



## **Reduce marine plastics and plastic pollution in Latin American and Caribbean cities through a circular economy approach**

### **Part I: Project Information**

#### **GEF ID**

10547

#### **Project Type**

FSP

#### **Type of Trust Fund**

GET

#### **CBIT/NGI**

CBIT **No**

NGI **No**

#### **Project Title**

Reduce marine plastics and plastic pollution in Latin American and Caribbean cities through a circular economy approach

#### **Countries**

Regional, Colombia, Jamaica, Panama

#### **Agency(ies)**

UNEP

#### **Other Executing Partner(s)**

Cartagena Convention Secretariat

#### **Executing Partner Type**

Others

#### **GEF Focal Area**

Multi Focal Area

#### **Taxonomy**

International Waters, Focal Areas, Deploy innovative financial instruments, Influencing models, Gender Equality, Adaptive management, Learning, Theory of change, Knowledge Exchange, Capacity, Knowledge and Research, Workshop, Knowledge Generation, Large Marine Ecosystems, SIDS : Small Island Dev States, Pollution, Persistent toxic substances, Plastics, Coastal, Chemicals and Waste, Emissions, Persistent Organic Pollutants, Unintentional Persistent Organic Pollutants, New Persistent Organic Pollutants, Green Chemistry, Waste Management, Hazardous Waste Management, Best Available Technology / Best Environmental Practices, Transform policy and regulatory environments, Demonstrate innovative approach, Convene multi-stakeholder alliances, Strengthen institutional capacity and decision-making, Stakeholders, Local Communities, Civil Society, Academia, Non-Governmental Organization, Community Based Organization, Private Sector, Individuals/Entrepreneurs, SMEs, Financial intermediaries and market facilitators, Large corporations, Communications, Public Campaigns, Behavior change, Education, Awareness Raising, Type of Engagement, Information Dissemination, Consultation, Participation, Partnership, Gender results areas, Capacity Development, Participation and leadership, Knowledge Generation and Exchange, Gender Mainstreaming, Sex-disaggregated indicators, Beneficiaries, Indicators to measure change, Peer-to-Peer, South-South, Field Visit, Conference, Enabling Activities, Innovation

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 1

**Climate Change Adaptation**

Climate Change Adaptation 0

**Submission Date**

12/3/2021

**Expected Implementation Start**

7/1/2022

**Expected Completion Date**

6/30/2026

**Duration**

48In Months

**Agency Fee(\$)**

665,000.00

**A. FOCAL/NON-FOCAL AREA ELEMENTS**

<b>Objectives/Programs</b>	<b>Focal Area Outcomes</b>	<b>Trust Fund</b>	<b>GEF Amount(\$)</b>	<b>Co-Fin Amount(\$)</b>
IW-1-3	Strengthen blue economy opportunities by addressing pollution reduction in marine environments	GET	3,500,000.00	18,203,874.00
CCM-1-1	Strengthen the sound management of industrial chemicals and their waste through better control, and reduction and/or elimination	GET	3,500,000.00	18,203,874.00
<b>Total Project Cost(\$)</b>			<b>7,000,000.00</b>	<b>36,407,748.00</b>

## B. Project description summary

### Project Objective

Reducing regional marine plastics and plastic pollution by facilitating governments and businesses at the city-level, to accelerate the transition to a circular economy thereby responding to national, regional and global marine litter and plastics-related action plans, resolutions and commitments.

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1. City Led Promotion of Circular Economy Policies to Reduce Marine Plastics and Plastic Pollution in Targeted Cities	Technical Assistance	Outcome 1 Circular economy policies developed or adopted by city-level governments to reduce marine plastics and plastic pollution in targeted cities	Output 1.1 Policy action plans developed by municipalities to promote circular economy approaches for plastics  Output 1.2 Targeted policy interventions carried out to improve circularity  Output 1.3 Implementation plans for financial instruments developed to facilitate responsible plastics management	GET	1,920,000.00	4,925,789.70

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
2. Private Sector Led Promotion of Circular Economy Actions to Reduce Marine Plastics and Plastic Pollution in Targeted Cities	Technical Assistance	Outcome 2 Circular economy innovations and practices adopted by the private sector to reduce marine plastics and plastic pollution in targeted cities	<p>Output 2.1 Approaches developed and tested to facilitate more circular design, production, and consumption of plastics</p> <p>Output 2.2 Approaches developed and tested to improve collection and recycling of plastic waste</p> <p>Output 2.3 Industry roundtable on plastic circular economy established and roundtable meetings organized</p>	GET	2,355,000.00	16,186,842.00
3. Inter-City Network on Marine Plastics and Plastic Circular Economy	Technical Assistance	Outcome 3 Increased capacity and cooperation among LAC cities through the LAC Inter-city Network on marine plastics and plastic circular economy	<p>Output 3.1 Inter-city network operationalized</p> <p>Output 3.2 Inter-city network expanded with more participating cities</p>	GET	814,584.00	3,742,021.50

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
4. Capacity development and knowledge management	Technical Assistance	Outcome 4 Improved regional awareness and capacity in applying circular economy approaches to reduce marine plastics and plastic pollution	Output 4.1 Information, Education and Communication (IEC) strategy for the project developed and implemented using IW: LEARN platform , GGKP and GPML platforms  Output 4.2 Targeted capacity building activities conducted  Output 4.3 Long-term monitoring conducted by cities on the implementation of circular economy approaches and associated reduction in plastic pollution	GET	1,269,583.00	10,028,280.00
M&E	Technical Assistance			GET	307,500.00	800,538.88
Sub Total (\$)					6,666,667.00	35,683,472.08

**Project Management Cost (PMC)**

**Project Management Cost (PMC)**

GET	333,333.00	724,275.92
<b>Sub Total(\$)</b>	<b>333,333.00</b>	<b>724,275.92</b>
<b>Total Project Cost(\$)</b>	<b>7,000,000.00</b>	<b>36,407,748.00</b>

**C. Sources of Co-financing for the Project by name and by type**

<b>Sources of Co-financing</b>	<b>Name of Co-financier</b>	<b>Type of Co-financing</b>	<b>Investment Mobilized</b>	<b>Amount(\$)</b>
GEF Agency	UNEP	In-kind	Recurrent expenditures	3,163,860.00
GEF Agency	UNEP	Grant	Investment mobilized	8,546,201.00
Recipient Country Government	Mayor of Cartagena	In-kind	Recurrent expenditures	1,643,840.00
Recipient Country Government	Mayor of Barranquilla	In-kind	Recurrent expenditures	262,734.00
Recipient Country Government	EPA Cartagena (urban environmental authority)	In-kind	Recurrent expenditures	1,151,405.00
Recipient Country Government	SENA Regional Bolivar	In-kind	Recurrent expenditures	12,900.00
Private Sector	XICLO	In-kind	Recurrent expenditures	1,400,000.00
Private Sector	XICLO	Grant	Investment mobilized	2,100,000.00
Private Sector	Trashforma	In-kind	Recurrent expenditures	400,000.00
Private Sector	Trashforma	Grant	Investment mobilized	810,000.00
Private Sector	Bliss Earth Recycling Panam?	In-kind	Recurrent expenditures	570,000.00
Private Sector	Bliss Earth Recycling Panam?	Grant	Investment mobilized	500,000.00



Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Private Sector	Algramo	In-kind	Recurrent expenditures	640,730.00
Private Sector	Algramo	Grant	Investment mobilized	2,475,000.00
Private Sector	Pepsi Cola	Grant	Investment mobilized	1,000.00
Private Sector	LeafSync	In-kind	Recurrent expenditures	268,000.00
Private Sector	LeafSync	Grant	Investment mobilized	100,000.00
Other	Alliance to End Plastic Waste	Grant	Investment mobilized	4,100,000.00
Other	GPAP	Grant	Investment mobilized	835,000.00
Other	GPAP	In-kind	Recurrent expenditures	83,500.00
Other	Acoplasticos	Grant	Investment mobilized	16,890.00
Other	CEMPRE	In-kind	Recurrent expenditures	34,014.00
Other	CEMPRE	Grant	Investment mobilized	114,703.00
Other	EcoComputo	In-kind	Recurrent expenditures	90,000.00
Other	EcoComputo	Grant	Investment mobilized	30,000.00
Other	INVEMAR	In-kind	Recurrent expenditures	605,603.00

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Other	INVEMAR	Grant	Investment mobilized	200,000.00
Other	Fundacion de Accion Social por Panama	Grant	Investment mobilized	105,368.00
Other	Botellas de amor	In-kind	Recurrent expenditures	138,500.00
Other	Botellas de amor	Grant	Investment mobilized	138,500.00
Recipient Country Government	Waste Agency of Panama (Autoridad de Aseo)	In-kind	Recurrent expenditures	4,000,000.00
Other	Recycling Partners Jamaica	In-kind	Recurrent expenditures	560,000.00
Other	Recycling Partners Jamaica	Grant	Investment mobilized	1,310,000.00
<b>Total Co-Financing(\$)</b>				<b>36,407,748.00</b>

#### **Describe how any "Investment Mobilized" was identified**

Ecocomputo will improve material sorting, treatment, recovery and the environmental sound disposal of plastic in electronics. It will also establish conditions conducive to supporting collection and recycling in order to increase recovery rates of plastic in electronic equipment, specifically those containing POPs (HBCS, PBDE, SCCP) (including informatics, entertaining, office equipment, electronic cables, etc.). GPAP will invest in the development and deployment of a modelling tool for plastic flow assessment and scenario building; the development and utilization of the UpLink platform; the development of a Reuse portal and scaling reuse work; financing innovation work by the dissemination of GPAP and its partners' insights; and support for convening and capacity building across 6 cities and the wider network of Latin American cities. Acoplasticos' investment mobilized includes training, information collection, statistical analysis, and attendance of the project's closing session to strengthen ties with businesses. Fundacion de Accion Social por Panama will further implement its recovery programme of recyclable solid waste and invest in the transformation of thermoplastics waste (mainly PET, HDPE and PP). Recycling partners of Jamaica will fund the mobilization infrastructure by parish and transportation and logistical requirements to support a deposit refund system for plastics (PET 1 and HDPE 2) in Jamaica. It will also fund the necessary capacity building and educational activities needed to support this system. They will also fund

the development of marketing and public education efforts to spread awareness among general public and schools in Jamaica on the why, how, where and what to recycle. XICLO will invest in the development and implementation of the 'Pilot Project in Bogota City', the development and implementation of XICLO system service in all the restaurants of Grupo Takami, the expansion of XICLO system service to other food & drink service business in Bogota City, and the expansion of XICLO system services to other cities in Colombia, (including Cartagena and Barranquilla). INVEMAR will contribute through different work that is being developed on marine litter, plastics and microplastics, in coordination with environmental authorities, the Ministry of Environment and Sustainable Development and other sources of funding. This work includes monitoring of marine litter pollution; awareness raising; assessing the impact of macro and microplastics in mangroves, beaches and other coastal ecosystems; capacity building activities; and prevention and protection strategies for marine litter. Algramo will set up innovative refill solutions that transform the consumer industry, reduce waste and benefit consumers in Colombian cities. It will also share key findings on supply chain optimization and consumer behaviour change so government and other key stakeholders possess key knowledge to help make refill systems successful and scalable across Latin America. Botellas de amor will develop a recycling plant and set-up collection points in Panama. Leafsinc will finance the opening of recycling centers; recycling projects in institutions companies and residential; and the education in the area of recycling materials with the scope of reducing plastic waste through their initiatives in Panama. Pepsi will contribute to its beach clean-up and recycling initiative where employees of the organization volunteer the time and efforts to assist with these initiatives in Jamaica. Bliss Earth Recycling will contribute to the development, implementation and creation of products from discarded plastics. CEMPRE will use its grant co-financing for technical, operational and formalization strengthening of the recyclers' organization; implementation of their DONDE RECICLO app; and awareness and education, with the message of separation at the source and dissemination of the DONDE RECICLO app. UNEP has mobilized investment through the Cartagena Convention Secretariat, the Resources and Markets Branch (Economy Division), the Marine and Freshwater Branch (Ecosystems Division), and through the Regional Office for Latin America and the Caribbean. This investment includes different projects (e.g., Prevention of Marine Litter in the Caribbean Sea project, NFL 2020 Plastic Hotspotting project, Dominican Republic under IKI tourism project and NFL/SIDA 2021 dumpsite project), capacity building, the implementation of Extended Producer Responsibility, an LCA study, the GPML platform, and a Plastics flow model focusing on the Wider Caribbean Sea region, among others. Trashforma will continue their recycling services and routes with their existing clients and future ones; participate and sponsor cultural and educational events and initiatives promoting recycling and sustainable solutions to plastic; and develop a new project of making plastic wood and products. The Alliance to End Plastic Waste will invest in two projects. The GIRO Rethinking Recycling project, is implemented by Delterra in Olavarria, Argentina and includes the development of a materials recovery facility, increasing the efficiency of collection through community engagement and source segregation, and identification of economic solutions for recyclables. The project with Instituto Recicleiros in Brazil will include the development of community-based plastic waste aggregation, sorting, and recycling systems across 60 mid-sized cities in Brazil that will be supported by community education activities to promote participation and proper segregation of waste.

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

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>
UNEP	GET	Colombia	International Waters	International Waters	1,000,000	95,000
UNEP	GET	Panama	International Waters	International Waters	1,000,000	95,000
UNEP	GET	Jamaica	International Waters	International Waters	1,000,000	95,000
UNEP	GET	Colombia	Chemicals and Waste	POPs	1,000,000	95,000
UNEP	GET	Panama	Chemicals and Waste	POPs	1,000,000	95,000
UNEP	GET	Jamaica	Chemicals and Waste	POPs	1,000,000	95,000
UNEP	GET	Regional	International Waters	International Waters	500,000	47,500
UNEP	GET	Regional	Chemicals and Waste	POPs	500,000	47,500
<b>Total Grant Resources(\$)</b>					<b>7,000,000.00</b>	<b>665,000.00</b>

**E. Non Grant Instrument**

NON-GRANT INSTRUMENT at CEO Endorsement

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Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)  
PPG Required **true**

PPG Amount (\$)  
200,000

PPG Agency Fee (\$)  
19,000

Agenc y	Trust Fund	Country	Focal Area	Programmin g of Funds	Amount(\$)	Fee(\$)
UNEP	GET	Regional	International Waters	International Waters	100,000	9,500
UNEP	GET	Regional	Chemicals and Waste	POPs	100,000	9,500
Total Project Costs(\$)					200,000.00	19,000.00

## Core Indicators

**Indicator 5** Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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**Indicator 5.1** Number of fisheries that meet national or international third party certification that incorporates biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
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Type/name of the third-party certification

**Indicator 5.2** Number of Large Marine Ecosystems (LMEs) with reduced pollutions and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE
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**Indicator 5.3** Amount of Marine Litter Avoided

Metric Tons (expected at PIF)	Metric Tons (expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
5,000.00	5,065.00		

**Indicator 6** Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
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Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO <sub>2</sub> e (direct)	0	0	0	0
Expected metric tons of CO <sub>2</sub> e (indirect)	3000	9382	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 CO <sub>2</sub> e (direct)				
Expected metric tons of CO <sub>2</sub> e (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 CO <sub>2</sub> e (direct)				
Expected metric tons of CO <sub>2</sub> e (indirect)	3,000	9,382		
Anticipated start year of accounting	2021	2022		
Duration of accounting	4	4		

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)
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**Indicator 7 Number of shared water ecosystems (fresh or marine) under new or improved cooperative management**

	<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
<b>Shared water Ecosystem</b>	Caribbean sea, Pacific Central American Coastal	Caribbean sea, Pacific Central American Coastal		
<b>Count</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>

**Indicator 7.1 Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation (scale of 1 to 4; see Guidance)**

<b>Shared Water Ecosystem</b>	<b>Rating (Expected at PIF)</b>	<b>Rating (Expected at CEO Endorsement)</b>	<b>Rating (Achieved at MTR)</b>	<b>Rating (Achieved at TE)</b>
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**Indicator 7.2 Level of Regional Legal Agreements and Regional management institution(s) (RMI) to support its implementation (scale of 1 to 4; see Guidance)**

<b>Shared Water Ecosystem</b>	<b>Rating (Expected at PIF)</b>	<b>Rating (Expected at CEO Endorsement)</b>	<b>Rating (Achieved at MTR)</b>	<b>Rating (Achieved at TE)</b>
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**Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministerial Committees (IMC; scale 1 to 4; See Guidance)**

<b>Shared Water Ecosystem</b>	<b>Rating (Expected at PIF)</b>	<b>Rating (Expected at CEO Endorsement)</b>	<b>Rating (Achieved at MTR)</b>	<b>Rating (Achieved at TE)</b>
Caribbean sea	2	2		<input type="checkbox"/>
<b>Select SWE</b>				
Pacific Central American Coastal	2	2		<input type="checkbox"/>
<b>Select SWE</b>				

**Indicator 7.4 Level of engagement in IWLEARN through participation and delivery of key products(scale 1 to 4; see Guidance)**

<b>Shared Water Ecosystem</b>	<b>Rating (Expected at PIF)</b>	<b>Rating (Expected at CEO Endorsement)</b>	<b>Rating (Achieved at MTR)</b>	<b>Rating (Achieved at TE)</b>
Caribbean sea	2	2		<input type="checkbox"/>
<b>Select SWE</b>				

Shared Water Ecosystem	Rating (Expected at PIF)	Rating (Expected at CEO Endorsement)	Rating (Achieved at MTR)	Rating (Achieved at TE)
Pacific Central American Coastal	2	2		
<b>Select SWE</b>				

**Indicator 9 Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced)**

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
0.00	54.90	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)
<b>Select</b> Hexabromocyclodo decane (HBCDD)		14.00		
<b>Select</b> Decabromodiphenyl ether (commercial mixture, c-decaBDE)		40.90		

**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)
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**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)
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**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)
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<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
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**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)

<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
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**Indicator 9.6** Quantity of POPs/Mercury containing materials and products directly avoided

<b>Metric Tons (Expected at PIF)</b>	<b>Metric Tons (Expected at CEO Endorsement)</b>	<b>Metric Tons (Achieved at MTR)</b>	<b>Metric Tons (Achieved at TE)</b>
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1,200.00

**Indicator 10** Reduction, avoidance of emissions of POP to air from point and non-point sources (grams of toxic equivalent gTEQ)

<b>Grams of toxic equivalent gTEQ (Expected at PIF)</b>	<b>Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)</b>	<b>Grams of toxic equivalent gTEQ (Achieved at MTR)</b>	<b>Grams of toxic equivalent gTEQ (Achieved at TE)</b>
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1.16

**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)

<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
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**Indicator 10.2** Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
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**Indicator 11** Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
<b>Female</b>	513,834	559,306		
<b>Male</b>	342,556	430,856		
<b>Total</b>	856390	990162	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

**Part II. Project Justification**

**1a. Project Description**

1. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN WITH THE ORIGINAL PIF

The overall project structure presented in this document is consistent with the one presented in the PIF, albeit limited updates in the four components and associated budgets. The project design and activities were adapted to ensure cohesion in line with feedback received during PPG consultations with the Ministries of Environment, analysis of the policy and baseline situation in six project cities and two stakeholder workshops led by UNEP, as outline in Table 1 below.

Table 1. Changes between PIF and PPG versions

PIF	CEO endorsement	Comment
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<p>Component 1: Municipalities led governance and policy development to enact circular economy approaches in selected cities, for improved circularity and reduced marine plastics and plastic pollution</p> <p>Budget: 2,650,000</p>	<p>Component 1: City Led Promotion of Circular Economy Policies to Reduce Marine Plastics and Plastic Pollution in Targeted Cities</p> <p>Budget: 1,920,000</p>	<p>Changes to the outputs are made by merging policies targeting both the upstream and downstream of the plastic value chain to improve coherence.</p> <p>The budget is reduced as the key knowledge products to distil the learnings from the Component 1 will be delivered under component 4 which covers knowledge management.</p> <p>The pilot tests of business solutions under component 2 will also contribute to the delivery of component 1, by helping cities to understand better what policies will be needed to facilitate the uptake of relevant business solutions. But the resources for those relevant outputs is allocated under component 2.</p> <p>Outcome 1 was changed from ?policies adopted? by city-level governments in the PIF to ?policies developed or adopted?, considering that policy adoption is usually a long process which may not be completed within the 4-year project implementation phase.</p>
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<p>Component 2: Private sector led interventions to strengthen markets for investments in innovative, scalable upstream actions, waste management and recycling solutions to reduce marine plastics and plastic pollution.</p> <p>Budget: 2,650,000</p>	<p>Component 2: Private Sector Led Promotion of Circular Economy Actions to Reduce Marine Plastics and Plastic Pollution in Targeted Cities</p> <p>Budget: 2,355,000</p>	<p>Changes to the outputs are made by merging two outputs on business solutions targeting both the production and consumption stages to improve coherence.</p> <p>The budget is reduced as the key knowledge products to distil the learnings from the Component 2 will be delivered under component 4 which covers knowledge management.</p>
<p>Component 3. Inter-city marine plastics and plastics circular economy engagement network</p> <p>Budget: 745,000</p>	<p>Component 3: Inter-City Network on Marine Plastics and Plastic Circular Economy</p> <p>Budget: 814,584</p>	<p>The component is strengthened, and additional resources are allocated to allow the inter-city network to cover more cities in the region.</p> <p>Output 3.1 was rephrased as 'Inter-city network operationalized?' to better reflect the nature of this output, Under this output, a framework document to define the clear, governance and goals of the Inter-city network as indicated in the PIF will be developed.</p>
<p>Component 4: Capacity development, visibility improvement, knowledge management and dissemination, and communications.</p> <p>Budget: 621,667</p>	<p>Component 4: Capacity development and knowledge management</p> <p>Budget: 1,269,583</p>	<p>Allocation of more resources is made to accommodate the importance of the component for learning, training, analysis, dialogue, awareness, and interaction, within and beyond the project cities.</p>
<p>Monitoring and Evaluation was integrated in project component, and not singled out in the PIF.</p>	<p>Monitoring and Evaluation is singled out in the CEO endorsement.</p> <p>Budget: 307,500</p>	<p>Monitoring and Evaluation cost is listed out separately in the CEO endorsement.</p>

## A. PROJECT DESCRIPTION

# 1) GLOBAL ENVIRONMENTAL AND/OR ADAPTATION PROBLEMS, ROOT CAUSES AND BARRIERS THAT NEED TO BE ADDRESSED

### 1.1 Problems on Marine Plastics and Plastic Pollution

#### 1.1.1 The problems with plastics

Plastic pollution is one of the most pressing and visible environmental issues. About 388 million tonnes of plastics were produced in 2015 with 99.5% from petrol-based sources.[1]<sup>1</sup> Despite all efforts to rethink, refuse, reduce, reuse, and recycle, around 7.0 billion tonnes out of the 9.2 billion tonnes of global cumulative plastic production became plastic waste between 1950 ? 2017.[2]<sup>2</sup> With global plastic recycling rate as low as 9%, [3]<sup>3</sup> and growing global plastic production rate by an average of 9% per year,[4]<sup>4</sup> a far bigger problem is unfolding with devastating consequences on oceans and coastlines worldwide. Under a business-as-usual scenario, the amount of plastics entering aquatic ecosystems could nearly triple from approximately 9-14 million tonnes per year in 2016 to a projected 23-37 million tonnes per year by 2040.[5]<sup>5</sup>

While the impact on oceans is vast and rapidly growing, the threat on land is of equal significance considering that 32% of plastic waste finds its way into soils or freshwater [6]<sup>6</sup>. Hotspots of microplastics were documented in the vicinity of cities, beaches, and dams.[7]<sup>7</sup> while usage and disposal of plastics continue to raise concerns over excessive accumulation of plastics in landfills and natural habitat, ingestion, or entanglement in wildlife, and above all leaching of toxic chemicals. [8]<sup>8</sup> The problem with plastics is multi-dimensional, with far-reaching implications on ecosystems and societies. Some highlights include:

- Plastic leakage in the environment results in ecological, eco-toxicological and economic effects, where plastics and plastic products travel long distances, transport invasive species, and severely impact marine ecosystems through entanglement, ingestion, and starvation of marine
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animals[9]<sup>9</sup>. Plastics degrade extremely slowly in the environment, and its fragments during degradation can be digested by organisms which transfer these materials across the food value chain back to humans.

- Plastic pollution has reduced marine ecosystem services (including fisheries, aquaculture, climate regulation, pest and disease control, heritage values, and recreation) by at least 1-5%, with an annual loss of US\$500-2,500 billion value of marine natural capital to society (which amounts to between US\$3,300 and \$33,000 per tonne of marine plastic pollution). [10]<sup>10</sup>
  - Some polymers are of high toxicological concerns such as polystyrene (PS), polyvinyl chloride (PVC) and those incorporating flame-retardant chemicals, some of which are POPs. These polymers are primarily used in electronics, transport, and building and construction products. Although some of these products are not prevalent in marine plastics, their potential presence is of concern due to their high toxicity. Lack of information and evidence about the content and breakdown of the various polymers used to make plastics, including biodegradable plastics, is of serious concern to many experts because these products often do not meet expectations and can lead to less effective recycling and waste disposal.[11]<sup>11</sup>
  - Some plastics contain property enhancing additives that are classified as POPs, which are hazardous if not adequately managed at their end of life[12]<sup>12</sup>. Chemical impacts may occur due to POPs exposure, which persist for long periods of time in the environment and can accumulate and pass from one species to the next through the food chain, in a process known as biomagnification. From the POPs listed in the Stockholm Convention, Hexabromocyclododecane (HBCD), Polybrominated diphenyl ethers (PBDEs, including Penta-BDE, Octa-BDE and Deca-BDE), short chain chlorinated paraffins (SCCPs), Perfluorooctanoic acid (PFOA), and Perfluorooctane sulfonic acid (PFOS) and its salts, Perfluorooctane sulfonyl fluoride (PFOSF) are relevant to plastic products. Moreover, Polychlorinated naphthalene's (PCNs) were formerly used in plastics and cables. Plastics can also absorb POPs such as PVB, DDT and dioxins, which are frequently detected in marine plastic litter.[13]<sup>13</sup> Table 2 below summarizes some of the key applications of these chemical additives in plastics which are listed in the annex in the Stockholm convention.
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- Some plastic products contain halogens (e.g., Polyvinyl chloride as plastic coating on electrical cables and pipes), when these are combusted at low temperatures without off-gas treatment in substandard recycling facilities (e.g., with deliberate or unintentional burning), it can lead to the formation of unintentional POPs (uPOPs) including dioxin and furans, which can cause cancer.[\[14\]](#)<sup>14</sup>
- The level of greenhouse gas (GHG) emissions associated with the global life cycle of all conventional fossil fuel-based plastics could grow from 1.7 gigatons of carbon dioxide equivalent (GtCO<sub>2</sub>eq) in 2016 to approximately 6.5 GtCO<sub>2</sub>e by 2050.[\[15\]](#)<sup>15</sup>
- Recycling of materials containing Polybrominated diphenyl ethers (PBDEs) prolongs the exposure via new products. In 2018 the global amounts of PBDE were estimated to be 425kt in use, and 113kt for the waste stocks. More than 70% of PBDE emissions from production and use occurred in industrialized regions, while more than 70% of the emissions during waste disposal occurred in the less industrialized regions. A total of 70 kt was recycled within products since 1970. As recycling rates are expected to increase under the circular economy, an additional 45 kt of PBDEs will reappear in new products through recycling unless taken out of the loop. [\[16\]](#)<sup>16</sup>

Table 2. Chemical additives and their common application in plastic products

Chemical additive	Linkage to the Stockholm Conv.	Common application
HBCD	Annex A	Brominated flame retardant primarily used in polystyrene building insulation (EPS and XPS), at concentrations between 0.5-2.5% (5000-10000 and 8000-25000 mg/kg respectively) <a href="#">[17]</a> <sup>17</sup> . Also found in high-impact polystyrene, EPS packaging and vehicle floor covering <a href="#">[18]</a> <sup>18</sup>
Penta-BDE	Annex A	They are mostly present in countries where flammability standards exist, in ranges between 3-5 wt.%, as they are used as a flame retardant. Articles include flame retardant PUR foam in upholstery, cushions, mattresses, carpet padding, in transportation seats for arm/head rest, carpet padding, lamination to headliner fabric <a href="#">[19]</a> <sup>19</sup> and car seats <sup>16</sup> , and in electronic products such as printed circuit boards. <a href="#">[20]</a> <sup>20</sup>

Octa-BDE	Annex A	Used as a flame retardant with a wt.% between 12-18%, octa-BDEs are mainly found in plastic casings for electronics, including CRT monitor casings, flat screen TVs (LCD), ABS casings, HIPS casings; parts in EEE (computer & TV casings, office equipment), HIPS cold-resistant layers in refrigerators, polybutylene-terephthalate (PBT) casings for electronic appliances, PBT connectors in vehicles, PBT in household irons. Are also found in polyamide pipes & plastic foils.
Deca-BDE	Annex A	Ranging almost up to 5 kg per tonne, deca-BDE is present in products as a flame retardant, including rail vehicles as UP resin, as plastic fraction of cooling / freezing appliances & washing machines, heating appliances, household appliances, ICT equipment (w/o monitors), flat screen TVs (LCD) <sup>16</sup> , and polyurethane foam vehicle seats with 3.4 mg/kg. <sup>18</sup>
SCCP	Annex A	SCCP can be found in PVC (cables and consumer goods), EVA foams, and natural synthetic rubber, in concentrations ranging up to 170,000 mg/kg. <sup>[21]<sup>21</sup></sup> Consumer products (no further materials specified) in which SCCP were found, mainly as a plasticizer or flame retardant, include sports equipment, toys, pillows, electronics, (power chords, cables, mobile phone cases, household appliances), all-purpose mats, rain covers, bathmats, shower curtains, artificial leather products (e.g., wallets, handbags, purses, toiletry bags, pencil cases) <sup>17</sup> . SCCP is also used in transmission belts, rubber conveyor belts, adhesives, and plasticizers as a specific exemption under the Stockholm Convention. <sup>[22]<sup>22</sup></sup>
PFOA/PFOS	Annex A/B	PFOS and PFOA are used in sports shoes, mattresses, textiles, children's clothes, PVC floors, photographic and electronic equipment, building materials, and food packaging as a dispersing agent. PFOA has been found in food packaging in concentrations up to 44 µg of PFOA/dm <sup>2</sup> . <sup>[23]<sup>23</sup></sup> From 2002-2007, 4,442.1 kg of PFOS was used in artificial or synthetic fabric rugs and mats manufactured locally in Colombia. <sup>[24]<sup>24</sup></sup>
Dioxin & furans (uPOPs)	Annex C	These are released upon incineration of wide range of plastic products (including cables, agricultural plastics such as PVC, electric wire tube, scrap tires, municipal waste) different concentration volumes ranging from 12,000 to 40 µg TEQ/t material from highest to lowest. <sup>[25]<sup>25</sup></sup>

### 1.1.2 The problem in LAC cities

Latin America and the Caribbean shares 4% of total plastics production and 8% of total plastics consumption worldwide<sup>[26]<sup>26</sup></sup>. With over 600 million inhabitants, plastic waste within the municipal waste stream is significant. Yet, existing waste management systems are limited and characterized by inadequate practices and the need for improvements. Despite waste collection coverage reaching 89.9% (higher than the global average of 73.6%), <sup>[27]<sup>27</sup></sup> one third of the waste generated in LAC (equivalent

to 145,000 tonnes per day) continue to end up in open dumpsites, including 17,000 tonnes/day of plastic waste. [28]<sup>28</sup> Visible plastics and plastic products are frequently found along LAC coasts and marine environments, owing to intensive anthropogenic activities and poor management systems. [29]<sup>29</sup>

Recycling and composting systems are still emerging across the region. Recycling rate is well below 4.5%, [30]<sup>30</sup> which is in part due to the absence of comprehensive recycling programs at the region, state, and municipal levels, and the informal nature of existing recycling practices (informal sector typically recovers only the valuable fraction and their efforts are not included in official statistics). As a consequence, wastes that end up in landfills or improperly disposed in an unprotected dump sites contain enormous volumes of reusable and recyclable materials.

Colombia, Panam?, and Jamaica are coping with similar challenges posed by ever increasing volumes of plastic wastes. Marine litter within the three countries is adversely affecting the coastal waters and impacting key sectors from tourism to fisheries. Insufficient waste management capacities and practices affect millions of inhabitants whose livelihoods are based on fragile coastal marine areas. Furthermore, there is a larger context of excessive waste generation, knowledge gaps, and ineffective/absent policy and regulatory frameworks. Some highlights include:

- Costal lines are plagued by macro- and micro-plastic pollution in the three countries. A plastic pollution assessment found that the microplastics densities ranged from 3 to 1387 items per m<sup>2</sup> in 43 Colombian sandy beaches on the Caribbean and Pacific coasts.[31]<sup>31</sup> Similarly, Panamanian beaches recorded high concentration of microplastics of 353 items/m<sup>2</sup> and 87 items/m<sup>2</sup> at the Caribbean and Pacific coasts respectively. [32]<sup>32</sup> This was also confirmed in Jamaica by a study that documented microplastic pollution in the Kingston Harbour ranging from (0-5.73 particles/m<sup>3</sup>).[33]<sup>33</sup> While the anthropogenic activities are the main influencer behind the increase in microplastic contents, country specific factors should be also noteworthy (e.g., Panam? Canal, natural phenomena, ocean currents).
  - Single use plastics continue to dominate marine litter accumulated in the costal lines in the region, including the three countries. The majority of macroplastic marine litter has a lifetime less than1 year, as documented in costal lines of Colombia. Similar case exists in Jamaica confirmed by a study that documented marine litter to be mainly composed of plastic beverage bottles (32%), followed by plastic bottle caps (11%), and foam food containers (2.7%). Laws restricting
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single-use plastics are slowly emerging in the region as in the case of Panamá and Jamaica. Yet, there remain challenges related to law enforcement and expansion to more product categories.

