treatment and disposal practices within the cities. Within this activity, the assessment of health care waste management will be of particular interest.

Output C.2. Capacity built in industries, designers, and producers based on green chemistry and circularity principles, and demonstration of cleaner production to design/phase out chemicals of concern and waste.

Through this Output the project will support demonstration activities to evidence effective practices to phase out chemicals of concern (with focus on POPs/Mercury) in prioritized value chains identified in the cities. The activity will conduct facility/entity assessments and subsequently train industries and private sector entities on the assessment/selection and introduction of safer/cleaner alternatives into existing processes, the optimization of production processes (cleaner production) and familiarize them with the benefits of safer alternatives and cleaner production processes. This activity will contribute to minimizing harmful substances contained in products and consequently in waste streams, facilitating the recovery and recycling of materials, thus diverting waste from landfills as well as minimizing impact to health and the environment.

The following sectors will be considered for the development of the pilot activities:

Electronics: e-products are manufactured containing hazardous chemicals (fluorinated greenhouse gases (GHGs) of F-gases, flame retardants, mercury, and lead, among others). In addition, the rudimentary e-waste recycling practices used in informal settings lead to the release of these chemicals including dioxins and furans. The project will support the phase-out of harmful chemicals ((e.g. POP flame retardants) from e-product manufacturing by supporting product manufacturers in identifying and introducing alternatives to harmful chemicals using green and sustainable chemistry solutions, which will allow materials to be kept in use for longer and minimize impacts on human health and the environment.

Building and Construction: this is one of the largest end markets for chemicals. It uses a wide range of products containing various outputs from the chemical industry, ranging from commodity chemicals such as plastic resins — for example, polyvinyl chloride (PVC), polyethylene (PE) and polypropylene (PP)— to specialty chemicals like paints, asbestos, coatings, adhesives, sealants, advanced polymers, and additives. In materials such as *Extruded polystyrene (XPS) and Expanded Polystyrene (EPS)* HBCD can also be found. The project will support the phase-out of chemicals of concern from construction products by supporting product manufacturers in identifying and introducing alternatives to harmful chemicals, such as by using green and sustainable chemistry solutions. This will be linked to activities in Output A3 on green procurement.

Packaging: while different materials are used for packaging, this Output will focus on plastics packaging. In particular, polypropylene (PP); high-density polyethylene (HDPE); low-density polyethylene (LDPE); polyvinyl chloride (PVC); polystyrene (PS); polyethylene terephthalate (PET); and polyurethane (PUR), which make up 65% of total plastics use. Packaging plastics are made from a polymer mixed with a complex blend of additives such as stabilizers, plasticizers, and pigments, and might contain unintended substances in the form of impurities and contaminants. Substances such as bisphenol A (BPA) and certain phthalates, which are used as plasticizers in polyvinyl chloride (PVC), have already raised concerns about the risk of adverse effects on human health and the environment. The project will support the phase-out of harmful chemicals (e.g.

PFAS, SCCPs, POPs flame retardants, BPA, phthalates, etc.) from plastic production: support plastic and product manufacturers in increasing recyclability and identifying and introducing alternatives to harmful chemical additives using green chemistry solutions.

Textiles: Textile production is also a chemical-intensive sector. The following hazardous chemicals can be found along textile value chains: pesticides, PFOS, PFOAS, PFHXS, SCCP, POPs flame retardants, among other substances of concern. The project will promote innovation in textile production processes (through green and sustainable chemistry): support collaboration between innovators, fiber producers, chemical suppliers, textile mills and/or brands to develop and demonstrate alternative processes, materials and/or chemicals with the desired properties that avoid using substances of concern.

The project will design and implement a programme for strengthening the capacity of industries, designers, and producers (with local and national presence). The objective is to support them in applying LCA to analyze impacts throughout the value chain; harness innovation for the design and scale-up of safer, more sustainable products and production processes (using best available technologies and more efficient, cleaner production processes); and provide services to improve resource efficiency (energy, water, materials) in production and product reusability or recyclability, including through sustainable materials management (recycled or renewable content) and by phasing out chemicals of concern to lower the life cycle impact of products and processes.

Output C.3. Feasibility studies and piloting activities carried out to increase recycling and reuse of materials in key value chains. Circular business models developed.

The adoption of circular economy models is a necessary condition for the cities to achieve their zero-waste vision. Through this Output the project will support feasibility studies to introduce circular economy principles in prioritized value chains: i) eliminate waste and pollution, ii) circulate products and materials (at their highest value), and iii) regenerate nature. The analysis consists in exploring technical, quality, material efficiency, economic and financial dimensions of circularity applied to specific value chains to ensure sustainability and needs met for every stakeholder.

Piloting activities will be also supported to provide evidence in the field of the implementation of sustainable business models. Concrete actions will be implemented towards: i) maintaining, reusing, refurbishing and remanufacturing end-of-life products; ii) Enhanced product design for circulation back into the economy by facilitating its recycling, repair and/or durability and iii) Enhanced energy and material efficiency in production processes. Every key stakeholder of the value chain will be identified and engaged from the beginning. The piloting activities scalability will result in a significant increase in recycling and reuse of products and materials in key value chains.

The following value chains were preliminary prioritized to promote circularity business models:

Electronics: Support circular principles in design processes by building the capacity of manufacturers and producers to improve product design, with a focus on e-product lifetime extension through improved durability, adaptability, repairability, ease of maintenance, etc.; introduction of recycling-friendly materials and components and sustainable non-plastic packaging; phase-out of harmful chemicals; improved product recyclability and ease of dismantling at end of life to facilitate the recovery of resources and reusable components.

Plastics Packaging: Promote product innovation and redesign through capacity building of manufacturers in the (re)design of eco-friendly products, sustainable or alternative non-plastic packaging, product recyclability, green packaging and the phase-out of harmful chemicals used in products. Create an effective after-use plastic economy which is critical to capture more material value and increase resource productivity; it also provides a direct economic incentive to avoid leakage into natural systems. Promote innovations towards decoupling plastics from fossil feedstocks.

Construction: The project will support the design of construction-related products that can be reused, reassembled, reconfigured, and recycled by supporting local and national product manufacturers and recycling companies in identifying and introducing recycled materials and product designs of high quality and durability which can be easily reused, repaired, recycled or recovered. Activities led to circularity may include: increase amount of recycled content; better management of waste during construction and demolition, including more advanced material separation techniques (this can help increase the amount of materials to be reused or recycled); innovations in design and materials; extend constructions useful life; sustainable building certifications.

Transportation: The production of components going into vehicles—steel, plastics, glass, aluminium, rubber, paints, etc.—remains a resource- and carbon-intensive process. To turn this around and reduce its environmental footprint, the sector will need to rethink asset utilization, components production, and lifetime optimization in a fundamental way. Activities directed to promote circularity within the sector may include: recycling end-of-life tires, vehicles utilization improvement, more lightweight designs (reducing materials and energy needed), promote resource conscious practices such as remanufacturing engines, end-of-life management to make materials recycled into products of similarly high value and more durable.

Output C.4 Demonstration activities on innovative tools to foster sustainable consumption in public and private sectors, and consumers.

Promoting sustainable consumption, in public and private sectors and consumers, is equally important to limit negative environmental and social externalities as well as to provide markets for sustainable products. Through this Output the project will support cities in implementing specific tools enabling consumers' engagement in sustainable purchasing practices. In partnership with key stakeholders, the following tools will be considered:

Ecolabelling: this activity may include the determination of the criteria (addressing environmental impacts throughout the product's life cycle, including production, use, and disposal) for products/services that will be labeled; development of the standard required to be met by the product/service; establish the certification process; promote the ecolabel through a communication strategy; monitoring compliance and evaluation on the impact on environmental performance. This will require a collaborative effort between government, industry, and certification bodies.

Sustainable Certification: this activity may include identifying the need for a sustainable certification in a specific industry or product category; developing certification standards (including criteria related to the environmental and social performance of the product, service, or organization being certified); developing and piloting certification process; launching and promoting the certification; monitoring and evaluating the effectiveness of the certification. It will require collaborative effort between government, industry, and certification bodies.

Green Packaging: this activity may include the packaging needs assessment, identify sustainable materials that meet the assessed needs; design packaging for efficiency; test and evaluate the designed packaging; promote green packaging with marketing and communications strategies; monitor and evaluate effectiveness. Implementing green packaging will require a collaborative effort between product designers, manufacturers, and packaging suppliers.

Demonstration activities to encourage sustainable consumption will also be directed to educate consumers about the criteria and standards of ecolabels, the benefits of certifications (trust and environmental performance), as well as educating on waste reduction at source and sorting at source, recycling, and reuse of products/materials. The development of user-friendly digital tools to support sorting at source and recycling will be assessed and developed.

This activity will be complementary to Output A.4 which will support the drafting of the suitable policies, regulations, and incentives to encourage behavioral change at scale on the consumption side ensuring the demand of greener products/services and production processes.

COMPONENT 4: Training, education, advocacy, and evaluation at city and national level

This project component's objective is to make knowledge accessible for raising awareness of every key stakeholder, including the informal sector, in the waste management chain. Awareness raising and incentives will encourage behavior change of consumers and waste generators and effectively support the transition to a zero-waste city. Lastly, it will ensure mechanisms to promote sustainability, replication and scaling up of obtained results.

This component will support the monitoring and evaluation of activities periodically during project implementation to ensure the project effectively achieves these results. Best practices, project experiences and lessons learned obtained through adaptive management processes and evaluations will be incorporated in knowledge management tools for easy distribution at local, national, regional, and global levels.

OUTCOME D: Lessons learned captured and disseminated, awareness raised, and project results monitored.

Output D.1. Communication strategy implemented and awareness raised to encourage behavior change.

Through this Output the project aims to raise awareness (through education and awareness raising campaigns) among consumers, manufacturers, waste generators, and any other key stakeholder group to:

- Better understand the environmental, social, and economic impacts of the current take-make-dispose economic model and create demand for greener, safer, healthier, and more sustainable products and business models.
- Support government and private sector partners in designing and rolling-out intuitive and clear labelling and supply chain transparency requirements to facilitate greener procurement and increased recycling.
- Support awareness raising on the phase-out of harmful products and materials and the introduction of safer and greener alternatives.
- Support awareness raising on waste sorting at source among national, regional and local waste generators.
- Support communication and education to support waste diversion programmes and litter reduction.
- Support the waste sorting campaign to citizens and the dissemination of useful tools (such as digital tools (applications) for sorting) and the distribution of useful items (such as bags, composting bins, differentiated garbage cans, etc.)