- Urban environments are responsible for an estimated 60% of marine plastics<sup>[34]</sup><sup>34</sup>, and polluted waterways continuously carry plastic pollution to oceans. Floating waste captured in the Matias Hernandez river basin in Panamá is primarily plastic material.<sup>[35]</sup><sup>35</sup> Around 8% of the waste generated in Barranquilla, Colombia is uncollected and eventually leaks into the ocean and waterways. There is a similar case in Jamaica, where 370 tonnes of plastics were estimated to be leaked to the ocean from Kingston in 2018, corresponding to 3.33 kg/capita/year. Furthermore. It was observed that the most polluted beaches were found in the urban Caribbean and the rural Pacific areas.<sup>26</sup> This can be explained due to larger population, higher waste generation, deficiencies in basic sanitation and poor waste management systems.
  - The economic dimension is becoming more salient, as the effects of plastic pollution accumulate. A study estimated that clean-up costs of plastic waste in LAC range from \$196 to \$401 million USD, while revenue loss accounts for between \$23 to \$276 million USD.<sup>[36]</sup><sup>36</sup>
  - Regulatory and legislative frameworks are riddled with gaps and implementation challenges. Laws restricting single-use plastics (targeting plastic consumption) are promising steps but do not substitute the need for holistic sustainable plastic life-cycle management, which is absent in the LAC region. Product stewardship initiatives (targeting the plastic industry), including extended producer responsibility, are nascent and yet to mature.
  - Emissions of uPOPs is common in the region due to mismanagement of waste and resources. According to Stockholm Convention National Implementation Plans, 57.6% of Jamaica's Dioxins and Furans releases come from open burning. Similar readings are shared with Panamá (~23.2 gTEQ/year), and Colombia (~243.47g EQT/y) constituting 41.74% of country's emission.
  - There exist regional knowledge gaps in mainstreaming the management of harmful chemicals and waste, and inclusion of POPs into certain institutions and policies. For instance, Colombia's vehicle disintegration and scrapping programmes do not consider vehicle polyurethane foams as
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hazardous wastes. To date, HBCD continues to be used as a flame retardant in construction and plastic vehicle parts. Similarly, for Panama, where products in the form of EPS layers with HBCD content are continuously imported. Awareness about certain chemicals, specifically plastic chemical additives containing POPs, is limited, and by extension preparedness for the sound management of later phases such as end-of-life

- LAC cities are attracting rural residents in droves, which is part of the global trend driving 3 million people to urban centers every week. As cities continue to grow, the consumption patterns and consumer behavior need to be influenced. Behavioral instruments (utilising people's social preferences and/or cognitive limitations to influence behaviour in favour of lower plastic pollution) [37]<sup>37</sup> had proven effective in other regions and are currently absent in the LAC region. Cross-learning and exchange of knowledge in this field is needed.

As discussed, cities are engines of economic growth. They are central drivers of unsustainable patterns of consumption, with urban consumers particularly accustomed to the convenience of on-the-go and home-delivery lifestyle. Cities need to be at the forefront of rethinking the consumption landscape.[38]<sup>38</sup> A detailed analysis of key problems is included in the baseline section, where national and city specific contexts are covered.

## 1.2 Root causes and barriers

As presented in Figure 1, the analysis of the problematic situation of increased pollution from hazardous chemicals, mismanaged plastic waste, and leakage of plastic into the environment has identified six root causes that lead up to the key problem. Each root cause underpins specific barriers which must be addressed to reduce regional marine plastics and plastic pollution and to accelerate the transition to a circular economy. These barriers sustain the environmental problem identified in the section above (section 1.1): the unsustainable consumption and production of plastic products, increasing generation of plastics waste and insufficient management that causes plastic pollution in Latin America and Caribbean cities. This has led to the impacts at environmental, social and economic dimensions, which eventually slow down or prevent the achievement of the Sustainable Development Goals and its relevant targets by 2030. Increased circularity of plastic value chains would reduce the pollution from hazardous chemicals and mismanaged waste, and leakage into the environment.

The project is structured around the mitigation of these root causes and barriers (see section 3 on the alternative scenario).

### 1.2.1 Root causes

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The root causes leading to the unsustainable consumption and production of plastic products, increasing generation of plastics waste and insufficient management that causes plastic pollution in Latin America and Caribbean cities are the following:

- 1- **Linear plastics economy with increasing plastic consumption driven by population growth, urbanization, and economic development, while further intensified by COVID-19:** The fundamental cause of the plastic pollution is the linear 'take-make-dispose' pattern of the current plastics economy paired with low oil prices, making the production of virgin plastics much cheaper and economically more attractive than using recycled content or other alternative materials. Demand for single-use plastic products has further increased due to COVID-19, as disposable plastic products (such as PPE and cutlery) provide affordable solutions to consumers to meet their sanitary and health requirements.[39]<sup>39</sup> This needs for PPE due to COVID-19 has also increased the production and consumption of plastics specifically in the LAC region. For example, Colombia estimated an increase in the monthly manufacture of face masks (from 2 to 8?10 million), of N95 medical masks (from 60,000 to 100,000), and it imported over 2 million pairs of gloves.[40]<sup>40</sup> Furthermore, urban areas continue to grow in LAC which drives the consumption of plastic products. Urban population increased by more than 35 million people between 2010 and 2015 and is expected to climb to a total of 567 million persons by 2025.[41]<sup>41</sup>
- 2- **Hazardous additives and chemicals used in plastic products reduce circularity:** Additives (such as brominated flame retardants) and chemicals are used in large volumes of plastics. The presence of additives is potentially a serious constraint on the recycling of plastics and the move to a circular economy.
- 3- **Policy design, waste management and awareness are outpaced by plastic growth and challenged by weak monitoring:** Plastic waste is being generated at such a pace that far exceeds the ability of existing policies, infrastructure, and awareness raising campaigns to deal with. Existing waste reporting and monitoring systems are inadequate to bring optimal analysis of waste generation and leakages. Up to 50% of all recycling in the LAC region is undertaken by approximately two million informal recycling workers,[42]<sup>42</sup> which is rarely reported on and captured by existing surveys. Therefore, LAC has as the lowest reported average recycle rate (for all waste types) across all regions at 4.5%.
- 4- **Alternative materials, technologies, and business models needed for a more circular plastic economy are not widely tested or financially viable.** Identifying alternative materials based on life cycle assessment can be a challenge itself. Findings from the LCA are usually context-specific, as the environmental impact of products is dependent on the sources that their raw materials come from and where the products are manufactured, which may differ over the years.[43]<sup>43</sup> Many reuse

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solutions, which might perform well in pilots, still need to test their operational and economic viability at scale. In terms of technologies, chemical recycling technologies are not yet widespread and/or not yet economically viable for most common packaging plastics. In the context of the pandemic, reduced economic activity has seen sharp falls in global oil prices. In turn, this has made it significantly cheaper for manufacturers to produce plastic goods from virgin, fossil-based materials than to use recycled plastic materials. The economic viability of global plastics recycling market is presently under significant pressure.[44]<sup>44</sup>

- 5- **Externalities of plastic pollution are not factored into the low production cost of plastics in the region.** The production cost of recycled plastics is often still higher than that of virgin plastics as the externalities of plastic pollution (see sections 1.1.1 and 1.1.2) are not factored into the costs[45]<sup>45</sup>. In the LAC region, national economies have been heavily dependent on natural resources and commodities exports with macroeconomic vulnerabilities, thus, some countries have not been able to develop appropriate circular policies that incentive plastics recycling. There is thus a high dependence on the linear plastic economy in the region partially due to its industrial structure. The largest consumer and producer markets of plastics are Mexico and Brazil, while Colombia, Peru and Chile are the fastest growing ones.[46]<sup>46</sup>

## 1.2.2 Barriers to be addressed

The problem of marine plastics and plastic pollution is transboundary, cross-cutting as well as regionally specific, and there are notable barriers in various aspects to solve the problem. In this context, the barriers of fully implementing a circular economy approach for plastics in LAC cities include:

- 1- Lack of regulations and policy instruments from governments to incentivize sustainable consumption and production for circular plastic products and pollution reduction at city level. This is linked to Root Causes 1, 2, 3, and 5.
- ? Globally and nationally, agreements policies and action plans to support implementation of upstream solutions (such as eco-design and product lifetime extension), improve recyclability, incentivize demand for recycled plastics, and streamline downstream waste management, are uncoordinated.
- ? Existing city level policy usually focuses more on the collection, recycling, and disposal of plastic waste, while lacking a comprehensive strategy and concrete targets on waste minimization and reduction, reuse and refurbishment.
- ? There is a lack of standards, labelling and policy incentives on reuse and remanufacturing of products and components, as well as on the chemical content in relevant plastic products.
- ? There lacks policy and enforcement to set up environmentally sound management system for plastics, considering the presence of the informal sector and prevalence of open dumpsites.



2- Lack of innovations and investment from the private sector to tackle the plastic pollution from a systemic and value chain perspective at city level. This is linked to all Root Causes.

- ? Technology is a bottleneck for further improvements in linking product design, value chain management and industrial symbiosis for circularity of plastic products, and there is in general low R&D investment within businesses and in new businesses enterprises. There are no sufficient alternatives and solutions that have been proven to replace single-use and unnecessary plastic products and polymers, that are appropriate, effective, and do not result in other environmental and human health impacts.
- ? Most plastic wastes are sent to dumpsites and technical solutions and infrastructure to support more efficient reuse, remanufacturing and recycling, are absent.
- ? There is a lack of market, economic incentives, added value and competitiveness for product reuse and recycled materials for adopting circularity. Upcycling plastic is currently not profitable in most of the cases. The public-private partnership working on the circular solution such as financing, investment and infrastructure is usually weak.
- ? The information on the chemicals of concern (CoCs) and substances in plastic products are not assessed and shared by the private sector, and the pollution from substandard recycling is not properly evaluated either.
- ? The presence of the informal sector and mismanaged waste systems make formal recycling less competitive and attractive. There is a lack of tailored approaches for developing circularity strategy to match with the local reality of waste handling.
- ? There is a lack of appropriate business cases to encourage the private sector to invest in circular products and service. Small and medium-sized businesses lack budget, personnel, or time to devote to researching issues around waste and circularity.
- ? Coordinated systems standardizing materials for reuse and recycling are lacking, along with challenges for more efficient collection, sorting, recycling, and recovery of plastics. There is no sufficient coordinated financing, incentives, and awareness, to support upstream solutions to plastic pollution and to prevent the leakage of plastics into the environment (especially the financing of waste management).

3- Lack of a common vision, approaches, and leadership for LAC cities to act collectively under an aligned regional strategy for circular economy of plastics at the regional level. This is linked to Roots Causes 1 and 3.

- ? There is no common vision and strategies for cities in LAC to work collectively on the circularity agenda of plastics.
- ? There is no platform and initiative to support the exchange of experience and best practices for LAC cities.
- ? There is a lack of knowledge, resources, and capacity to implement existing strategies, policies, and business plans, as well as mechanisms to upscale the influence in all LAC cities.

4- Lack of knowledge, awareness, and capacity to enable governments, businesses and other stakeholders to learn and adopt best practices at city, national and regional levels in LAC. This is linked to Root causes 1, 2, 3, and 4.

- ? There is a lack of harmonized monitoring for marine litter and plastic pollution at city, national and regional levels in LAC. In addition, there are no sufficient quality data, databases and information management systems on e.g., numerous types of polymers and plastics applications along the value

chain; chemical content of plastic products; stocks, flows, pathways and fates of macro- and microplastics into the environment including the oceans; consumer behavior and cultural drivers of plastics consumption; the magnitudes of environmental and socio-economic impacts of marine plastics and plastic pollution; and quantitative evaluation on the impacts of different solutions and interventions, to support the monitoring.

- ? It is difficult to obtain information and track the quantity and impacts of hazardous additives and chemicals throughout the life cycle of plastics, thus making reduction of chemicals of concerns and waste difficult.
- ? There is a lack of institutional capacity in the governments at city level, to address plastic pollution in a systemic way. Regulations and policies at national level face implementation challenges at municipal level sufficiently due to lack of technical expertise and resources.
- ? At the business and company level, circular design and solutions are usually not well evaluated, communicated, and applied in strategic planning.
- ? There is a lack of capacity to learn and adopt the latest success experience and best practices for circularity of plastics at city, national and regional levels.

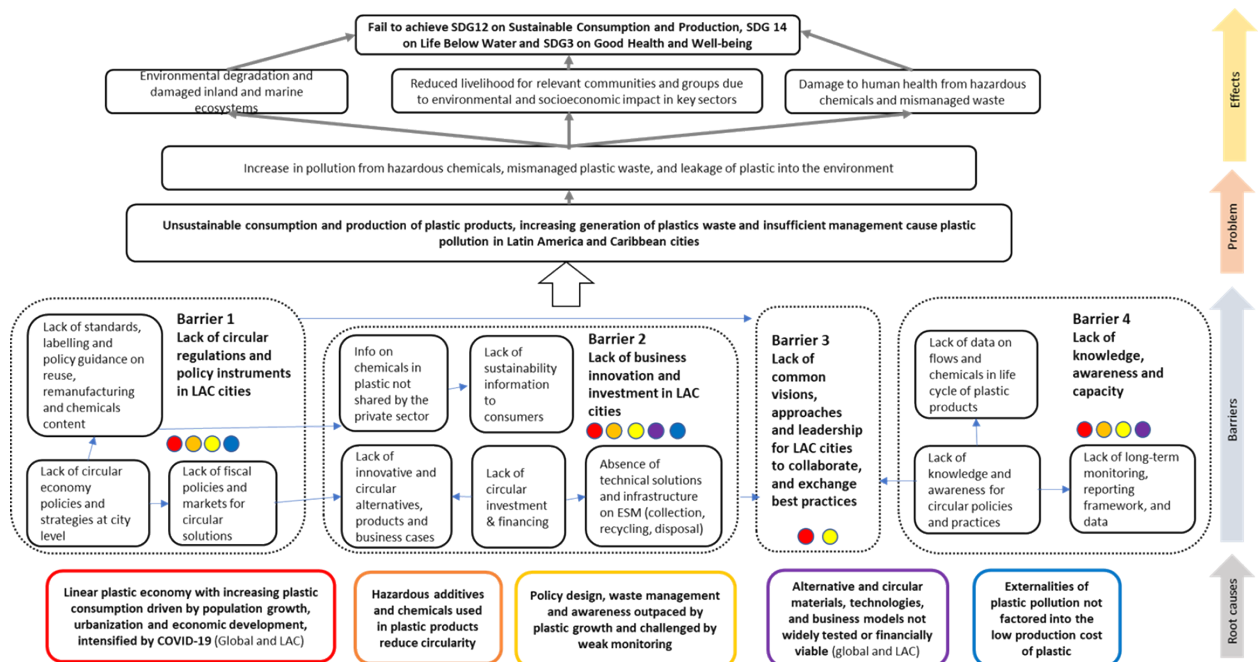


Figure 1. Problem Tree of the Project

## 2) THE BASELINE SCENARIOS AND ANY ASSOCIATED BASELINE PROJECTS

### 2.1 Global and Regional Baseline Scenario

A number of existing Multilateral Environmental Agreements (MEA) and global instruments, of both legally binding and voluntary nature, are relevant to plastics, the chemicals of concern in plastics and plastic pollution. These include:

- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (including the BAN Amendment and the Plastic wastes amendments).[47]<sup>47</sup>
- Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on persistent organic pollutants (POPs).[48]<sup>48</sup>

Table 3 presents an overview on the status of ratifying plastics related conventions in Colombia, Panam?, and Jamaica.

The United Nations Convention on the Law of the Sea (UNCLOS) is the only binding policy that requires nations to minimize pollution from both marine and land-based sources that may enter the marine environment. The Regional Seas Conventions and Action Plans are of direct relevance to reducing marine plastic pollution. The action plans target key activities and sources of plastic waste in 18 separate regions and set binding and non-binding obligations to reduce pollution from these sources. Furthermore, the Global Partnership on Marine Litter (GPML), a voluntary, multi-stakeholder platform with more than 400 members from over 70 countries, fosters collaboration on a range of activities, including building the knowledge base and facilitating the development of regional nodes as well as regional and national strategies and action plans to tackle marine litter and plastic pollution. It is also developing a digital platform aiming to integrate data and information, connecting stakeholders, and facilitating coordination on an ad hoc or regular basis.

Table 3. Status of Ratification of the relevant Conventions in three project countries

Target Country	CONVENTION				
	Basel	Rotterdam	Stockholm	Cartagena	UNCLOS
<b>Colombia</b>	R (1996)	R (2008)	R (2008)	R (2003)	d (1982)
<b>Panam?</b>	R (1991)	R (2000)	R (2003)	R (2002)	R (1996)
<b>Jamaica</b>	a (2003)	a (2002)	R (2007)	R (2012)	R (1983)

Key: (a) = accession; (R) = ratification; (d)=Signature, Succession to signature; N.S. = not signatory

Marine plastic pollution has been the subject of resolutions at United Nations Environment Assembly (UNEA)-1, -2, -3 and -4. In recent years, many countries have highlighted the need for a global agreement to address the issue.

Many governments are taking actions. Five of the Group of Seven (G7) nations have agreed to an Ocean Plastics Charter that commits them to act towards 'a resource-efficient lifecycle management approach to plastics in the economy'. The European Strategy for Plastics in a Circular Economy is a forerunner in describing the vision for a revised and sustainable plastics economy. It includes aspects on improving the economics and quality of recycling, preventing waste and littering, increasing investment and innovation in circular solutions, and increasing global action.

More than 60 countries have introduced measures to curb single-use plastic waste, and the number of governments, industry and consumer led actions continues to rise. Bans on single-use plastic bags have been especially evident in developing countries, particularly Africa and Asia, with restrictions and other disincentives (taxes or levies) motivated primarily by waste management and littering concerns. Most European Union member countries have adopted economic instruments and public-private agreements rather than directly banning single-use plastic products. There are also a number of voluntary initiatives to address plastic pollution. For instance, the New Plastics Economy Global Commitment has united more than 500 organizations, including 20 governments and more than 250 businesses across all stages of the plastic packaging value chain, representing more than 20% of all plastic packaging used globally. The Clean Seas Campaign was launched by UNEP in 2017 and now has commitments by 63 signatory countries (20 from the LAC region) which cover more than 60 per cent of the world's coastlines. Moreover, more than 111,000 people have signed the pledge worldwide.

Government policies across LAC have been taking measures to address marine plastics and plastic pollution, but efforts to introduce resource efficient production and consumption practices, that can help tackle this pollution problem, are still lacking. Also, given that the region's economies and industries are characterized by an intensive use of natural resources. In at least 27 out of 33 LAC countries, national and/or local legislation towards the reduction, prohibition, and/or elimination of single-use plastic products have been issued.<sup>[49]</sup> Fiscal policies (including taxation, incentives and subsidy removal) are applied together with other policies to tackle plastic pollution. Product lifetime extension and circular design are a step further in the direction of the circular economy but are currently not present in the region.

Existing actions on reducing marine plastics and plastic pollution at the LAC regional level include:

**1- The Cartagena Convention** is the only legally binding agreement in the region for the protection of the Caribbean Sea. Through the Convention and specifically the Land-Based Sources of Marine Pollution Protocol, governments receive support to control, reduce and prevent marine pollution from all sources. **The UNEP Caribbean Environment Programme (CEP)**, which is also the Secretariat of the Cartagena Convention, promotes best practices and shares experiences about the management of solid waste, marine litter, and plastics through various platforms such as the Caribbean Regional Node of the GPML. These include participation at regional and international conferences.

**2- The South-East Pacific Action Plan** was adopted in 1981 together with the Convention for the Protection of the Marine Environment and Coastal Zones of the South-East Pacific (Lima Convention) and its associated protocols. The Protocol for the Protection of the South-East Pacific Against Pollution from Land- Based Sources; along with the framework programme for marine litter management (2007) form the basis for the support provided to countries in the region.

**3- The Caribbean Regional Action Plan for Marine Litter (RAPMaLi)** serves as a comprehensive toolkit to assist countries of the WCR to adopt a range of practices for reducing the negative impacts of solid waste, marine litter, and plastics. A Regional Marine Litter Strategy completed in 2021 through the GPML-Caribe complement this plan.<sup>[50]</sup><sup>50</sup>

**4- The Trash Free Waters International Initiative in the WCR:** The Cartagena Convention Secretariat, with financial support from the U.S. Environmental Protection Agency (EPA) and in partnership with the Peace Corps, UNEP's Regional Office for Latin America and its Caribbean Sub-Regional Office, Governments of Jamaica and Panama and other local partners, have implemented activities to reduce and prevent land-based trash from entering watersheds, coastal waters, and the marine environment in Jamaica and Panama.

**5- Working Group on Marine Litter and Microplastics in Latin America and the Caribbean:** The group surges in the framework of the XXII Forum of Ministers of the Environment of Latin America and the Caribbean (Bridgetown, Barbados, February 2021), where the Member States acknowledged their concern about *the magnitude and increasing levels of marine litter, particularly plastic litter and microplastics, and the related impacts on the ecosystems and societies* in the region. Through Decision 1 on Pollution, the Secretariat was invited, in coordination with other entities and relevant stakeholders, and within available resources, to facilitate the establishment of a suitable mechanism to promote regional cooperation and coordination, such as a working group or regional node. So far, the group is composed by 19 countries of the region through the nomination of governmental focal points.

**6- Regional Action Plan on Marine Litter in the Northeast Pacific Region:** It proposes actions applicable to the municipal, national, and regional context for the eight countries of this region (Mexico, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, and Colombia) to address the problem of marine litter and plastic pollution effectively and sustainably over time.

**7- National Action Plans on Marine Litter and Plastic Pollution in LAC countries (such as Panama, Belize, Brazil, Costa Rica and Chile):** they include a diagnosis of the national problem of marine litter, national public policy on the management of marine litter and microplastics and provide national guidelines to focus management and actions on the reduction of waste generated on land and from marine sources. Additional efforts to develop National Action Plans (NAPs) are being made with the support of UNEP and the Global Partnership on Marine Litter, in particular with Ecuador, El Salvador, Guatemala, Mexico, Dominican Republic, and Saint Lucia, using a national source inventory approach.

**8- Latin America and the Caribbean Circular Economy Coalition** The coalition aims to foster an imperative resilient, sustainable, and inclusive economic recovery by implementing best practices through collaborative work between governments, companies and society as a whole. The objectives include the creation of groups in plastics, including chemicals, marine litter and waste management, and the publication of the regional common vision for a Circular Economy in LAC.<sup>[51]</sup> Activities including guidance and support of new business models for environmental, financial, and social triple-win. A circular economy for plastics is important to ensure a reduction of the use of plastics, as well as ensuring those plastics being used are managed responsibly throughout their lifecycle.

**9- Coalition for the progressive closure of dumpsites in Latin America and the Caribbean** was established at the XXI meeting of the Forum of Ministers of Environment of LAC. The countries of the

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region agreed to make the necessary efforts to strengthen the integrated solid waste management, developing the necessary policies and strategies to phase out the unsound waste management practices, including dumpsites and open burning.

**10- The ACP MEAs programme** is a partnership between the European Union, the Organization of African, Caribbean and Pacific States (OACPS), United Nations Environment Programme (UNEP) and the Food and Agriculture Organization of the United Nations (FAO). The programme aims to build capacity in 79 countries in Africa, Caribbean, and the Pacific (ACP) to support them in fulfilling their obligations as parties to Multilateral Environmental Agreements (MEAs), to address the environmental challenges they face and to reap the benefits of improved environmental governance at national and regional levels. Currently in its third phase, one of the project outputs is to reduce the influx of waste entering the marine environment in the four regions developed.

**11- Transforming Tourism Value Chains project (TTVC):** This is a project that has been developed and implemented since 2017 in four countries: Dominican Republic, Saint Lucia, Mauritius, and the Philippines with the objective of reducing greenhouse gas emissions and improving resource efficiency from a value chain approach. It has a component on beating pollution which aims to eliminate the use of single use plastic items in hotels, reduce pollution on the seas, improve solid waste management and reduce the impact of hotels on water availability.

**12- Central America Marine Litter Action Plan:** In 2021, LAC countries raised their interest in learning from experiences implemented by different countries in the region and recommended the compilation of adopted policies, regulations and strategies undertaken by Member States to prevent marine litter and enhance management of plastic waste.

**13- Regional Caribbean Action Plan on Solid Waste:** Comprehensively review, identify and map recently completed, existing and proposed regional waste management programmes, projects, and activities on waste management to identify gaps in implementing the current Caribbean Waste Management Action Plan (CWMAP). Review and update proposed targets and indicators for the current CWMAP (assess whether they are still relevant, realistic, and appropriate and support relevant regional and global commitments relating to solid waste, marine litter, and plastics management). Estimate the costs and identify potential donors/financing mechanisms for implementation of the plan, including potential for public/private sector partnerships. Prioritize areas where the Private Sector can be engaged.

**14- Clean Seas Campaign** was launched by UNEP in 2017. Through the Campaign, UNEP is connecting and rallying individuals, civil society groups, industry and governments for catalysing change and transforming habits, practices, standards and policies around the globe to dramatically reduce marine litter and its negative impacts. It now has commitments by 63 signatory countries (20 from the LAC region) which cover more than 60 per cent of the world's coastlines. Moreover, more than 111,000 people have signed the pledge worldwide.

**15- New Plastics Economy Global Commitment** unites businesses, governments, and other organizations behind a common vision and targets to address plastic waste and pollution at its source.

Signatory governments in the LAC region include Chile, Peru, Grenada, the State of Mexico (Mexico), the city of Toluca (Mexico), the city of Buenos Aires (Argentina), the city of Sao Paulo (Brazil).

**16- The Alliance to End Plastic Waste** (the 'Alliance') is a global non-profit organisation that brings together industry, government, civil society, development agencies and investors to help end plastic waste in the environment. The Alliance has 90 members and partners drawn from across the world's leading organisations in the plastic value chain to develop, accelerate and scale technologies and solutions focusing on integrated waste management systems, engaging communities and catalysing capital towards a circular economy.

## 2.2 National Baseline Scenarios

### 2.2.1 Plastics lifecycle data

Table 4 presents a summary of the plastics life cycle information in the three project countries.

Table 4. Plastics lifecycle data in the 3 project countries

Plastic production	
<b>Colombia</b>	<p>? In 2019, around 854,723 tonnes of plastic resins were imported into Colombia. The total production capacity of plastic resins in the country during the same year was 1.6 million tonnes and more than 50% of this local production was exported.[52]<sup>52</sup></p> <p>? HBCD continues to be used as a flame retardant in the construction sector and to produce plastic vehicle parts.[53]<sup>53</sup> Its use has been restricted to EPS and XPS insulation materials in buildings and over 90% of construction and isolation materials contains HBCD.<sup>48</sup></p> <p>? The Octa-BDE content in the EEE fraction in use in the country was around 57,804 kg by the end of 2015.<sup>48</sup> It is estimated that only vehicles manufactured from 1975 to 2004 may contain PBDE, comprising a total of 9,045.8 kg.</p>
<b>Panam?</b>	<p>? According to the Stockholm Convention National Implementation Plan for Panam? in 2018[54]<sup>54</sup>, the annual PBDEs in cables estimated is 269.38 tonnes, in transportation vehicles is equivalent to 4.27 tonnes. And, in foams is 0.02 tonnes. (Note that this data is focused on imports, usage, and waste management)</p> <p>? HBCD is currently not produced in Panam? but used for insulation in construction, specifically in layers of EPS and XPS insulation. There are 3 industrial plants where these layers are fabricated, using imported material in the form of pellets of EPS that contain additives of the flame retardant HBCD. The finished layers (with or without HBCD content) also enter the country through import. The quantities of these layers in buildings are unknown but it is a booming product due to its low cost and light weight properties. A total of 10.65 tonnes and 0.50 tonnes of HBCD are estimated to be present in EPS and XPS insulation in the country respectively.</p>
<b>Jamaica</b>	<p>? Jamaica does not possess an industry of plastic resins production. There is no recent NIP.</p>
Plastic consumption	

<b>Colombia</b>	? The average consumption of plastics was 27.8 kg/capita/year in 2019. <sup>47</sup> Government statistics and WWF figures show that in Colombia, the annual average consumption of plastic bags is about 288 units per person. The largest application for plastics in this country is packaging (54% of plastic consumption) and the most consumed plastics are PE, PP, PVC, and PET in this order [55] <sup>55</sup> .
<b>Panam?</b>	? Panam? currently has no data on plastics consumption.
<b>Jamaica</b>	? Jamaica currently has no data on plastic consumption.
<b>Plastic waste generation</b>	
<b>Colombia</b>	<p>? 13% of the total solid waste generated is plastic waste (1,789,548.22 tonnes) and on average the country is estimated to generate 57 kg of plastic waste /capita/year.[56]<sup>56</sup></p> <p>? A trend has been observed that as the size of the population of a municipality increases, the waste generation per inhabitant also increases<sup>51</sup>. For example, in municipalities with less than 30 thousand inhabitants the average generation is below 240 kg /capita/year, translating to a plastic waste generation rate of below 31.2 kg/capita/year.</p>
<b>Panam?</b>	? In 2019 the total amount of plastic waste generated in the country was 276,005.92 tonnes. This corresponds to approximately 65.4 kg of plastic waste /capita/year.[57] <sup>57</sup>
<b>Jamaica</b>	<p>? In 2019 Jamaica generated 1,297,327 tonnes of solid waste from which 17% was estimated to be plastics and the average plastic waste generation was 79 kg/capita/year.</p> <p>? According to the National Environment and Planning Agency (NEPA)[58]<sup>58</sup>, 51.2% of this plastic waste was PET, 7.40% HDPE and 7% PVC.</p>
<b>Plastic waste management</b>	



<b>Colombia</b>	<ul style="list-style-type: none"> <li>? In Colombia the main disposal method for waste is sanitary landfill (89% of total waste)<sup>22</sup>.</li> <li>? According to the sectoral report of the Public Services in Colombia<sup>[59]</sup><sup>59</sup>, Polyethylene Terephthalate-PET was the most recycled material (representing 34%) out the approximately 196,170 tonnes of plastic waste that was recycled in 2019.</li> <li>? It is important to note that the informality of the sector results in gaps in data and traceability of plastics which is dominated by 'waste pickers'.</li> <li>? In the country, 68% of the municipalities carry out collection, classification, and recycling of plastic waste material. It is estimated that proximately 300,000 to 350,000 tonnes of plastic waste are recycled per year in Colombia<sup>[60]</sup><sup>60</sup>. Furthermore, 4 out of 10 municipalities state that they have at least one ECA (Estaci?n de Clasificaci?n y Aprovechamiento) which is essential infrastructure for waste classification for the recycling activities in the country<sup>51</sup>. Around 90% of the Colombian municipalities have a single provider of the public cleaning service, Moreover, 18% of the municipalities carry out beach cleaning activities in which the municipal administration is mostly one of the main supervisors.</li> <li>? The result from the 2013 toolkit<sup>57</sup> show total releases of 583.32 g EQT/y of uPOPs in Colombia in 2013. 243.47g EQT/y (41.74%) from open burning processing, 124.4g EQT/y (21.33%) coming from waste incinerated, 42.65 g EQT/y (7.31%) from production of chemical products and consumer goods, and 10.86 g EQT/y (1.86%) from disposal and sanitary landfill. There is no data specific to plastic products.</li> <li>? The country's vehicle disintegration and scrapping programs do not consider vehicle polyurethane foams as hazardous wastes. Foam wastes containing c-penta-BDE must be identified and separated from others in order to be properly managed as hazardous wastes.</li> </ul>
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## Panam?

- ? It is estimated that 74% of municipal waste ends up in landfills. Additionally, approximately 26% of the waste generated in the country is neither disposed of in sanitary landfills nor recycled. A large portion is disposed of without any treatment or are burned in the open, possibly generating uPOPs (see section 1.1)[61]<sup>61</sup>.
- ? According to the AAUD52, the country has only 2 sanitary landfills (Cerro El Patac?n, located northeast of Panam? City and El Diamante) and 63 uncontrolled landfills, which serve 74% of the country's population. Moreover, according to local authorities these sanitary landfills technically do not meet the standards to be considered a sanitary landfill and are rather uncontrolled landfills without the technical measures of management and safety where hazardous waste is deposited without treatment and in more than 80% open burning takes place. Of the 63 (controlled and uncontrolled) landfills studied by INECO55, 91% are less than 1 km away from a riverbed; 46% have mangroves less than 2.5 km away; and 89% were found dumping hazardous waste. The environmental risks were evident in the study, where they also observed cases of spills in bodies of water.
- ? The waste collection is the responsibility of the municipalities, either with their own means (46 districts) or indirectly by concession companies (13 districts), serving 66% of the population. It has been found, as confirmed by the mayors surveyed by INECO55, that 83% of the municipalities have a waste collection service, a percentage that rises to 94% if the indigenous regions are not considered, which only have voluntary cleaning. However, another survey (developed by the same institution in 2016)52, showed that 43% of the population were not satisfied with the waste collection services and 46% did not know what the selective collection of waste consists of. Furthermore, 21% of the surveyed population considered waste management the country's second most important issue. Thus, it can be inferred that in Panam? there are major deficiencies in the processes for collecting and disposing of MSW.
- ? Panam? has no temporary storage systems or waste treatment facilities. However, there is an informal separation carried out by the segregators, who collect recyclable materials to sell them to private companies, which is almost the only form of recovery in the present. According to the Ministry of Environment the rate of recycling is 5% (including all type of materials).
- ? There are some initiatives of recycling companies that collect and manage large amounts of usable waste, including metal, paper, and plastic. The Panamanian Chamber of Recycling, established in August 2017, is one of these companies. Its purpose is to promote recycling in the country and encourage collaboration and exchange among its members such as ?Red Ecologica?, ?Recimetal SA?, ?La Casa de las Bater?as?, and ?Felipe Motta?.
- ? About 23.2 gTEQ/year of dioxins and furans are released in Panam? due to open burning practices of waste (2015), 13.9 gTEQ/year are released on landfills/dumpsites and 8.10 gTEQ/year released through incineration.49

<b>Jamaica</b>	<p>? The National Solid Waste Management Authority (NSWMA)[62]<sup>62</sup> stated that in 2019, the country had a waste collection coverage of 80%. However, as the country does not have sanitary landfills with engineering techniques, the waste is taken to 8 municipal dumpsites located in different parts of the island. In the same year 1,015,592 tonnes of waste were collected and disposed to these municipal dumpsites.</p> <p>? Currently plastic waste is collected by companies that export it abroad for recycling. Recycling Partners of Jamaica (RPJ)[63]<sup>63</sup> is the main company specialized in the collection of plastic waste and they export the waste mainly to the USA and Malaysia. According to them, 1,365.5 tonnes of plastic waste were collected in 2019 from which 99.8% was PET and the remaining was HDPE. However, neither The Statistical Institute of Jamaica (STATIN)[64]<sup>64</sup>, nor the Jamaica Customs Agency[65]<sup>65</sup> were able to provide data on the amount of exported plastic waste for recycling, as they indicated that the in 2019 data had not yet been collected.</p> <p>? 78.3% of dioxins and furans were released in residues followed by releases to air (20.6%), water (1.2%) and land (0.83%). Releases to air were dominated by burning of garbage and sugar cane fields (57.6%) and waste incineration, primarily from hospital wastes (40.9%). Releases to water were based entirely on leachate from landfill/dumpsites, while releases to land arise exclusively from residues left after uncontrolled combustions. The amounts left in residues arise mainly from disposal/landfilling (75.7%) and much less from uncontrolled combustion (24.3%).</p> <p>? The emissions stated in the NIP, although subject to considerable uncertainties, clearly indicate that the management of dioxins and furans releases will depend on addressing hospital incineration, burning of cane fields and uncontrolled burning of garbage/household waste and accidental fires, no specific data available on plastics.[66]<sup>66</sup></p>
<b>Marine plastic pollution</b>	
<b>Colombia</b>	<p>? Coastal marine ecosystems of Colombia's main pollution source of plastic garbage are tourist activities that take place seasonally. Plastic pollution also comes from the inadequate management of solid waste (open dumps, disposal directly in bodies of water)26. Consequently, different types of plastics are accumulating in Colombia's ecosystems, with a general average concentration of 2.7 macro-plastic and 255 microplastic items per cubic meter being found in the beaches' sand. The areas with the highest concentrations of plastics are Cartagena, Boca Tocino and Santa Marta[67]<sup>67</sup>.</p> <p>? The most common types of polymers reported in studies on plastic pollution in coastal ecosystems of Colombia26 27 are: polyethylene (PE), polypropylene (PP), polystyrene (PS), polyurethane (PU), polyethylene terephthalate (PET), polyvinyl chloride (PVC), high impact polystyrene (HIPS), high density polyethylene (HDPE), polyacrylamide (PAM), and acrylonitrile butadiene styrene (ABS), which are widely used in packaging, containers, textiles, and elements of construction, among others. As mentioned in section 1.1 (Problems in LAC cities), some of these are of high toxicological concern.</p>

<b>Panam?</b>	<p>? Marine waste in Panam? is produced by human activity on coastal areas densely populated by residents and tourists (land sources); from industrial and recreational marine activities such as navigation, maritime transport, fishing, and aquaculture; and by marine currents. Panam?'s discharge of marine waste (generated by land sources) is 102,229 tons/year, of which 61,553 tons is generated by human activities in urban areas and 40,675 in rural areas.[68]<sup>68</sup> The hydrographic basin of the Panam? Canal which provides drinking water in some provinces, is affected by the generation of waste solids due to the contamination produced by landfills.</p> <p>? ANCON[69]<sup>69</sup>, a non-profit non-governmental organization which promotes the conservation of the natural resources and biodiversity in Panam?, showed that due to its projects in 2019, 54 beaches were cleaned. From these cleaning activities, 164,450 objects were removed from which 82.01% was plastic waste material. Considering this 82.01% of plastic and the 102,229 tonnes/year of waste that are discharged into the sea in Panam?, it could be estimated that the amount of plastic waste discharged to the ocean corresponds to 83,838 tonnes/year. Moreover, studies of characterization of floating plastic waste were carried out in 2019 and the results revealed that the floating waste captured in the Matias Hernandez river basin, was primarily plastic material; Polyethylene Terephthalate (PET) predominated with 29.5%, followed by Expanded Polystyrene (EPS) with 17.2% and High-Density Polyethylene (HDPE) with 6.1% of the total characterized floating waste<sup>30</sup>.</p>
<b>Jamaica</b>	<p>? Plastic pollution in Jamaica results in flooding, damage to coastal and marine ecosystems and an unhealthy environment for residents. Places like Rae Town, a coastal Kingston neighbourhood, suffer the most from the wave of plastic pollution that makes its way into Kingston Harbour. According to the Ocean Conservancy, during coastal clean-ups in 2017, an average of 4,684 litter items per kilometer were found on beaches and coastal areas of Jamaica[70]<sup>70</sup>. The top marine litter found was plastic beverage bottles (32%), followed by plastic bottle caps (11%), and foam food containers (2.7%). According to NSWMA<sup>56</sup>, marine litter within the country's coastal waters has significantly impacted the tourism and fisheries industries.</p>
<b>Gender Dimension</b>	
<b>Colombia</b>	<p>? In Colombia, around 59.7% of the women and 55.2% of the male workforce are in the informal sector. A very balance situation regarding self-employment is present, around 50% for both genders generally across industries. Moreover, according to national polls, 35% of the recycling workforce are women.<sup>51</sup></p>
<b>Panam?</b>	<p>? The informal recycling sector in terms of employment is quite balanced with around 47% for both genders, with about 53% corresponding to formal. However, self-employment is higher for male, 40.8% and 36.7% respectively.</p>
<b>Jamaica</b>	<p>? Currently lacking data.</p>

## 2.2.2 Policy

Table 5 presents a summary of the policies on plastics in the three project countries.

Table 5. Policy overview in the 3 project countries

Policy Overview
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Colombia	<ul style="list-style-type: none"> <li>? In terms of national policies, Colombia has established goals for all recyclable products but not specifically for plastics. The National Development Plan has a target of 15% of waste recycled by 2022, while CONPES 3874[71]<sup>71</sup> sets it to 30% by 2030, having measured a baseline of 8% in 2018.</li> <li>? The Extended Producer Responsibility resolution sets a target of 30% of recycled packaging by 2030, with a 2-3% annual growth rate.</li> <li>? Colombia's National Circular Economy Strategy (ENEC) sets specific targets to increase the overall waste recycling rate, as well as of packaging waste, through instruments such as Extended Producer Responsibility. The objective of the Strategy is to strengthen the country's sustainable development model, orienting it to the efficiency of material and energy flows, technological innovation, the generation of collaborations and alliances and new business models that allow the closing of business cycles and efficient use of materials, water, and energy. This strategy emphasizes six actions with short-term and long-term goals and activities: (i) industrial materials and products; (ii) container and packaging materials; (iii) optimization and use of biomass; (iv) water cycle, (v) sources and use of energy; (vi) construction materials and demolition waste.</li> <li>? As part of the packaging line, the National Government created the National Board for Sustainable Plastic Management, aimed at articulating and executing actions in all phases of the plastic life cycle to improve environmental, economic, and social sustainability for the benefit of all Colombians, incorporating the concept and lines of action to implement the ENEC.</li> <li>? In November 2019, the National Plan for the Sustainable Management of Single-use Plastics was introduced. It aims at sustainable management of plastics, based on instruments and actions in prevention, reduction, reuse, use, responsible consumption, generation of new opportunities of business, productive chains, and jobs and technological developments, to protect natural resources and promote competitiveness and subsequently prohibited the entry of single-use plastics into the areas of the System of National Natural Parks in Colombia through Resolution 1558 of 2019.</li> <li>? During the last months of 2020, 231 programs have submitted their environmental management plans for containers and packaging to ANLA (National Environmental Licensing Authority), comprising 51 collective programs and 180 individual programs. More details of these programs are listed in Appendix 11.</li> <li>? In relation to policies to address marine litter, Colombia is engaged in the RAPMALI for the Wider Caribbean Region, the Framework for Marine Litter for the South Pacific. Moreover, Colombia is also part of the Marine Litter Regional Action Plan for the Northeast Pacific Region 2021 ? 2025, which aims at providing countries and stakeholders with actions applicable to the local, national, and regional context that allow addressing the problem of marine litter in an effective and sustainable way over time.</li> </ul>
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<b>Panam?</b>	<p>? This country has developed different regulations and initiatives to face the generation of plastic waste.</p> <p>? In 2018, Panam? became the first country in Central America to ban polyethylene bags in supermarkets, self-service stores, warehouses, or shops in general to transport products or merchandise with a phase-out period of 18 to 24 months.</p> <p>? Law No. 6 of February 6, 2017, which establishes the integrated management of solid waste in public institutions, orders the latter to classify their waste and undertake recycling plans for paper, plastic bottles, Tetrapak containers and aluminum cans.</p> <p>? Law No. 33 of March 30, 2018, establishes the Zero Waste Policy and its framework of action for the integrated management of waste based on the concept of circular economy.</p> <p>? In 2020, Law No. 187 was approved and came into force in 2021, as part of the public environmental policy in the state, which establishes the legal framework on single-use plastic articles in the national territory. Moreover, law 223 of June 8, 2021, was recently presented and aims to promote the recycling sector as an industry in the national territory.</p> <p>? Panam? joined three Regional Seas Programmes ? the Wider Caribbean Region and its RAPMALI for the Caribbean side, the South Pacific (Regional Action Plan framework) and Northeast Pacific (Regional Action Plan under development). In addition, the GPML, UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA) and UNEP Regional Office for Latin America and the Caribbean (UNEP ROLAC) have supported the development of a National Action Plan on Marine Litter together with the Ministry of Environment and Mar Viva Foundation.</p>
<b>Jamaica</b>	<p>? Two Ministerial Orders were promulgated to ban some types of single-use plastics implemented on a phased basis over three years, commencing on January 1, 2019, with several phases. The final phase, A ban on the import, manufacture, distribution and use of all SUPP (with some exceptions) which applies to expanded polystyrene foam, commonly referred to as ?Styrofoam??, for use as finished goods in the food and beverage industry, that is, food and beverage containers. And ``24x24? single-use plastic bags and disposable drinking straws attached to drink boxes or pouches, began on January 1, 2021. The government has granted a six-month transition period to the private sector and has committed to increasing public education and awareness-raising activities.</p>

### 2.3 Overview of situation in the 6 project cities

The following section includes a brief description of the current situation of the waste management system in the project cities, based on the National Guidance for Plastic Pollution Hotspotting and Shaping Action[72]<sup>72</sup>. The main findings represent estimations based on national official documents, publications and data collection from regional, national and citystakeholders (see **Figure 2** and **Table 6**)

Source: Data calculation based on the National Guidance for Plastic Pollution Hotspotting and Shaping  
Action74

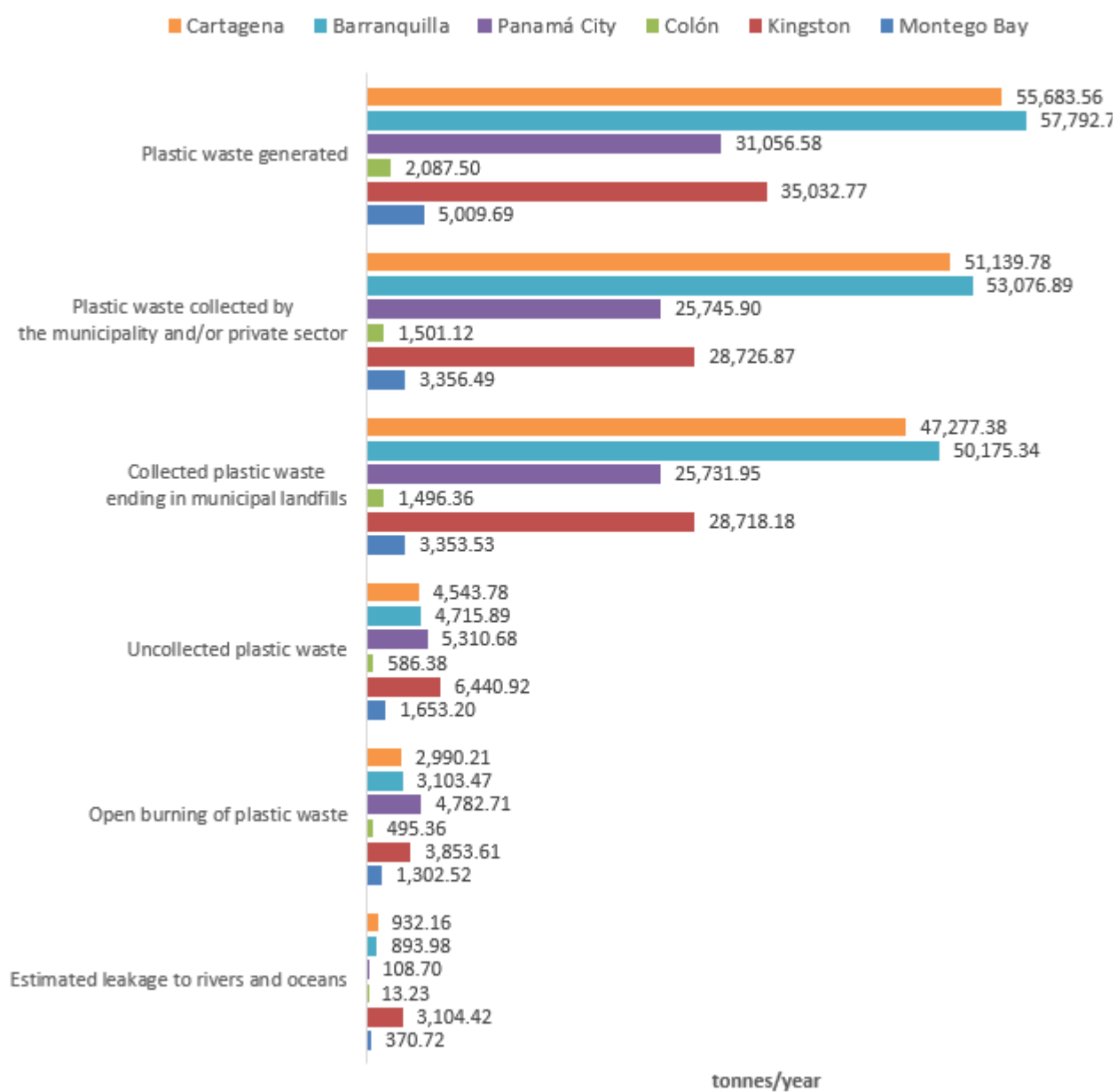


Figure 2. Comparative overview of plastic waste generation and management across the six project cities

The figure above compares the six project cities in terms of plastic waste generated, plastic waste collected, collected plastic waste ending up in landfills, uncollected plastic waste, open burning of plastics waste and leakage into rivers and oceans. Total plastic waste generated in the 6 project cities during 2019 was estimated to be 186,663 tonnes. From this total amount, 163,547 tonnes were collected by the municipalities and/or private sector. Based on consultations with national stakeholders it was possible to estimate the collected plastic waste ending into different type of municipal landfills (sanitary landfills, dumpsites, etc.) which in 2019 was 156,752.73 tonnes. Moreover, in the 6 project cities it was calculated that 23,2550.84 tonnes of plastic waste are uncollected. This uncollected plastic waste ends up either being open burnt, being littered into rivers and oceans or in other final disposal method used by the consumer. The estimated leakage rate was calculated based on the methodology followed by National Guidance for Plastic Pollution Hotspotting and Shaping Action<sup>74</sup>. From this, it was estimated that 5,423 tonnes of plastic waste were leaked to rivers and oceans from the 6 project cities.

The Colombian cites mostly possess the highest numbers of the presented data, which can be explained by the high population of Colombia and its two project cities compared to the other project cities. The sections below describe the figures of the above graph and its context in more detail (section 2.1 ? 2.2). Furthermore, Table 7 gives an overview of the policy priorities identified by the six project cities.

Table 6. City Baseline information of the 6 project cities

City Baseline Data
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Colombia	Cartagena	<p>? According to the Regional Solid Waste Comprehensive Management Plan (PGIRS) of Cartagena de Indias [73]<sup>73</sup>, the waste generation is estimated to be 1.1 kg/capita/day in the region. Within this amount, 15% is plastic waste. There were approximately 56,000 tonnes of plastic waste generated in Cartagena in 2019, or 62 kg/capita/year. It is estimated that 92% of this generated plastic waste is collected by the municipality and disposed to sanitary landfills (47,277.38 tonnes per year). Furthermore, approximately 8% of the plastic waste collected in this city is recycled. The remainder 8% of the waste generated is uncollected and part of it leaks into the ocean and waterways. It is estimated that 932 tonnes of plastics were leaked to the ocean from Cartagena in 2018, corresponding to 1.05 kg/capita/year.</p> <p>? According to the 2018 Colombian census compiled by DANE[74]<sup>74</sup>, Cartagena represented 9.76% of the municipal waste collected in Colombia. In terms of recycling, around 20% of separation is done at the source, and the other 80% is not being separated. Today mainly PET, PP and HDPE are collected and mechanically recycled using key infrastructure provided by a few large players in the recycling market. Chemical recycling is led by Andercol, who has developed a PET facility in Cartagena.</p> <p>? Concerning the city level strategies to address plastic pollution, the mayor of Cartagena de Indias, through Agreement 039 of December 18, 2020, replaced and regulated the consumption of single-use plastics in public entities of the central and decentralized level of the Tourist and Cultural District. The agreement had different objectives such as the generation of a social transformation through the active participation of the citizens and the replacement of single-use plastic products, through a pedagogical process of environmental education in terms of sustainability.</p> <p>? Furthermore, the city's PGIRS contains a Coastal and Riparian Beaches Cleaning Program. For the year 2021, this Program has the following two activities planned, with funding of COP \$ 135,997,900 (US \$36,221): Design and implementation of a training program for the different actors that provide tourist services on the beach, on the proper management of waste and the review and background check, on the generation of solid waste on beaches. More information about these initiatives and programmes at interinstitutional level in Cartagena are listed in Appendix 11.</p>
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	<b>Barranquilla</b>	<p>? As stated by the Regional Solid Waste Comprehensive Management Plan (PGIRS) of Barranquilla<sup>[75]</sup><sup>75</sup>, there was a waste generation of 0.99 kg/capita/day in the region. Moreover, the Regional Solid Waste Comprehensive Management Plan (PGIRS) of the Municipality of Atl?ntico<sup>67</sup>, developed a characterization of the solid waste generated and 14.25% was estimated to be plastic. From this per capita amount, and the plastic share it was estimated that 58,000 tonnes of plastic waste was generated in Barranquilla in 2018, or 52 kg/cap/year. 92% of the plastic waste generated is collected and disposed to sanitary landfills, representing 53,076 tonnes per year. Furthermore, only 5.28% of the plastic waste collected in this city is recycled. The remainder 8 % of the waste generated is uncollected and part of it leaks into the ocean and waterways. It is estimated that 893 tonnes of plastics were leaked to the ocean from Barranquilla in 2018, corresponding to 0.79 kg/capita/year.</p> <p>? Regarding the city-level strategies, Barranquilla is part of a departmental strategy which has a recovery goal of 5%, while the EPR normative has the goal of 16% recovery for the year 2023. The city has introduced the Departmental Development Plan and the Sound Solid Waste Management Plan, with 3 main objectives: first, structure a strategy for solid waste with the active participation of all the actors involved that is technically feasible, environmentally convenient, and economically viable. Second, strengthen the educational and advertising campaigns on a permanent basis that are developed to sensitize citizens to the integral management of solid waste aimed at raising environmental awareness. Finally, develop actions in favor of the recycling population that will result in their formalization and strengthening. Further information about the initiatives in Barranquilla can be found in Appendix 11.</p>
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<b>Panam?</b>	<b>Panam? City</b>	<p>? According to regional documents provided by INECO52, a person generated in average 1.03 kg/day of solid waste in Panam? City. From this average, 17.13% is plastic. Based on this information, there were approximately 31,000 tonnes of plastic waste generated in Panam? city in 2018, or 64 kg/cap/year. 82.9% of this generated plastic waste is collected and disposed to sanitary landfills, representing 25,745 tonnes per year. It is estimated that only 0.5% of this collected plastic waste is recycled. The remainder 17.10% of the waste generated is uncollected and part of it leaks into the ocean and waterways. It is estimated that approximate 109 tonnes of plastics were leaked to the ocean from Panam? city in 2018, corresponding to 0.23 kg/capita/year.</p> <p>? In the last years, a growing concern about the generation of waste and specifically about the plastics that enter the oceans encouraged the population, government institutions, non-governmental organizations (NGOs), companies, universities, and others to take part every year in cleaning beaches, rivers, and mangroves. They have been involved in many activities from environmental education campaigns and projects to the collection of recyclable materials segregated at the source. From 2001, the National Association for the Conservation of Nature (ANCON) in conjunction with the Foundation for the Protection of the Sea (PROMAR) led garbage collection through the annual activity called Cleaning of Beaches, Coasts and Rivers nationwide.</p> <p>? In 2008, the ANCON Association started to raise awareness and search for solutions for waste management through its #TuPapelCuenta campaign supported by the Papelera Istme?a SA companies (today part of a multinational), TetraPak, and the Riba Smith and El Rey supermarkets. This campaign lasted until the beginning of 2014 when the organization started another campaign known as Trash Zero-Change Your Neighborhood, called Recycle for your future from 2019. During the 2010s, new organizations emerged that seek to encourage recycling, prevention, and rational waste management, including the Ecocreando, Costa Recicla, Marea Verde, and Movimiento MiMar Foundations. In Appendix 11, the description of these initiatives and programmes can be found.</p>
	<b>Col?n</b>	<p>? There were approximately 2,087 tonnes of plastic waste generated in Col?n in 2018, or 51 kg/cap/year. 72% of this generated plastic waste is collected and disposed to sanitary landfills, representing 1,501 tonnes per year. It is estimated that less than 1% of this collected plastic waste is recycled. The remainder 28% of the waste generated is uncollected and part of it leaks into the ocean and waterways. As a result, it is estimated that 13 tonnes of plastics were leaked to the ocean from Col?n in 2018, corresponding to 0.32 kg/capita/year.</p>
<b>Jamaica</b>	<b>Kingston</b>	<p>? There were approximately 35,000 tonnes of plastic waste generated in Kingston in 2018, or 59 kg/cap/year. 82% of this generated plastic waste is collected by the municipal services. However, 100% these are disposed to unsanitary landfills, representing 28,591 tonnes per year. It is estimated that only 0.47% of this collected plastic waste is recycled. The remainder 18% of the waste generated is uncollected and part of it leaks into the ocean and waterways. As a result, it is estimated that 3,104 tonnes of plastics were leaked to the ocean from Kingston in 2018, corresponding to 5.24 kg/capita/year.</p>

	<b>Montego Bay</b>	? There were approximately 5,009 tonnes of plastic waste generated in Montego Bay in 2018, or 45 kg/cap/year. 67% of this generated plastic waste is collected. However, these 4,643 tonnes per year of plastic waste were disposed to unsanitary landfills. The remainder 33% of the waste generated is uncollected and part of it leaks into the ocean and waterways. As a result, it is estimated that 370 tonnes of plastics were leaked to the ocean from Kingston in 2018, corresponding to 3.33 kg/capita/year.
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The baseline in the PPG is primarily based on modelling, and it is essential to ground truth and verify the findings of the modelling approach with in-situ monitoring data to further strengthen and confirm the findings with regards to different products and polymers. As part of the execution of this project, city-level monitoring initiatives will be implemented to strengthen and confirm the findings of the model and to allow for the calculation of the reduction of marine plastics and chemicals of concern on the ground based on primary data collected in cities, to measure the effectiveness of the interventions selected by each city.

Table 7. Summary of policy priorities in the 6 project cities

	<b>Barranquilla and Cartagena (Colombia)</b>	<b>Panamá City and Colón (Panamá)</b>	<b>Kingston and Montego Bay (Jamaica)</b>
<b>Restrict or ban unnecessary, avoidable, and problematic products, including products with chemicals of concern and single-use plastics</b>	? Identify problematic and unnecessary plastics and reduce/eliminate them through restriction/ban ? Identify the plastic products that contain CoC and introduce ban and/or restriction on such products	Identify the plastic products that contain CoC and introduce ban and/or restriction on such products Ban the use of EPS containers as established by Law 33 of 2018, and other plastic containers not regulated by Law 187 of 2020.	Identify the plastic products that contain CoC and introduce ban and/or restriction on such products
<b>Promote reuse and refill</b>	Implement the <a href="#">National Plan for the sustainable management of single-use plastics</a> Promote reusable non-food packaging Encourage prevention, reuse and returnability of plastic products Establish and implement specific actions of the National Circular Economy Strategy (ENEC), line of action 5.2.2: Flow of packaging materials, to promote the circularity of plastics	Promote the development of a regulatory framework that includes economic incentives to promote reuse and recycling	Promote the development of a regulatory framework that includes economic incentives to promote reuse and recycling

<b>Eco-labels, standards and sustainable procurement</b>	Implement <a href="#">Sello Ambiental Colombiano</a> (sustainable stamp) as a voluntary requirement for specific product categories Establish and implement Sustainable Procurement legislation	Strengthen the measure of municipal agreement 231 of the Mayor's Office of Panam? on sustainable procurement Promote eco-labels	Strengthen the ecolabel programme under the Green Business Jamaica (GBJ)
<b>Waste management</b>	Improve plastic waste management to align with the <a href="#">Environmental Policy for the Sound Management of Waste or Hazardous Waste</a> Formalize the informal sector, to improve the working conditions of waste pickers	Improve plastic waste management to align with the National Policy for the Sound Management of Non-Hazardous and Hazardous Waste Pilot test innovative schemes for separation at source Formalize the informal sector, to improve the working conditions of waste pickers	Develop an update/review of the Regulatory Impact Assessment on plastic that was undertaken under the Plastic Waste Minimization Project Improve plastic waste management to align with the <a href="#">Management of Hazardous and Solid Wastes in Jamaica</a> , and the <a href="#">national policy for environmentally sound management of hazardous wastes</a> Formalize the informal sector, to improve the working conditions of waste pickers Establish waste reduction policies and solutions within the private sector

### 3) THE PROPOSED ALTERNATIVE SCENARIO WITH A DESCRIPTION OF COMPONENTS OF THE PROJECT

#### 3.1 Project Rationale and Approach

The baseline section (section 2) shows that the current practice of plastic production, manufacturing, distribution, use and disposal, is not sustainable. Polymers, products, business models and treatment solutions should be designed and developed with sustainable product management and circularity in mind. Input of virgin plastics into production processes must be reduced drastically with increasing

use of recycled content; meanwhile hazardous additives and chemicals being added in various plastic products must be reduced substantially. To reduce all the impacts, it is important to have a holistic and precautionary approach to tackle plastic pollution from its source to 'close the tap', while improving recycling. Countries, cities, and companies need to identify and act upon hotspots, detect leakage of plastic and chemicals in their industries and value chains, and activate the most effective interventions systematically. Such efforts will lead to more sustainable consumption and production practices and contribute significantly to the implementation of the 2030 Agenda for Sustainable Development.

■ Built on the lessons learnt from the GEF funded Medium Sized Project (9681): 'Addressing Marine Plastics - A Systemic Approach'[76]<sup>76</sup>, plastic pollution needs to be addressed along the entire value chain (including production, distribution, consumption, reuse, collection, and recycling, as well as final disposal of plastics), by making a systemic and fundamental shift from a linear to a circular economic model. GEF MSP 9681 also developed a 'A Roadmap to a Circular Economy'[77]<sup>77</sup>, which calls for wider testing and application of circular interventions at city, national, regional, and global levels, to gain first-hand learning for further replication and scaling-up.

Based on the recommendations of the GEF MSP 9681, this project proposes the actions needed in specific life cycle stages along the plastic value chain, as well as the cross-cutting solutions to link upstream and downstream stakeholders to avoid actions done in isolation. It incorporates key systemic interventions from the government to create cross-cutting policies and enabling conditions, actions from the private sector on innovative business models and the improvement of waste management of plastics, as well as cooperation and capacity development.

Actions proposed under this project also consider the local political, cultural, and socio-economic situation and cultural context, and are tailored according to the specific needs of the cities and the LAC region. The project will target macroplastics (defined as plastic fragments with dimensions greater than 5mm)[78]<sup>78</sup> as the main source of marine plastics and plastic products containing the chemicals regulated by the Stockholm Convention.

### 3.2 Project Goal and Objective

The key barriers are that policy makers and businesses in LAC cities lack the necessary policy framework, innovations, technologies, incentives, capacity, and other enabling conditions to implement

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circular economy approaches for the plastics sector. Based on the identified barriers, the logic of the intervention is for governments to design and enforce circular policies to regulate and guide the production, consumption, and end-of-life management of plastics and to replicate them at the city level (addressing barrier 1); for the private sector to innovate, re-design and upgrade their products, service, logistics and waste management practices (addressing barrier 2); for all stakeholders to work in an orchestrated manner under a shared vision (addressing barrier 3); and to enable cities to learn from each other (addressing barrier 4).

The objective of this project is:

**Reducing marine plastics and plastic pollution in the Latin America and the Caribbean region by facilitating circular actions at the city level to accelerate the transition to a circular economy, in line with government and business commitments on addressing marine plastics and plastic pollution.**

The project will be delivered through four interlinked components and corresponding outputs to reach expected outcomes, which will directly address the four main barriers identified in the problem tree (section 1).

**Component 1** addresses the lack of regulations and policy instruments on circular economy of plastics in target LAC cities, by supporting city governments and authorities to set up regulatory frameworks and testing key policy instruments to provide enabling conditions for developing a more circular plastic economy.

**Component 2** addresses the lack of business innovation and actions in target LAC cities, by stimulating the development of circular design on products, service, business models, and collection and recycling systems, with cooperation among relevant businesses along the value chain.

**Component 3** tackles the lack of a common vision, approaches, and leadership for LAC cities towards a circular economy of plastics, by setting up an inter-city network to align regional strategy and actions to stimulate cities to cooperate at the regional level.

**Component 4** develops various knowledge products, capacity-building activities, and monitoring schemes, to enable governments, businesses, and other stakeholders to adopt best practices for wider replication in more cities in LAC.

The four components organically interact with each other and provide a consolidated solution to fundamentally shift the unsustainable consumption and production patterns and insufficient waste management, which is the key problem of marine plastics and plastic pollution. The project will lead to net gain at environmental, social, and economic dimensions, which eventually support the achievement of the Sustainable Development Agenda and its relevant targets by 2030.

### 3.3 Project Components and Expected Results

The four main components presented above, each with specific outcomes and outputs are elaborated in the Results Framework (Annex A). **Figure 3** illustrates the project's Theory of Change based on the

problem tree (Figure 1, section 1) and objective tree (Appendix 1) to desired outputs and outcomes that will result in expected changes and impacts as project goals.