- Support dissemination of best practices and best available technologies in waste prevention, recycling and management through global, regional and national awareness raising campaigns and platforms.

Lessons learned during project implementation will be periodically and systematically captured and documented in suitable formats for proper dissemination. This Output will ensure that the knowledge generated by the project will be available to the target groups which will benefit from it in their specific activities.

Output D.2. Technical Assessment of informal sector integration and formalization.

Through this Output the project will support the development and formalization of informal recyclers/recycling companies. Efforts will be directed to deliver training and education, to promote access to the benefits of circular economy models, to build/increase technical capacity and improve environmental practices (including the introduction of best available technologies) in the collection, transport, recycling, and valorization of recyclables materials. The project will support the improvement of informal recyclers working conditions and encourage their integration into the value chain. Lastly, the strengthening of the links between recyclers and those who consume their recycled materials will be sought.

A circular economy can offer numerous new green job opportunities in the collection, separation, processing, and valorization of recyclable materials. In order for a circular economy to function, recycling rates need to increase significantly from the current baseline. In addition, the capacity, know-how and number of recycling companies, which play a critical role in diverting waste away from landfilling/incineration/dumping, also need to increase substantially. In many emerging economies and Least Developed Countries the majority of recyclables' collection is undertaken by informal workers or semi-formalized entities, while the recycling process or export process is often assumed by formalized entities (including private sector entities, NGOs, etc.). Most recycling activities, ranging from secondary metals to e-waste processing, from composting to the recycling of plastics, from lead acid batteries to waste oil, need to be increased both from a capacity/volume perspective but also from an operational/greening perspective. Even though recycling processes often have a "green connotation," in reality practices and technologies applied by recyclers/recycling companies could be significantly improved to reduce their environmental footprint. Especially in the area of the recycling of hazardous wastes, such as waste oils, batteries, e-waste, plastics, among other materials, considerable progress can be made to reduce the environmental footprint.

Output D.3. M&E and adaptive management applied to assess activity performance and GEB impact.

Project-level monitoring and evaluation will be undertaken in compliance with standard UNDP requirements as outlined in the [UNDP](#)

POPP (http://www.undp.org/content/undp/en/home/operations/accountability/programme_and_operations_policies_and_procedures.html) and [UNDP](#) Evaluation

Policy (http://www.undp.org/content/undp/en/home/operations/accountability/evaluation/evaluation_policy_of_undp.html); furthermore additional and mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF M&E policy (<http://www.thegef.org/gef/Evaluation%20Policy%202010>) and GEF guidance materials.

Monitoring and Evaluation activities will at a minimum include: Inception Workshop (and Inception Report); Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP; Monitoring of indicators in project results framework; GEF Project Implementation Report (PIR); NEX Audit as per UNDP audit policies; Supervision missions; Oversight missions; GEF Secretariat learning missions/site visits; Independent Mid-term Review (MTR); GEF Tracking Tool; and Terminal Evaluation (TE).

In addition, the project aims to undertake a gender assessment during the project's PPG phase, to help assess the various gender dimensions of the project and its interventions and determine the various ways in which city waste management and associated global pollutants (e.g. UPOPs, Mercury) impact various occupational and population groups. Efforts will be made to collect data disaggregated by sex in every project area. This gender assessment will be used to help adjust the design and interventions of the proposed project in such a way that gender equality and women empowerment can be better achieved throughout the project's implementation.

Output D.4. Experiences exchanged at city networks for scale-up of good practices in other cities of the country and region.

Encouraging experiences exchanged at city networks is a critical step in scaling up good practices to other cities within the country or the region. The following activities can help facilitate this process:

- Identify relevant stakeholders: identify the key stakeholders involved in the city network and convene them. This can include representatives from city governments, NGOs, businesses, and community organizations.
- Share best practices: This can be done through workshops, conferences, or online platforms. The aim is to highlight successful initiatives (as well as less successful ones and lessons from them), projects, best practices, and policies that have worked in the city and could be replicated in others.

- Foster dialogue and collaboration: Encouraging dialogue and collaboration between cities can help create a shared understanding of common challenges and potential solutions. This can be done through peer-to-peer exchanges, joint projects, and partnerships.
- Provide technical assistance: Providing technical assistance can help cities replicate successful practices more effectively. Technical assistance can take the form of training programs, mentorship, and access to experts.
- Communicate and disseminate: Finally, it is important to communicate and disseminate the lessons learned from successful practices. This can be done through publications, online platforms, and conferences. Sharing knowledge and experiences can help inspire other cities to adopt similar practices, thereby scaling up good practices across the country or region.

The project will assist each of the cities in developing new or strengthening ongoing city networks towards the objective of the Zero Waste and Zero Pollution Vision within its municipalities.

GLOBAL COMPONENT – Coordination, communication, technical assistance at global level.

The global component will conduct the function of coordination, communication, learning and knowledge management of SWAP Initiative, and support a zero-waste clearing house and zero waste financial platform and partnership.

The Zero waste clearing house will serve as a platform to build network and partnership on waste management, provide policy and technical advice, facilitate knowledge sharing, and raise public awareness. It will support the activities included in the five locations participating in Outcomes A-D, but also beyond these 5 countries. Through partnerships established with experts in this area^[2]^[27], the clearinghouse will provide a one-stop-shop to address questions on city solid waste management. This clearing house will be supported by the partnership established between UNDP and Avfall Sverige (The Swedish association for the waste management and recycling)^[3]^[28]. It will aim to develop partnerships across the city waste management network such as ISWA, regional and national waste association and reach out to city policy makers (mayors), showcase the positive impacts to avoid redundancy and accelerate the zero waste movements globally. This component will be a fully global one and will be executed by UNDP's global chemical and waste team in partnership with Avfall Sverige (responsible party), while benefitting from the expertise of UNDP's Sustainable Finance Hub.

The zero-waste financial platform and partnership aims to support cities to address their financial challenges and connect them with global and regional investors. Furthermore, SWAP aims to build a zero-waste enabling facility through partnerships for the technical assistance to the investment and help the capacity building of innovative and diverse financial approach at the city level. Finally, the SWAP Initiative will support the partnership with other UN agencies and relevant global and regional thematic platforms, city network, and promote zero waste initiative globally.

OUTCOME E: Clearing house on Zero Waste Operated.

Output E1: Technical and financial advice to the municipalities for the development and implementation of zero waste strategy provided.

The cities within the SWAP Initiative will be continuously assisted through the global Zero Waste clearing house. The clearing house envisions to providing answers, advice and support to the diverse waste management problems and circularity challenges that the cities are currently facing towards its zero-waste goal. A digital platform for learning, knowledge management and communication will be built for the functions of the clearing house.

Through this Output, the following main activities of the Clearinghouse are listed below:

- Provide a one-stop-shop to address questions on municipal solid waste infrastructure and management, help identify and analyze challenges, data, target, review and advise on short-term and long-term solutions towards Zero Waste goal, referring to the experience and lessons learned in other cities of the world.
- Provide advice on the governance, accountability, responsibility framework and enforcement.
- Provide policy advisory and technical support services in terms of BAT/BEP.
- Promote collaboration and twinning arrangements between municipalities. Help build national and regional waste management associations.

- Communicate circular business models and case studies. Develop and distribute a newsletter on the progress of the zero-waste initiative.
- Provide technical and program advisory services to municipalities concerning the infrastructure development, finance, and governance in waste management.
- Support education, awareness, capacity building (technical and institutional) and training. The proposed training should target actors along the entire product lifecycle, from producers to consumers to waste management solution providers, the youth, local governments, among others.
- Communicate circular business models, through case studies, webinars, and publications.
- Capacity building on sustainable waste management planning, consultative processes, and communication, through E-training and dialogues (with focus on high-level stakeholders in municipalities).
- Support to develop cost recovery, financing, and regulatory instruments for sustained funding.
- Support for preparation of large investments in infrastructure.

In 2022, UNDP and Avfall Sverige worked with graduate students at the International Institute for Industrial Environmental Economics of Lund University to assess the principles that the Clearinghouse should pursue to maximize its impact. Some of the recommendations that were made will be taken up in operating the Clearinghouse:

- Follow a holistic and inclusive approach:
 - Including diverse stakeholders e.g., private sector, youth
 - Holistic approach to awareness creation and education
 - Targeting at the entire waste cycle as well as related issues
- On Knowledge Management, establish a digital platform which will:
 - Be user-friendly and based on topics or needs
 - Allow for connecting actors, sharing information, virtual training
 - Connect easily and rapidly with the main stakeholders
- Identify key partners (a list was drawn by the authors of the study) and assess the entry points for cooperation.

Output E2: Global Zero Waste City Finance Platform and Zero Waste Partnerships strengthened.

Frequently, cities face challenges in mobilizing resources to build the sustainable waste infrastructure and facilities that can process waste to resources for reuse, as well as the circular economy. In addition to the potential support from the central government or bilateral donors (in case of Least Developed Countries), innovations in financial models are necessary to address the financial needs towards zero waste. The SWAP Initiative aims to coordinate and connect potential global investors to five pilot cities and identify investment opportunities and partnerships. In addition, it will help the development of financial products based on the requests of cities. This stream of work will benefit from the expertise and network of the Sustainable Finance Hub of UNDP and the experience and methodological work developed by the Biodiversity Finance Initiative (BIOFIN), which can be easily replicated from the biodiversity field of work.

Through partnerships in the UN-development system, the SWAP initiative aims to establish a Zero Waste enabling facility to support prioritized activities in participating cities such as feasibility studies, risk analyses and de-risking measures to unlock investments. This facility will also look at the replication opportunities beyond the pilot cities. UNDP's Sustainable Finance Hub will be involved to facilitate the development of diverse financial instruments such as insurance, guarantee, green bonds, partnership with private sectors and institutional investors. SWAP will also help the capacity building of innovative finance such as with Microfinance Institutions to support innovative initiatives in the city, circular business by MSMEs and sustainable consumption such as providing green loans to citizens and SMEs for purchasing eco-products.

UNDP will also seek the collaboration with UNEP, UN Habitat and the World Bank to promote the zero-waste vision collectively through SWAP initiative. The platform will be conducive to partnership strengthening such as the collaboration with relevant international treaties (BRS, Minamata convention, SAICM, Montreal Protocol), as well as relevant global platforms (IOMC, C40 Cities, CCAC, ISWA, ZWIA). It is planned that at least three international conferences/workshops will be organized during project implementation to promote the most promising solutions. UNDP will seek to organize these events with lead institutions identified in the field of zero waste, especially UN Habitat, UNEP, ISWA, and the World Circular Economy Forum (WCEF). The partnership and platform will also contribute to the UN resolution on zero waste that was adopted by the United Nations General Assembly (UNGA) on 14 December 2022 and its further development.