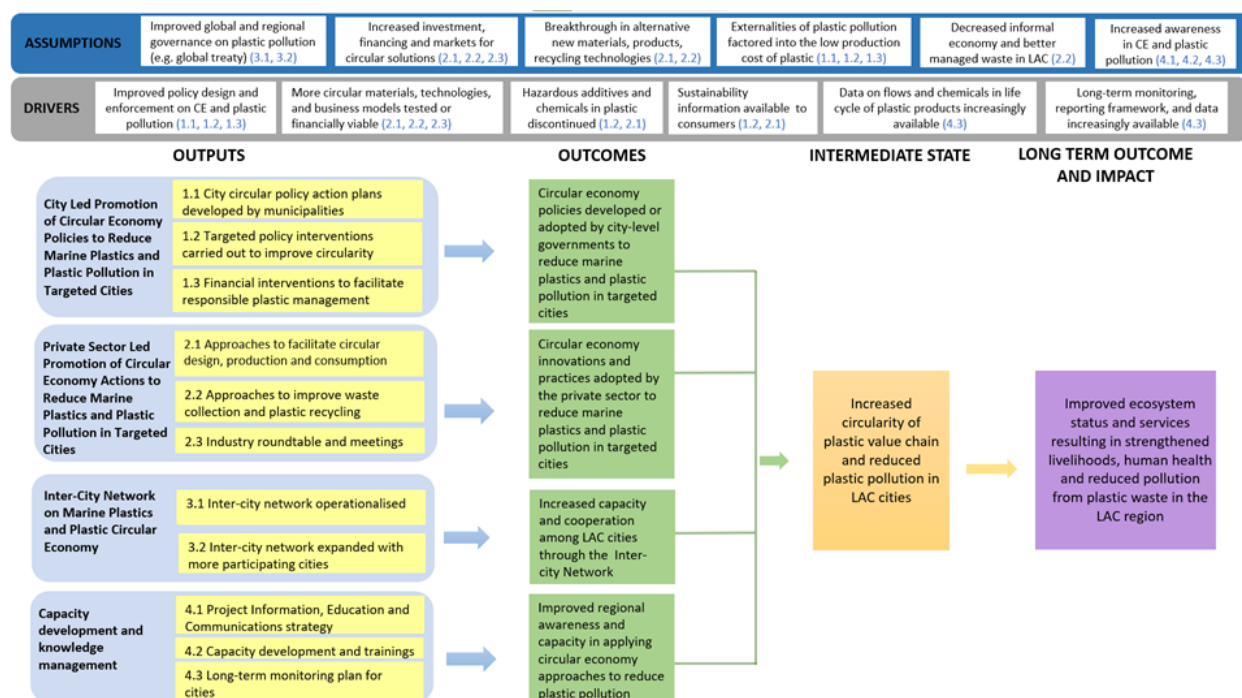


Figure 3. Theory of Change of the Project

### 3.3.1 Component 1: City Led Promotion of Circular Economy Policies to Reduce Marine Plastics and Plastic Pollution in Targeted Cities

#### Outcome 1 Circular economy policies developed or adopted by city-level governments to reduce marine plastics and plastic pollution in targeted cities

To effectively address the impacts from marine plastics and plastic pollution, the multiple land-based sources of plastic pollution need to be understood and tackled by the development and implementation of relevant policies. This component will first support each participating city government to develop a comprehensive policy action plan on circular economy of plastics, and then test and scale up priority policies, to ensure effective implementation and/or enforcement by mayors, city councils, local



authorities, municipalities, and different departments of cities. The development and implementation of policies will require effective engagement with all stakeholders (especially the private sector and civil society), to collect timely feedback and gain support.

### **Output 1.1 Policy action plans developed by municipalities to promote circular economy approaches for plastics**

This output will support city governments, municipalities, and local authorities to develop circular economy related policy action plans for plastics. It will facilitate city-level governments and administrations to lay out the policy vision, objectives, targets, and actions, to achieve a reduction in marine plastics and plastic pollution through circular economy approaches and actions.

#### **? Activity 1.1.1 Conduct global review of policy framework with recommendations for LAC**

A review of existing policy framework, action plans, roadmaps, and best practices related to the macro-planning of circular economy of plastics will be conducted, including typical case studies implemented at national and regional levels. Seemingly applicable approaches and recommendations will be provided to the development of similar regulations and action plans in LAC cities, which serves as a basis for Activity 1.1.2.

#### **? Activity 1.1.2 Develop policy action plan for six cities**

The activity will assist the city governments to develop policy action plans for the implementation of circular economy and management of chemicals of concern for the plastic value chain in six project cities. It will start with a comprehensive analysis of the existing policy framework, and an assessment on implementation gaps and challenges. Then the project will organize stakeholder consultations to validate the analysis and seek further inputs and support to the development of policy action plans. It will be ensured that women represent at least 40% of the attendees at these consultations. The project will define vision, specific targets, key activities, roles and responsibilities of stakeholders and arrange them in a timeline (short-term, mid-term, and long-term) for implementation. As a result, the activity will develop policy action plans for the six project cities, to implement the circular economy for plastics. The project team will also support the adoption, dissemination and sensitization of the action plan towards relevant stakeholders including relevant governmental offices, municipal departments, businesses along the value chain, commercial establishments, consumers, and citizens.

### **Output 1.2 Targeted policy interventions carried out to improve circularity**

Based on the circular policy action plan established in Output 1.1, this output will pilot test key policy instruments at the city level, prioritized by the municipalities and city-level authorities and with potential to be scaled up. The targeted policy interventions will focus around reducing plastic waste generation from the source, eliminating problematic and unnecessary plastic products and hazardous chemicals in plastic products, encouraging reuse, guiding environmentally sound collection, separation at source, recycling, and disposal, and discouraging littering, open dumping and open burning of plastics.

### ? **Activity 1.2.1 Identify global best policy practices and propose recommendations for LAC**

This activity will carry out a comprehensive overview of best practices for specific policy instruments at the global level, to provide reference and inspiration to the development of city-level policy pilots in LAC. Recommendations on application and adaptation of existing experience will be proposed for the pilot testing in six LAC cities.

Based on the scope of circular economy policies and the priorities that were identified during the PPG phase, the overview of the best policy practices will include the following policy topics and areas:

- o ban and restriction on problematic and unnecessary plastic products (such as single-use plastic products, e.g. plastic straws, stirrers, cutlery and food take-away packaging), with previous stakeholder consultation and informing;
- o restriction and elimination of plastic products that contain chemicals of concern;
- o policy guidance to recommend alternative materials, products and service;
- o policy encouraging and stimulating reusable packaging and refill, such as regulatory assurance to give legal clarity to refillable solutions;
- o policy guidance to establish voluntary commitments on the recycled content in plastic products and in plastic pellets, to increase demand on recyclables;
- o eco-labels, standards and sustainable procurement;
- o policy to improve collection rates and recycling efficiency;
- o policy to discourage or ban improper treatment (littering, dumping, and open burning); and
- o waste reduction policies and solutions in commercial establishments and public entities.

The topics included in the overview will be further refined by consulting with the city governments and covering all relevant policies in the city action plans by Activity 1.1.2.

Founded on the global experience, recommendations on how to adapt best policy practices and success cases in LAC cities will be developed, considering the policy, socio-economic and local context. These recommendations will be tested and implemented by the policy pilot in Activity 1.2.2.

### ? **Activity 1.2.2 Support the implementation of selected policies in six cities**

Based on the best practices summarized in Activity 1.2.1, this activity will develop, test, and improve targeted policy instruments and solutions in the six cities. Policies leading to significant GEBs will be prioritized for implementation, such as banning or restricting plastics containing hazardous chemicals, banning and limiting open burning, policies that encourage reuse and better collection and recycling.

The activity will first support the municipalities and city-level authorities to identify priority policy instruments to intervene in the plastic value chain at the municipal level. The priority policy instruments will be identified through a hotspot analysis (policy that can tackle the most problematic polymer, chemicals in products, plastic products, sector, waste management practices and geographical spots), stakeholder consultation, and with linkage to policy priorities identified during the PPG phase (Table 4) and the city policy action plans to be developed by Activity 1.1.2. To ensure that sufficient resources and support are provided by this project while gaining in-depth experience, it is expected that one specific policy topic will be selected per city for its test or implementation. The selection of the policy instrument will also consider diversity and novelty while allowing cross-reference among six cities and leads to substantial contribution to GEBs (especially on reduction of marine litter, reduction of POPs and uPOPs, and climate benefits).

For policies and instruments that already exist at the national level but with low maturity for enforcement, the project will support city governments to explore effective modalities and provisions for their adoption and implementation at city level. The activity will support the implementation by providing technical support and facilitation, while progress and impacts of the implementation will be closely monitored, to track performance and adjust implementation modalities.

For policies and instruments that do not yet exist or are at early stages of development at the national level, early concept of relevant policy instruments will be tested at the city level, to inspire and support the process of their introduction and scaling-up at the country level. The activity will carry out legal analysis, financial-administrative analysis, and develop draft documents for specific policy instruments, such as draft regulations, guidance, technical specifications, or feasibility study. Then the project will support the city governments to organize stakeholder consultations to receive feedback and inputs from the private sector, NGOs, academia, and the public.

By the end of the implementation, experience and success cases will be summarized, with recommendations developed to further scale up replication in other LAC cities and at the national level (Output 4.1).

### **Output 1.3 Financial instruments developed to facilitate responsible plastics management**

Effective financing will generate economic and market incentives for the uptake of more circular products and solutions. This output will test and develop different financial instruments at the city level, covering producer responsibility, taxation, subsidies, procurement, and investment schemes.

#### **? Activity 1.3.1 Identify global best practices on financial instruments**

The activity will compile the best practices of existing green fiscal policies and financial instruments applied at the global level, through desktop research and expert interviews. The overview will cover how these policies have been introduced in the local context, the detailed modality of implementation, the engagement with stakeholders, the effects and impacts of implementation on economics and the environment, as well as lessons learnt on implementation gaps, opportunities, and key success factors. The compiled best practices will provide reference to how similar instruments can be implemented in LAC cities, and recommendations will be provided on how existing instruments can be adopted at city level. These recommendations will be further tested and implemented under Activity 1.3.2.

The review will include the following financial instruments to cover the whole life cycle of plastic products:

- o tax and levy for less sustainable products,
- o Extended Producer Responsibility (EPR) and eco-modulation of EPR levies for packaging, fishing gear and agricultural plastics,
- o deposit return schemes (in particular for beverage containers),
- o financial incentives to create markets for recycled content and circular products with high reusability and recyclability,
- o taxes or fees for landfill disposal and/or incineration to encourage recycling,
- o penalties on littering, dumping and open burning,
- o investment and public-private partnership to establish collection channels and waste segregation, environmentally sound recycling and disposal, and
- o other instruments for specific sector and sites (such as ?no special fee? ports for the shipping industry and the tourism sector).

#### **? Activity 1.3.2 Develop implementation plans for selected financial instruments**

The activity will develop a comprehensive implementation plan of green fiscal policies and financial instruments to address plastic pollution prioritized by the city governments for three selected cities (one city per country), with thorough assessment of feasibility, including the readiness of legal framework and options for implementation modality. The implementation plan will include timebound targets and monitoring plan. The project will provide further technical support to the governments and relevant stakeholders (women and vulnerable groups will be prioritized) of three selected cities, in collecting and reviewing data and information, and facilitating stakeholder consultation. In the cases where city government's priority is to improve the implementation of existing financial instruments instead of developing new ones, the project will support the cities in monitoring progress and impacts of the existing instruments and proposing actions for its optimization.

Experience and success stories from the process of developing implementation plans for the cities will be summarized based on the learning in the six cities (Output 4.1). Recommendations for further scale-up replication in LAC cities will be developed as well.

### 3.3.2 Component 2: Private Sector Led Promotion of Circular Economy Actions to Reduce Marine Plastics and Plastic Pollution in Targeted Cities

#### Outcome 2 Circular economy innovations and practices adopted by the private sector to reduce marine plastics and plastic pollution in targeted cities

The private sector can play a critical role in improving the circularity and sustainability of the value chain. Efforts from producers and product designers is critical to generate upstream solutions to promote the adoption of more innovative business solutions. Producers can act as financiers (or co-financers) of collection and sorting schemes (as local governments often lack the resources) and as generators of markets for the recycled materials. Waste collectors and recyclers play an indispensable role in setting up integrated solid waste management systems, where plastic wastes are processed with the least environmental cost and greatest socio-economic benefits.

The project will engage with private sector stakeholders, in particular with plastic producers (such as plastic importers and manufacturers) and fast consumer goods companies to promote the shift towards more circular alternative materials and business models, with retailers (e.g. supermarket, chain stores), commercial establishments (e.g. restaurants including fast food services, office buildings, conference, event and recreation centers) and public entities (e.g. schools, governmental offices, parks) to change the consumption pattern (such as reducing reliance on single-use products, substitution of problematic plastic products and motivating reuse) with waste collectors and recyclers to develop effective recycling systems and markets for recycled materials.

This component will focus on supporting the private sector to develop, test, and scale up circular economy innovations and practices actions along the plastic value chain. It will include exploring better design of product and business models, reuse solutions, innovations to trigger consumer behavior

change, improvement of waste management (collection, sorting, recycling, and disposal), as well as cross-cutting actions. In addition, the component will facilitate the collaboration between different actors along the value chain, to ensure the developed solutions are systematically tackling the pollution without presenting false solutions (e.g., biodegradable plastic), shifting problems or generating unintended trade-offs.

## **Output 2.1 Approaches developed and tested to facilitate more circular design, production, and consumption of plastics**

This output will work with the private sector to develop upstream interventions to improve sustainable consumption and production of plastics. The intervention will cover the following life cycle stages: manufacture, design, production, distribution, and use phase including reuse. This output aims to contribute to the elimination of problematic or unnecessary plastic products/packaging, reduction and elimination of chemicals of concern in plastic products, shift towards reuse models suggested by findings from life cycle analysis<sup>37</sup>, increased inclusion of recycled content in new products, and better provision of sustainability information to consumers to foster more sustainable consumption practice.

### **? Activity 2.1.1 Identify global best practices on business upstream innovations**

The activity will compile the best practices on existing business upstream innovations and solutions on elimination, reduction, and reuse at the global level, to provide examples and inspiration to the uptake in LAC cities. Success cases, implementation modality, achieved impacts will be summarized for different business interventions, with a specific focus on the application at the city level. Based on the best practices, the activity will prepare recommendations on how these upstream innovations will be applied in the context of LAC cities.

The overview of best upstream practices will include the following topics:

- o circular design on packaging and products (on reducing and phasing out hazardous pigments, additives and chemicals of concern in relevant sectors and product categories, improving reusability and recyclability of plastic products, and developing alternative materials and solutions),
- o new business models,
- o reuse (including refill) and product lifetime extension,
- o collaboration with government to implement policy related to standard and quality on the use of recycled content in products,
- o eco-labels and declaration to improve consumer information,

- o waste reduction solutions in different commercial establishments and public entities, and
- o awareness raising campaigns for consumers to adopt more sustainable consumption practices.

These best practices will be further tested and implemented by the pilots in Activity 2.1.3 on upstream solutions.

#### **? Activity 2.1.2 Identify business upstream interventions in six cities**

The activity will support the private sector to prioritize upstream innovation and actions in six project cities. First, the project will undertake a thorough brand audit and mapping of key business stakeholders along the plastic value chain in the six project cities, including polymer manufacturers and importers, plastic product and packaging producers, companies using packaging (such as fast-moving consumer goods companies), key commercial establishments and public entities for plastic consumption (supermarkets, retailers, schools, shopping malls, restaurants, hotels), as well as collection and recycling companies. This mapping will also include the specific identification of women-owned businesses as they will be prioritized for the interventions under Activity 2.1.3. In the meantime, the project will also identify the most problematic and unnecessary plastics, opportunities for upstream solutions related to sustainable consumption and production, and interests from supporting companies and investors. Then, the project will develop a detailed list of targeted activities (elimination, reduction, and reuse) to be implemented by specific companies through feasibility assessment and stakeholder consultation in all six cities. This will be designed to align with the city action plan and policy actions in Component 1, and with close interaction through the industry roundtable in Output 2.3.

#### **? Activity 2.1.3 Pilot test business upstream interventions in six cities**

Based on the upstream interventions identified in Activity 2.1.2, the project will pilot test and implement the key actions partnering with the identified companies and provide technical support to bridge existing experience to the local companies. The activity will also develop monitoring indicators to track the progress of the pilots. The activity will support targeted companies in LAC cities to re-design their packaging, products, and business models, by connecting them with the forerunner companies and innovation institutes at the global level for technical support. The pilot will also build close collaboration with organizations and companies providing co-finance to the project, with a focus on reuse (including refill), such as implementation of refillable solutions (e.g., RFID bottles owned by consumers and B2B packaging), and reduction of chemicals of concern in products (such as through integration of green and sustainable chemistry) among other topics. The technical support will include providing feedback on adoption of existing solutions, review of product prototypes, draft design, and business models, offering feedback on small-scale testing, and giving advice on further up-scaling potential. The activity will also support the pilot companies to assess and forecast on the potential impacts and trade-offs of the new solutions based on the implementation experience in the target cities,

to avoid trade-offs and problem shifting. The result of this activity is new product design and business models developed and implemented in the six project cities.

To strengthen the uptake of innovation and new design, the project will also support relevant companies to carry out consumer testing and campaigns to communicate the knowledge, information and benefits of good practices and innovation, to trigger behavior changes on sustainable consumption and lifestyles. This will be materialized in conjunction with Output 4.2 through targeted capacity building exercises.

## **Output 2.2 Approaches developed and tested to improve collection and recycling of plastic waste**

This output aims to improve waste collection and plastic recycling by working closely with collectors and recyclers, with a specific focus on the informal sector, such as waste pickers and sorters. The main objective is to improve plastic collection and recycling performance, while reducing the amount of mismanaged plastic waste (such as open burning, dumping, and littering) and reducing the release and exposure to chemicals of concern in plastics during waste treatment. The key approach is to identify and pilot test new solutions, technologies, digital tools, and awareness raising means to improve collection and recycling, as well as to address core socio-economic and political considerations including gender issues.

### **? Activity 2.2.1 Identify global best practices on collection and recycling**

The activity will carry out an overview of the best practices on setting up segregation at source, differentiated and diverse collection channels (supported by various collection avenues and digital tools), establishing cost-effective recycling facilities with state-of-the-art technologies, engaging with the informal sector for collaboration, as well as effective financing instruments and investment at the global level. Based on the existing experience, recommendations will be provided on how to design interventions to improve the performance of collectors and recyclers in LAC cities.

This activity will cover core topics on setting up efficient collection channels of municipalities and other collection channels for both commercial and household plastic products, such as:

- o improving sorting at source,
- o formulating partnerships between the private sector and municipalities to significantly improve the management of municipal solid waste (in particular plastic wastes),
- o exploring the feasibility to apply best available technologies for plastics recycling (material reuse, remanufacturing, mechanical recycling, certain applications of chemical recycling, potentially upcycling plastic into new products) and disposal of hazardous fractions (including safeguards to reduce the exposure to chemicals of concern and best technologies to minimize uPOPs formation during incineration),



- o implementing the Extended Producer Responsibility and management of the Producer Responsibility Organization to set up waste treatment systems,
- o initiating infrastructure development (e.g., increasing the number of depots, redemption centers and drop off points) and contracts,
- o engaging with the informal sector, and
- o improving gender and social inclusiveness.

These best practices will be further tested and implemented by the pilots in Activity 2.1.3 on upstream solutions.

#### **? Activity 2.2.2 Pilot test solutions to improve collection and recycling in six cities**

The activity will first conduct a thorough mapping of all relevant companies engaging with import, export, collection, recycling, and disposal of plastic waste in the six project cities. Then the project will carry out due diligence checks (operating license, permit, certificates, labour and EHS conditions etc.), and assess the technical and environmental performance of these companies and propose key actions to reduce mismanaged waste and improve collection, recycling, and recovery rates. The activity will also develop a local baseline study to identify which chemicals/product combinations are posing a barrier to circularity/local recycling activities, which are high risk to recycling workers and to the environment, and the gap in recycling operation, technologies, and facilities in the context of the 6 cities. Based on the mapping, the assessment and the baseline study, the project will organize pilot projects to test various collection channels as well as digital tools to improve the segregation, collection, and treatment of various plastic wastes. The activity will support the municipalities to release a Request for Proposal (RFP), to contract eligible collectors and recyclers to improve existing collection and recycling practices for plastic waste from both commercial and household sources and develop innovative solutions. The activity will provide technical support to develop technical specifications and evaluation criteria of RFP, assist the review and selection of contractors, issue contracts to the selected collectors and recyclers, monitor progress during the implementation phase, provide technical feedback to the contractors to improvement efficiency, review the data collected from the pilot project, and support relevant assessment and evaluation. Measures will be put in place to engage with female entrepreneurs in the waste sector to include them in feasibility assessment, due diligence check, and also collection tenders.

The activity aims to collect and recycle 1,480 tonnes of plastic products and packaging in total in six project cities. The plastic products to be collected and treated will need to have high relevancy to marine plastics, climate impact, as well as relevancy to POPs and uPOPs, which will have direct GEBs for the project. Some of these high relevant polymers are: PET, HDPE, LDPE, PS, PVC PU and synthetic rubber. These polymers are represented in different macroplastic products used in relevant sectors such as packaging, construction, electronics, and the automotive sector.

Table 8. Target for collection and recycling pilot

City	Collection and treatment targets of the project (tonnes of plastic products and packaging)	Activities
Barranquilla	296	<p>The pilot project will collect and treat 1,480 tonnes of plastic products/packaging, including 780 tonnes of single-use plastic products and consumer products, 500 tonnes of construction materials, furniture, packaging, and products containing HBCD and PBDE, and 100 tonnes of cables and products containing PVC.</p> <p>The pilot will include the following three activities:</p> <ul style="list-style-type: none"> <li>? Improve the collection and recycling efficiency of recyclable fractions</li> <li>? Safely segregate and dispose of plastics containing POPs and COCs</li> <li>? Reduce dumping, littering and open burning through environmentally sound collection and treatment, while engaging actively with the informal sector</li> </ul>
Cartagena	296	
Panam? City	370	
Col?n	74	
Kingston	370	
Montego Bay	74	
<b>TOTAL</b>	<b>1,480</b>	

In the pilot, contractors will collect critical plastic products/packaging that substantially contribute to marine plastics, the release of chemicals of concern and plastic pollution. The collection pilot will test various collection channels and methods to increase the collection rate of plastic waste from both commercial and household sources. Innovative digital and information tools will be tested to increase outreach to final users to improve sorting at source and collection efficiency. The plastic waste collected will be diverted to state-of-the-art facilities for further treatment and disposal, to understand the status quo of treatment at city level, as well as testing innovative solutions to improve the recycling performance. When recycling and treatment solutions (such as for plastics containing POPs) are not available in the pilot cities, solutions will be identified at the national and regional levels for shared treatment infrastructure. If relevant and feasible, the pilots will also explore solutions for plastic waste importation and exportation for recycling. At the same time, the performance of different treatment technologies and solutions will be evaluated against their technical, environmental, and economic performances. The pilot will explore the best collection channels and treatment routes, at the same time bringing environmental and socio-economic benefits to the cities. During the pilot, an effective approach to engage the informal sector will be identified to integrate them into the existing waste management system, while improving their income, well-being, and occupational protection. Gender will be considered throughout the design and implementation of the pilot, to ensure the access to waste and jobs by female entrepreneurs and workers.

When the pilots are concluded, the project will compile all the economic and environmental data generated from the pilots for analysis and documentation, summarize the learning from contracted collectors and recyclers, and prepare recommendations to further scale up the practices in other LAC cities.

### **Output 2.3 Industry roundtable on plastic circular economy established and roundtable meetings organized**

This output will set up cross-sector dialogues and mechanisms to act as an incubator to stimulate business innovation and cooperation, and it will provide a collaborative structure for the private sector to participate in activities in both Component 1 and Component 2. This roundtable will ensure there is collaboration for a group of companies in the same sector and value chain stakeholders to come together to develop and catalyze solutions for shared problem on plastic pollution. This output will also organize meetings to converge businesses along the value chain for the development of new technologies, solutions, and community ideas to induce innovation. It will consequently enable industrial players to reach common vision and targets through scalable actions to promote a circular economy for plastics.

#### **? Activity 2.3.1 Establish the industry roundtable and organize roundtable meetings**

The activity will carry out the following actions to establish the industry roundtable: converge on a common vision and cooperation areas among the participating companies, understand shared issues and identify key gaps for industrial players to address plastic pollution, and define code of conducts, governance, and activities of the industrial roundtable. Building on the list of key businesses identified in Activity 2.1.2 and Activity 2.2.2, the project will approach the following stakeholders to join the industrial roundtable in each target city: plastic manufacturers and importers, logistics and distribution companies, consumer goods companies (using plastics as packaging), innovation companies and start-ups for eco-design and new business models, retailers, business associations, waste collectors and recyclers, and waste importers and exporters. It will be ensured that women represent at least 40% of the attendees at these meetings and events through the identification of female entrepreneurs in Activity 2.1.2 and 2.2.2.

The activity will also support the participating businesses to organize the industrial roundtable meetings and networking events at the city level every 2 years, and in all 6 cities. More technical meetings are expected to be organized by the industry at a regular basis to discuss specific topics, innovation, and interventions. In-kind contribution is expected from the private sector to organize such technical meetings. Key learnings from the city level industrial roundtable will also be shared at the meetings hosted by the Inter-City network.

The industrial roundtable meetings will cover the following topics:

- o generate and share information and data on the applications, quantities, and compositions of plastics (including CoC in plastics), as well as the leakage and impacts of different plastic packaging and products at the city level;

- o brainstorm, identify and develop innovative solutions on circular design (alternative materials, reuse, refill, new business models) and sustainable production;
- o create enabling conditions on regulation compliance, knowledge, and intellectual properties to support entrepreneurship and collaboration among designers, researchers, engineers, start-ups, female entrepreneurs and especially SMEs;
- o channel discussion and feedback between municipalities and businesses for adopting circular policies and solutions;
- o explore possible investment and financial resources to facilitate the uptake of new innovation; and
- o share learning and successful cases among participating companies and with other stakeholders (such as policymakers, governments, NGOs, consumers and academics at the city and national levels) to seek collaboration and support for action scaling-up.

The activity will provide technical support to the industry roundtable meetings, by reviewing the agenda and tracking the progress of the project. Implementation gaps and opportunities for the project will be discussed in the meetings, to ensure that the project pilots (Activity 1.2.2, 1.3.2, 2.1.2, 2.1.3, 2.2.1, 2.2.2) receive assistance and support from the private sector through the roundtable meetings.

### 3.3.3 Component 3: Inter-City Network on Marine Plastics and Plastic Circular Economy

#### **Outcome 3 Increased capacity and cooperation among LAC cities through the LAC Inter-city Network on marine plastics and plastic circular economy**

Realizing the vision of a circular economy for plastics will require unprecedented levels of collaboration, not just globally, but also at city, national and regional levels to work towards scalable and localized solutions. Led by city-level leaders, an inter-city network on marine plastics and plastic circular economy can drive collective action of LAC cities towards a common vision and a set of ambitious targets, with transparent reporting on progress. The inter-city network offers a platform for city leaders and actors to build shared infrastructure, leverage policy instruments and financial resources, improve innovation and technologies for solutions along the value chain, and exchange lessons learnt and best practices across cities in the LAC region.

Activities in this component will include the engagement of targeted LAC cities in this project to establish a collaboration platform to raise awareness on the problems and solutions to address marine plastics and plastic pollution through the development of a common vision, aligned actions, peer-to-peer learning, and capacity development. The first inter-city network meeting (which is also the launch of the network) will be organized in the second year of the project, and the second meeting will be organized in the fourth year of the project to enhance collaboration and increase impacts.

The network is instrumental to amplify learnings and facilitate replication, adaptation and scale-up of best practices to reduce plastic pollution and accelerate the transition to a circular economy at the regional level. Besides the six target cities, additional cities in the LAC regions will be approached and invited to join the meetings and activities of the inter-city network, with relevant costs, if any, to be covered by themselves as co-finance to this project.

The budget for component 3 increased from PIF, as activity 3.2.1 will provide technical assistance to at least three more participating cities of the network in addition to the six project cities to develop the city action plan on circular economy for plastics to reduce marine plastics and plastic pollution

### **Output 3.1 Inter-city network operationalized**

This output will focus on developing a framework of the inter-city network including the planning, governance, vision, and missions of the inter-city network.

#### **? Activity 3.1.1 Establish the inter-city network**

The activity will first work with the six target cities to discuss and draft a framework document of the intercity network, laying out the vision, missions, benefits of joining, working areas, governance, timelines, and operational cost. The vision of the inter-city network will align with existing MEAs, regional priorities and agenda (such as those defined in the LAC ministerial declaration), as well as national plans on circular economy. The project will also approach other cities in the LAC region to invite them to join the initial planning and the development of the framework document. Upon agreement with the participating cities, the project will support the network to establish its secretariat and governance structure and support the secretariat of the network to formally launch the network. A website of the network will be developed and updated regularly to document key progress, publications, events, and communication materials, while enabling cities to interact through the website.

The inter-city network will explore how to strengthen regional coordination on actions to address marine plastics and plastic pollution, through engaging with cities in the region. The experience and lessons learnt will be summarized and shared under output 4.1.

#### **? Activity 3.1.2 Develop a performance tracking mechanism and facilitate knowledge exchange among cities**

The project will support the network to set up a performance tracking mechanism with indicators and reporting procedures to monitor the progress of cities towards improving circularity of the plastic sector and reducing marine plastics and plastic pollution. The tracking of performance will contribute to the reporting of regional targets and global processes such as MEAs. This activity will also support the

gathering of data from participating cities to report on progress, demonstrate lessons learnt and improve performance. Experience and knowledge sharing among cities will be facilitated under the network via joint events and dialogues.

### **Output 3.2 Inter-city network expanded with more participating cities**

The output aims to approach more cities in the LAC region to join the inter-city network, and actively participate in the work of the network to achieve common vision and objectives.

It is instrumental to have a harmonized approach for participating in the network to achieve the common vision and target. This output will also develop a harmonized action plan for cities with the willingness to develop their own action plan on plastics.

#### **? Activity 3.2.1 Develop a harmonized action plan for cities and expand the network**

Based on the policy action plans developed (developed in Activity 1.1.2) and business actions identified (developed in Activity 2.1.2 and Activity 2.2.1), this activity will assess the key elements needed for promoting circular economy for plastics at city level. In accordance with the vision and objectives of the inter-city network, a harmonized template will be drafted to lay out the objective, approaches, key actions needed, milestones, indicators and timeline from the city-level government, the private sector, and other actors. Gender indicators will also be included. The action plan template will cover target setting, activities, timeline of implementation, and stakeholder responsibilities, and cover topics related to elimination of problematic or unnecessary plastic products/packaging, elimination of chemicals of concern in plastic products, promotion of more sustainable products (in terms of reusability, recyclability, composability, and recycled content used), reuse and waste management. The template will also provide step-by-step instructions on how to collect the necessary information, conduct analysis, organize consultation for feedback, and engage stakeholders. The development of the action plan template will be based on consultation with participating cities of the network.

To increase the impacts of the network, the project will support communication and dissemination at the regional level, to invite more cities to join the network and contribute to its expansion. At the international level, the project will also work with partners (such as UN-Habitat, the World Bank, WWF, PACE, GPAP, GPML global and regional nodes, NPEGC, Euro CITIES, HISCAP, the IW: LEARN network and the GGKP platform), to establish linkages to existing city-led initiatives for synergies and collaboration. The activity aims to have at least 15 cities connecting to the network by the end of the project.

The activity will also provide technical assistance to at least three more participating cities of the network in addition to the six project cities (possible cities include Belem in Brazil and Roatan in Honduras) to develop the city action plan on circular economy for plastics to reduce marine plastics and plastic pollution.

### 3.3.4 Component 4: Capacity Development and Knowledge Management

#### **Outcome 4 Improved regional awareness and capacity in applying circular economy approaches to reduce marine plastics and plastic pollution**

This component will increase the awareness of problems resulting from the impacts of marine plastics and plastic pollution as well as communicating the gained knowledge, learning and success stories from this project's activities. The project team and local municipalities will disseminate the learning of the project to a wide range of stakeholders for maximum outreach. This component will be supported by all project activities under the other 3 components and will develop knowledge products and capacity building activities and disseminate them through various means and channels at city, national, regional, and international levels.

This component will also deliver an output to enable key city stakeholders (authorities, industry, civil society, etc.) to monitor the future impacts and benefits by implementing circular economy approaches to reduce marine plastics and plastic pollution. Through the development of a pragmatic and affordable monitoring programme, based on the baseline on marine plastics and plastic pollution established under this project, the cities are expected to be equipped with a robust mechanism to monitor and evaluate plastic pollution reduction and showcase their progress.

#### **Output 4.1 Information, Education and Communication (IEC) strategy for the project developed and implemented using IW: LEARN platform, GGKP and GPML platforms**

This output will summarize the key learning and experience from the whole project and present them in communicable formats for wider dissemination and replication.

##### **? Activity 4.1.1 Establish a project website**

The activity will mount a dedicated IW:LEARN compliant website for the project, as a one-stop shop to document and store project information, activities, progress, publication, and events. The project team will develop an initial structure of the website and will seek feedback from all project partners before the launch. The project team and communication experts will regularly update project information (at least on a quarterly basis) to ensure key stakeholders and partners are updated with the latest progress of the project. This activity will take advantage of the knowledge products developed in Activity 4.1.3 and all project components and share them on the website.

##### **? Activity 4.1.2 Develop and implement the project communication strategy**

The activity will develop an Information, Education and Communication Strategy compliant with IW:LEARN requirements, to plan the activities on the production of communication materials (such as press release, videos, web stories, content for social media) and dissemination plan (media outreach, meetings, high-level events) towards the target audience, while linking closely with the activities of the other 3 project components.

The activity will first carry out a comprehensive mapping of the target audience for project communication, including the following categories:

- o Public sector: government officers (inter-ministerial, national and local), policy makers, enforcement agencies;
- o Private sector: polymer, plastics and packaging producing companies, durable goods and consumer goods producers, retailers, collection, sorting and recycling industry, informal sector;
- o Non-governmental organizations working on circular economy, solid waste management, recycling and recovery of plastics, awareness raising, consumer behavior and environmental education; and
- o Academia, universities and research institutions working in the field of marine plastics, plastic pollution and circular economy.

Targeting different audience groups, the project will develop a comprehensive communication plan covering the following areas:

- o raise awareness towards all related stakeholders by defining project visual identity and planning the objectives, approaches and targets for stakeholder outreach;
- o deliver educational and awareness-raising activities targeting critical issues;
- o develop consumer campaigns and partnership facilitation to encourage behavior and attitudinal change towards the circular economy of plastics, such as increasing the acceptance of refillable solutions, organizing large scale multi-channel campaigns aimed at motivating citizens to reduce plastic consumption, separating plastics waste from sources and disposing through responsible channels; and
- o produce communication and IW:LEARN compliant materials including developing regular newsletters to keep relevant stakeholders and interested parties informed on the progress of the project.

To support specific training, events, and communication campaigns, the project will prepare press releases, web stories, content for social media, presentations, and videos to fit different purposes. These will be designed from a gender perspective.



After the communication plan is approved by the project steering committee, the plan will be carried out according to the milestones and timeline defined. For each communication activity, the project will document recipients and audiences in gender disaggregated data, and analyze the impacts related to behavior change.

#### ? **Activity 4.1.3 Compile and disseminate project knowledge products via various platforms**

The activity will document and produce key knowledge products based on the learnings from Components 1, 2 and 3, to share lessons learnt to key audiences and encourage replication and scale up of successful approaches, such as EPR solutions. For policy makers, learning experience and case studies will be compiled from Component 1, related to the best practice on developing and implementing circular policy. For the private sector, learning experience and case studies will be compiled from Component 2, related to the best practices on developing circular innovation and solutions along the value chain, including circular product design, innovative business models, and reuse, collection, and recycling. LCA studies to support reuse technologies and systems is a key enabler. The experience on setting up the inter-city network at the regional level will be summarized and presented in a case study, for the reference of other sectors and regions. A survey study will assess the role of women in the plastic value chain and a Gender Guidance Note will be developed to ensure that activities are organized in a gender responsive manner. Overall gender-disaggregated data from the project cities will be collected and tracked under this activity.

All the project information and knowledge products will be integrated into the project website, IW: LEARN platform, GGKP, GPML Digital Platform, SAICM knowledge platform and other relevant online repositories.

- o All knowledge generated under the project will be integrated in the IW: LEARN platform,<sup>[79]</sup> which functions as a knowledge-sharing and exchange hub that has been supported by the GEF since 2000 in various tranches. The integration with IW: LEARN will help in linking and sharing internal IW learning and knowledge management efforts across GEF agencies and focal areas.
- o The knowledge products of the project will also be shared on Green Growth Knowledge Platform (GGKP)'s website. The GGKP<sup>[80]</sup> is the world's largest policy platform dedicated to managing and sharing knowledge at the nexus of economics and the environment. Partnering with the GGKP will provide the project with a distinct identity while also benefitting from the GGKP's existing knowledge management system including case studies, good practices, learning materials and publications.

- o When appropriate, elements of this project may also be linked to the GPML Digital Platform<sup>[81]</sup>, a multi-stakeholder, mostly open-source platform that compiles and crowdsources different resources, integrates data and connects stakeholders to guide action towards the long-term elimination of marine plastics and plastic pollution.
- o At the end of the project at least 3 Experience Notes/Results notes/Best Practices report on project learning will be prepared.
- o The knowledge products related with chemicals of concern will also be shared on the SAICM knowledge platform<sup>[82]</sup> developed by the project Chemicals Without Concern funded by GEF to enhance the dissemination of relevant knowledge to stakeholders working on chemicals of concern.

## Output 4.2 Targeted capacity building activities conducted

### ? Activity 4.2.1 Develop capacity building events and training

This output will organize different capacity building activities towards different stakeholders, based on the project experience and learning. These will include a gender balance approach and gender data will be reported. **Table 9** below presents an overview of relevant meetings and training events.

Table 9. Events and trainings of the project

Events and training	Topic and goal	Time and frequency	Geographical level	Main target audience	Link to project components
A. Events					
Launch meeting of the project	Kick off project and gain visibility and support	Y1	Regional	All relevant stakeholders in LAC, GEF Secretariat and GEF agencies, and international organizations	PM and M&E
Closure meeting of the project	Share experiences of project and conclusion	Y4	Regional		PM and M&E
B. Capacity building and networking					
Training of governmental officers and stakeholders for policy development and enforcement	Disseminate the developed policy for uptake and enforcement	Y2/Y3 (1 training per country, and 3 trainings in total)	National, city	City-level governmental officers, private sector, NGOs	Component 1

Events and training	Topic and goal	Time and frequency	Geographical level	Main target audience	Link to project components
Training of business partners for uptake of upstream innovation	Disseminate best practices on upstream interventions	Y2/Y3 (1 training per country, and 3 trainings in total)	National, city	Plastic producers, consumer goods companies, retailers etc., including SMEs	Component 2
Training for collectors and recyclers, including the informal sector	Provide technical guidance and best practices to the plastic collectors and recyclers	Y2/Y3 (1 training per country, and 3 trainings in total)	National, city	Plastic collectors, recyclers, and the informal workers	Component 2
Industry roundtable meetings	Discuss specific innovation and interventions organized among relevant businesses along the value chain	1st meeting in Y1 and 2nd meeting in Y3 (the project will fund the first meeting per city, and the 2nd meeting is expected to be funded by the industry itself)	City	Plastic producers, consumer goods companies, retailers, collectors, and recycler, with specific inclusion of SMEs and companies with female leaders	Component 2
1st inter-city network event	Offer a platform for city leaders and actors to build shared vision, exchange lessons learnt and best practices across cities in the LAC region	Y2	Regional	6 cities of the project and additional LAC cities	Component 3
2nd Inter-city network event and regional training	Exchange learnings among LAC cities. Training event to share best practice from the GEF project with other cities	Y4	Regional (back-to-back with the 2nd meeting of the inter-city network)	6 cities of the project and additional LAC cities	Component 3
<b>C. Project management</b>					

Events and training	Topic and goal	Time and frequency	Geographical level	Main target audience	Link to project components
Annual project working meetings	To plan and advance on project planning and implementation	Every year (4 in total)	Regional, city	Executive agency, implementing agency, project partners	Component 4
Project steering committee meetings	To approve project workplan and budget, and discuss critical issues	Every year (4 in total)	Regional, city	Executive agency, implementing agency, Steering Committee members	Component 4

#### **Output 4.3 Long-term monitoring conducted by cities on the implementation of circular economy approaches and associated reduction in plastic pollution**

This output will develop a harmonized methodology, a set of indicators and technical instructions to support cities to monitor the implementation of circular solutions for long-term impacts tracking. The methodology can facilitate the evolution of the effects of the on-going interventions introduced at the city level, while identifying gaps and opportunities for adapting the solutions according to the latest development. It will also ensure that the learning and solutions developed by the project will continue to serve the cities beyond the project lifetime, and lead to sustainable results for a longer period.

##### **? Activity 4.3.1 Develop monitoring indicators and methodologies for progress monitoring**

The activity will develop an overview to summarize and analyze the existing indicators and measurement approaches towards the circular economy for the plastic sector, to monitor the impacts of the actions and progress to achieve a circular economy. The overview will cover indicators related to relevant SDGs, MEAs, GEBs, indicators used in global initiatives (such as the New Plastics Economy Global Commitment and CleanSeas campaigns), indicators related to marine litter and plastic pollution action plans through national source inventories, indicators on circular economy and indicators related to gender and socio-economic performance. This activity will propose a set of core indicators (e.g. Percentage of plastics being reusable, recyclable or compostable; tonnes of marine plastics reduced; tonnes of plastics containing chemicals of concern eliminated) aiming to support plastic related GEF projects to monitor the performance and impacts of activities, based on consultation with the GEF Secretariat, GEF Scientific and Technical Advisory Panel (STAP), GEF agencies, and international experts.

The activity will apply the proposed indicators to monitor the progress in reducing marine plastics and plastic pollution in 6 cities against in-situ monitoring results around the relevant cities. The feasibility and effectiveness of the indicators will be assessed, through collecting feedback from the city governments and the private sector, as well as evaluating their actual functionality to serve for relevant SDGs and MEAs requiring monitoring. The learnings from the progress monitoring under the project will be shared with the GEF Secretariat for better understanding of the effectiveness of the indicators. Promotion of digital solutions and tools to increase data tracking and transparency along the value chain will be performed and, where relevant, this information will be incorporated into the GPML Digital Platform.

Based on the indicators and monitoring data, the activity will also provide a methodology and a tool which will enable cities to forecast on the potential impacts, costs and benefits, and trade-offs of adopting various circular strategies as possible future scenarios, by adapting relevant methodologies already developed by UNEP, IUCN and GPAP. This forecast methodology and tool will provide assessment and visualization to better understand the benefits of choosing different circular pathways (such as reduce, substitute, reuse, recycle) for strategy decisions, while avoiding problem shifting among different environmental impact categories (such as shifting from climate change to human toxicity or to marine litter) or shifting to different actors and locations.

Considering the need to collect information related to POPs and uPOPs from plastic products and their impacts, the project will develop a calculation tool to guide the collection of CoC related data at city level. Support will also be provided to cities in analyzing results generated by the tool and drawing conclusions on the management of CoC in plastics.

## 4) ALIGNMENT WITH GEF FOCAL AREA AND/OR IMPACT PROGRAM STRATEGIES

### 4.1 Impacts and effects related to plastic pollution

The environmental problem arising from plastics can be seen from two angles: one being the plastic leakage occurring across the value chain and ending up in the environment (such as land, rivers, waterways, and oceans), especially in countries where the waste management is inefficient; the other one being the chemicals of concern contained in many plastic products, releasing toxic substances during their life cycle (please see more details in the problem definition in section 1.1).

Plastic is a persistent material and thus the ecological, economic, and eco-toxicological effects of plastic pollution are all long-term. These include:

- ? Physical impact on marine life: entanglement, ingestion, starvation
- ? Chemical impact: the build-up of POPs contained in certain plastic products and from substandard recycling processes

- ? Transport of invasive species and pollutants from polluted rivers to remote areas in the ocean
- ? Economic impact: damage to fisheries, shipping, and tourism
- ? Social impact: informal sector working on plastic collection and recycling; human health and well-being of residents close to dumpsites

Plastic pollution threatens food safety and quality, human health, and marine ecosystems, and contributes to climate change. Plastic degrades extremely slowly and when it breaks down, bio-organisms then digest these plastic particles and transfer the plastic across the food chain, all the way back to humans. At the same time, many plastics contain additives to enhance their properties throughout their lifespan and to offer better solutions in their applications; however, this results in the release of chemicals of concern during their use known as Persistent Organic Pollutants (POPs), which are highly toxic to both humans and wildlife. Furthermore, the incineration or open burning of plastic waste produces unintended Persistent Organic Pollutants (uPOPs), mainly dioxin and furans, which are also highly toxic chemicals.

CoCs in plastics are those highly hazardous chemicals in plastic products that are a threat to humans, especially putting in danger manufacturing workers in plastic production plants, recyclers, and people who dismantle and dispose them. Also, they pose a big threat to wildlife and the environment. POPs are one of the CoCs that cause serious health effects, such as cancer, birth problems, dysfunctional immune and reproductive systems, and damage to the nervous system. As the name indicates, they persist in the environment since they are resistant to degradation, thus accumulating in living organisms and polluting our food supplies.

#### 4.2 GEF Focal Area

The project is aligned with the GEF-7 Strategy for IW Objective 1 (Strengthening National Blue Economy Opportunities) through addressing pollution reduction in the marine environment. The project is also aligned with the GEF-7 Strategy for C&W program 1 on industrial chemicals that aims to support investments promoting circular economy approaches. Within program 1 and through tackling the Chemicals and Waste at end of life, the project will also prevent waste/products containing persistent organic pollutants, from entering material recovery supply chains (including e-waste management with the aim of preventing e-waste from entering solid waste). The project aims to eliminate or significantly reduce chemicals subject to the Stockholm convention. The project is also directly relevant to the Basel Convention Technical Guidelines on the Identification and Environmentally Sound Management of Plastic Wastes and their Disposal. It will contribute to the implementation of a legally binding framework for plastic waste of the Basel Convention (introduced in May 2019) in the LAC region, to ensure global and regional trade in plastic waste is more transparent and better regulated, whilst also ensuring that its management is safer for human health and the environment.

The project will strengthen inter-sectoral and inter-department co-operation at the city/municipality level that will also strengthen national inter-ministerial committee activities (IMCs) in line with GEF-7 corporate indicators. The proposed actions through public-private partnerships will help transform the

plastic life cycle for problematic products and polymers and contribute towards achieving the GEF-7 target on ?Area of marine habitat under improved practices? by avoiding 5,125 tonnes of marine plastics which corresponds to 12,281 tonnes of avoided CO<sub>2</sub> emissions.

Through the activities under component 3, inter-city network, valuable know-how can be transferred to cities in different geographies under the GEF Sustainable Cities programme, and with the GPSC (Global Platform on Sustainable Cities) as well as the Regional Seas Programme. The proposed activities will minimize the impacts of marine plastics and plastic pollution, including microplastics, on the health of marine biodiversity and contribute towards outcome 7 of the Four-year Framework of Program Priorities under the GEF-7 Biodiversity strategy.

Promoting a circular economy will improve production, consumption, and environmentally sound disposal patterns, and eventually reduce plastic leakage and the release of chemicals of concern to the environment. There are clear benefits of bringing both focal points and well-established synergies.

## 5) INCREMENTAL/ADDITIONAL COST REASONING AND EXPECTED CONTRIBUTIONS FROM THE BASELINE, THE GEFTF, LDCF, SCCF, AND CO-FINANCING

The countries of the LAC region (including the Caribbean, the North Brazil, as well as the South Pacific and Northeast Pacific) have recognised the local issues associated with plastic pollution and their contributions to regional and global problems. They are all in the process of initiating various approaches to limit use and disposal of single use plastic products. The GEF grant USD 7,000,000 is leveraging a co-financing contribution of USD 36,407,748 that will collectively contribute to the incremental activities and the current baseline. These experiences and lessons, coupled with those gained by the 6 cities working together in this project, will be shared widely between the 6 cities, across the wider LAC region, and globally to encourage uptake of circular economy approaches to reduce marine plastics and plastic pollution.

The GEF project is expected to provide a range of outputs that will contribute to enhancing understanding on circular economy approaches and reducing marine plastics and plastic pollution from increased awareness, enhanced policies, practical interventions, sharing experiences together, and through robust post-project monitoring and reporting of the impacts of this project. Ultimately, through the application of sustainable life cycle approaches and the transition to a circular economy, the project will ensure pollution reduction to the marine environment and improve the ecosystems health of large marine systems of global significance as well as marine habitat. The resulting improvement of marine and coastal habitat will enhance the provisional services of such ecosystems and contribute to boosted economic and livelihood opportunities.

**Without the GEF Grant - baseline scenario**

Without the GEF grant, it is likely that the initiatives that are underway at the national and city levels (which form part of the baseline for this project) will continue, but they may lack the coordination gained through adopting a circular economy approach. In addition, the baseline scenario will lack inter-city dialogue to share experiences and lessons across the LAC region. Together, these isolated actions undertaken in the baseline will not result in the benefits expected from improved coordination and guidance, and the impacts on reducing marine plastics and plastic pollution in the LAC Region will be more limited. In addition, the experiences and lessons gained in the LAC region will not have a vehicle for enabling these to be disseminated more widely.

### **With the GEF Grant - incremental reasoning**

The GEF grant is central to promoting circular economy by the municipalities at the city level (Component 1) and facilitating innovative interventions led by the private sector (Component 2). Component 3 will enable the sharing of experiences between the LAC cities to assist with the overall transition to the circular economy in LAC. Component 4 will provide national, regional, and global capacity development and communication mechanisms to raise awareness through the lessons and experiences generated in this project, encouraging up-scaling thereby further increasing the global environmental benefits from the GEF support. Overall, GEF funding will enable the participating cities and countries, to create the conditions for change through the implementation circular economy approaches benefiting the LAC and global environments by:

- 1- Reducing marine plastics and plastic pollution in the LAC region (and by future implementing upscaling actions, globally).
- 2- Assisting countries in LAC in meeting relevant SDGs (including SDG 6, 11, 12, 14 and 17) and other international convention targets (including the Cartagena Convention, Lima Convention, Land-based Sources of Pollution Protocols, Basel Convention, Stockholm Convention, etc.),
- 3- Promoting sustainable approaches to development in the region through the implementation of circularity approaches to addressing marine plastics and plastic pollution.
- ? Establishing a network of cities sharing experiences and lessons on circular economy approaches to address marine plastics and plastic pollution, that will benefit the LAC region and be available as a model for upscaling globally.
- ? The GEF grant will facilitate the coordination of public and private sector actions that will enhance the formation of sustainable public-private partnerships.

With substantial co-financing mobilised from the governments and the private sector, the project can achieve the following impacts through various co-financing partners:

- ? The national and city-led governments and municipalities have provided co-finance, which ensures that the concept of circular economy will be embedded in policies on plastics, and the solutions of circular policies and better waste management are implemented through policy development and enforcement
- ? The private sector has provided co-finance which will provide a very solid ground to test new business models (such as reuse) and treatment solutions (such as recycling technologies and



infrastructure), by bringing the business network, forerunner experience, and to replicate it in larger scale in LAC.

- ? Co-financing is confirmed by international organisations and industrial associations, which connects the development and solutions in LAC with global value chain and players, to ensure consistency and harmonisation.

## 6) GLOBAL ENVIRONMENTAL BENEFITS (GEFTF) AND/OR ADAPTATION BENEFITS (LDCF/SCCF)

The project is expected to reduce marine plastics by 5,065 tonnes during the project lifetime. This will be achieved cumulatively through five major intervention pathways: 1) the project will aim to achieve a reduction of 1,600 tonnes of single-use plastic products which represent the top 10 products in marine plastics sampling of the six cities, through policies (such as banning single-use plastic products) and business innovation (reuse and redesign to reduce single-use plastic products). It is presumed that 9% of these single-use products will be avoided becoming marine litter (i.e. 144 tonnes); 2) the project will aim to reduce 10% of marine plastics (compared to the baseline) in the six target cities in the last three years of the project (in total 1,627 tonnes) compared to the baseline data 2018, as a result of improved waste management from policy and business action; 3) the project will collect and treat 780 tonnes of single-use plastic products and 700 tonnes of other plastic products containing POPs from the recycling pilots. It is assumed that 9% of the single-use plastic products and 3.4% other plastic products containing POPs would have ended up as marine litter eventually, so 94 tonnes of marine plastics will be avoided thanks to the collection and treatment activities; 4) the project is expected to reduce marine plastics by at least 400 tonnes in six cities, through awareness raising events, training, and clean-up campaigns. The actual reduction data will be collected per event organised; 5) the project is expected to reduce marine plastics by at least 2,800 tonnes, as a result of the inter-city network and capacity building activities at the regional level, and the actual reduction data will be collected through the monitoring scheme of the inter-city network.

Table 10. Project interventions to reduce marine plastics

Project intervention	Circularity strategy	Delivered by project output	Weight of plastics targeted by the intervention (tonne)	Note

Policies and business innovation leading to the reduction of single-use plastic products in the six cities (such as banning or imposing tax on single-use plastic products and promoting reuse)	Reduce, re-design, reuse	1.1, 1.2, 2.1	144	The project will aim to achieve a reduction of 1,600 tonnes of single-use plastic products in 6 cities, through policies and business innovation. It is presumed that 9% of the single-use plastic products will be avoided leaking to the ocean as marine plastics (the baseline suggests that 3.4% of all plastic waste will become marine litter in six cities, and the single-use plastic products will have a higher leakage rate than other plastic products). Actual reduction of single-use plastic products during project implementation will be accounted by the results of specific policy and business interventions.
Policies and business actions leading to the improvement of waste management system, thus reducing the plastic leakage to the marine environment in the six cities	Reduce, recycling	1.1, 1.2, 1.3, 2.2	1,627	The interventions on waste management are expected to result in a 10% reduction of marine plastics in the six pilot cities during the last three years of the project, compared to the baseline of 2018.
Collection and recycling pilots in the six cities leading to reduction of marine plastics	Recycling	2.2	94	It is presumed that 9% of the collected single-use plastic products and 3.4% of plastics containing POPs will be avoided leaking to the ocean.
Awareness raising, training events, and clean-up campaigns in the six cities	Reduce, recycling	1.1, 4.1	400	Data on reduction of marine litter will be collected from specific awareness raising events, training, and clean-up campaigns
Awareness raising activities, training, and capacity building through the inter-city network at regional level	Reduce, Refuse, Recycling	3.2, 4.1	2,800	Data on reduction of marine litter will be collected from the monitoring scheme of participating cities in the inter-city network in the last two years of the project
<b>TOTAL</b>	-	-	<b>5,065</b>	

The project is expected to achieve a reduction of 9,382 tonnes CO<sub>2</sub>eq emission during the project lifetime. This will be achieved cumulatively through the following seven intervention pathways: 1) the project will support six city governments to ban open burning of plastics, which will lead to the reduction of open burnt plastics by 992 tonnes, thus achieving an avoidance of GHG emission by 4,464 tonnes CO<sub>2</sub>eq; 2) the project is expected to support city government to ban and reduce single-use plastic products by 1,400 tonnes. By considering the trade-off between banning single-use products and using new alternatives, the project uses an emission factor of 1.5 to calculate the benefits of CO<sub>2</sub>

reduction, totalling in 2,100 tonnes CO<sub>2</sub>eq due to this intervention; 3) the project is expected to introduce reuse policies and promote reusable products and reuse business models through circular design, which will achieve a reduction of consuming single-use plastic products in six project cities by 200 tonnes, which will result in a reduction of GHG emission by 300 tonnes CO<sub>2</sub>eq; 4) the project is aimed to achieve a target of re-introducing 200 tonnes of recycled content into new products through circular design by businesses and supporting policies (such as sustainable procurement) in six cities, which will result in a reduction of GHG emission by 300 tonnes CO<sub>2</sub>eq; 5) the project will also support EPR system in two cities of Jamaica, and it will result in a reduction of 574 tonnes CO<sub>2</sub>eq of GHG emission; 6) the project will collect and treat various types of plastic products to pilot in six cities, and aims to reach the yield of 520 tonnes of recycled plastics, which will replace virgin plastics and avoid GHG emission by 780 tonnes CO<sub>2</sub>eq; 7) the project will achieve the avoidance of 192 tonnes of PVC cables and other plastic waste being open burnt through the same collection and recycling pilot, which will end up a reduction of GHG emission by 864 tonnes CO<sub>2</sub>eq.

Table 11. Project interventions for the reduction of CO<sub>2</sub>eq emissions

Project intervention	Circularity strategy	Delivered by project output	Weight of plastics targeted by the intervention (tonne)	Emission Factor (EF, tonne of CO <sub>2</sub> eq emission per tonne of plastics)	Total GHG mitigated (tonnes CO <sub>2</sub> eq)	Note
City-level policy banning and/or imposing penalty on open burning	Reduce, Recycling	1.1, 1.2, 1.3	992	4.5 (Source[83])	4,464	The policy is expected to contribute to at least 2% reduction of weight of plastics being open burnt (compared to the baseline) in the six cities during the last three years of the project. The actual reduction of plastics being open burnt will be accounted though the assessment of relevant policy outcomes.

Policy to reduce or ban single-use plastic products	Reduce	1.1, 1.2	1,400	1.5 (Source76)	2,100	The actual amount of avoided single-use plastics products will be accounted by the impacts of specific policy to be piloted at the city level
Policy and business innovation leading to product reuse, while avoiding the use of single-use plastic products	Re-design, Reuse	1.1, 1.2, 2.1	200	1.5 (Source76)	300	The weight signifies the mass of plastics being reused (thus the weight of single-use products avoided). The actual weight of reused plastics achieved by the project will be accounted by evaluating the outcomes of reuse policy and business innovation
Material related policy and business innovation leading to the increase of use of recycled content, which will replace virgin plastics made from oil	Re-design, Repurpose	1.1, 1.2, 2.1	200	1.5 (Source [84] <sup>84</sup> )	300	The weight signifies the recycled content being applied in the production of new plastic products. The actual weight will be accounted by evaluating the outcomes of relevant product/material policy and business innovation on re-design

EPR programme (to support Jamaica EPR)	Re-design, Recycling	1.3	-	-	574	Contribute to 5% of the EPR recycling target for the two cities in Jamaica during the last three years of the project. The GHG reduction data is obtained directly from Recycling Partners of Jamaica (RPJ)
Collection and recycling pilot in cities leading to the yield of recycled plastics, which will replace virgin plastics made from oil	Recycling	2.2	520	1.5 (Source77)	780	The weight of plastics is the output/yield from recycling process of the pilot
Collection and recycling pilot in cities leading to the avoidance of burning cables and other plastics (such as in dumpsites)	Recycling	2.2	192	4.5 (Source76 77)	864	9% of plastics is burnt averagely in six cities for normal plastics, and it is also presumed that 70% is burnt for PVC cables in the baseline scenario
<b>TOTAL</b>	-	-	-	-	<b>9,382</b>	

The project is expected to achieve the reduction of plastics containing POPs through both upstream interventions (policy on eliminating CoCs in plastic products such as furniture and building materials, and circular design by producers) and downstream interventions (collection and recycling pilot). Through implementing upstream policies and circular design by the private sector, the project is expected to reduce at least 200 tonnes of products containing HBCD and 1,000 tonnes products containing PBDE. This will result in a net reduction of 1.2 tonnes of HBCD and 30 tonnes of PBDE by applying an average concentration of relevant chemicals in such products. In the meantime, through collection, recycling, and disposal pilot in six cities, the project is expected to treat and dispose various waste plastic products containing HBCD and PBDE, and the pilot will achieve a reduction of 12.8 tonnes of HBCD and 10.9 tonnes of PBDE. Therefore, the total weight of POPs reduction in this project is expected to be 54.9 tonnes (HBCD and PBDE).

Table 12. Project interventions for the reduction of plastics containing POPs

Plastic products	Circularity strategy	Delivered by project output	Weight of plastics targeted by the intervention (tonne)	POPs concentration per plastic product (average)	POPs weight (tonne)
<b>Reduction of using CoCs including POPs in plastics products through upstream policy (standards and requirements on chemicals in products) and business innovation (circular design of materials and products)</b>					
Products containing HBCD (e.g., EPS packaging)	Reduce, Re-design	1.1, 1.2, 2.1	200	0.59% (Source [85] <sup>85</sup> )	1.2
Products containing PBDE (e.g., furniture and building materials)	Reduce, Re-design	1.1, 1.2, 2.1	1000	3% (Source17)	30
<b>HBCD reduction through collection and disposal pilot of plastics containing HBCD</b>					
From EPS plastic products	Recycling, Disposal	2.2	166.7	0.5% (Source78)	0.8
From HIP plastic products	Recycling, Disposal	2.2	166.7	7% (Source [86] <sup>86</sup> )	11.7
From car seat	Recycling, Disposal	2.2	50	0.000017% (Source16)	0.0
From car floor	Recycling, Disposal	2.2	50	0.59% (Source [87] <sup>87</sup> )	0.3
<b>Sub-total of HBCD reduction through disposal pilot</b>					<b>12.8</b>
<b>PBDE reduction through collection and disposal pilot of plastics containing PBDE</b>					

From furniture and building materials	Recycling, Disposal	2.2	167	5% (Source17)	8.3
From car seat	Recycling, Disposal	2.2	50	5.2% (Source16)	2.6
<b>Sub-total of PBDE reduction through disposal pilot</b>					<b>10.9</b>
<b>GRAND TOTAL of POPs</b>	-	-	-	-	<b>54.9</b>

The project is expected to achieve the avoidance of releasing 1.16 gTEQ unintentionally produced POPs, through reducing the open burning of plastics (including packaging, PVC cables and other plastic products), in places like backyards and dumpsites. The policy action to ban open burning of plastics, as well as the pilot project to collect and recycle plastics will both contribute to the reduction of open burning. Policy to ban open burning in six cities is expected to reduce the plastics of open burning by 991.7 tonnes, which results in an avoidance of 0.30 gram of uPOPs. The environmentally sound disposal of 100 tonnes of plastic products containing PVC will lead to an avoidance of 70 tonnes of products being burnt, thus achieving an avoided generation of 0.84 grams of uPOPs. The environmentally sound disposal of 1,380 tonnes of non-PVC plastic products (such as packaging) will lead to an avoidance of 122.2 tonnes of plastics being burnt, thus achieving an avoided generation of 0.02 grams of uPOPs.

Table 13. Project interventions for the avoidance of releases of unintentionally produced POPs

	Delivered by project output	Weight of plastics targeted by the intervention (tonne)	EF (?g TEQ/t material burned) (Source20)	eTEQ (gram)	Note
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City-level policy banning and/or imposing penalty on open burning	1.1, 1.2, 1.3	991.7	300	0.30	This will be achieved through ban and penalty on open burning of cables and other plastics product, which contribute to at least 2% reduction of plastic being openly burnt (compared to the baseline) for six cities during the last three years of the project. The actual reduction of plastics being open burnt will be accounted though the assessment of relevant policy outcomes.
Collection and recycling pilot in cities leading to the avoidance of burning cables and products containing PVC	2.2	70	12000	0.84	This will be achieved through the collection and recycling pilot on plastic products containing PVS (such as cables)



Collection and recycling pilot in cities leading to the avoidance of burning non-PVC plastics	2.2	122.2	300	0.02	This will be achieved through the collection and recycling pilot on plastic waste including single-use plastic products and packaging (1,380 tonnes). 9% of such products is burnt averagely in six cities for normal plastics as a baseline.
<b>TOTAL</b>				<b>1.16</b>	

**The project aims to reach 990,162 people as direct beneficiaries, with 559,306 females and 430,855 males.** The estimation has been based on the project activities across different stakeholder groups, with their scope, as it can be seen in Table 14. Those activities with largest reach are relating to the new circular policies, including eco-labels, procurement, standards, etc, to be most effective in reaching consumers, a 10% of population per city has been estimated, assuming consumers will be affected by these policies. And, even more effective to reach direct beneficiaries is the communication material, which has a regional scope, estimations of 0.01% of LAC population, assuming people will come across the material via social media, the news, reports, etc. More direct beneficiaries are being reach through other project activities but with a significant lower impact, however these other activities may have a potential impact in translating to indirect beneficiaries as some of these stakeholders will build capacity and knowledge which will potentially transfer to others. Consultation meetings will be involving mainly private sector together with policy makers, those related businesses in sustainable solutions and best practices will be engaged. Informal workers will be engaged, one such recent example in the Rae Town pilot under the recently concluded Plastic Waste Minimization Project. Finally, a number of trainings will engage the entire value chain of plastics, across different sectors.

Table 14. Project activities and targeted beneficiaries

<b>Project Activities</b>	<b>Targeted beneficiaries</b>	<b>Project Output</b>	<b>Total</b>	<b>Female</b>	<b>Male</b>
Consultation meetings on policy and business solutions under component 1 and 2	participants of consultation/meetings	1.1, 1.2, 1.3, 2.1, 2.2	500	200	300
10% of cities population influenced by new circular policies (eco-labels, procurement, standards etc.)	consumers	1.1, 1.2	323,439	226,407	97,032
120 businesses engaging in the project and/or adopting best practices or sustainable business solutions (*5 employees)	employees of businesses	2.1, 2.2, 2.3	600	240	360
number of informal workers engaged	informal workers	2.2	200	80	120
number of women entrepreneurs participating in the industrial roundtable and innovation	entrepreneurs	2.3	40	40	0
government stakeholders supported by the inter-city network	government	3.1	120	36	84
network estimation of 0.01% of cities population	targeted network	3.1	3,235	1,294	1,941
0.01% of total LAC population reached by communication materials (incl. social media, reports, news, etc.)	communication	4.1	660,978	330,489	330,489
number of employees of NGOs and new initiatives involved	campaigns / NGOs	4.1	50	20	30
trained people	All relevant stakeholders as trainees	4.2	1,000	500	500
<b>Total</b>			<b>990,162</b>	<b>559,306</b>	<b>430,856</b>

## 7) INNOVATIVENESS, SUSTAINABILITY AND POTENTIAL FOR SCALING UP

### Innovation

The project will promote innovative solutions to problematic and unnecessary plastic products, reuse, waste collection, recycling, and disposal at the city level. This will also involve the informal sector where relevant. The project will build on the approaches gained from the previous GEF MSP (GEF ID 9681 Addressing Marine Plastics - A Systemic Approach). One of the four building blocks recommended by the previous GEF MSP is to establish a circular economy for plastics, called for

?Introducing innovative design, production and business models to ensure that the plastics we do need are reusable, recyclable, or compostable, and free of toxic additives?.

The project will work with a wide range of innovation initiatives (such as Upstream Innovation of the Ellen MacArthur Foundation, and UpLink of the Global Plastic Action Partnership), forerunner companies along the value chain (e.g., Coca-Cola, Nestl?, Unilever, Algramo, XICLO, Recycling Partners of Jamaica, Trashforma, BlissPanam?, LeafSync), and academia to develop, test and validate different technologies, tools, and solutions to speed up the uptake of innovation in the context of LAC.

Different outputs and activities of the project will serve as an important basis for the development of long-term innovative approaches and technologies in the project countries. Specific project outputs that will be encouraging the introduction of innovative policies and business solutions include:

? Output 1.2 that will identify and pilot test policies aiming at creating an enable environment for circular economy, including policies that creates more market demands, uptake, and awareness for circular products (such as eco-labels, and sustainable procurement), policies that will lead to actual reduction of plastic consumption and waste generation from sources, and policies stimulating reuse of product. The concept of these policies is not new, however, their actual implementation at city level in the context of developing countries has not happened at large scale yet. Piloting these policies in LAC cities will lead to first-hand knowledge and learning.