The SWAP initiative will naturally be linked to the GEF Integrated Programme on Eliminating Hazardous Chemicals from the Construction and Fashion Supply Chains, which seeks to accelerate the uptake of sustainable production practices that eliminate reliance on harmful chemicals in the construction and fashion sectors. The SWAP project and the Supply Chain IP will work together to replace resource-intensive processes and materials with more sustainable alternatives and creating more circular and transparent value chains.

The SWAP initiative will also exchange knowledge with the GEF IP on Circular Solutions to Plastic Pollution. The particularity of SWAP is to address waste streams in an integrated way. Plastic is an important material/waste stream that need special consideration. Cities have willingness and tools to reduce the use of the plastics particularly in the packaging and shipping applications, and develop the policies, incentives, and instruments to reduce the plastic leakage and pollution.

Furthermore, the SWAP project will learn the experiences from the GEF Sustainable City Programme and other city programs to help combat climate change and increase the resilience of cities. This will be achieved through integrated planning process that will put together the investment demands related to the waste management, circular economy, resource efficiency, and ocean protection. In coastal cities, the increased frequency of violent climatic events leads to overflowing and flooding of the city. By rationalizing and helping reach zero waste, SWAP will also help cities adapt to the impact of climate change.

Close coordination and exchange of information and sharing of best practices will be ensured with above IPs through the global platform of SWAP initiative with the aim to shift existing investments and trigger the needed transformative changes in the concerned counties and pilot cities.

Innovation, Sustainability and Potential for Scaling Up:

Innovation:

The innovation of this Global Initiative relies on its integrated approach in view of the need to support emerging economy and Least Developed Countries in adopting effective and sustainable waste management models with a gender-responsive and inclusive approach, while promoting the shift from unsustainable linear patterns to a clean and circular economy, introducing upstream solutions, circularity of materials and sustainable policies (such as green procurement). The Initiative envisions zero-waste societies where: Economic growth is decoupled from waste generation; Materials are circulated at their optimum quality, so their value is preserved as long as possible; Producers use recycled resources as the main inputs in making new products; the disposal of residual waste is regarded as a last resort and the highest percentage of the wastes generated are reused, recycled, sanitarly landfilled, or converted to biogas, bio fertilizer and energy, applying the BAT/BEP that prevent the release of pollutants; Societies' development is sustainable without a build-up of toxic and hazardous chemicals in their territories; and waste management becomes a core indicator for a city to demonstrate its commitment to social and environment responsibility.

For that purpose, the project will base its interventions on previous successful experiences as well as developing and introducing new approaches that have not yet been tested in the region, but which are thought to be technically and financially feasible and sustainable. The project will address different processes to promote the reduction of wastes volumes (which also implies the reduction of hazardous substances) and improve the management of different waste streams such as: domestic waste (organic, paper, cardboard, glass, metal and plastics), e-waste, construction waste, healthcare waste, industrial waste, agricultural waste, etc., depending on local needs and circumstances.

Lastly, never before a comprehensive and holistic multi country/city project has been implemented to promote integrated chemicals and waste management by supporting cities in emerging economy and Least Developed Countries towards zero-waste vision in line with waste hierarchy principle with a focus on city waste. This approach is further enhanced with the assistance of a Global Component which will support cities by providing technical and policy advice, as well as enhancing partnerships with key national and international stakeholders.

Sustainability:

The project will address and support several aspects that contribute to sustaining results beyond the project's duration. The following can be highlighted:

- Developing a long-term strategy for zero waste city based on local needs and circumstances as well as a Comprehensive Waste Management Plan where investment and suitable financing instruments and incentives are included.
- The creation of an enabling environment through improved national policies and regulatory frameworks for comprehensive waste management and circular economy approach.
- Piloting activities which evidence business models and sound practices that ensures benefits in different dimensions: social, environmental, and economic.
- Capacity built in key stakeholders. Through its different interventions the project will engage key stakeholders and deliver training and education to build technical capacity for the reduction of waste volumes. In particular the following activities can be highlighted: trainings and education programmes; technical assistance (underlining mainly those foreseen within the demonstration activities and pilot projects); networking and collaboration (such as City Twinning and Clearing House); data collection and analysis (Waste Management Plan and Zero Waste Strategy); policy and regulatory support; funding measures and financing mechanisms assessment; engaging in advocacy efforts and public awareness campaigns to promote the importance of sustainable consumption and waste management practices, building support for waste reduction and recycling initiatives.
- Awareness raising of all those involved and/or impacted by waste management practices, and sustainable production and consumption which will ensure that the behavioral change is sustained.

Scale-up:

The potential for scaling up the results is based on the following:

- Multiple and varied interventions will be implemented for different waste streams and different local contexts, which will facilitate the scale-up and replication of results. Scaling up of results to national level will be enhanced through building business models in the pilot cities that could be replicated in other cities. The project will document the interventions applied by the demonstration projects, which will allow other stakeholders to replicate such practices and select the practices and technologies most fitting their needs and circumstances.
- National policies, regulations and plans which will be developed as part of the project Component 1 will also support the scale-up/replication of project interventions among entities/partners which did not participate in the project, through enactment and monitoring of these regulatory measures by national enforcement entities.
- The development of suitable financing instruments under Component 2 will also be strategically contributing to replication and scale-up since it will make finance available for encouraging key stakeholders in new investments for improving the sound management of waste streams, as well as developing circular business models and adopting green principles among processes and products after project completion. In particular, this component foresees the development of a Strategy (Output B.5) to ensure the replication and scaling up of results obtained by the project through its different interventions. This strategy will analyze feasible alternatives to achieve national scaling up.
- SWAP will facilitate the city to city learning and knowledge exchange at the national level to provide guidance, and work with finance institution to scale up the best practice.
- Türkiye already has a nation wide zero waste city network which will facilitate the learning between cities through the SWAP project; Uruguay is involving the three major cities of its country, Tunisia and Sierra Leone are participating through their capital cities, which represents significant share of economic activities of the country and is of great relevance for the scaling up at the national level.
- The establishment of a Zero Waste Platform will contribute for the results' scale-up since it will favor South-South cooperation, exchanges of experiences, knowledge and technologies between urban stakeholders that face comparable challenges within similar socio-economic environments.
- Finally, it will have a global influence, by providing useful insights into practical and effective solutions to inspire, replicate and scale-up in different urban contexts, leverage transformative change in existing structures, contributing as well to attain the 2030 Agenda for Sustainable Development.

Gender Equality and Women's Empowerment

It is frequently observed that women are traditionally responsible for managing household waste as part of their daily responsibilities, meaning they have greater engagement with domestic waste management and waste management services. In the large informal sector of waste management, women are mainly found at the lower level, working as waste pickers and

separating at landfills. At the same time, men dominate the higher-earning and decision-making roles (whether as truck drivers, junk dealers, repair shop workers, or in buying and reselling recyclables). This again reflects the gendered division of labor in society, but also means that women are often excluded when waste management activities are formalized, missing out on protections and benefits such as social security or higher wages.

To better understand the gender realities within the framework of the project activities in each of the participating cities, a gender analysis will be carried out as a first step during PPG phase. This analysis will help identifying the different roles and responsibilities of women and men within the waste management value chain, as well as identifying the specific needs and challenges faced by women in this sector. Based on this diagnosis, a Gender Action Plan will be developed to mainstream the gender approach in the execution of the project, which will make it possible to maximize results taking into account the realities and needs differentiated by sex, as well as to make visible the contribution of women and men to the achievement of inclusive sustainable development in the different components and activities proposed, within a gender-sensitized environment.

Likewise, the project will seek to strengthen and promote the wide range of development opportunities that the paradigm shift around “waste as resource”, the move away from landfilling towards waste prevention, reuse, recycling and recovery, and the circular economy offer, where women can thrive in all areas of the industry, from entrepreneurs in waste recycling, to development workers, researchers, high-level managers, government officers and Ministers.

The following objectives will be pursued:

Develop gender-sensitive policies. Policies to be developed by the project will incorporate gender considerations throughout its design, implementation, monitoring, and evaluation processes. This should involve ensuring that women and men have equal access to resources, opportunities, and benefits, and that gender-based discrimination and biases are eliminated. It will include specific interventions that address the specific needs and priorities of women and other marginalized gender groups, gender-sensitive indicators to track progress towards gender equality and empowerment, and gender-responsive budget to ensure resources are adequately allocated.

Increase women's participation. Improve the spaces for participation and empowerment of women as agents of change to ensure that the prioritized sectors are free of POPs and their residues. Women's participation will be increased by providing them with training and capacity-building opportunities to improve their skills and knowledge in different sectors covered by the project. Women will also be encouraged to take on leadership roles, supporting them with leadership trainings and/or mentoring programs. Women's representation in decision-making positions will be also ensured.

Ensure every new initiative in chemicals and waste management (including planning, design, implementation, monitoring, and evaluation) are gender-responsive and provide clear connections to other sectors, such as poverty and education, and a commitment to efforts towards gender equity, the economic empowerment of women, and better opportunities for girls and women to receive quality education. Women and men have equal access to education and training on chemicals and waste management, and their capacity is equally strengthened, including technical knowledge and skills that equally empower women and men and facilitate the development of gender responsive policies and projects within the chemicals and waste management sectors.

Guarantee the access to finance by women. Firstly, financial institutions will be encouraged to offer tailored financial products and services that specifically cater to the needs of women. Secondly, women will be provided with financial literacy training, which will help them to understand the various financial products available and make informed decisions about borrowing and investing. Thirdly, government policies will be designed to support women entrepreneurs and encourage financial institutions to lend to them. Fourthly, women will be given equal access to information and networking opportunities that can help them to develop their businesses and access finance. Lastly, cultural and social barriers that prevent women from accessing finance will be addressed through awareness campaigns and education programs.

The project will ensure that gender-disaggregated data is available and collected, as this is an important source of information to better identify routes of exposure and chemicals' impacts on the health of women and men. Lack of such data results in poor exposure standards that are “usually based on an assumed average male height and body weight; this reduces protection for both women and children”^[1]. Baseline gender-disaggregated data provides the foundation for a better understanding of gender-dependent hazards that, in turn, will improve the design and implementation of protective and preventive measures.

Stakeholder Engagement

During the preparation of this PIF, UNDP through its county offices conducted conversations related to the project idea, target, activity, and budget with the counterparts in the ministries of the government and cities. The selection of pilot cities were recommended by the central government with commitments from the cities. UNDP developed and sent the questionnaire to collect

necessary information such as rationales, related policy framework, baseline data, coordination mechanism between central government and local government, challenges, and related actions on the zero waste. The concerned governments provided the information on the four cities as presented in this document. There were also meetings organized by UNDP and the government focal points to clarify the related questions on activities, as well as the co-financing.

In terms of specific engagement for each of the 4 cities:

Montevideo: The preparation of the proposal was carried out together with the institutions involved. Several consultations and meetings were held with the Director of Cleaning of the Municipality of Montevideo and his team, the General Director of Environmental Management of the Municipality of Canelones; and the Planning Manager of the Ministry of Environment and her team. The proposed objectives and activities were developed in consensus among the institutions and respond to environmental commitments of each of them, as well as previous cooperation experiences with UNDP in waste management.

The Ministry of Environment is beginning to implement the National Waste Plan, which involves [closing landfills in different regions](https://www.gub.uy/presidencia/comunicacion/noticias/ambiente-destinara-17-millones-dolares-para-cierre-vertederos-cielo-abierto) (<https://www.gub.uy/presidencia/comunicacion/noticias/ambiente-destinara-17-millones-dolares-para-cierre-vertederos-cielo-abierto>) of the country, while the Municipality of Montevideo is developing innovative waste management programs, which includes the creation of [eco centers](#) and the [improvement of infrastructure in sorting plants](#) to process more materials and more efficiently. The Municipality of Canelones has a Comprehensive Cleaning and Waste Management Plan that includes the recovery of household organic waste through the [Sustainable Home Plan](#), or the [Ecofincinas](#) program among others, seeking to involve public office staff and citizens in the development of classification, recovery and recycling strategies. All these projects and initiatives are aligned to a Zero Waste Strategy.

Kocaeli: UNDP met in 2022 with the representative of the government of Türkiye in UN headquarters to discuss the zero-waste initiative after the UN GA decision on Zero Waste proposed by the government of Türkiye. A strong commitment of Kocaeli Municipality to implement National Zero Waste Policy and By-law on Zero Waste at local level can be seen through the aforementioned activities:

- Kocaeli Municipality established a new branch called “Zero Waste Branch” under its Environment Department that is specifically focusing in implementation of zero waste in Kocaeli.
- Kocaeli Municipality started implementing zero waste practices at municipality buildings by putting separate collection bins for all types of recyclables plus unrecyclable waste.
- The municipality established a Zero Waste Theme Park to increase awareness of the community on zero waste.
- The municipality established 12 mobile waste delivery centers in different districts of the Kocaeli.
- Kocaeli Municipality held a 3 days Zero Waste festival together with the Kocaeli University in 2022. The festival aims to increase the awareness of citizens on zero waste through workshops, seminars, demonstrations, etc.

Tunis: On 30 March 2023, UNDP and the Ministry of Environment of Tunisia gathered national partners including Government agencies and the municipality of Tunis to discuss the SWAP project and provide inputs – this marked the first international day for zero waste as decided by the UN General Assembly in 2022. The meeting was chaired by the Hon. Minister of Environment of Tunisia, Ms. Leila Chikhaoui. There will be cooperation between the 3 municipalities of Greater Tunis to ensure joint solutions to the common waste challenges, with the facilitation of the Government and the support of the project.

Freetown: close cooperation and discussions were held between the UNDP Country Office and the Sierra Leone EPA. Under the leadership of the municipality of Freetown, the Transform Freetown plan has been adopted and is being monitored. The Plan sets out a series of priorities and targets that span across 11 sectors focused on four main clusters, 1) Resilience, 2) Human Development, 3) Healthy Cities, 4) Mobility.^[2] This plan demonstrates the commitment of the city to a Zero waste agenda, which was reaffirmed by the mayor of the city, during her intervention at the Stockholm+50 conference, during the UNDP-Avfall Sverige-ISWA-SEPA official side event.

Globally: in 2021, the UNDP Zero waste strategy project started as an agreement between UNDP and Avfall Sverige, which set out to deliver expertise for the improvement of waste management in three pilot cities: Tianjin, China; five municipalities in the Great

Metropolitan Area (GAM) of San Jose, Costa Rica; and Kigali, Rwanda. Assessment to zero waste strategy were provided and documented in the publication “Zero Waste Strategy Project”.^[3]

In 2022, UNDP published the report “Transitioning to a Circular Economy through Chemicals and Waste Management”^{[4]²⁹}, which presented advices on chemical and waste management and zero waste approach taken by UNDP, as well as UNDP’s GEF-supported chemical and waste portfolio. The publication was broadly distributed through UNDP’s SparkBlue knowledge network, UNDP’s Climate Promise Platform and City2City network. A corporate level offer of UNDP on Zero Waste was also developed after internal and external consultations in 2022 as part of services to implement UNDP’s Strategic Plan (2022-2025), to articulate the dimensions of the support to the program countries. This SWAP Initiative is fully consistent with the vision and service lines of UNDP’s Zero Waste Offer.

In 2021 and 2022, UNDP led Stockholm+50 national consultations by working closely with the government of Sweden and UNEP. The national consultations were carried out in 56 countries and engaged over 50,000 people through in-person, hybrid and virtual events. Waste and plastics were part of the main challenges raised by the countries in the consultations. One of ten key messages from the consultations is that “Countries stress the need for strong drivers of economic transformation and a greener, healthier development paradigm. This includes economic reforms, shifting investment flows toward sustainable consumption and production and circularity.” A global synthesis report of national consultations “A healthy planet for the prosperity of all-our responsibility, our opportunity”^{[5]³⁰} was published by UNDP in 2022 .The concept of SWAP initiative fully aligns with the recommendations of these national consultations.

The Zero-Waste concept was presented at the Stockholm+50 conference in Sweden on 2 June 2022, in an official side event organized by UNDP, Avfall Sverige, ISWA, and Sida with the title of “Waste Management – An urgent issue to be addressed at the local and municipal level to achieve Sustainable Development Goals and to fight climate change”. The event featured city mayors’ experiences on targeting Zero Waste. Governments, CSOs and Private sector participating in Stockholm+50 were introduced to the concept and engaged on this occasion. The mayor of Freetown, Sierra Leone, was one of the speakers during that event^{[6]³¹}.

UNDP has been in regular contact with United Nations organizations involved in the promotion of BAT/BEP in green and circular economy (UN PAGE: Partnership for Action on Green Economy) and waste management, in cooperation with Local governments and municipalities through the Waste wise city network^{[7]³²}. Other international stakeholders that are regularly consulted include professional associations focusing on waste management such as the International Solid Waste Management Association (ISWA) whose vision (an Earth where no waste exists) obviously fits very well with the Zero waste approach. Associations of Local Governments such as the International Council for Local Government Initiatives (ICLEI) and United Cities and Local Governments (UNCLG) are partners of UNDP. International projects connecting cities globally for implementation of the SDGs, such as the City2City network, facilitated by UNDP, were or will be engaged at the PPG stage. Networks of academic institutions that conceptualize and disseminate the Zero waste concept will be important stakeholders to associate, as well as CSOs, such as the NGO Zero Waste International Alliance, with which preliminary discussions were held during INC-1 of the Plastics treaty negotiations.

[1] “Beyond 2020: Women and chemical safety”. SAICM. [Beyond 2020: Women and chemical safety](#).

[2] <https://fcc.gov.sl/transform-freetown/>

[3] <https://www.sparkblue.org/content/zero-waste-strategy-project>

[4] <https://www.undp.org/publications/transitioning-circular-economy-through-chemical-and-waste-management>

[5] “A healthy planet for the prosperity of all-our responsibility, our opportunity”- Stockholm+50: A Global Synthesis Report of National Consultations. UNDP - [Global Synthesis Report of National Consultations](#).

[6] <https://www.sparkblue.org/event/waste-management-urgent-issue-be-addressed-local-and-municipal-level-achieve-sustainable>

[7] <https://unhabitat.org/waste-wise-cities>

[1] See UNDP's webinar on PPPs and zero waste/circular economy: <https://www.sparkblue.org/system/files/2022-06/Zero%20Waste%20Workshop%20Summary.pdf>

[2] ISWA, ZWIA, IOMC, UNEP, UN Habitat, UNITAR, IFIs (including Reg. Dev. Banks).

[3] <https://www.undp.org/news/undp-and-avfall-sverige-enter-agreement-global-waste-management-cooperation>

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

Yes

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

UNDP is the implementing agency of this global project and will oversee the development of all components and activities at the national and global levels. The global component (USD 2.2 million) will be executed by UNDP through a Direct Implementation Modality (DIM). One key activity in the global component is to provide policy and technical advice to five pilot cities through a clearing house which will be operated by a non-profit entity (Avfall Sverige) as a responsible party. UNDP's Sustainable Finance Hub, which has expertise on innovative financial instruments for development, will be involved to provide guidance and support. Additionally, UNDP will coordinate with other partners at global level such as UN Habitat, UNEP, the World Bank and IOMC for the potential collaboration on this initiative and promotion of good practices on zero waste and zero pollution.

For each of the 5 countries involved, the implementation modality will be decided during the PPG phase after the capacity assessment of the local partners, potentially ministries, given that the participating cities may be new to the GEF program policy and reporting requirements. The National Implementation Modality (NIM) with UNDP Country Office support may be considered when there is the request from the government partner due to their administrative challenges. One country (Uruguay) already confirmed that CO supported National Implementation Modality will be used. UNDP will document all execution arrangements clearly in the CEO endorsement request. Strong country ownership and separation between oversight and execution functions will be ensured, as key principles.