? Output 1.3 will identify and pilot test financial instruments that will provide economic incentives and financial support to circular solutions. Extended Producer Responsibility will be a key policy instrument to be further developed to cultivate public-private partnership, as it has not been fully implemented in LAC countries and cities.

? Under Output 2.1, a series of upstream solutions on alternative solutions, eco-design, sustainable production, business models will be developed and tested to address problematic and unnecessary plastic products/packaging, including:

- o Innovate and set up pilots to scale up the most viable new product/packaging designs to achieve three circular economy strategies: Elimination, Reuse, Material. The key innovation will include circular design such as package-less products, reusable, or refillable containers (such as smart water bottles connecting with refill stations, compostable and edible cutlery, using resins from organic material to make plastic, refillable solutions in the fast-moving consumer goods, upcycling recyclable plastic into valuable products such as a plastic desk, chair, etc.)
- o Algramo is developing an innovative platform (IoT) solution for retailers, brands, and consumers to plug into a market-based, low-cost refill system.
- o Create new business models and strategies to stimulate reuse or encourage durable goods with product life extension strategies (such as leasing products, shared ownership of products, provide service and functions instead of selling actual products), to shift from single use to reusable plastic packaging and products. This will be delivered through collaboration with by working closely with the private sector (companies like Algramo, XICLO who provides co-finance to the project).

? Output 2.2 on collection and recycling will first test different collection methods and means, to increase awareness, segregation, and collection efficiency through various channels, especially through the application of digital tools and social media towards different users. Output 2.2 will also carry out feasibility studies on different treatment solutions and innovations at city level (such as

environmentally sound recycling technologies, composting, chemical recycling), and pilot test different recycling techniques to identify the best treatment methods and technical routes for potential shipment in the LAC region. This output will also look into the opportunities and feasibility of specific reuse and upcycling technologies and innovation for recycled plastics (using recycled plastics to produce higher value products such as apparel, furniture, tableware, game, and sport equipment).

? Output 2.3 on the industrial roundtable will facilitate the exchange of best practices on innovative options for eco-design and sustainable production, business models for plastic production; and promote the development of strategic partnerships among private sector stakeholders to identify financing options for innovative waste management solutions. The round table will support companies along the value chain to scale and deploy new technologies, solutions, and innovation in domestic and global markets.

## **Sustainability**

The project will actively assist cities/municipal authorities to develop sustainable partnerships with the private sector involved in plastic waste collection and recycling (both formal and informal sectors). The sustainability will also be encouraged through improving understanding and awareness to assist key stakeholders attract new sources of financing to adopt circular economy approaches to reduce marine plastics and plastic pollution. The project will facilitate this increased understanding and awareness through the inter-city networks, round-table discussions, etc. This will also enhance the overall governance and improve engagement of stakeholders to address the issue of plastic pollution. The project will also support the sharing of lessons, experiences, and benefits from the circular economy approaches within the LAC region (including ecosystem benefits and socio-economic benefits) to reducing marine plastics and plastic pollution, which will help ensure the uptake of the knowledge generated by the project in the region and the long-term impacts of the project.

To promote the sharing of knowledge and lessons learnt generated by the project, knowledge products generated by the project will be shared through the?IW: Learn?platform, the Green Growth Knowledge Platform (GGKP)?s website, the SAICM knowledge platform, and the GPML Digital Platform. Please refer to the section on knowledge management.

## **Potential for scaling-up**

A mechanism will exist to facilitate the up scaling of the results from this project to other cities within the LAC region and globally. In the PPG phase, key stakeholders from city governments and private sector have been reached out to and convinced of the value of the proposed activities under the project and the linkage of the project with their own agendas. In the implementation phase, the project will also create ownership of stakeholders to the project by supporting city governments and businesses to design and pilot test policies and solutions. When it comes to innovations, generally a new set of interventions, it is fundamental that plans for scaling up consider a broad range of factors and balance what is desirable with what is feasible. The success of scaling up depends on actual implementation. When developing policies and solutions, the project will also advise partners on how to scale these up, which is particularly important for the pilot tests under component 1 and 2. The communication strategy to be developed under the project will take into consideration how the communication efforts could help generate at an early stage a positive environment for scaling up and at later stage sustain the

results achieved by the project. Engaging actively with relevant stakeholders identified by the project will also open-up channels for dissemination and promote the scaling-up based on sufficient coordination of interests.

The experience gained through the different phases of the project can be very helpful for other countries in the LAC region. Different methodologies, procedures and approaches can be replicated in similar economies. One specific project activity is Output 2.1 that will compile the best practices on existing business upstream innovations and solutions on elimination, reduction, and reuse at the global level, to provide examples and inspiration to the work in LAC cities. Based on the best practices, the activity will prepare recommendations on how these upstream innovations will be applied in the context of LAC cities. The overview of best practices will include some of the following topics: circular design on packaging and products, new business models to enable waste reduction, reuse and product lifetime extension, eco-labels, declaration to improve consumer information, etc. Under output 2.1, experience and lessons learnt from the pilot test of the upstream solutions in the target cities will also be summarized and disseminated with other cities in the region. It will be crucial for city governments and other businesses to consider these experience and lessons learnt when developing policies or business practices to support relevant upstream solutions.

Moreover, Output 4.1 will document and produce key knowledge to promote the benefits and lessons from the GEF LAC project to key audiences and encourage replication of successful approaches. Towards policy makers, learning experience and case studies will be compiled from Component 1, related to the best practice on developing circular policy and enabling conditions. Towards the private sector, learning experience and case studies will be compiled from Component 2, related to the best practice on developing circular innovation and solutions along the value chain. As mentioned in the sustainability section, knowledge products generated by the project will be shared through the?IW: Learn?platform, the Green Growth Knowledge Platform (GGKP)?s website, the SAICM knowledge platform, and the GPML Digital Platform, to facilitate the scaling-up.

In addition, the implemented inter-city network can drive collective action of LAC cities towards a common vision and a set of ambitious targets, with public reporting on progress. This network will act as a platform for city leaders and actors to leverage policy instrument and financial mechanism, discuss innovation and technologies for solutions along the value chain, exchange lessons learnt and best practices across cities in the LAC region.

In most cases it is anticipated that the scaling-up will require incremental adaptation rather than fundamental transformative change, sustaining the approaches promoted by the project more widely. Output 4.2 on the training activities will support strengthening the capacity of relevant stakeholders in adaptation. Output 4.3 to support long-term monitoring will track and showcase the progress made under the project and help keep the momentum to scale up the project activities by achieving more measurable progress.

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- [1] Ryberg, M., Laurent, A., Hauschild, M. (2018). ?Mapping of global plastics value chain and plastics losses to the environment with a particular focus on marine environment?. United Nations Environment Programme (UNEP)
- [2] Geyer, R. (2020). ?Production, use and fate of synthetic polymers in plastic waste and recycling. In Plastic Waste and Recycling: Environmental Impact, Societal Issues, Prevention, and Solutions. Letcher, T.M. (ed.). Cambridge, MA: Academic Press.13-32
- [3] Wen, Zongguo, Yiling Xie, Muhan Chen, and Christian Doh Dinga. (2021). "China?s plastic import ban increases prospects of environmental impact mitigation of plastic waste trade flow worldwide." Nature communications 12, no. 1
- [4] Chen, Y., Awasthi, A. K., Wei, F., Tan, Q., & Li, J. (2020). ?Single-use plastics: Production, usage, disposal, and adverse impacts?. Science of The Total Environment, 141772. doi:10.1016/j.scitotenv.2020.1417
- [5] Lau, W.Y., Shiran, Y., Bailey, R.M., Cook, E., Stutchey, M.R., Koskella, J. et al. (2020). ?Evaluating scenarios toward zero plastic pollution?. Science 369(6510), 1455-1461. <https://doi.org/10.1126/science.aba9475>
- [6] De Souza Machado, A. A., Kloas, W., Zarfl, C., Hempel, S., & Rillig, M. C. (2018). ?Microplastics as an emerging threat to terrestrial ecosystems?. Global Change Biology, 24(4), 1405?1416. doi:10.1111/gcb.14020
- [7] Zhang, K., Xiong, X., Hu, H. J., Wu, C., Bi, Y., Wu, Y., ... Liu, J. (2017). ?Occurrence and characteristics of microplastic pollution in Xiangxi Bay of three gorges reservoir, China?. Environmental Science & Technology, 51, 3794?3801. <https://doi.org/10.1021/acs.est.7b00369>
- [8] Thompson, R. C., Moore, C. J., vom Saal, F. S., & Swan, S. H. (2009). ?Plastics, the environment and human health: current consensus and future trends?. Philosophical Transactions of the Royal Society B: Biological Sciences, 364(1526), 2153?2166. doi:10.1098/rstb.2009.0053
- [9] Pinto da Costa, J., Rocha-Santos, T., Duarte, A. (2020). ?The environmental impacts of plastics and micro-plastics use, waste and pollution: EU and national measures?. Accessed 11 February 2021. <http://www.europarl.europa.eu/supporting-analyses>
- [10] Beaumont, N., Aanesen, M., et al. (2019). ?Global ecological, social and economic impacts of marine plastic?. Marine Pollution Bulletin, Vol. 142, pp 189-195.
- [11] United Nations Environment Programme (2021). ?[From Pollution to Solution. A global assessment of marine litter and plastic pollution?](https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution). Nairobi. <https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution>
- [12] United States Environmental Protection Agency. (2009). ?Persistent Organic Pollutants: A Global Issue, A Global Response?. U.S Environmental Protection Agency. Accessed 11 February 2021. <https://www.epa.gov/international-cooperation/persistent-organic-pollutants-global-issue-global-response>

[13] Stockholm Convention in Persistent Organic Pollutants. (2018). ?Marine plastic litter and microplastics?. Brochure Marine Litter

[14] Vaughan, M. (2011). ?uPOPs Prevention and Chemical Awareness: Elements of a General Awareness Campaign?. Secretariat for the Pacific

Regional Environment Programme (SPREP). Accessed 20 February 2021.  
<https://library.sprep.org/content/upops-prevention-and-chemical-awareness-elements-general-awareness-campaign>

[15] Zheng, J. and Suh, S. (2019). ?Strategies to reduce the global carbon footprint of plastics?. Nature Climate Change 9, 374-378. Accessed 14 January 2021. <https://doi.org/10.1038/s41558-019-0459-z>

[16] Abbasi G. et al. (2019). ?Global Historical Stocks and Emissions of PBDEs?. Environmental Science & Technology, Volume 53 pages 6330-6340.  
<https://pubs.acs.org/doi/10.1021/acs.est.8b07032>

[17] European HBCD Industry Group and EUMEPS, European HBCD Industry Group and EUMEPS position on the appropriate low POP content limit for HBCD in Polystyrene Foam waste, December 2016

[18] Kajiwar, N., Takigami, H., Kose, T.; Suzuki, G., Sakai, S. (2014). ?Brominated Flame retardants and related substances in the interior materials and cabin dusts of end-of-life vehicles collected in Japan?. Proceedings of 34th International Symposium on Halogenated Persistent Organic Pollutants

[19] United Nations Environment Program (UNEP). (2019). ?Draft guidance on preparing inventories of decabromodiphenyl ether?

[20] The Stockholm Convention (2021) Guidance on best available techniques and best environmental practices relevant to the polybrominated diphenyl ethers (PBDEs) listed under the Stockholm Convention. Available at: <http://chm.pops.int/Implementation/NIPs/Guidance/GuidanceonBATBEPfortherecyclingofPBDEs/tabid/3172/>

[21] Nevondo, V., Okonkwo O.J. (2021). ?Status of short-chain chlorinated paraffins in matrices and research gap priorities in Africa: a review?. Environmental Science and Pollution Research. <https://doi.org/10.1007/s11356-021-15924-w>

[22] The Stockholm Convention on Persistent Organic Pollutants. (2017). ?The 16 New POPs under the Stockholm Convention: An introduction to the chemicals added to the Stockholm Convention as Persistent Organic Pollutants by the Conference of the Parties?.  
<http://www.pops.int/TheConvention/ThePOPs/TheNewPOPs/tabid/2511/Default.aspx>

[23] Schaidler L.A., et al. (2017). ?Fluorinated Compounds in U.S. Fast Food Packaging?. Environmental Science & Technology Letters. <https://pubs.acs.org/doi/pdf/10.1021/acs.estlett.6b00435>

[24] Plan Nacional de Implementaci?n del Convenio de Estocolmo sobre Contaminantes Org?nicos Persistentes 2017

- [25] United Nations Environment Program (UNEP). (2013). ?Toolkit for identification and quantification of releases of dioxins, furans and other unintentional POPs?
- [26] Savino, A., Quispe, C., Correal, M. (2018). ?Waste Management Outlook for Latin America and the Caribbean?. United Nations Environment Programme (UNEP) International Environmental Technology Centre (IETC). <https://www.unep.org/ietc/resources/publication/waste-management-outlook-latin-america-and-caribbean>
- [27] Kaza, S., Yao, L., Bhada-Tata, P., Van Woerden, F. (2018). ?What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050?. World Bank. <http://hdl.handle.net/10986/30317>
- [28] Lasso, M. (2018). ?A third of urban waste ends up in open dumpsites or environment in Latin America and the Caribbean?. United Nations Environment Programme (UNEP). Accessed 20 February 2021. <https://www.unep.org/news-and-stories/press-release/third-urban-waste-ends-open-dumpsites-or-environment-latin-america>
- [29] Kutralam-Muniasamy, G., P?rez-Guevara, F., et al. (2020). ?Review of current trends, advances and analytical challenges for microplastics contamination in Latin America?. Environmental Pollution, Volume 267. <https://doi.org/10.1016/j.envpol.2020.115463>
- [30] Brooks, A., Jambeck, J., Mozo-Reyes, E. (2020). ?Plastic Waste Management and Leakage in Latin America and the Caribbean?. Inter-American Development Bank. <https://publications.iadb.org/publications/english/document/Plastic-Waste-Management-and-Leakage-in-Latin-America-and-the-Caribbean.pdf>
- [31] Garc?s-Ord?ez, et al. (2020). ?Plastic litter pollution along sandy beaches in the Caribbean and Pacific coast of Colombia?. Environmental Pollution, 115495. doi: 10.1016/j.envpol.2020.115495
- [32] Delvalle de Borrero, D., F?brega, J., et al. (2020). ?Distribution of Plastic Debris in the Pacific and Caribbean Beaches of Panam??. Air, Soil and Water Research, 13, 117862212092026. doi:10.1177/1178622120920268
- [33] Rose, D., & Webber, M. (2019). ?Characterization of microplastics in the surface waters of Kingston Harbour?. Science of The Total Environment, 664, 753?760. <https://doi.org/10.1016/j.scitotenv.2019.01.319>
- [34] Lebreton, L., Andrady, A. (2019). ?Future scenarios of global plastic waste generation and disposal?. Palgrave Commun 5,6. <https://doi.org/10.1057/s41599-018-0212-7>
- [35] Quir?s, A. (2019). ?Caracterizacion de residuos s?lidos flotantes captados en el BOB de Marea Verde, cuenca baja del R?o Mat?as Hern?ndez, muestreos realizados entre mayo y septiembre del 2019?. <https://www.senacyt.gob.pa/wp-content/uploads/2020/03/Desechos-S%C3%B3lidos-por-Ing.-Alvaro-Quir%C3%B3s.pdf>
- [36] Viool, V., Gupta, A., Petten, L., Schalekamp, J. (2019). ?The Price Tag of Plastic Pollution?. Deloitte. <https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/strategy-analytics-and-ma/deloitte-nl-strategy-analytics-and-ma-the-price-tag-of-plastic-pollution.pdf>



- [37] Alpizar, F., Carlsson, F., Lanza, G., Carney, B., Daniels, R. C., Jaime, M., ? Wahdera, S. (2020). ?A framework for selecting and designing policies to reduce marine plastic pollution in developing countries?. *Environmental Science & Policy*, 109, 25?35
- [38] Ingilizian Z. (2019). ?Waste-free consumption: 3 reasons why cities will lead. *World Economic Forum*?. World Economic Forum. Accessed 21 February 2021.  
<https://www.weforum.org/agenda/2019/06/3-reasons-why-cities-can-stem-the-tide-of-the-plastic-crisis/>
- [39] Yuan, X., Wang, X., Sarkar, B. et al. (2021). ?The COVID-19 pandemic necessitates a shift to a plastic circular economy?. *Nat Rev Earth Environ* 2, 659?660. <https://doi.org/10.1038/s43017-021-00223-2>
- [40] Vita, L. (2020). *La Rep?blica*. Accessed 21 September 2021.  
<https://www.laRep?blica.co/especiales/101-buenas-ideas/sector-plastico-aumenta-produccion-de-insumos-para-el-sector-de-la-salud-por-covid-19-2989970>
- [41] United Nations Environment Program (UNEP). (2016). ?Rate of Environmental Damage Increasing Across the Planet but There Is Still Time to Reverse Worst Impacts if Governments Act Now?. UNEP. Accessed 10 February 2021. <https://www.unep.org/news-and-stories/press-release/rate-environmental-damage-increasing-across-planet-there-still-time>
- [42] Madi, G., Lazarini, V., et al. (2019). ?Anu?rio da Reciclagem 2017-2018?. Associa??o Nacional dos Catadores e Catadoras de Materiais Recicl?veis (ANCAT). Accessed 21 February 2021.  
<https://cempre.org.br/wp-content/uploads/2020/11/2-Anu%C3%A1rio-da-Reciclagem.pdf>
- [43] United Nations Environment Programme (UNEP). (2021). ?Addressing Single-use Plastic Products Pollution Using a Life Cycle Approach?. Nairobi.  
[https://www.lifecycleinitiative.org/wp-content/uploads/2021/02/Addressing-SUP-Products-using-LCA\\_UNEP-2021\\_FINAL-Report-sml.pdf](https://www.lifecycleinitiative.org/wp-content/uploads/2021/02/Addressing-SUP-Products-using-LCA_UNEP-2021_FINAL-Report-sml.pdf)
- [44] European Environment Agency (2021). *Plastics, the circular economy and Europe?s environment ? A priority for action*, file:///C:/Users/xier/AppData/Local/Temp/TH-AL-20-025-EN-N%20Plastics-%20the%20circular%20economy....pdf
- [45] D?Ambri?res, W. (2019) ?Plastics recycling worldwide: current overview and desirable changes?. *Field Actions Science Reports*, Special Issue 19. <http://journals.openedition.org/factsreports/5102>
- [46] *Tecnolog?a del Pl?stico*. (2014). *The Latin American Plastics Industry Market Composition & Capital Spending Survey*. *Tecnolog?a del Pl?stico*. Accessed 10 February 2021.  
<https://www.plastico.com/sitio/imagenes-produccion/14/pdf/The-Latin-American-Plastics-Industry-Market-Trends-And-Buying-Intention-Survey-Gio.pdf>
- [47] In 2019, Governments amended the Basel Convention to include plastic waste in a legally binding framework which will make global trade in plastic waste more transparent and better regulated, whilst also ensuring that its management is safer for human health and the environment. At the same time, a new Partnership on Plastic Waste was established to mobilise business, government, academic and civil

society resources, interests, and expertise to assist in implementing the new measures, to provide a set of practical supports ? including tools, best practices, technical and financial assistance.

[48] The Stockholm Convention aims to protect human health and the environment from Persistent Organic Pollutants (POPs). POPs are organic chemicals that persist in the environment, bioaccumulate in humans and wildlife, have harmful effects and have the potential for long-range environmental transport. As of 2018, the Convention controls 28 POPs, including those which have been used as additives, flame retardants or plasticizers in plastics.

[49] United Nations Environment Program (UNEP). (2021). ?Policies, Regulations and Strategies in Latin America and the Caribbean to Prevent Marine Litter and Plastic Waste?.  
[https://wedocs.unep.org/bitstream/handle/20.500.11822/34931/Marine\\_EN.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/34931/Marine_EN.pdf?sequence=1&isAllowed=y)

[50] Countries such as Guyana, Barbados and Saint Lucia have received support to improve their national marine litter and solid waste management policies and legislation, expand monitoring and assessment programmes, and enhance their public awareness, education, and outreach activities. GPML-Caribe continues to support regional Governments in implementing priority national and regional actions identified in the RAPMaLi.

[51] Platform for Accelerating the Circular Economy (PACE). (2021) ?Circular Economy Action Agenda?. Plastics. [https://pacecircular.org/sites/default/files/2021-02/circular-agenda-plastics-feb2021\\_FINAL.pdf](https://pacecircular.org/sites/default/files/2021-02/circular-agenda-plastics-feb2021_FINAL.pdf)

[52] Acopl?sticos. (2021). ?Pl?sticos en Colombia 2020-2021?. Accessed on 6 August 2021.  
<https://www.acoplasticos.org/index.php/mnu-nos/mnu-pyr/mnu-pyr-pi/378>

[53] Stockholm Convention (2017) NIP Colombia.  
<http://chm.pops.int/Implementation/NationalImplementationPlans/NIPTransmission/tabid/253/Default.aspx>

[54] The Stockholm Convention. (2017). ?National Implementation Plan ? Panam??.  
<http://chm.pops.int/Implementation/NationalImplementationPlans/NIPTransmission/tabid/253/Default.aspx>

[55] Acopl?sticos. (2020). ?Pl?sticos en Colombia 2019-2020?. Accessed on 5 July 2021.  
[`jbOSTNKYs4831gepsfiq57DRCFws38164LXIEMFhqner/sGcWB9lkZ/PeC2020/](https://www.acoplasticos.org/index.php/mnu-nos/mnu-pyr/mnu-pyr-pi/378)

[56] Compromiso Empresarial para el Reciclaje (CEMPRE). (2021). ?Encuesta a Municipios sobre Gestio?n de Residuos S?lidos Domiciliarios 2019 Colombia?. [https://cempre.org.co/wp-content/uploads/2021/08/Encuesta\\_municipios\\_residuos\\_domiciliarios\\_Col\\_2019\\_digital.pdf](https://cempre.org.co/wp-content/uploads/2021/08/Encuesta_municipios_residuos_domiciliarios_Col_2019_digital.pdf)

[57] Autoridad de Aseo de la Rep?blica de Panam?. (2017). ?Plan Nacional de Gestio?n Integral de Residuos 2017 -2027?. INECO. <http://www.aaud.gob.pa/plangestion/pngir.pdf>

[58] Government of Jamaica - National Environment and Planning Agency (NEPA). (2021).  
<https://www.nepa.gov.jm/>

- [59] Superintendencia de Servicios P blicos Domiciliarios. (2020). <https://www.superservicios.gov.co/>
- [60] Estrada, C. (2021). ?La Rep blica?. <https://www.larepublica.co/especiales/la-revolucion-del-plastico/colombia-recicla-material-plastico-por-un-aproximado-de-300000-a-350000-toneladas-por-ano-3233728>. Accessed on 1 October 2021.
- [61] Rep blica de Panam  Ministerio de Salud. (2015). ?An lisis de Situaci n de Salud?. <http://www.minsa.gob.pa/informacion-salud/analisis-de-situacion-de-salud-asis>
- [62] Ministry of Local Government and Community Development - National Solid Waste Management Authority (NSWMA). (2021). <http://www.nswma.gov.jm/>
- [63] Recycling Partners of Jamaica. (2021). <https://recyclingja.com/>
- [64] Government of Jamaica - The Statistical Institute of Jamaica. (2021). <https://statinja.gov.jm/>
- [65] Government of Jamaica - Jamaica Customs Agency. (2021). <https://www.jacustoms.gov.jm/>
- [66] Stockholm convention. (2004). NIP Jamaica. <http://chm.pops.int/Implementation/NationalImplementationPlans/NIPTransmission/tabid/253/Default.aspx>
- [67] Rangel-Buitrago et al. (2018). ?Abundance and distribution of beach litter along the Atl ntico Department, Caribbean coast of Colombia?. Marine Pollution Bulletin. 10.1016/j.marpolbul.2018.09.040
- [68] Rep blica de Panam , Ministerio del Medio Ambiente. (2020). ?Borrador Plan de Acci n Nacional de Basura Marina 2021-2026?. <https://www.miambiente.gob.pa/download/borrador-plan-de-accion-nacional-de-basura-marina/>
- [69] ANCON. (2020). ?Memoria de Sostenibilidad 2019?. [https://ancon.org/wp-content/uploads/2020/10/ANCON\\_Estilos\\_MEMORIA-2019\\_VF-ok.pdf](https://ancon.org/wp-content/uploads/2020/10/ANCON_Estilos_MEMORIA-2019_VF-ok.pdf)
- [70] Diez, S.M., Patil, P.G., et al. (2019). ?Marine Pollution in the Caribbean: Not a Minute to Waste?. World Bank Group.
- [71] Rep blica de Colombia Departamento Nacional de Planeaci n. (2016). ?Pol tica Nacional para la Gesti n Integral de Residuos S lidos?. <https://colaboracion.dnp.gov.co/CDT/Conpes/Econ%C3%B3micos/3874.pdf>
- [72] Boucher, J., Zgola, M., et al. (2020). ?The National Guidance for Plastic Pollution Hotspotting and Shaping Action: Introduction to the methodology?. Shaping Environmental Action (EA) & Quantis International. <https://plastichotspotting.lifecycleinitiative.org/wp-content/uploads/2020/07/National-Guidance-for-Plastic-Hotspotting-and-Shaping-Action-Final-Version-2.1.pdf>

[73] Alcaldía Distrital de Cartagena de Indias. (2021). ¿Actualización del Plan de Gestión Integral de Residuos Sólidos del Distrito de Cartagena de Indias 2016-2027?. <https://www.cartagena.gov.co/>

[74] Alcaldía Municipal de Puerto Colombia. (2016). ¿Plan de Gestión Integral de Residuos Sólidos 2016-2020?. [https://www.puertocolombia-atlantico.gov.co/Transparencia/PlaneacionGestionControl/Plan%20de%20Gesti%C3%B3n%20Integral%20de%20Residuos%20Sólidos%20\(PGIRS\)%202016-2020.pdf](https://www.puertocolombia-atlantico.gov.co/Transparencia/PlaneacionGestionControl/Plan%20de%20Gesti%C3%B3n%20Integral%20de%20Residuos%20Sólidos%20(PGIRS)%202016-2020.pdf)

[75] Alcaldía de Barranquilla, Distrito Especial, Industrial y Portuario. (2020). ¿Plan de Gestión Integral de Residuos 2021 ? 2032?

[76] GEF project. (2017). ¿Addressing Marine Plastics - A Systemic Approach?. GEF. Accessed on 6 August 2021. <https://www.thegef.org/project/addressing-marine-plastics-systemic-approach>; Project website: <https://gefmarineplastics.org/>

[77] Wang, F., L. Talaue McManus, R. Xie (eds.). (2019). ¿Addressing Marine Plastics: A Roadmap to a Circular Economy?. United Nations Environment Programme (UNEP). Accessed on 15 September 2021. <https://gefmarineplastics.org/resolveuid/2c1f3937-3de1-41e7-8ce4-09f1c654d465>

[78] Kershaw, P. J. (2015). ¿Sources, fate and effects of microplastics in the marine environment: a global assessment?. GESAMP. <http://hdl.handle.net/123456789/735>

[79] IW: LEARN is the Global Environment Facility's (GEF) International Waters Learning Exchange and Resource Network. The IW: LEARN project was established to strengthen transboundary water management around the globe by collecting and sharing best practices, lessons learned, and innovative solutions to common problems across the GEF International Waters portfolio. It promotes learning among project managers, country official, implementing agencies, and other partners. <https://iwllearn.net/>

[80] The Green Growth Knowledge Partnership (GGKP) is a global community of policy, business, and finance professionals and organisations committed to collaboratively generating, managing, and sharing knowledge on the transition to an inclusive green economy. <https://www.greengrowthknowledge.org>

[81] The platform was set up in 2020 and is being developed through a phased approach, which will culminate in 2023. Phase 2 of the GPML DP was released in September 2021. Phase 1 had focused on integrating a wide range of resource databases and on the creation of the first stakeholder's database, and Phase 2 focuses on laying data hub foundations and piloting the matchmaking functionalities (for connecting stakeholders). The next steps for Phase 3 will help develop more advanced data-related functionalities, create a capacity building experience, pilot the action plan workflow and enable stakeholders to connect further. The aim is to release Phase 3 around UNEA 5.2. And then continue until the final phase is launched in 2023.

[82] This knowledge platform is a key element of the project Chemicals Without Concern, funded by GEF, implemented by UNEP, and executed by SAICM Secretariat. It offers a repository of resources,

facilitates networking among people working for a safer environment, and provides information on articles and events on chemical-related topics. <https://saicmknowledge.org/>

[83] U.S. Environmental Protection Agency. (2015). ?Waste Reduction Model: Plastics?. WARM Version 13. <https://archive.epa.gov/epawaste/conserve/tools/warm/pdfs/Plastics.pdf>

[84] World Health Organization (WHO). (2008). ?Protecting Health from Climate Change?. [https://www.who.int/globalchange/publications/factsheets/Kit2008\\_annex1\\_2.pdf?ua=1](https://www.who.int/globalchange/publications/factsheets/Kit2008_annex1_2.pdf?ua=1)

[85] Abdallah, M., Sharkey, M., et al. (2018). ?Hexabromocyclododecane in polystyrene packaging: A downside of recycling??. Chemosphere, ISSN: 0045-6535, Vol: 199, Page: 612-616. <https://doi.org/10.1016/j.chemosphere.2018.02.084>

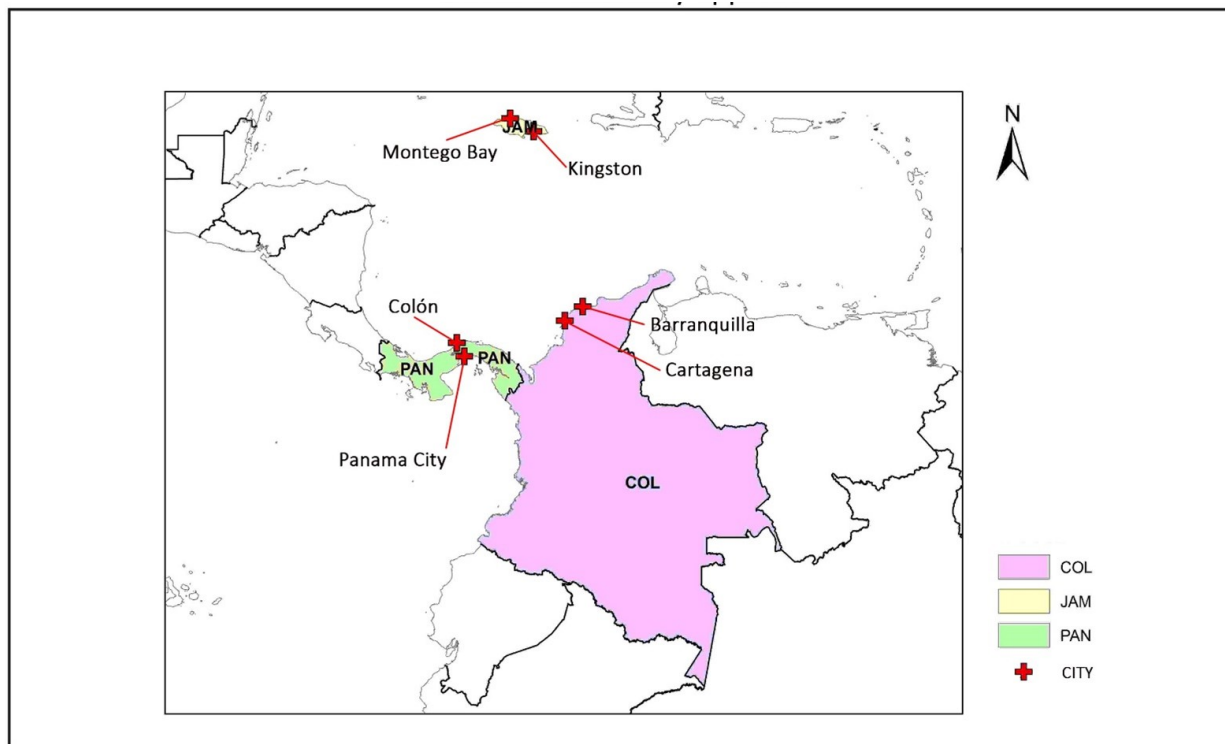
[86] United Nations Environment Program (UNEP). (2019). ?Guidance for the inventory of hexabromocyclododecane (HBCD)?