Table 2. On-Going Initiatives

On Going Initiatives/projects	Implementation site	Main relevance to this Project
UN Habitat Waste Wise Cities	Global – coordinated from Nairobi	The Waste Wise Network is a global network of cities, a “network between organisations working on solid waste management around the world” to align methodologies and project implementation. It will be an important partner to complement the UNDP networks to reach out to municipalities about the lessons learnt from the SWAP project.
UNDP City2City Network	Global – coordinated form UNDP HQ	City2City Network is a peer-to-peer learning platform providing curated information and bringing together cities and experts to design solutions for urban challenges. The platform facilitates engagement among cities for knowledge exchange and approaches for building inclusive

		cities. It is closely related to the objectives of the SWAP project.
C40 – Advancing Towards Zero Waste Declaration	Global	<p>The Advancing Towards Zero Waste Declaration aims to help cities accelerate the transition towards a zero waste and more regenerative future by taking ambitious, measurable and inclusive actions to reduce municipal solid waste generation and improve materials management.</p> <p>The main commitments/targets in the declaration are:</p> <p>a) Reduce the municipal solid waste generation per capita by at least 15% by 2030 compared to 2015.</p> <p>b) Reduce the amount of municipal solid waste disposed to landfill and incineration by at least 50% by 2030 compared to 2015 and increase the diversion rate away from landfill and incineration to at least 70% by 2030.</p>
ISWA/Avfall Sverige	Global – coordinated from Malmö (Sweden) for Avfall Sverige; Rotterdam, Netherlands for ISWA.	Avfall Sverige has a network of experts which is described elsewhere in this PIF and will be key to the functioning and the quality of the Zero waste clearinghouse. The International Solid Waste Association (ISWA) is an international network of waste professionals and experts whose mission is “To promote and develop sustainable and professional waste management worldwide and the transition to a circular economy.” This expertise, which benefits from working group exchanges and an annual international conference, would be interesting to associate to the implementation of the project.
Resilient Urban Sierra Leone (RUSLP) Project	Hastings, Sierra Leone	The Ministry of Finance is implementing the World Bank funded Resilient Urban Sierra Leone (RUSLP) Project and a component is the construction of the first engineered landfill site of Freetown, at Hastings
Private Initiative	Freetown, Sierra Leone	Private investors are developing bio-digesters to convert organic waste from markets into biogas as a cleaner fuel for domestic use
Private Initiative	Freetown, Sierra Leone	Plastic waste conversion to paving blocks, bricks and for road construction are all small-scale projects proposed by private individuals
Private Initiative	National Sierra Leone	Waste to Energy projects – a couple of proponents have applied to the EPA for an EIA license to convert waste to energy for Electricity Generation
ASIMA-Tunis Project	Tunis, Tunisia	A project launched in February 2020 “Tun is capitale”, initiated by the municipality of Tunis, this includes “strategic planning and multi-level governance for a multi-level metropolitan city”. The aim is to define a city strategy aligned with the Agenda 2030.
National program to support the closure of open-country landfills.	Uruguay (National and departmental)	The Ministry of Environment provides USD 17 million to assist municipal governments in landfill closures.
Tires plan Battery plan Vale plan Agrochemical and obsolete pesticides packaging plan	Uruguay (National and departmental)	National Plans that encourage the minimization of generation, and the collection and promotion of reuse, recycling and other forms of valorization of different waste streams. (Packaging, Tires, Batteries and Agrochemical wastes)

Program for the labor reconversion of urban solid waste classifiers and sorters into non-homestead waste transporters	Montevideo, Uruguay	It is aimed at sorters and former sorters of urban solid waste who wish to become formalized as non-domestic waste haulers to provide waste collection and transportation services to companies and businesses in the city.
Montevideo is ahead (Montevideo se adelanta)	Montevideo, Uruguay	Multiple investment in equipment, infrastructure and services for the improving of the waste management value chain.
ECOCENTRO	Montevideo, Uruguay	This new infrastructure (first Ecocentro) allows the reception of various recyclable materials and unused items, which will be disposed of separately to facilitate their recovery through authorized waste managers. The second Ecocentro is expected to open in El Prado in May.
Montevideo Integra	Montevideo, Uruguay	A bulky waste recycling project designed and managed by sorters.
Sustainable Homes Program Sustainable Institutions Program (schools and eco-offices)	Canelones, Uruguay	Program consisting of the delivery of equipment to each household, schools and offices in the Department, in the 30 municipalities, consisting of two intra-household containers (one for recyclable waste and one for non-recyclable waste) and a vermicompost with a nucleus of Californian red worms (<i>Eisenia Foetida</i>).
National Zero Waste Campaign	Türkiye	Türkiye's Zero Waste campaign, launched in 2017, expanded throughout the country in order to encourage recycling. Regulations on the establishment and operation of waste collection centers have been introduced, as well as for zero waste management.

Core Indicators

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)	8150000	0	0	0
Expected metric tons of CO₂e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)				
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)	8,150,000			
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting	2024			
Duration of accounting	10			

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
11,410.00	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride	1,153.00			
Hexabromocyclododecane (HBCDD)	7,300.00			
Short-chain chlorinated paraffins (SCCPs)	106.00			
Decabromodiphenyl ether (commercial mixture, c-decaBDE)	2,790.00			

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
61.00			

Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
11,410.00			

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
954,144.00			

Indicator 10 Persistent organic pollutants to air reduced

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
1,320.00			

Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	2,476,271			
Male	2,426,394			
Total	4,902,665		0	0

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

Project Core Indicators are calculated for five years of project implementation plus five years after project completion.

Core Indicator 6: Greenhouse gas emission mitigated.

GHG avoidance will be achieved through different interventions resulting in an improvement of current waste management and disposal practices, reduction of waste going to landfills as well as increase recycling rates. It is estimated that the project will gradually reduce at least 25% of emissions from waste management. For the baseline calculations, GHG emissions from waste sector for each of the cities were considered.

During 5 years of project implementation plastics waste avoidance will be 2.5 MtCO₂e (accrued value), reaching an avoidance of 8.15 Mt CO₂e (accrued value) of after 5 years of project completion.

Core Indicator 9: Chemicals of global concern and their waste reduced.

POPs and Mercury reduction will be achieved through different interventions (improving waste collection, treatment and disposal, phase out POPs/Hg containing products) mainly in working on the following waste streams: E- waste, Healthcare Waste, Industrial Waste, Construction Waste.

For the baseline calculation the NIP and MIA (or mercury assessment) documents developed by each of the countries and volumes of waste streams informed by the cities were considered. It is estimated that the project will reduce at least 25% of POPs/Hg containing materials in a gradual way from the 3rd year of project implementation onwards.

During the 5 years of project implementation POPs/Hg containing materials reduction will be 3,550 MT (accrued value), reaching a reduction of 11,410 MT (accrued value) after 5 years of project completion.

Plastic waste avoided will be achieved through different interventions that will improve collection and recycling rates, promote of green procurement and the adopt circular business models that will reduce the use of plastics. It is estimated that the project will avoid at least 20% of plastic waste in a gradual way from the 3rd year of project implementation onwards. For the baseline calculation plastics waste fraction informed by each of the cities were considered.

During the 5 years of project implementation plastics waste avoidance will be 296,114 MT (accrued value), reaching an avoidance of 954,144 MT (accrued value) of plastic waste after 5 years of project completion.

Core Indicator 10: Persistent organic pollutants to air reduced.

UPOPs reduction will be achieved in each of the cities by avoiding waste being inadequately incinerated and/or openly burnt, as well the upgrading of current treatment and disposal facilities. It is estimated that the project through its different interventions will gradually reach the reduction of at least 25% of UPOPs released as a consequence of these practices. For the baseline emissions calculations the Stockholm Toolkit was used considering treatment and disposal practices informed by cities.

During 5 years of project implementation UPOPs reduction will be 403 gTEQ (accrued value), reaching a reduction of 1,320 gTEQ (accrued value) after 5 years of project completion.

CI 11 People benefiting from GEF-financed investments.

The project is expected to benefit the inhabitants in each of the cities who are directly involved in the different activities of the project.

Risks to Project Preparation and Implementation

Summarize risks that might affect the project preparation and implementation phases and what are the mitigation strategies the project preparation process will undertake to address these (e.g. what alternatives may be considered during project preparation such as in terms of consultations, role and choice of counterparts, delivery mechanisms, locations in country, flexible design elements, etc.). Identify any of the risks listed below that would call in question the viability of the project during its implementation. Please describe any possible mitigation measures needed. (The risks associated with project design and Theory of Change should be described in the “Project description” section above). The risk rating should reflect the overall risk to project outcomes considering the country setting and ambition of the project. The rating scale is: High, Substantial, Moderate, Low.

Risk Categories	Rating	Comments
Climate	Substantial	Please see the project’s pre-SESP for details.
Environment and Social	Substantial	Please see the project’s pre-SESP for details.
Political and Governance	Moderate	Change of Government, City councils, and/or political instability, might result in new management and technical appointees within entities that are project partners, requiring additional efforts to ensure buy-in for project support and timely implementation. In the situation that this would happen, technical personnel from related UNDP CO and the UNDP RTA will do their utmost to inform and convince new decision-makers on the importance of the project, the reasons why it was developed and the positive impact it will have on human health and the environment in selected cities.
Macro-economic	Moderate	Impacts due to fluctuations in inflation and interest rate, market and currency that may affect project total budget due to a stressful economic national context. UNDP monitors expenditure on a daily basis. Furthermore, UNDP HQ provides global oversight of project delivery

		minimizing the operational risk due to currency fluctuations.
Strategies and Policies	Low	<p>The project strategy, objectives and activities are fully aligned with the national and local policies and strategies on waste management and are also fully aligned with the International Chemicals and Waste Conventions of which Türkiye, Sierra Leone, Uruguay, and Tunisia are parties, including the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Minamata Convention on mercury.</p> <p>Consequently, risks related to strategies and policies are considered low.</p>
Technical design of project or program	Low	<p>UNDP has a wide experience in chemicals and waste management: through funding from the GEF, MLF and bilateral sources, UNDP supports actions on sustainable production and consumption that eliminate hazardous chemicals and waste in products' design, production process in sectors of agriculture, healthcare, mining, energy, secondary metals, plastics, electronics, textiles, construction, as well as waste recycling and disposal. As of 2022, UNDP had active chemicals and waste projects funded by GEF in 39 countries, supporting the elimination of hazardous chemicals in multiple sectors such as healthcare, energy, secondary metals, electronics, plastics, agriculture, and promoting green production and consumption, waste recycling, green chemistry approach, green procurement, and green financial mechanisms. In addition, the design of the project foresees the involvement of key stakeholders (at municipal, national and international level) within the</p>

		scope of the activities to ensure accurate design of interventions and effective results. Therefore, risks related to the technical design of the project are low.
Institutional capacity for implementation and sustainability	Moderate	Government authorities, civil servants, private sector and other stakeholders may lack the knowledge and skills necessary for the integrated chemicals and waste management towards zero waste in line with waste hierarchy principles. An awareness-raising and training/capacity building plan will be developed and implemented for national authorities, civil servants, private sector and other stakeholders who are working on the implementation of activities within the scope of the project to ensure that they obtain the necessary knowledge, expertise and experience to perform their tasks properly.
Fiduciary: Financial Management and Procurement	Moderate	Within this category the following risks were considered: i) Currency risks and inflation effects that may affect project total budget; ii) Private sector partners are reluctant to play an active role during project execution. During the PPG stage, the main concerns, and interests of the key stakeholders (including private sector) for the project will be compiled, allowing the development of proper stakeholder engagement strategy during project implementation. In addition, the project foresees to develop a legal and financial incentives framework that enables investment in waste management infrastructure, recycling, circular economy business models implementation, and adoption of BAT/BEP to promote green supply chains. As per the budget execution, UNDP monitors

		expenditure on a daily basis and furthermore UNDP HQ provides global oversight of project delivery minimizing the risk of operational risk due to currency risks.
Stakeholder Engagement	Substantial	Please see the project's pre-SESP for details.
Other		None
Financial Risks for NGI projects		N/A
Overall Risk Rating	Substantial	