[87] Liu et al. (2019). ?Dynamic stock, flow and emissions of brominated flame retardants for vehicles in Japan?. Journal of Cleaner Production, Volume 232, Pages 910-924. <https://doi.org/10.1016/j.jclepro.2019.05.370>

#### **1b. Project Map and Coordinates**

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

- *Cartagena (Colombia): 10°24'N 75°30'W*
- *Barranquilla (Colombia): 10°57'50"N 74°47'47"W*
- *Kingston (Jamaica): 17°58'17"N 76°47'35"W*
- *Montego Bay (Jamaica): 18°28'N 77°55'W*
- *Panamá City (Panamá): 8°59'N 79°31'W*
- *Colón (Panamá): 9° 21' 26" N, 79° 53' 55" W*



The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries  
 This map is intended for illustrative purposes only and should NOT be used to derive any information regarding the project's operations.  
 No activities planned in any disputed territories



### 1c. Child Project?

**If this is a child project under a program, describe how the components contribute to the overall program impact.**

### 2. Stakeholders

**Select the stakeholders that have participated in consultations during the project identification phase:**

**Civil Society Organizations** Yes

**Indigenous Peoples and Local Communities** Yes

**Private Sector Entities** Yes

**If none of the above, please explain why:**

**Please provide the Stakeholder Engagement Plan or equivalent assessment.**

This project will collaborate with various stakeholders from the public and private sector and the civil society. The collaboration and participation of key stakeholders has been analyzed through consultation meetings with 114 potential actors from Colombia, Panama, and Jamaica. During the mentioned consultations, it became clear that the effective implementation of the project will depend

on the strengthening of technical and institutional capacities, and on the participation of these stakeholders. In this context, it is essential that the activities programmed consider specific interests and influence of different stakeholder groups.

Appendix 6A provides a detailed description of the different stakeholders and their engagement processes in these six project cities. Moreover, the analysis provides a framework for conducting and evaluating stakeholder engagement efforts to enhance the experience and results of the engagement process. To identify the main public, private, academic, and non-governmental actors and their interest and influence on the implementation of the project, a stakeholder matrix was developed. Please refer to Appendix 6B for this information. It should be highlighted that the stakeholder analysis and engagement is an ongoing process, which may evolve as new stakeholders are introduced to the project.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Table 15. Stakeholders at the Global Level

Stakeholder Name	Interest	Influence	Linkage to project component	Linkage to project output	Strategy for engaging the stakeholder
Global Plastic Action Partnership (GPAP)	High	High	Component 3, 4	Output 3.1, 4.1, 4.2, 4.3	Networking, capacity, and knowledge exchange: to be invited to meetings/workshops (and potentially PSC). Information shared with these bodies include experiences, papers, guidance for peer review etc. Dissemination of project learning and success stories will be done in collaboration with these organizations and initiatives.
Platform for Accelerating the Circular Economy (PACE)	High	High			
Basel Convention Secretariat	High	High			
Stockholm Convention Secretariat	High	High			
Scale 360	Low	Low			
The Strategic Approach to International Chemicals Management (SAICM)	High	High			
The Inter-Organization Programme for the Sound Management of Chemicals (IOMC)	High	High			
Beyond Oil and Gas Alliance	Medium	Low			
Euro CITIES	Medium	Low			
Plastics Europe	Medium	Medium			
International Union for Conservation of Nature (IUCN)	Medium	Medium			

German Society for International Cooperation (GIZ)	Medium	Medium			
UNHABITAT	High	Medium			
SYSTEMIQ	High	Medium			
Plastic Pollution Coalition	Medium	Low			
The Ocean Cleanup	Medium	Low			
InterAmerican Development Bank	Medium	Medium			
Environmental Investigation Agency	Medium	Low			
Green Growth Knowledge Platform (GGKP)	High	Medium			
The Global Partnership of Marine Litter (GPML)	High	High			
Ellen McArthur Foundation (EMF)	High	Medium			
World Bank	Medium	Medium			
Consumer Beyond Waste	High	Medium			
Alliance to End Plastic Waste	High	High			
Circulate Capital	Medium	Medium			
Regional coalition on circular economy in Latin America and the Caribbean	High	High			
WWF	Medium	Medium			

Table 16. Stakeholders at the Regional Level

Stakeholder Name	Interest	Influence	Linkage to project component	Linkage to project output	Strategy for engaging the stakeholder
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<p>The following groups of companies are responsible and will be engaged in this project for reducing plastic pollution through a value chain approach:</p> <ul style="list-style-type: none"> <li>- Polymer, plastics, and packaging producing companies in LAC (e.g., Braskem in Brazil, Carvajal S.A., and PROPLAS S.A. in Colombia, Algramo)</li> <li>- Plastics importing companies</li> <li>- Durable goods and consumer goods producers (e.g., global brands: Coca-Cola, Nestle, Unilever, Procter &amp; Gamble; Natura in Brazil; Pepsi)</li> <li>- Retailers, food service companies, packed good companies (e.g., Arcos Dorados)</li> <li>- Design and innovation companies for products and business models</li> <li>- Collection, sorting and recycling industry (e.g., Wisewood Eco Solutions, Louisiana Chemical Equipment Co. in Colombia; Camar Plásticos Ltd, M.M.P. Plásticos, Plaskaper Termoplásticos, Raposo Plásticos, Voltoplast Indústria e Comércio de Plásticos Ltda., and Wisewood Eco Solutions in Brazil; Terra Polyester in Honduras; ACEBRI Construcción y Procesos Plásticos, Bioplast de Antioquia S.A.S, División Ambiental SAS, Promaplast, SC Recycling SA in Colombia)</li> <li>- The informal sector working on collection and recycling of plastic waste</li> <li>- Investors (investment banks, funders for start-ups, foundations)</li> </ul>	Medium	High	Component 2	Output 2.1, 2.2, 2.3	<p>Actively engage with, plastic producers, consumer goods companies, collectors, sorters, waste operators, etc. in a range of Private Sector Organizations including the informal sectors, small and large retailers, tourism companies, etc.</p> <p>Different innovations and solutions will be consulted and tested in this companies, and success stories will be derived from them.</p> <p>Provide co-finance and financial support</p>
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Network of National Cleaner Production Centres (NCPCs) with centres in LAC	High	Medium	Component 3, 4	Output 3.1, 4.1, 4.2, 4.3	UNEP is regularly interacting with NCPCs in LAC for project implementation and capacity building on cleaner production, eco-innovation and circular economy.
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Table 17. Stakeholders-Colombia

Stakeholder Name	Interest	Influence	Linkage to project component	Linkage to project output	Strategy for engaging the stakeholder
<b>PUBLIC SECTOR</b>					
Departamento Nacional de Planeación (DNP)	Medium	High	Component 1	Output 1.1	Support the development, implementation, and enforcement of circular policy
Ministerio de Vivienda, Ciudad y Territorio	Medium	High	Component 1	Output 1.1	
Ministerio de Ambiente y Desarrollo Sostenible	High	High	Component 1	Output 1.1, 1.2, 1.3	
Asociación de corporaciones autónomas regionales y de desarrollo sostenible (ASOCARS)	High	High	Component 1	Output 1.1	
Vice Ministry of Tourism	High	High	Component 1	Output 1.1, 1.2	
Ministry of Health and Social protection	Low	Low	Component 1	Output 1.1, 1.2	
Corporación Autónoma Regional del Sur de Bolívar	High	High	Component 1	Output 1.1	
Mayor of Barranquilla	High	High	Component 1	Output 1.1, 1.2, 1.3	
Cormagdalena	High	High	Component 1	Output 1.1, 1.2	
Corporación Autónoma Regional del Atlántico CRA	High	High	Component 1	Output 1.1, 1.2	
Establecimiento Público Ambiental de Cartagena	Medium	Medium	Component 1	Output 1.1, 1.2	
CAR Cardique (Cartagena)	Medium	High	Component 1	Output 1.1, 1.2	

Corporaci?n Aut?noma Regional del Sur de Bol?var	Medium	High	Component 1	Output 1.1, 1.2	
Puerta de Oro	Medium	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	Provide technical assistance and support, and share existing experience
Local governments (Barranquilla, Atlantico)	High	High	Component 1, 3, 4	Output 1.1, 1.2, 1.3, 3.2, 4.1, 4.2, 4.3	Support the development and implementation of circular business solution
Local governments (Cartagena, Bolivar)	High	High	Component 1, 3, 4	Output 1.1, 1.2, 1.3, 3.2, 4.1, 4.2, 4.3	
CARDIQUE	High	High	Component 4	Output 4.1, 4.2, 4.3	Networking, capacity, and knowledge exchange
Ministry of Education of Colombia	Medium	High	Component 4	Output 4.1, 4.2	
National Natural Parks (Parque Nacionales Naturales - PNN)	Medium	Medium	Component 4	Output 4.1, 4.2	
Comisi?n Regional de Competitividad e Innovaci?n	Medium	High	Component 4	Output 4.1, 4.2	
Barranquilla Verde	High	Medium	Component 4	Output 4.1, 4.2	
PRIVATE SECTOR/NGOS/Academia					
Acoplásticos	High	High	Component 2, 3, 4	Output 2.1, 2.2, 2.3, 3.1, 4.1, 4.2, 4.3	Capacity development and knowledge sharing from studies
The Environmental Chamber of Plastic (C?mara Ambiental del Pl?stico)	Medium	Low	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	Provide technical assistance and support, and share existing experience Support plan of action across cities
The National Association of Businessmen of Colombia (ANDI)	Low	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
CEMPRE	High	High	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Triple A S.A E.S.P	Low	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Ekored	Medium	High	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Pacaribe S.A. E.S.P	Medium	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	

Veolia Cartagena	Medium	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Esenttia	High	High	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Dow	Low	Low	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Andercol	Medium	Low	Component 2,3	Output 2.1, 2.2, 2.3, 3.1	
The Barranquilla Chamber of Commerce	Low	Low	Component 2,3	Output 2.1, 2.2, 2.3, 3.1	
Ecopars S.A.S	Medium	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Fenalco	Low	Low	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Ajover	Medium	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Veolia	Medium	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
Geofuturo	Medium	Medium	Component 2, 3	Output 2.1, 2.2, 2.3, 3.1	
EcoComputo	High	High	Component 2	Output 2.1, 2.2, 2.3	Improve material sorting, storing, treatment, recovery, or environmental sound disposal of plastic in electronics.
XICLO	High	High	Component 2	Output 2.1, 2.2, 2.3	Full reusable packaging service implementation in restaurants
Universidad de Cartagena	Medium	Medium	Component 4	Output 4.1, 4.2, 4.3	Networking, capacity, and knowledge exchange

Table 18. Stakeholders-Jamaica

Stakeholder Name	Interest	Influence	Linkage to project component	Linkage to project output	Strategy for engaging the stakeholder
PUBLIC SECTOR					
Ministry of Housing, Urban Renewal, Environment and Climate Change	High	High	Component 1	Output 1.1, 1.2, 1.3	Networking, capacity, and knowledge exchange
Maritime Authority of Jamaica	High	High	Component 1	Output 1.1, 1.2, 1.3	
National Solid Waste Management Authority	High	High	Component 1	Output 1.1, 1.2, 1.3	
National Environment and Planning Agency	High	High	Component 1	Output 1.1, 1.2, 1.3	
PRIVATE SECTOR/NGOs/ Academia					
Wisynco	High	Medium	Component 2	Output 2.1, 2.2, 2.3	Provide technical assistance and support, and share existing experience
The Jamaica Environment Trust (JET)	Medium	Medium	Component 4	Output 4.1, 4.2, 4.3	Networking, capacity, and knowledge exchange (Provide information and data)
University of the West Indies: Faculty of Pure and Applied Sciences:	High	Medium	Component 4	Output 4.1, 4.2, 4.3	

Table 19. Stakeholders-Panam?

Stakeholder Name	Interest	Influence	Linkage to project component	Linkage to project output	Strategy for engaging the stakeholder
<b>PUBLIC SECTOR</b>					
Ministry of Environment	High	High	Component 1	Output 1.1 , 1.2 , 1.3	Support the development and implementation of circular business solution
Autoridad del Canal de Panam? (ACP)	Medium	Medium	Component 1	Output 1.1, 1.2	
Autoridad de Aseo Urbano y Domiciliario (AAUD)	High	High	Component 1, 3,4	Output 1.1 , 1.2 , 1.3, 3.1 , 4.1 , 4.2, 4.3	Support the development and implementation of circular business solution Networking, capacity, and knowledge exchange
Municipality of Panam?	High	High	Component 1, 4	Output 1.1 ,1.2 , 4.1 , 4.2	
Municipality of San Miguelito	High	High	Component 1, 4	Output 1.1 ,1.2 , 4.1 , 4.2	
Municipality of Col?n	High	High	Component 1, 4	Output 1.1 ,1.2 , 4.1 , 4.2	

Ministry of Education (MEDUCA)	High	High	Component 4	Output 4.1, 4.2	Networking, capacity, and knowledge exchange
AMP - Autoridad Marítima	High	Medium	Component 4	Output 4.1, 4.2	
Autoridad de los Recursos Acuáticos (ARAP)	Medium	Medium	Component 4	Output 4.1, 4.2	
Autoridad del Turismo de Panamá (ATP)	Medium	Medium	Component 4	Output 4.1, 4.2	
Zona Libre de Colón (ZOLICOL)	High	Medium	Component 4	Output 4.1, 4.2	
PRIVATE SECTOR/NGOS/Academia					
Tetra Pak S.A	High	Medium	Component 2.	Output 2.1, 2.2 , 2.3	Provide technical assistance and support, and share existing experience
Cervecería Baru/Heineken Panamá	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Cervecería Nacional de Panamá AB-Inbev	Medium	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Sistema Coca-Cola	Medium	High	Component 2	Output 2.1, 2.2 , 2.3	
Nestlé	Medium	High	Component 2	Output 2.1, 2.2 , 2.3	
Compañía de Reciclaje de Panamá	High	High	Component 2	Output 2.1, 2.2 , 2.3	
Compañía Nacional de Turismo de Panamá (CAMTUR)	High	High	Component 2	Output 2.1, 2.2 , 2.3	
National Center for Cleaner Production (CNP + L)	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Recimetal Panamá	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Bliss Panamá	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
GesVil Recycling S.A.	Low	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Aguaseo	High	High	Component 2	Output 2.1, 2.2 , 2.3	
Aseo Capital	Medium	Medium	Component 2	Output 2.1, 2.2 , 2.3	

Panam? Waste Management	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Pronto Aseo S.A.	Low	Low	Component 2	Output 2.1, 2.2 , 2.3	
Planta de tratamiento de Aguas Residuales Juan D?az	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
National Association for the Conservation of Nature (ANCON)	Medium	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Fundaci?n MarViva	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Fundaci?n Costa Recicla	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Marea Verde Foundation	High	Low	Component 2	Output 2.1, 2.2 , 2.3	
City of Knowledge Foundation	High	Low	Component 2	Output 2.1, 2.2 , 2.3	
Botellas de Amor	Medium	Low	Component 2	Output 2.1, 2.2 , 2.3	
Movimiento Nacional de recicladores	High	Medium	Component 2	Output 2.1, 2.2 , 2.3	
Trashforma	High	High	Component 2	Output 2.1, 2.2 , 2.3	
Waste Agency	High	High	Component 2	Output 2.1, 2.2 , 2.3	
FAS Panama	High	High	Component 2, and 4	Output 2.1, 2.2 , 2.3 Output 4.1, 4.2	Recycling project, and opening recycling centres. Awareness raising.
Universidad Santa Maria La Antigua USMA	High	Medium	Component 4	Output 4.1 , 4.2	Networking, capacity, and knowledge exchange Provide information and data

**Select what role civil society will play in the project:**

**Consulted only;**

**Member of Advisory Body; Contractor;**

**Co-financier;**

**Member of project steering committee or equivalent decision-making body; Yes**

**Executor or co-executor;**

**Other (Please explain)**

### 3. Gender Equality and Women's Empowerment

**Provide the gender analysis or equivalent socio-economic assesment.**

See Appendix 7 for the project Gender Analysis.

#### Overview

##### Regional

The combination of education, employment opportunities and a relatively progressive gender climate provide entry points for gender mainstreaming in the plastics sector in the LAC region. Women already play a significant role in waste management efforts, and the essential role of women in designing and implementing solutions is increasingly recognised. For example, women are playing a larger role as volunteers and women's associations are spearheading effective community engagement campaigns. Women typically manage household waste and adhere more frequently to proper disposal behaviour. Moreover, there is a growing awareness across the region about the benefits of resource efficiency and the importance of solid waste management and recycling, especially in relation to marine plastics. All 33 LAC Ministries of Environment have committed to combatting ocean plastic pollution and improving recycling efforts.[\[1\]](#)

What is less known is the role (and potential roles) of women across the plastics value chain. Information about the proportion of men and women working in the plastics industry is often lacking. Actual estimations on the number of employed people in the global plastic industry are not available or not accessible. As far as gender disaggregated data on the workforce in the plastic industry is available, the assumption is that about 30% of the workforce are women.[\[2\]](#)

#### Countries

Table 20. Summary of gender key figures across the three countries

Country	Tertiary School Enrolment <sup>[3]</sup>		Self-employment		Unemployment		Informal Sector		Global Gender Gap Index (2021)
	Female	Male	Female	Male	Female	Male	Female	Male	Rank (156 countries)
Colombia	60.8%	52.2%	49%	50.3%	12.8%	7.9%	59.7%	55.2%	59 <sup>th</sup>



<b>Panam?</b>	58.6%	37.3%	36.7%	40.8%	5.8%	4.0%	46.8%	46.6%	31 <sup>st</sup> (2020)
<b>Jamaica</b>	34.7%	19.9%	33.1%	44.7%	9.9%	5.8%	Not available		40 <sup>th</sup>

### Gender plan

A gender specialist will be engaged to support project design and preparation across the timeline of the project. The gender specialist will conduct survey to assess role of women in plastic value chain, and will be responsible of designing a gender plan, within the strategic priorities in line with the objectives and including those activities in table 21 and include responsible actors and, deliverables and timeline. The specialist will also collect gender-disaggregated data from the project cities and track the gender-related GEB, as well as support the design of communication campaigns from a gender perspective. Project budget (80,000 USD) will be allocated to support these activities.

### Objectives

Various actions and activities will be put in place across the project to respond to identified gender risks, differences, gaps, or opportunities. The adoption of the gender mainstreaming will consider both women and men experiences, concerns, and needs. These proposed activities and target setting are intended to achieve the following strategic priorities: 1) increase women's involvement across the plastics value chain; 2) enhance gender equality in decision making and leadership; and 3) improve women's economic empowerment.

### Indicator development

Below are the indicators used to qualitatively assess whether the participation and capacity of women and men has been increased. Given the indigenous populations in the region, indicators must be designed in a way to enable gender-sensitive monitoring and collection of accurate data in a culturally sensitive manner.

#### Consultation Participation:

- ? Number and percentage of women and men actively participating in consultations, workshops, events, training, and committee meetings; at least 40% of each gender represented
- ? Number and percentage of men and women, by social group, consulted in each of the four project components
- ? Number of women and men in decision-making positions in the related activities
- ? Number of steering board members disaggregated by gender and sector
- ? 100% of guidelines and workplans have gender inclusiveness integrated

#### Benefit Sharing:

- ? Number of women and men benefitting from organized workshops and trainings opportunities
- ? Number of women and men benefitting from new tools and resources

- ? Number of poor households that are project beneficiaries broken down by number headed by women/men
- ? Number of women-owned businesses that are involved in project activities
- ? Number of women of in a leadership position in community or sector
- ? Number of specific knowledge material developed on gender

**Monitoring and evaluation:**

Understanding whether the project is successful in mainstreaming gender will be important. Monitoring of gender related activities will occur throughout the project and will track and evaluate gender impacts and results by ensuring:

- ? the presence of tools/methods to ensure gender responsive design
- ? tracking of positive impact: sex-disaggregated indicators and targets

The Communication Strategy and the Capacity Building Activities will also be developed with considerations to ensure gender equity. The final evaluation will contain a discussion about how well the project has integrated a gender perspective, with concrete examples including learnings and recommendations related to the gender perspective of the project.

Table 21. Gender related activities in project components

<b>Project Component</b>	<b>Output</b>	<b>Key Activities and actions</b>
1. Policy intervention	1.1 City policy action plan	Ensure decision makers involved in the policy action plans represented both genders. Women represent at least 40% of the attendees during workshops and roundtables.
	1.2 Policy implementation	When designing and implementing specific policy intervention, the number of women citizens and stakeholders influenced by the policy will be monitored by relevant indicators
	1.3 Financial instruments	Promote women entrepreneurship by targeting assistance and inclusiveness to vulnerable groups when facilitating responsible plastics management. Ensure a large number of women are in leadership roles.
2. Business innovation	2.1 Upstream innovations and solutions	In the process of developing and testing new circular solutions across the value chain, data on gender should be reported and ensure balance gender equality, while involving vulnerable women groups, and ensuring large number of women from households, governments, and value chain businesses are in leadership roles, and are in position of decision making on sustainable consumption, as well as being beneficiaries.
	2.2 Collection and recycling solutions	When implementing the collection and recycling pilot, measures need to be in place to engage with female entrepreneurs in the waste sector to include them in feasibility assessment, due diligence check, and also collection tenders. The improvement and upgrade of collection and recycling facilities should include the measure to improve the working conditions, health, and welfare of female workers.

	2.3 Industry roundtables	All roundtable meetings should be organised with a gender balance approach. At least 40% for each gender. At the end of meetings, workshops and events, a report should be included illustrating gender data.
3. Intercity network	3.1 Governance and strategy	When designing the strategy and governance of the intercity network, female leaders and officers in city governments will be invited for consultation
	3.2 City engagement	Gender related indicators will be incorporated into the template of city action plans of circular economy of plastics
4. Knowledge and capacity	4.1 Information, education and communication strategy	Communication material should illustrate and take gender into consideration. Specifically, addressing consumer behaviour according to gender purchasing patterns.
	4.2 Capacity building	All capacity building activities should report gender data and have a gender balance approach. Women represent at least 40% of the attendees
	4.3 Long-term monitoring	Long term monitoring plan should include gender data across the value chain. For example, if data is being collected of the number of ?waste pickers? in certain city, then it is essential to understand the gender balance.

[1] United States Agency for International Development (USAID). (2019). ?Factsheet, Women?s Economic Empowerment and Equality in Solid Waste Management and Recycling: Latin America and the Caribbean Landscape?. [https://banyanglobal.com/wp-content/uploads/2019/06/USAID-factsheet-WE3-SWM-LAC\\_2019\\_09\\_27.pdf](https://banyanglobal.com/wp-content/uploads/2019/06/USAID-factsheet-WE3-SWM-LAC_2019_09_27.pdf)

[2] Lynn, H., Rech, S., Samwel-Mantingh, M. (2017). ?Plastics, Gender and the Environment: Findings of a literature study on the lifecycle of plastics and its impacts on women and men, from production to litter?. Women Engage for a Common Future (WECF). <https://www.wecf.org/wp-content/uploads/2018/11/PlasticsgenderandtheenvironmentHighRes-min.pdf>

[3] Dates for tertiary school enrollment are not comparable across countries. Dates for data are as follows:

Colombia: 2018; Panam?: 2016; Jamaica: 2015.

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment?**

Yes

**Closing gender gaps in access to and control over natural resources;**

**Improving women's participation and decision making** Yes

**Generating socio-economic benefits or services or women** Yes

**Does the project's results framework or logical framework include gender-sensitive indicators?**

Yes

**4. Private sector engagement**

**Elaborate on the private sector's engagement in the project, if any.**

Private sector organizations (large industries, SMEs, informal sector, retailers, tourism, etc.) will be key partners at the city level for this project. The project will be guided by the outcomes of brand-audits around the target cities to identify relevant sectors to engage with, existing work undertaken throughout the development of the national and regional marine litter action plans, the engagement of GPML members as well as signatories outlined in the progress reports of the New Plastics Economy Global Commitment (Global Commitment) in order to identify relevant private sector organizations to engage with on this project to reduce marine plastics and plastic pollution. By partnering with the Global commitment, the project will take advantage of its business network, which connects large global consumer goods producers and retailers that are operational in the LAC region and target cities of the project (e.g., Nestle, Coca-Cola). Global companies will be engaged where relevant in the industry roundtable and inter-city network to be established under the project, and in the activities on piloting and scaling up upstream solutions, and those that follow the CORRECT attributes suggested by the WHO[1]. A variety of organizations from the private sector expressed high interest in the project, and according to their capacities, resources, and focus along the value chain of plastics, are willing to influence and participate in it. The stakeholders to be engaged with will include upstream, mid-stream and downstream actors of the value chain, including chemical companies as the polymer producers of plastics/packaging, design and use companies (such as food and beverage producers, consumer goods companies), collectors, logistics companies, and recyclers.

The private sector will have a long-term main purpose to lead innovative interventions, sustain the circular economy approaches tested in the project and ensure the upscaling and replication of these approaches in other locations.

Private sector organizations will be involved in all components of the project, including:

- ? **Component 1** the private sector will be engaged in the dialogues on city level policy to: reduce and/or eliminate unnecessary and problematic plastics products; the reduction, reuse, recycling, and disposal of plastic waste, etc.
- ? **Component 2** will largely be directed at working with the private sector to implement the policies delivered in component 1. The private sector will lead interventions to strengthen markets for investments in innovative, scalable upstream actions, waste management and recycling solutions. Moreover, this group is aimed to work in partnership with other stakeholders along the value chain to identify, assess and implement innovative solutions for the problematic products and polymers contributing most to marine plastics and plastic pollution.

- ? **Component 3** the private sector will support municipality authorities to share the experiences and lessons across the network of cities to promote circular economy approach for plastics.
- ? **Component 4** the private sector will be actively involved in the capacity development for enhancing circular economy approaches and will be key to the long-term sustainable monitoring that will be continued post-project.

The private sector has a high interest in the project, however depending on their position in the value chain of plastics and their focus of activity, they could have a lesser or higher influence. Most relevant private sector stakeholders are consumer goods companies, plastic associations, recycling and recovery companies of plastics and other types of waste, chamber groups, and urban collection companies.

The project will also engage with the following groups of companies in the cities and in the region along the plastic value chain:

- ? Polymer, plastics, and packaging producing companies
- ? Plastics importing companies
- ? Durable goods and consumer goods producers (e.g., global brands: Coca-Cola, Nestle, Unilever, Procter & Gamble)
- ? Retailers, food service companies, packed good companies
- ? Design and innovation companies for products and business models
- ? Collection, sorting, and recycling industry
- ? The informal sector working on collection and recycling of plastic waste
- ? Investors (investment banks, funders for start-ups, foundations)

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[1] World Health Organization (WHO). (2010). ?Nine steps for developing a scaling-up strategy?  
[https://www.who.int/immunization/hpv/deliver/nine\\_steps\\_for\\_developing\\_a\\_scalingup\\_strategy\\_who\\_2010.pdf](https://www.who.int/immunization/hpv/deliver/nine_steps_for_developing_a_scalingup_strategy_who_2010.pdf)

## 5. Risks to Achieving Project Objectives

**Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):**

### Global risks

#### a) COVID-19

The COVID-19 pandemic has resulted in rapid changes in work routines, commercial activities, health care and other industries and social services. It had a direct impact in the volumes and types of waste generated in the countries, specifically during lockdowns. It has been estimated that waste generation has increased sharply, including plastic waste streams, such as Single Use Plastic Products (SUPP).

Data and statistics of the COVID-19 for the three countries are presented in Table 22.

Table 22. Statistics of the COVID-19 for the 3 project countries<sup>[1]</sup>

Country	Cases	Death	Vaccination
Colombia	5M	127K	21M
Panam?	473K	7.3K	2.37M
Jamaica	89K	2,2K	375.9M

Direct risks from the COVID-19 pandemic to the project include travel restrictions and the generation of additional waste streams, specifically to PPE (such as face masks). Some countries had indicated or experience lockdowns and/or travel restrictions. Although vaccines have been developed after approximately one year following the proclamation of the pandemic, the delivery and rollout of vaccination programs in LAC countries have been slow as compared to developed countries. Restrictions on traveling to and within LAC countries are therefore likely to continue and will impact project execution activities by a) physical meetings replaced by virtual meetings b) data collection on site remains challenging c) health and safety procedures and standards need to be enforced to protect workers and the most vulnerable, especially in the context of pilot projects involving recycling facilities and other similar initiatives.

The COVID-19 pandemic has shifted priorities in the countries and has made it more difficult to those businesses seeking support. Moreover, the private sector is more restrained in investing in novel technologies to replace plastic or supporting alternatives. Additionally, delivery of project resources such as equipment and materials may also be constrained by delays due to travel restrictions. Also, countries are importing COVID-specific medical equipment, leading to increased pressure on medical waste management. These medical wastes include single use plastic products and other impact-heavy waste streams that the GEF project seeks to reduce. Indirect risks caused by the COVID-19 pandemic include decreased local support due to shifted priorities and resources and impacts to the countries' economies, as well as a temporary suspension of SUPP ban and promotion of reusables. Businesses oriented to recycling have been forced to closed down, as the local restrictions were not permitting the business operations. Tourism-dependent countries are facing significant decreases in GDP, growing unemployment rates and sharp increases in state debt.

World Bank Group Country disasters - Risk Profiles. Available at:  
<https://www.gfdrr.org/sites/default/files/Jamaica.pdf>

## **b) Climate change**

The Caribbean is the most vulnerable region to climate change, as it is an issue of survival to its people and of long-term existence to its countries. The Intergovernmental Panel on Climate Change has already concluded that sea levels will continue to rise during the next several centuries. On top of this, it is

important to point out that an increase in the surface temperature of seas will result in deadlier tropical cyclone activity in the Caribbean[2].

Table 23. Risk assessment of natural hazards in the cities and their respective impacts of disasters<sup>150</sup>

City / Risks	Wildfire	Floods	Tsunami	Hurricane	Extreme Heat	Earthquake	Landslide	Water scarcity
Cartagena	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	LOW	LOW	LOW
Barranquilla	HIGH	HIGH	MEDIUM	MEDIUM	MEDIUM	MEDIUM	VERY LOW	LOW
Panamá City	HIGH	HIGH	HIGH	LOW	MEDIUM	HIGH	MEDIUM	VERY LOW
Colón	HIGH	HIGH-MEDIUM	MEDIUM	LOW	MEDIUM	HIGH	LOW	VERY LOW
Kingston	HIGH	MEDIUM	LOW	MEDIUM [3]	MEDIUM	MEDIUM	HIGH	MEDIUM [4]
Montego Bay	HIGH	HIGH	LOW	MEDIUM M87	MEDIUM	MEDIUM	HIGH	MEDIUM M88

Table: Risk classification.[5]

Tools such as think hazard[6] have identified risks aggravated by climate change such as an increase in flooding. The following hazards are of importance due to the associated influence with leakage of plastic waste.

Flooding can exacerbate plastic pollution due to transportation of plastic waste to the oceans and collapsing waste management by increasing waste leakage. Floods considered high risk is due to inundations depth above 0.5-2m with high probability of occurrence. Structural solutions in place to reduce plastic leakage to the environment are not as effective in the case of inundations and flash floods. Waste management practices should consider potential issues.<sup>150</sup>

All three (3) project countries face COVID-19 and climate change related risks as highlighted in the Risk Assessment Table. Regionally specific mitigation measures are needed to adequately address specific regional vulnerabilities, these can be found in **Tables 24 - 26** indicating main risks, ranking and mitigation strategies.

This is the data repository for the 2019 Novel Coronavirus Visual Dashboard operated by the Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE). Also, Supported by ESRI Living Atlas Team and the Johns Hopkins University Applied Physics Lab (JHU APL)

### Regional/country risks

UNEP's Safeguards approach provides a holistic framework for the identification, assessment, and management of a project's potential environmental, social, and economic risks at each stage of the project cycle. Application of the Framework will help UNEP Project Managers avoid or minimize where avoidance is not possible potential associated negative environmental, social, and economic impacts that might otherwise arise as unintended consequences of their projects. It is expected that many UNEP projects will not significantly change due to application of the safeguard requirements. It is expected that in this project the risk impacts will be minimized by implementation of mitigation measures and strategies.

The main risks lie in SS4: Community Health, Safety and Security, and SS8: Labor and Working Conditions and SS2: Climate Change and Disaster Risks as shown in the Appendix 5 ? SRIF, both classified as moderate, with Impact of level 2 and Probability of level 3 (1-5). In addition, there is a risk associated with a scenario where policies are developed but not fully implemented or enforced; failure of private sector to participate in the project, with low engagement from the large corporations and small medium-sized enterprises; finally, a risk associated with the inter-city network that cannot be sustained after the end of the project.

Table 24. Description of Impacts and Risk Levels

Level Criteria	Very Low (1)	Low (2)	Medium (3)	High (4)	Very High (5)
Probability	Very unlikely	Unlikely	Chances about even	Likely	Ver Likely
Impact	Routine procedures sufficient to deal with consequences	Could threaten results and thus, may require monitoring	May threaten results and thus, may require monitoring	Would threaten results, and thus may require review	Would prevent achievement of results, and would require close management

Table 25. Definition of Risk Levels or Significance

Impact	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
Probability						

Significance	
	High
	Moderate
	Low



Table 26 summarises the main risks, ranking and mitigation strategies. The risk mitigation plan can be found in Appendix 8.