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

The Shifting to Zero Waste Against Pollution (SWAP) Initiative will deliver on the objectives of the Chemical and Waste Focal Area set for the GEF 8 Programming Directions since hazardous chemicals, including chemicals listed in Stockholm and Minamata Conventions, are used in or emitted from one or more supply chains making them widely present in cities and their different waste streams. The SWAP Initiative will support the transition to a circular economy with upstream interventions and solutions, circularity of materials, sustainable policies, green production principles and sustainable consumption patterns that consequently result in the reduction of hazardous chemicals and waste as co-benefits. The Initiative will deliver on:

Objective 1: Creation, strengthening and supporting the enabling environment and policy coherence to transform the manufacture, use and sound management of chemicals and to eliminate waste and chemical pollution.

On this Objective the SWAP Initiative will contribute by developing and strengthening policies and regulatory frameworks as well as building capacities in government institutions, private sector and CSOs to support the long-term objective of zero-waste cities. The initiative through its different interventions in close coordination with key stakeholders will contribute to evidence at municipal level practices, knowledge, strategies and planning for improving existing waste streams management (including hazardous waste) in line with waste hierarchy principles, as well as, the adoption of sustainable policies (such as green procurement) and fiscal/financial incentives encouraging waste prevention and circularity of materials in line with a circular economy.

Financing mechanism and incentives will be assessed, developed and implemented to allow for access to finance for environmental sound management of different waste streams, sustainable recycling practices, development of circular business models, and to sustain and scale project results.

Furthermore, the Initiative will contribute to the implementation of green and sustainable production principles. Mainly in collaboration with the private sector, the SWAP Initiative will support manufacturers in introducing life cycle assessments (LCA) throughout the value chain and set innovation targets for the design and scale-up of safer, more sustainable products, production processes and services to improve resource efficiency (e.g. sustainable materials management), phase out the use of chemicals of concern and lower the impact of products and processes, including at the end of life.

Objective 2: Prevention of future build-up of hazardous chemicals and waste in the environment.

The SWAP Initiative will contribute to the prevention of future build-up of hazardous chemicals and waste mainly through the interventions planned within Component 3 which aims to provide upstream solutions to promote circular economy and sustainable materials management. The project will promote LCA of value chains with focus on eliminating the use of hazardous chemicals (including mercury and POPs) in products and processes, as well as the introduction of best available techniques and

best environmental practices to minimize and eliminate emissions of unintentionally produced POPs and mercury in different waste streams management.

The project also builds on the support to the implementation of international agreements and initiatives: Stockholm and Minamata Convention and SAICM. Through its proposed interventions SWAP has the potential to generate multiple global environmental and socioeconomic benefits, including facilitating equal access of women and men to financial services and productive assets, as well as the formalization of informal waste management workers and activities to boost their livelihoods.

The Global Initiative is developed in line with the following GEF-8 principles: Cost effectiveness; Sustainability; innovation; Private Sector Engagement; Facilitates women's participation and decision-making opportunities; Facilitates gender sensitive awareness raising and communication.

Lastly, the SWAP initiative will positively contribute to combat the triple planetary crisis on the three main interlinked issues: climate change, biodiversity loss and pollution, which fully align with GEF's objective for a healthy planet and healthy people. In relation to the Kunming-Montreal Global Biodiversity Framework, the SWAP Initiative is relevant to and will clearly impact on the following targets:

Target 7. Reduce pollution risks and the negative impact of pollution from all sources, by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: reducing excess nutrients lost to the environment by at least half including through more efficient nutrient cycling and use; reducing the overall risk from pesticides and highly hazardous chemicals by at least half including through integrated pest management, based on science, taking into account food security and livelihoods; and also preventing, reducing, and working towards eliminating plastic pollution.

Target 16. Ensure that people are encouraged and enabled to make sustainable consumption choices including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, halve global food waste, significantly reduce overconsumption and substantially reduce waste generation, in order for all people to live well in harmony with Mother Earth.

The SWAP Initiative is aligned and will contribute to one of the Global Targets for 2030 "Cut global food waste in half and significantly reduce over consumption and waste generation",

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

It is frequently observed that women are traditionally responsible for managing household waste as part of their daily responsibilities, meaning they have greater engagement with domestic waste management and waste management services. In the large informal sector of waste management, women are mainly found at the lower level, working as waste pickers and separating at landfills. At the same time, men dominate the higher-earning and decision-making roles (whether as truck drivers, junk dealers, repair shop workers, or in buying and reselling recyclables). This again reflects the gendered division of labor in society, but also means that women are often excluded when waste management activities are formalized, missing out on protections and benefits such as social security or higher wages. To better understand the gender realities within the framework of the project activities in each of the participating cities, a gender analysis will be carried out as a first step during PPG phase. This analysis will help identifying the different roles and responsibilities of women and men within the waste management value chain, as well as identifying the specific needs and challenges faced by women in this sector. Based on this diagnosis, a Gender Action Plan will be developed to mainstream the gender approach in the execution of the project, which will make it possible to maximize results taking into account the realities and needs differentiated by sex, as well as to make visible the

contribution of women and men to the achievement of inclusive sustainable development in the different components and activities proposed, within a gender-sensitized environment. Likewise, the project will seek to strengthen and promote the wide range of development opportunities that the paradigm shift around “waste as resource”, the move away from landfilling towards waste prevention, reuse, recycling and recovery, and the circular economy offer, where women can thrive in all areas of the industry, from entrepreneurs in waste recycling, to development workers, researchers, high-level managers, government officers and Ministers. The following objectives will be pursued: Develop gender-sensitive policies. Policies to be developed by the project will incorporate gender considerations throughout its design, implementation, monitoring, and evaluation processes. This should involve ensuring that women and men have equal access to resources, opportunities, and benefits, and that gender-based discrimination and biases are eliminated. It will include specific interventions that address the specific needs and priorities of women and other marginalized gender groups, gender-sensitive indicators to track progress towards gender equality and empowerment, and gender-responsive budget to ensure resources are adequately allocated. Increase women's participation. Improve the spaces for participation and empowerment of women as agents of change to ensure that the prioritized sectors are free of POPs and their residues. Women's participation will be increased by providing them with training and capacity-building opportunities to improve their skills and knowledge in different sectors covered by the project. Women will also be encouraged to take on leadership roles, supporting them with leadership trainings and/or mentoring programs. Women's representation in decision-making positions will be also ensured. Ensure every new initiative in chemicals and waste management (including planning, design, implementation, monitoring, and evaluation) are gender-responsive and provide clear connections to other sectors, such as poverty and education, and a commitment to efforts towards gender equity, the economic empowerment of women, and better opportunities for girls and women to receive quality education. Women and men have equal access to education and training on chemicals and waste management, and their capacity is equally strengthened, including technical knowledge and skills that equally empower women and men and facilitate the development of gender responsive policies and projects within the chemicals and waste management sectors. Guarantee the access to finance by women. Firstly, financial institutions will be encouraged to offer tailored financial products and services that specifically cater to the needs of women. Secondly, women will be provided with financial literacy training, which will help them to understand the various financial products available and make informed decisions about borrowing and investing. Thirdly, government policies will be designed to support women entrepreneurs and encourage financial institutions to lend to them. Fourthly, women will be given equal access to information and networking opportunities that can help them to develop their businesses and access finance. Lastly, cultural and social barriers that prevent women from accessing finance will be addressed through awareness campaigns and education programs. The project will ensure that gender-disaggregated data is available and collected, as this is an important source of information to better identify routes of exposure and chemicals' impacts on the health of women and men. Lack of such data results in poor exposure standards that are “usually based on an assumed average male height and body weight; this reduces protection for both women and children” . Baseline gender-disaggregated data provides the foundation for a better understanding of gender-dependent hazards that, in turn, will improve the design and implementation of protective and preventive measures.

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

During the preparation of this PIF, UNDP through its county offices conducted conversations related to the project idea, target, activity, and budget with the counterparts in the ministries of the government and cities. The selection of pilot cities were recommended by the central government with commitments from the cities. UNDP developed and sent the questionnaire to collect necessary information such as rationales, related policy framework, baseline data, coordination mechanism between central government and local government, challenges, and related actions on the zero waste. The concerned governments provided the information on the five cities as presented in this document. There were also meetings organized by UNDP and the government focal points to clarify the related questions on activities, as well as the co-financing. In terms of specific engagement for each of the 5 cities: Tianjin: In 2018, the Chinese government issued a work plan and the construction index system for the "Zero-Waste City" pilot program. In 2019, the Sino-Singapore Tianjin Eco-city (One district of Tianjin), as the first batch of the national "Zero-Waste City" pilot, has been deepening cooperation with international cities. Drawing on Singapore's management concept, the Tianjin Eco-city has carried out joint community construction; established a "regulatory sandbox" mechanism for solid waste in the Eco-city and encouraged the early and pilot implementation of new ideas and technologies. In 2022, the Ministry of Ecology and Environment announced the list of "Zero-Waste City" for the 14th Five-Year Plan period. A total of 10 districts in Tianjin have been selected as national "zero-waste city" pilots. By the end of 2022, each pilot region in Tianjin has set up a leading group, established a clear division of labor, clear authority and responsibility, and a synergistic management system, and relevant departments have been promoting the work at a high level. In 2022, Tianjin issued the local construction work plan for the Zero-Waste City, the work plan specifies responsibilities for related work as well as target indicators and major tasks for Tianjin during the 14th Five-Year period, identifying 23 key tasks in seven categories, such as preventing environmental risks from hazardous waste and reducing pressure on general industrial solid waste disposal. This provides an excellent opportunity to achieve stronger coordination, develop harmonized regulations, and achieve better integration of resources to improve the urban green development level, and also provides a timely opportunity for this project to support the planning process. Montevideo: The preparation of the proposal was carried out together with the institutions involved. Several consultations and meetings were held with the Director of Cleaning of the Municipality of Montevideo and his team, the General Director of Environmental Management of the Municipality of Canelones; and the Planning Manager of the Ministry of Environment and her team. The proposed objectives and activities were developed in consensus among the institutions and respond to environmental commitments of each of them, as well as previous cooperation experiences with UNDP in waste management. The Ministry of Environment is beginning to implement the National Waste Plan, which involves closing landfills in different regions of the country, while the Municipality of Montevideo is developing innovative waste management programs, which includes the creation of eco centers and the improvement of infrastructure in sorting plants to process more materials and more efficiently. The Municipality of Canelones has a Comprehensive Cleaning and Waste Management Plan that includes the recovery of household organic waste through the Sustainable Home Plan, or the Ecoficinas program among others, seeking to involve public office staff and citizens in the development of classification, recovery and recycling strategies. All these projects and initiatives are aligned to a Zero Waste Strategy. Kocaeli: UNDP met in 2022 with the representative of the government of Türkiye in UN headquarters to discuss the zero-waste initiative after the UN GA decision on Zero Waste proposed by the government of Türkiye. A strong commitment of Kocaeli Municipality to implement National Zero Waste Policy and By-law on Zero Waste at local level can be seen through the aforementioned activities: - Kocaeli Municipality established a new branch called "Zero Waste Branch" under its Environment Department that is specifically focusing in implementation of zero waste in Kocaeli. - Kocaeli Municipality started implementing zero waste practices at municipality buildings by putting separate collection bins for all types of recyclables plus unrecyclable waste. - The municipality established a Zero Waste Theme Park to increase awareness of

the community on zero waste. - The municipality established 12 mobile waste delivery centers in different districts of the Kocaeli. - Kocaeli Municipality held a 3 days Zero Waste festival together with the Kocaeli University in 2022. The festival aims to increase the awareness of citizens on zero waste through workshops, seminars, demonstrations, etc. Tunis: On 30 March 2023, UNDP and the Ministry of Environment of Tunisia gathered national partners including Government agencies and the municipality of Tunis to discuss the SWAP project and provide inputs – this marked the first international day for zero waste as decided by the UN General Assembly in 2022. The meeting was chaired by the Hon. Minister of Environment of Tunisia, Ms. Leila Chikhaoui. There will be cooperation between the 3 municipalities of Greater Tunis to ensure joint solutions to the common waste challenges, with the facilitation of the Government and the support of the project. Freetown: close cooperation and discussions were held between the UNDP Country Office and the Sierra Leone EPA. Under the leadership of the municipality of Freetown, the Transform Freetown plan has been adopted and is being monitored. The Plan sets out a series of priorities and targets that span across 11 sectors focused on four main clusters, 1) Resilience, 2) Human Development, 3) Healthy Cities, 4) Mobility. This plan demonstrates the commitment of the city to a Zero waste agenda, which was reaffirmed by the mayor of the city, during her intervention at the Stockholm+50 conference, during the UNDP-Avfall Sverige-ISWA-SEPA official side event. Globally: in 2021, the UNDP Zero waste strategy project started as an agreement between UNDP and Avfall Sverige, which set out to deliver expertise for the improvement of waste management in three pilot cities: Tianjin, China; five municipalities in the Great Metropolitan Area (GAM) of San Jose, Costa Rica; and Kigali, Rwanda. Assessment to zero waste strategy were provided and documented in the publication “Zero Waste Strategy Project”. In 2022, UNDP published the report “Transitioning to a Circular Economy through Chemicals and Waste Management”, which presented advices on chemical and waste management and zero waste approach taken by UNDP, as well as UNDP’s GEF-supported chemical and waste portfolio. The publication was broadly distributed through UNDP’s SparkBlue knowledge network, UNDP’s Climate Promise Platform and City2City network. A corporate level offer of UNDP on Zero Waste was also developed after internal and external consultations in 2022 as part of services to implement UNDP’s Strategic Plan (2022-2025), to articulate the dimensions of the support to the program countries. This SWAP Initiative is fully consistent with the vision and service lines of UNDP’s Zero Waste Offer. In 2021 and 2022, UNDP led Stockholm+50 national consultations by working closely with the government of Sweden and UNEP. The national consultations were carried out in 56 countries and engaged over 50,000 people through in-person, hybrid and virtual events. Waste and plastics were part of the main challenges raised by the countries in the consultations. One of ten key messages from the consultations is that “Countries stress the need for strong drivers of economic transformation and a greener, healthier development paradigm. This includes economic reforms, shifting investment flows toward sustainable consumption and production and circularity.” A global synthesis report of national consultations “A healthy planet for the prosperity of all-our responsibility, our opportunity” was published by UNDP in 2022 .The concept of SWAP initiative fully aligns with the recommendations of these national consultations. The Zero-Waste concept was presented at the Stockholm+50 conference in Sweden on 2 June 2022, in an official side event organized by UNDP, Avfall Sverige, ISWA, and Sida with the title of “Waste Management – An urgent issue to be addressed at the local and municipal level to achieve Sustainable Development Goals and to fight climate change”. The event featured city mayors’ experiences on targeting Zero Waste. Governments, CSOs and Private sector participating in Stockholm+50 were introduced to the concept and engaged on this occasion. The mayor of Freetown, Sierra Leone, was one of the speakers during that event . UNDP has been in regular contact with United Nations organizations involved in the promotion of BAT/BEP in green and circular economy (UN PAGE: Partnership for Action on Green Economy) and waste management, in cooperation with Local governments and municipalities through the Waste wise city network . Other international stakeholders that are regularly consulted include professional associations focusing on waste management such as the

International Solid Waste Management Association (ISWA) whose vision (an Earth where no waste exists) obviously fits very well with the Zero waste approach. Associations of Local Governments such as the International Council for Local Government Initiatives (ICLEI) and United Cities and Local Governments (UNCLG) are partners of UNDP. International projects connecting cities globally for implementation of the SDGs, such as the City2City network, facilitated by UNDP, were or will be engaged at the PPG stage. Networks of academic institutions that conceptualize and disseminate the Zero waste concept will be important stakeholders to associate, as well as CSOs, such as the NGO Zero Waste International Alliance, with which preliminary discussions were held during INC-1 of the Plastics treaty negotiations.

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities:

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

Private sector and CSOs in each of the 4 cities have started being sensitized to the Project. Avfall Sverige, the Swedish Waste Management and Recycling Association, was regularly consulted during the preparation of this PIF, on a frequency of regular monthly meetings in past two years. As previously mentioned, UNDP and Avfall Sverige engaged with the International Institute for Industrial Environmental Economics of Lund University to evaluate the idea of zero waste clearing house.

UNDP, together with the representatives from UN Habitat, UNEP and the UN Youth Envoy Office, participated in a Global Youth Event “Towards a Zero Waste Future - What Does Global Governance Need?” on the first International Day of Zero Waste on March 30, 2023, to engage with Youth groups in the world. UNDP has been actively engaging with community leaders on the topic of chemicals and waste through its flagship GEF Small Grants Programme.

In light of the requests by the program countries and UNDP country offices, UNDP’s chemical and waste team together with its regional bureaus and hubs, organized a series of workshops and webinars on related topics with participants from representatives of dozens of countries including CSOs and private sector. For example, a regional workshop was organized on 2 November 2022 in Bangkok on “Driving a Circular Economy through Extended Producer Responsibility (EPR)”^{[1]³³}, discussing how EPR schemes can be better designed and utilized to support circular economy development and address waste and plastic challenges. A webinar on “Advancing Public-Private Partnerships (PPP) for Waste Management Practices”^{[2]³⁴} was organized by UNDP in April 2022 to introduce the PPP model, including a waste to energy example in Hanoi, Viet Nam and other best practices in India, China and Indonesia.

Above consultations provided insights for the design of this SWAP initiative on how a systemic and coordinated approach at global, national and city level could help address the complex issue of chemicals and waste and shifting of unsustainable consumption and production towards a cleaner, greener and circular economic development.

[1] <https://www.sparkblue.org/event/driving-circular-economy-through-extended-producer-responsibility-asia-and-pacific>

[2] <https://www.sparkblue.org/system/files/2022-06/Zero%20Waste%20Workshop%20Summary.pdf>

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non- Grant	GEF Project Grant(\$)	Agency Fee(\$)	Total GEF Financing (\$)
UNDP	GET	Global	Chemicals and Waste	POPs	Grant	6,802,000.00	612,180.00	7,414,180.00
UNDP	GET	Sierra Leone	Chemicals and Waste	POPs	Grant	4,427,000.00	398,430.00	4,825,430.00
UNDP	GET	Tunisia	Chemicals and Waste	POPs	Grant	4,712,000.00	424,080.00	5,136,080.00

UNDP	GET	Türkiye	Chemicals and Waste	POPs	Grant	4,712,000.00	424,080.00	5,136,080.00
UNDP	GET	Uruguay	Chemicals and Waste	POPs	Grant	4,712,000.00	424,080.00	5,136,080.00
UNDP	GET	Global	Chemicals and Waste	Mercury	Grant	358,000.00	32,220.00	390,220.00
UNDP	GET	Sierra Leone	Chemicals and Waste	Mercury	Grant	233,000.00	20,970.00	253,970.00
UNDP	GET	Tunisia	Chemicals and Waste	Mercury	Grant	248,000.00	22,320.00	270,320.00
UNDP	GET	Türkiye	Chemicals and Waste	Mercury	Grant	248,000.00	22,320.00	270,320.00
UNDP	GET	Uruguay	Chemicals and Waste	Mercury	Grant	248,000.00	22,320.00	270,320.00
Total GEF Resources (\$)						26,700,000.00	2,403,000.00	29,103,000.00

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

300000

PPG Agency Fee (\$)

27000

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non- Grant	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
UNDP	GET	Global	Chemicals and Waste	POPs	Grant	133,000.00	11,970.00	144,970.00
UNDP	GET	Sierra Leone	Chemicals and Waste	POPs	Grant	38,000.00	3,420.00	41,420.00
UNDP	GET	Tunisia	Chemicals and Waste	POPs	Grant	38,000.00	3,420.00	41,420.00

UNDP	GET	Türkiye	Chemicals and Waste	POPs	Grant	38,000.00	3,420.00	41,420.00
UNDP	GET	Uruguay	Chemicals and Waste	POPs	Grant	38,000.00	3,420.00	41,420.00
UNDP	GET	Tunisia	Chemicals and Waste	Mercury	Grant	2,000.00	180.00	2,180.00
UNDP	GET	Türkiye	Chemicals and Waste	Mercury	Grant	2,000.00	180.00	2,180.00
UNDP	GET	Uruguay	Chemicals and Waste	Mercury	Grant	2,000.00	180.00	2,180.00
UNDP	GET	Global	Chemicals and Waste	Mercury	Grant	7,000.00	630.00	7,630.00
UNDP	GET	Sierra Leone	Chemicals and Waste	Mercury	Grant	2,000.00	180.00	2,180.00
Total PPG Amount (\$)						300,000.00	27,000.00	327,000.00

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
Total GEF Resources					0.00

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
CW-2	GET	26,700,000.00	216691545
Total Project Cost		26,700,000.00	216,691,545.00

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
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Recipient Country Government	Ministry of Environment and Climate Change Environment Protection Agency (EPA) Ministry of Health & Sanitation Freetown City Council	In-kind	Recurrent expenditures	1650000
Recipient Country Government	Local Municipal Government of the 5th country to be selected	In-kind	Recurrent expenditures	1500000
Recipient Country Government	ANGED, Government of Tunis (city), ANME (Tunis)	In-kind	Recurrent expenditures	3750000
Recipient Country Government	ANGED, Government of Tunis (city), ANME (Tunis)	Grant	Investment mobilized	9750000
Recipient Country Government	Ministry of Environment, Urbanization and Climate Change (MOEUCC), Kocaeli Municipality. (Kocaeli)	In-kind	Recurrent expenditures	4000000
Recipient Country Government	Ministry of Environment, Urbanization and Climate Change (MOEUCC), Kocaeli Municipality. (Kocaeli)	Grant	Investment mobilized	25000000
Recipient Country Government	Ministry of Environment (Montevideo)	Grant	Investment mobilized	1400000
Recipient Country Government	Municipality of Montevideo	In-kind	Recurrent expenditures	26180575
Recipient Country Government	Municipality of Montevideo	Grant	Investment mobilized	10610970
GEF Agency	UNDP CO (Tunis)	In-kind	Recurrent expenditures	750000
GEF Agency	UNDP Global	In-kind	Recurrent expenditures	3000000
Private Sector	Construction companies of the hazardous disposal center in the 5th country	In-kind	Recurrent expenditures	28500000
Private Sector	Construction companies of the hazardous disposal center in the 5th country	Grant	Investment mobilized	20000000
Private Sector	Waste Management Enterprise and Cement Manufacturer (with RDF)	In-kind	Recurrent expenditures	1500000

Private Sector	Waste Management Enterprise and Cement Manufacturer (with RDF)	Grant	Investment mobilized	5000000
Private Sector	Izaydas, Waste Management Companies. (Kocaeli)	Grant	Investment mobilized	9000000
Private Sector	Chamber of Industries of Uruguay (EPR Packaging Management Plan) (Montevideo)	Grant	Recurrent expenditures	35000000
Donor Agency	World Bank - Ministry of Finance (Freetown)	Grant	Recurrent expenditures	10000000
Donor Agency	EU projects on Local Zero Waste and Marine Litter Management (Kocaeli)	Grant	Recurrent expenditures	12000000
Donor Agency	GIZ - Project ProtectT "Climate protection through the circular economy in Tunisia"	Grant	Recurrent expenditures	5000000
Donor Agency	ASIMA Tunis Project - European Commission (Tunis)	Grant	Recurrent expenditures	2600000
Private Sector	Victory Recycling (Private Used oil to lubricant); Masada (Private Waste Management Company); Mr Klin (Private Waste Management Company); Salone Waste transformers (Private waste to biogas) (Freetown)	In-kind	Recurrent expenditures	500000
Total Co-financing				216,691,545.00

Describe how any "Investment Mobilized" was identified

The investment mobilized was identified by each of the UNDP Country Offices leading the consultations and information exchange with the potential co-financer, who provided this estimate of co-finance. The investment mobilized refers to investments that will be done in the future and does not include any past investments. Activities involved within investment mobilized include among others the construction of an engineered landfill (Resilient Urban Sierra Leone Project); the building of the regional hazardous waste disposal center construction (Tianjin), the upgrade of existing private infrastructure for sound management of POPs wastes (Kocaeli), Organic waste valorization program and Landfill GHG recovery system adequacy plan (Montevideo) and waste management and recovery channels for different waste streams (Tunis).

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

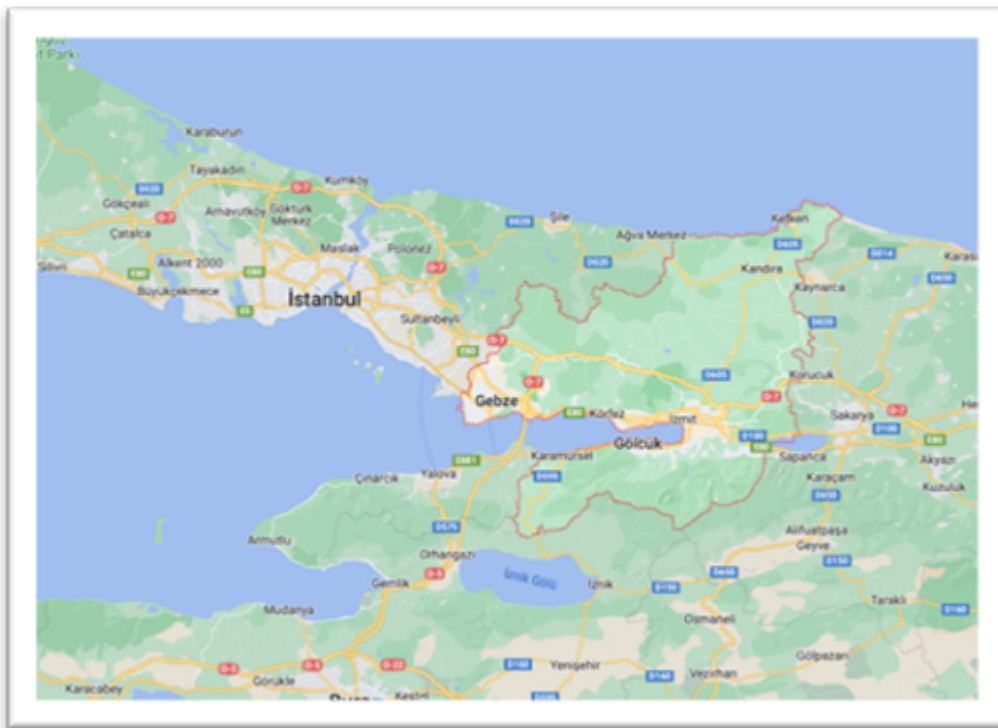
GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Mr Pradeep Kurukulasuriya	4/11/2023	Ms Xiaofang Zhou		xiaofang.zhou@undp.org

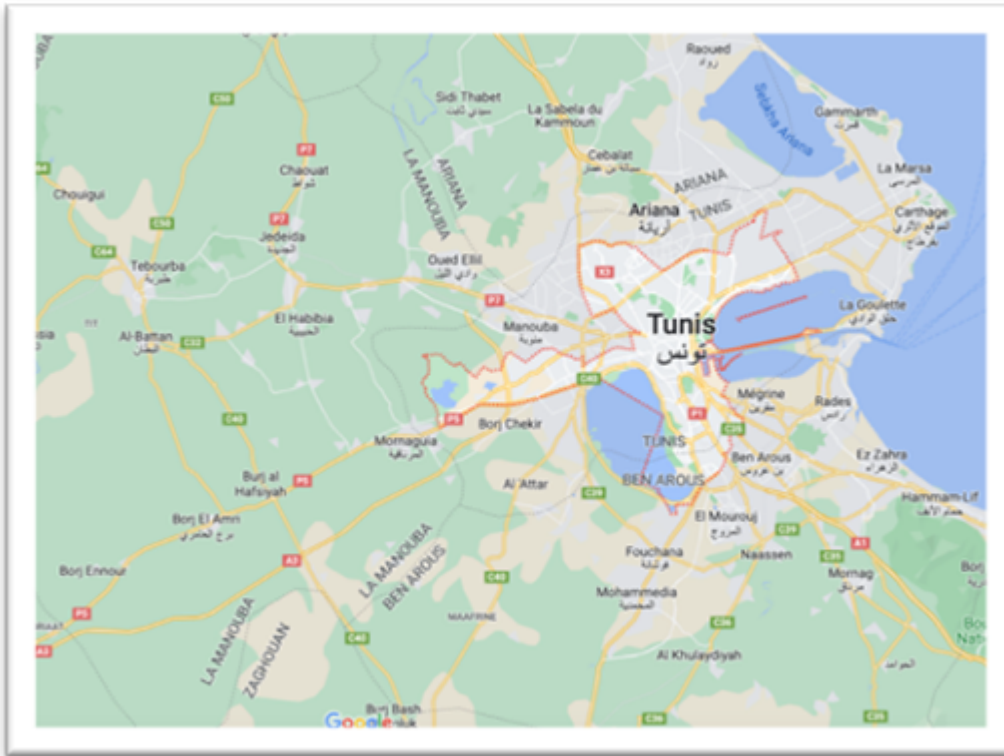
Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Mr Sheku Mark Kanneh	Operational Focal Point	Environmental Protection Agency, Sierra Leone	4/4/2023
Sabria Bnoui	GEF Operational Focal Point	Ministry of Environment, Tunisia	4/10/2023
Dr Nihat Pakdil	Deputy Minister	Ministry of Agriculture and Forestry, Turkiye	4/6/2023
Pradeep Kurukulasuriya	Executive Coordinator	UNDP	4/11/2023
Cr Robert Bouvier	Minister	Ministry of Environment, Uruguay	4/10/2023

ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place







ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

UNDP SESP SWAP - 0704023-clean

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
Significant Objective 1	No Contribution 0	No Contribution 0	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

Please refer to the Library (Roadmap/Documents): ANNEX F: TAXONOMY WORKSHEET