Table 26. Main risks, ranking and mitigation strategies

Risk	Project outputs	Environment, Social, Economic	Risk - Impact	Risk - Likelihood	Score (Risk level: Low, Moderate, High)	Proposed Mitigation Measures
<b>Covid 19 risks</b>						
Impacts to human health due to COVID 19	All outputs	Social (health)	4	3	12 (H)	<p>Since the proclamation of the COVID-19 pandemic, approximately 2% of persons who have contracted the virus globally have died. Although vaccinations have become available, mutated, and new strains of the virus have emerged, some of which have been noted to be more transmissible and more aggressive as compared to the strains identified at the beginning of the pandemic.</p> <p>For this reason, guidelines and recommendations of government authorities and healthcare professionals must be followed. meetings will be held virtually as far as possible, and travel will be limited to minimize physical interactions. However, where face-to-face meetings are held, international health protocols, including, but not limited to, sanitization and appropriate physical distancing will be observed.</p>
Decreasing local support and delays in actions due to restrictions	Output 1.1, 1.2, 1.3, 3.1, 3.2	Economic	3	2	6 (M)	Ensuring plastic pollution remains a priority to countries, and health and safety protocols are ensured and where possible actions should be taken in virtual manner



Policies only developed but not implemented or without practical solutions, which can be a risk as low policy implementation and enforcement will weaken the incentive structure for all other stakeholders to take actions	Output 1.1, 4.3	Social	4	3	12 (H)	To ensure policy recommendation(s) uptake, engagement with national and city governmental institutions will be further made from the beginning of the project. Close follow-up and ongoing monitoring of activity will be supported by the local governments
City authorities fail to mobilise private sector partners during policy development and implementation	Output 1.1, 1.2, 1.3	Economy	3	2	6 (M)	Project will engage in a range of awareness and partner-building workshops to fully explain and engage circular economy and benefits to city and specific private sector partners. Specific target setting and measures towards priority plastic products and sectors will facilitate the collaboration with specific companies.
Failure of private sector to participate in the project, with low engagement from the large corporations  Lack of industry or key corporations? engagement	Output 1.3, 2.1, 2.2, 2.3	Economy	3	1	3 (L)	Engage corporations in early, principled dialogues that highlight their opportunity to be proactive in constructing solutions prior to inevitable mandates by government. Should this approach cease to work we will look for the appropriate means to apply pressure to resistant companies.

Interventions through the private sector (component 2) fail to be sustained or replicated within and between cities.	Output 2.1, 2.2, 2.3, 4.3	Economy	3	3	9 (M)	The project will continuously work closely with both the municipality authorities and a range of private sector operators to assist in identifying appropriate innovative approaches and to facilitate the identification of appropriate financing mechanisms to encourage replication. This will be supported by a proactive strategy to highlight achievements within and between the cities involved.
Failure of informal waste sector to participate	Output 2.2,	Economy	3	3	9 (M)	The project will proactively engage with the informal sector to highlight the benefits to their operations from circular economy approaches and identify their potential roles in this project, while ensuring their livelihoods and health are improved
Cultural resistance from the citizens to accept new measures or adopt innovative solutions.	Output 2.1, 4.1	Social	3	3	9 (M)	The Project will communicate information to the public on new innovative measures in a way that is sensitive to local cultures and demonstrates direct benefits for the implementation of these new measures. It will be carried in various dissemination and communication forum through different media (such as TV, radio, newspaper, social media, and consumer campaigns)

Civil society (including NGOs, CSOs, education establishments) unwilling to participate	Output 4.1	Social	3	1	3 (L)	Lack of adequate accessible information and access to the decision process will inhibit public participation. The project will encourage broad civil society involvement at all stages of the project's interventions and ensure that information released is in a form that encourages involvement.
<b>Technical risks</b>						
Inadequate data available to support activities	Output 4.3	n/a	3	3	9 (M)	Historically, data collection within the region has not been consistent or reliable. Consultants have been hired to collect data and UNEP has developed mechanisms to ensure that sustainable data collection mechanisms are implemented.
<b>Climate change risks</b>						
Flooding can exacerbate plastic pollution due to transportation of plastic waste to the oceans and collapsing waste management by increasing waste leakage. Floods considered high risk is due to inundations depth above 0.5-2m with high probability of occurrence.	Output 2.2, 4.3	Environment	4	3	12 (H)	Through project implementation, the circular economy approach for plastics will be applied by stakeholders along the value chain, which will lead to the reduction of GHG emission caused by unsustainable production and consumption of plastics and the increase of efficiency of resources used by the plastic sector. It is expected that the sustainable production of plastics and sound plastic waste management practices implemented through the project (by activity 2.1.2, 2.1.3, 2.2.2) will lead to increased resilience against climate change impacts. The output 2.2 on solutions to plastic waste collection and recycling at cities will also take into account the risks of floods when designing the waste management practices.

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[1] This is the data repository for the 2019 Novel Coronavirus Visual Dashboard operated by the Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE). Also, Supported by ESRI Living Atlas Team and the Johns Hopkins University Applied Physics Lab (JHU APL)

[2] Sempris, E. (2020). "Climate Change and Freshwater in Latin America and the Caribbean". United Nations (UN). Accessed on 25 September 2021. <https://www.un.org/en/chronicle/article/climate-change-and-freshwater-latin-america-and-caribbean>

[3] World Bank Group Country disasters - Risk Profiles.<https://www.gfdrr.org/sites/default/files/Jamaica.pdf>

[4] Mullings, B. (2020) "An Opportunity To Pause And Reimagine: Jamaica's Public Water After Covid-19". Available at: [https://www.tni.org/files/public-water-covid-19\\_chapter\\_13.pdf](https://www.tni.org/files/public-water-covid-19_chapter_13.pdf)

[5] High risk - There is a potential for widespread impacts from climate change. Outcomes may be undermined by climate change, and adaptation measures may not be readily available. Financial, environmental and social underperformance or failure cannot be excluded. However, risk management activities are likely to increase resilience and adaptive capacity of households, infrastructure, communities, and ecosystems.

Moderate risk - Impact from climate change may occur, but will be limited, transient or manageable. Financial, environmental and social underperformance or failure is unlikely. The system has the capacity to manage volatility, shocks, stressors or changing climate trends.

Low Risk - No impact from climate change, or even positive impact, is expected based on best available science. Financial, environmental and social underperformance or failure appears very unlikely. (GEF, STAP guidance on climate risk screening)

[6] Think Hazard. (2021). "Identify natural hazards in your project area and understand how to reduce their impact". Global Facility for Disaster Reduction and Recovery. Accessed on 5 October 2021. <https://thinkhazard.org/en/>

## **6. Institutional Arrangement and Coordination**

**Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.**

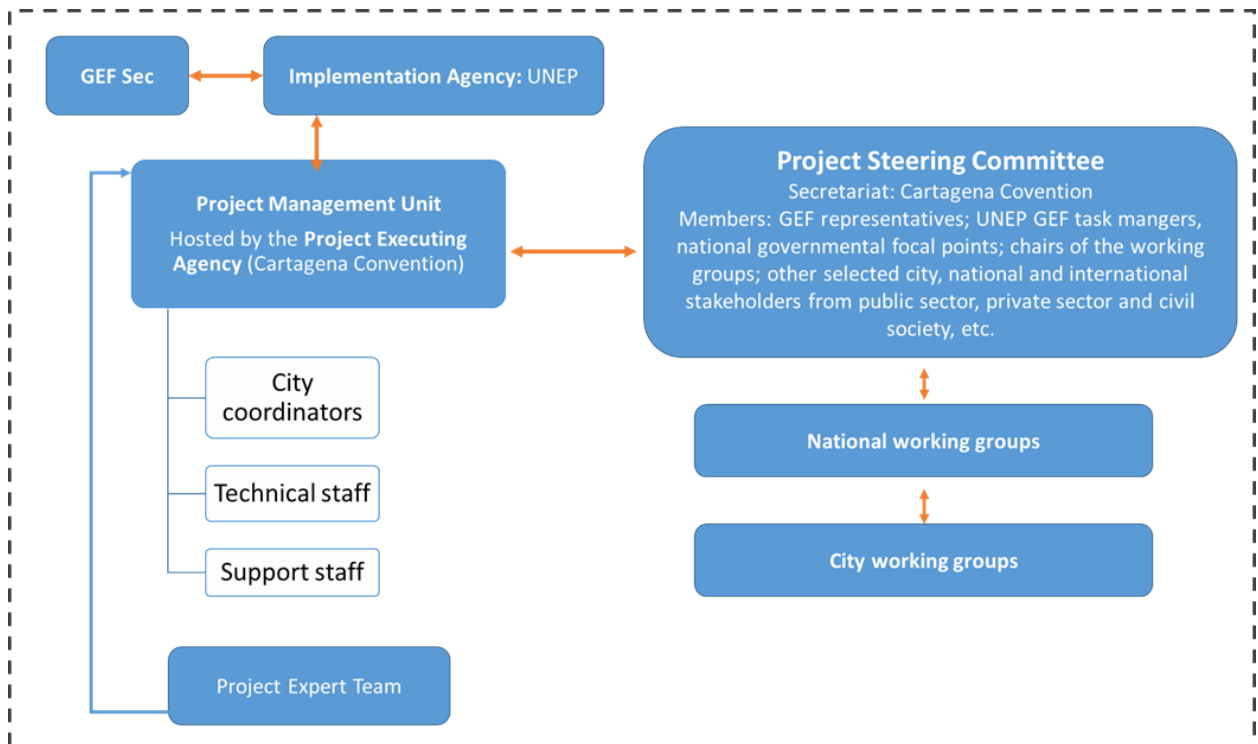


Figure 5. Project Execution Arrangement

The Cartagena Convention Secretariat will be the Executing Agency for the project and will host the Project Management Unit (PMU) which will coordinate, manage and be responsible for the project on a day-to-day basis. It is responsible for the overall management of the financial and human resources directly related to project execution in the countries. It will function as the general coordinator of the execution of the project and will be accountable to the implementing agency and the Project Steering Committee (PSC) for the achievement of project outputs and outcomes. The EA will take guidance from the GEF implementing agency and the PSC in all matters concerning the project. In the delivery of its functions, it will be a member of the PSC and the National Working Groups.

The Cartagena Convention is well positioned for this role. It was adopted by countries in the Wider Caribbean in 1983 and is the only legally binding agreement of its kind in the region for the protection of the Caribbean Sea. Through the Convention, governments receive support to control, reduce and prevent marine pollution from all sources. Marine Litter is one of the priority pollutants being targeted for improved management by the Cartagena Convention Secretariat. The Protocol Concerning Pollution from Land-Based Sources and Activities (LBS) of the Cartagena Convention which was signed in 1999 and adopted in 2010, along with the Regional Action Plan for Marine Litter (RAPMaLi) and Regional Marine Litter Strategy for the Wider Caribbean Region (see below) form the basis for the support provided to countries in the Wider Caribbean and the development and implementation of several marine litter programmes, projects and activities in support of the implementation of the Regional Action Plan on Marine Litter and the LBS Protocol. It was determined that MESTI/EPA would meet the requirements as the Project Executing Agency.

The Implementing Agency (IA) of this project are the GEF units in the Ecosystems and Economy Divisions of the United Nations Environment Program (UNEP). The IA will be responsible for the overall project supervision, overseeing the project progress through the monitoring and evaluation of activities and progress reports of the established components. It will be responsible for quality assurance procedures, organize contracting with Executing Agency (EA), approve progress reports and clear disbursement. The GEF Agency will be responsible for contracting independent evaluators for undertaking the mid and terminal evaluations. The IA will also monitor progress to ensure the proper quality of outputs. UNEP will report project implementing progress to GEF. The IA will also take part in the Project Steering Committee (PSC) and can request PSC to meet outside of the planned schedule as deemed necessary.

UNEP's comparative advantage is its mandate to coordinate the work of the UN in the area of environment, and its experience as a successful and efficient IA specializing in regional and global activities. UNEP's expertise includes proof of concept, testing of ideas, and the best available science and knowledge to form the basis of GEF investments. UNEP also serves as the Secretariat to three of the MEAs (Stockholm, Minamata and SAICM), for which GEF is the/a financial mechanism. UNEP will take the lead in finalising the project level data flow and reporting to the GEF Secretariat as indicated in the organogram in Figure 5 above.

The Project Steering Committee (PSC) meeting is held annually to ensure the delivery and quality of activities and outputs and to approve budget and ensure country ownership and governance. The PSC will include relevant countries (city and national representatives), GEF Agency, partners (including private and informal sectors), civil society, etc. The PSC members will review the project execution against the scope of project activities and review annual workplans and budget in accordance with the approved project document. The members will also select and nominate relevant project stakeholders; and provide advice, policy and institutional guidance to the implementing and executing agencies. The decision-making members of the PSC will be representatives of the governments and the Implementing Agency. Further key stakeholders will participate in the PSC to provide guidance but without decision rights. The PMU will act as the secretary to the PSC and provide regular project updates to the PSC. The PSC members will support the establishment of national working groups in their respective countries, as needed for each activity assign responsibilities amongst national government departments; select and nominate relevant project stakeholders; evaluate and assess the progress of the project; and provide advice, policy and institutional guidance to the implementing and executing agencies. In this regard, relevant governmental institutions will be requested to allocate the necessary human and technical resources to support project implementation through the PSC, where it does not already exist. PSC meetings will be organised on an annual basis to discuss the progress of activities and amendments to the schedule, as needed. In recognition of the 'new normal' the project will organize only the inception meeting, mid-term and final PSC meetings face to face (COVID situation permitting) while the intermediate PSC will be held virtually or as hybrid meetings. The PSC will make decisions alongside the UNEP and GEF as part of the monitoring and evaluation activities.

National Working Groups (NWGs) will also be established to support information gathering from respective entities, review project outputs and ensure that national priorities are being met and seek synergies among the activities at city level. The NWGs will also provide advice, policy and institutional guidance to support the successful execution of project activities and the sustainability of the project. The



NWG will consist of national stakeholders relevant for each activity and will be chaired by the national focal point. Members will also include representatives from CSOs/NGOs, the private sector and gender affairs groups to ensure that gender mainstreaming is considered throughout the project. Composition of the NWG will be determined at inception for each country but will include gender affairs department.

To support project execution and ensure that the outputs of the project are aligned with national and city priorities and that project activities are coordinated among stakeholders at city level within the scope of the project, each project city will also establish City Working Groups (CWGs). CWG members will not be contracted by the project and new members will be appointed by invitation of the existing members if needed. CWG members in each city will be designated at the discretion of the city government and in accordance with the Terms of Reference which will be developed at the project's inception. A Chair shall also be appointed for each CWG by its Government as per these Terms of Reference. The Chair will be responsible for arranging and chairing meetings of the CWG. Appendix 4 provides more information on the composition of the CWGs.

The PMU will be supported by the project expert team which will be comprised of the experts and consultants to be hired by the project. These will include consultants to collect international best practices and support the pilots of policy instruments and innovative business solutions in the 6 project cities; consultant to support the establishment and expansion of the inter-city network; gender and social expert; long term monitoring specialist; procurement expert, etc. The tasks and roles of these experts and consultants can be found in Appendix 13.

The project will build upon multiple regional projects and support global initiatives. The project will coordinate with relevant stakeholders including planned and ongoing projects and activities (GEF IW and C&W and non-GEF) in the region and where relevant world-wide. Appendix 4 presents an overview of closely related projects and initiatives. Through the development of appropriate mechanisms (described below in Section on Knowledge Management and in Component 4 activities) the results of this project will be shared widely. The dissemination of results will be guided by a communication strategy (Appendix 12) and updated within the first few months of project execution.

## **7. Consistency with National Priorities**

Describe the consistency of the project with national strategies and plans or reports and assessments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

Activities of the project are consistent with the commitments and priorities of the target countries and cities, and with their current national strategies, action plans or reports under relevant conventions and programmes, including:

- a) Basel, Rotterdam, and Stockholm Convention

- b) International Convention for the Prevention of Pollution from Ships (MARPOL)
- c) The Regional Seas Programme
- d) Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention)
- e) Global Programme of Action (GPA) for the Protection of the Marine Environment from Land-based Activities
- f) Global Partnership on Marine Litter (GPML)

The project is aligned with the national policies and regulations to prevent, manage, and reduce the proliferation of marine plastics and plastic pollution, which includes:

? Colombia

- o The Resolution 0668 established targets for gradual reduction of plastic bags, including banning single-use plastic bags smaller than 30X30 cm in 2016 and introducing a tax on this item in 2017. Since 2019, Colombia has been developing the National Strategy on Circular Economy developed in consultation with actors from the public and private sector, academic, and NGOs. Between 2019 and 2020, the National Plan for the Sustainable Management of single-use plastic items was formulated where lines of action and priority cross-cutting actions were defined. Within the framework of the Plan, Resolution 1558 was issued in 2019, which prohibits the entry of single-use plastic articles in the areas of National Natural Parks in Colombia with ecotourism activities, which seeks to positively impact 17,466,974 ha, corresponding to 8.4 % of the national territory. Decree 2198 of 2017 established innovation in the development of technologies to produce biodegradable, reusable, and recyclable bags, exempting them from the National Tax on the Consumption of Plastic Bags. In December 2020, the House of Representatives approved in the first debate the ban on single-use plastic products from 2025<sup>[1]</sup>.

? Jamaica

- o Passed the Trade (Plastic Packaging Materials Prohibition) Order, 2018, which prohibits the import of expanded polystyrene products, distribution or import of plastic bags 24 x 24 inches or less in size, and plastic drinking straws, effective since January 1, 2019. The second phase came into effect in 2020 and included Styrofoam along with the other materials in the first phase. In January 2021, the Government of Jamaica began the implementation of the third phase, which incorporated single-use plastic bags with dimensions greater than 24 x 24 inches and thickness of 2.5 mils (Hall-Hanson, 2021)<sup>160</sup>.

? Panam?

- o The country approved a law on the ban of plastic bags in 2018, which prohibits the use of polyethylene bags in shops in general to transport products or merchandise. In December 2020, Law No. 187 was passed, which establishes the legal framework on single-use plastic items in the national territory that will enter into force in 2021 as part of the public environmental policy of the State<sup>160</sup>.

In addition, targeted countries revealed the need to address a set of issues/priorities common across in the consultations during the PPG phase. These include:

- ? Better management of land-based sources of marine litter, including the potential to phase out of single use plastic products.
- ? Efforts should be enhanced and focus on a comprehensive waste management, fundamentally seen from the prevention and the generation to the final disposal of problematic or unnecessary plastic products.
- ? Strengthen the productive chain of recycling
- ? Almost all countries from the LAC region are facing the challenge brought by informal waste pickers. It is necessary that they are not marginalized but formalized.
- ? Development of articulated projects with equally articulated actors. With sustainable projects, the installed capacity of the industry can assist and further foster the business development in the region.
- ? It is quite relevant to work on environmental education, mainly regarding marine plastics and plastic pollution.
- ? Collaborate to avoid duplication of efforts, share knowledge, key information, and good practices among relevant actors, and try to build the network to achieve the same objective.

These cross-cutting priorities will be addressed by the project across all Barranquilla, Cartagena (Colombia), Montego Bay, Kingston (Jamaica), Panama City, Colombia (Panama) with the aim of developing a uniform approach across the targeted countries and further scaling up these efforts in the LAC region.

The project will also contribute to the delivery of SDGs in the target countries, including SDG 6 on Clean water and sanitation, SDG 11 on Sustainable Cities and Communities, SDG 12 on Sustainable Consumption and Production, SDG 14 to Conserve and sustainably use the oceans, seas and marine resources for sustainable development, and SDG 17 on Partnerships for the goals.

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[1] United Nations Environment Program (UNEP). (2021). Information report on policies, regulations, and strategies in Latin America and the Caribbean to prevent marine litter and plastic waste. Accessed 14 October 2021.  
[https://wedocs.unep.org/bitstream/handle/20.500.11822/34931/Marine\\_EN.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/34931/Marine_EN.pdf?sequence=1&isAllowed=y)

## **8. Knowledge Management**

**Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.**

The project will rely heavily on the management, dissemination, and scaling-up of knowledge, experiences, and results to achieve the overall project objective to reduce marine plastics and ensure long-term sustainability of the circular economy approaches in the LAC region that will also facilitate global up-scaling of the approaches.

The project can be implemented focusing on four main areas, which are complementary and parallel:??

1. At the early stage of the project implementation phase, the project communication strategy will be developed, and key target audience will be further identified based on the stakeholder analysis. Communication materials?(such as press release, videos, web stories) and relevant dissemination plan (media, conference, high-level events) will be developed to promote the visibility of the project and its key progress.
2. Raising awareness and cross-cutting communication activities among all related stakeholders will be conducted. These activities will raise the awareness of stakeholder on the project objective, approach, activities as well as the benefits associated with the implementation of the project at the local and national level.
3. Behaviour Change Campaigns will be developed to encourage behaviour and attitudinal change towards the circular economy of plastics, among others, through organizing large scale multi-channel campaigns aimed at motivating citizens to separate plastics waste from sources and dispose towards the responsible channels.
4. Lessons learnt, and best practices will be documented and communicated to key audiences to encourage replication of successful approaches. Key knowledge products will be developed based on the learnings from project components 1, 2 and 3. Towards policy makers, learning experience and case studies will be compiled from Component 1, related to the best practice on developing circular policy, and enabling conditions (such as financing, knowledge, and enforcement). Towards the private sector, learning experience and case studies will be compiled from Component 2, related to the best practice on developing circular innovation and solutions along the value chain, including circular product design, business models, reuse, collection and recycling. Knowledge management will be focused through the IW:Learn platform, as a one-stop shop to document and store project information, activities, progress, publication and events. Information will be regularly updated at a monthly basis to maintain engagement with key stakeholders and partners. The knowledge products of the project will also be shared on Green Growth Knowledge Platform (GGKP)?s website, which the world?s largest policy platform dedicated to managing and sharing knowledge at the nexus of economics and the environment. Partnering with the GGKP will provide the project with a distinct identity while also benefitting from the GGKP?s existing knowledge management system including case studies, good practices, learning materials and publications. The GGKP platform has also been used by many other projects and programmes in the UNEP GEF C&W portfolio and thus the projects knowledge material can in turn be used in these other projects and programmes and vice versa. The knowledge products related to chemicals of concern will also be shared on the SAICM knowledge platform developed by the project Chemicals Without Concern funded by GEF to enhance the dissemination of relevant knowledge to stakeholders working on chemicals of concern. When appropriate, elements of this project may also be linked to the GPML Digital Platform, a multi-stakeholder, mostly

open-source platform that compiles and crowdsources different resources, integrates data and connects stakeholders to guide action towards the long-term elimination of marine plastics and plastic pollution.

## **9. Monitoring and Evaluation**

### **Describe the budgeted M and E plan**

Periodic monitoring by the Cartagena Convention, as Executing Agency, will be undertaken to ensure the timely implementation of the project activities. All monitoring activities will be in line with the requirements for Full-Sized Projects outlined in the GEF's revised Policy on Monitoring<sup>[1]</sup> (2019).

The Cartagena Convention will be responsible for monitoring day-to-day project activities under the guidance of UNEP as the implementing agency and will develop and submit annual and quarterly progress and financial reports. These reports will track the progress according to the workplan and budget and identify any obstacles faced during implementation and mitigating actions to be taken.

The Cartagena Convention will develop the annual Project Implementation Report following a format provided by UNEP as lead implementing agency. The annual report will include progress towards project outcomes and major milestones achieved through overall project implementation as means to advance the overall project goal.

In line with the GEF Evaluation requirements and UNEP's Evaluation Policy, GEF Full-Sized Projects and any project with a duration of 4 years or more will be subject to an independent Mid-Term Evaluation or management-led Mid-Term Review at mid-point. All GEF funded projects are subject to a performance assessment when they reach operational completion. This performance assessment will be either an independent Terminal Evaluation or a management-led Terminal Review.

In case a Review is required, the UNEP Evaluation Office will provide tools, templates, and guidelines to support the Review consultant. For all Terminal Reviews, the UNEP Evaluation Office will perform a quality assessment of the Terminal Review report and validate the Review's performance ratings. This quality assessment will be attached as an Annex to the Terminal Review report, validated performance ratings will be captured in the main report.

However, if an independent Terminal Evaluation (TE) of the project is required, the Evaluation Office will be responsible for the entire evaluation process and will liaise with the Task Manager and the project implementing partners at key points during the evaluation. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness, and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learnt among UNEP staff and implementing partners. The direct costs of the evaluation (or the management-led review) will be charged against the project evaluation budget. The TE will typically be initiated after the project's operational completion. If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office in relation to the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Project Manager is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalisation of the Recommendations Implementation Plan. The compliance performance against the recommendations is then reported to senior management on a six-monthly basis and to member States in the Biennial Evaluation Synthesis Report.

Table 27. Costed M&E Workplan

Type of M&E activity	Responsible Parties	Budget from GEF	Time Frame
Inception Meeting	EA	35,000	Within two months of project start. Likely to be conducted virtually or in a hybrid manner due to COVID-19
Inception Report	EA	Included in PMC	1 month after project inception meeting
Measurement of project progress and performance indicators	EA with inputs from implementation partners	The cost for EA included in PMC	Annually
Baseline measurement of project outcome indicators, GEF Core indicators	EA based on PPG documents	The cost for EA included in PMC	Project inception. In the PPG phase baselines have been prepared. See Annex A.
Mid-point measurement of project outcome indicators, GEF Core indicators	Led by IA but supported by EA and project management unit	The cost for EA included in PMC	Mid-Point
End-point measurement of project outcome indicators, GEF Core indicators	EA with inputs from implementation partners	The cost for EA included in PMC	End Point
Quarterly Progress/ Operational Reports to UNEP	EA	Included in PMC	Quarterly
Project Steering Committee (PSC) meetings	EA	60,000	Annually (likely to be organised virtually or in a hybrid manner depending on the COVID 19 situation)

Type of M&E activity	Responsible Parties	Budget from GEF	Time Frame
National working group meetings and city working group meetings	Implementation partners	78,000	National working groups will meet at least annually. City working groups shall meet at their discretion. (likely to be organised virtually or in a hybrid manner depending on the COVID 19 situation)
Reports of PSC meetings	EA	Included in PMC	Annually
Project Implementation Review (PIR) report	EA and IA	Included in PMC	Annually, part of reporting routine
Monitoring visits to field sites	EA	Included in the travel budget	As appropriate
Mid Term Review/Evaluation	Consultant/IA	40,000	At mid-point of project implementation
Terminal Review/Evaluation	UNEP Evaluation Office	50,000	Typically initiated after the project's operational completion
Audit	EA to ensure partners with whom the Programme Cooperation Agreements are signed to conduct audits where needed	Included in the budget for sub-contracts	Annually
Project Operational Completion Report	EA	Included in PMC	Within 2 months of the project completion date
Co-financing report (including supporting evidence for in-kind co-finance)	EA to collect from co-financiers	Included in PMC	Within 1 month of the PIR reporting period
Publication of Lessons Learnt and other project documents	EA with inputs from implementation partners	Included in PMC	Annually, part of Semi-annual reports & Project Final Report
Office stationary/supplies	EA	1,500	Throughout the implementation phase
IT equipment	EA	3,000	At the beginning of the implementation phase

[1] Global Environment Facility (GEF). (2019). Policy on Monitoring (GEF/C.56/03/Rev.01). GEF. [https://www.thegef.org/sites/default/files/council-meeting-documents/EN\\_GEF.C.56.03.Rev\\_.01\\_Policy\\_on\\_Monitoring.pdf](https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.56.03.Rev_.01_Policy_on_Monitoring.pdf)

## 10. Benefits

**Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?**

The problems that result from marine plastics and plastic pollution are outlined above in section 2.1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed?. These problems have been recognized by multiple organizations at global and regional level, supported by national governments. For example, the following statement has been made by Antonio Guterres.

"Our world is swamped by harmful plastic waste. Microplastics in the seas now outnumber stars in our galaxy. From remote islands to the Arctic, nowhere is untouched. If present trends continue, by 2050, our oceans will have more plastic than fish. The message is simple: reject single use plastic products. Refuse what you can't reuse. Together, we can chart a path to a cleaner, greener world."

Seventy to eighty-five percent of marine litter in the Caribbean Sea is from land-based sources. Marine litter is one of three priority pollutants (the others being agrochemical run-off and domestic wastewater) that are being targeted for improved management. The previous GEF MSP identified the benefits of a circular economy model for plastics beyond improving marine ecosystems, with clear co-benefits of improved human health and livelihoods. There are also economic benefits, with significant opportunities for innovation in new materials and product systems. The project identified both the environmental and socio-economic benefits of adopting a circular economy approach to reducing marine plastics and plastic pollution.

**Expected environmental benefits**

The actions proposed by the project will bring benefits to the environment, including:

- ? Marine environments: Reduced marine litter and microplastics in the environment will greatly reduce the impacts on ecosystems and the ecosystem services they provide, national economies and health.
- ? Biodiversity and ecosystem services: Reducing plastics in the marine environment will help to protect threatened and endangered species due to less entanglement and ingestion of plastics and promote enhanced fish stocks for subsistence and commercial harvest.
- ? Resource Efficiency: Keeping key plastic products and polymers at its highest value, reducing the production and consumption of unnecessary plastic products, and improving reuse and recycling will ensure that resources are used in an efficient manner, at their highest potential, and reduce virgin plastic production and related fossil feedstock extraction.
- ? Climate change: More circularity in the plastics value chain will mitigate the effects from the consumption of fossil fuels to produce virgin polymers and reduce the emission from incineration of plastics at their end-of-life. For example: 45% of GHG emissions emanate from consumer goods production (cement, aluminum, steel, plastics and food); 55% from energy generation.



- ? Toxicity and human and ecosystem health: Eco-design, green manufacturing, state-of-the-art recycling of plastics will reduce the emissions of chemicals (such as POPs) to the environment from different life cycle stages of plastic products and thus the associated impacts on human and ecosystem health.

### Expected socio-economic benefits

Most plastic packaging is used only once; 95% of the value of plastic packaging material, worth USD 80-120 billion annually, is lost to the economy. The cost of negative externalities generated by plastic packaging, plus the cost associated with GHG emissions from its production, is conservatively estimated at USD 40 billion annually.

The actions proposed by the project will benefit communities and industries that are currently impacted such as the fishing and tourism sectors. They will improve the livelihoods of people whose life and living environment are vulnerable to plastic pollution, such as the informal recyclers of plastics, residents in the SIDS and coastal areas, and fishing communities. Innovations in the delivery of plastic products and in recycling (upcycling) plastics waste will generate novel livelihoods and institutional arrangements, which have the potential to add value to quality of life and community well-being. Reduction of marine plastics and plastic pollution will indirectly save costs for clean-up operations and clean-up activities, and other measures of ecological remediation, climate adaptation and mitigation. Communication campaigns targeting the consumers and activities on improving product labels will generate more reliable and transparent consumer information which will further trigger consumer behavior change towards a more sustainable consumption choice. The gender strategy to be developed under the project will ensure gender mainstreaming and the provision of training towards women. The pilots on collection and recycling under the project will improve the working conditions of collectors and recyclers and the ESG standards in the sector.

## 11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

### Overall Project/Program Risk Classification \*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

**Measures to address identified risks and impacts**

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Screening checklist	Y/N/ Maybe	Justification for the response (please provide answers to each question)
<b>Guiding Principles</b> (these questions should be considered during the project development phase)		
GP1 Has the project analyzed and stated those who are interested and may be affected positively or negatively around the project activities, approaches or results?	Y	A wide range of stakeholders have been identified. Please refer to the stakeholder engagement plan and appendix 6 on stakeholders of the project.

<p>GP2 Has the project identified and engaged vulnerable, marginalized people, including disabled people, through the informed, inclusive, transparent and equal manner on potential positive or negative implication of the proposed approach and their roles in the project implementation?</p>	<p>Y</p>	<p>The project has developed a Gender Analysis. Under component 2 of the project, informal collectors and recyclers will be engaged with in the plastic waste collection and recycling pilots. The pilots aim to improve plastic waste management practices in the project cities, including by exploring the approaches to formalise the waste management practices. Informal collectors and recyclers will be included in any activities that may affect their livelihoods as relevant stakeholders and they will be fully engaged with in identifying and applying the alternatives if informal collection and recycling activities are affected by project activities.</p>
<p>GP3 Have local communities or individuals raised human rights or gender equality concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?</p>	<p>N</p>	<p>Local communities are expected to gain from the project in terms of environmental and human health and even economic benefits.</p>

<p>GP4 Does the proposed project consider gender-balanced representation in the design and implementation?</p>	<p>Y</p>	<p>In the design phase 10 female staff were involved in the UNEP team (53% of the project team). In the project implementation phase gender-balanced representation will also be ensured.</p>
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<p>GP5 Did the proposed project analyze relevant gender issues and develop a gender responsive project approach?</p>	<p>Y</p> <p>A Gender Analysis (Appendix 7) has been developed to ensure gender equality concerns are tackled appropriately, if concerns are raised.</p> <p>The project will explore key gender aspects of addressing plastics reduction and will identify action priorities. Over the course of the project, project team will: assess the various gender dimensions of the project and its interventions; determine entry points across the plastics value chain; and develop associated project activities that consider the impact on various occupational and population groups. Efforts will be made to collect data disaggregated by sex across the four project components. Data will be used to help adjust the design and interventions of the project so that gender equality and women empowerment can be better achieved throughout the project's implementation.</p> <p>Activities will be designed to enable participation in project activities by community-leaders and champions. Local participation</p>
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<p>GP6 Does the project include a project-specific grievance redress mechanism? If yes, state the specific location of such information.</p>	<p>Y</p>	<p>A grievance redress mechanism will be built into the project website, which will include specific contact details (e-mail address and phone number) where persons can raise grievances.</p>
<p>GP7 Will or did the project disclose project information, including the safeguard documents? If yes, please list all the webpages where the information is (or will be) disclosed.</p>	<p>Y</p>	<p>In the project implementation phase, a project website will be created to share information and knowledge products developed by the project. The project website will be integrated with the IW: Learn website. The project team will also seek advice from and collaborate with the Green Growth Knowledge Platform (GGKP) on the development and management of the project website, and disseminate the knowledge products to be generated under the project on GGKP, SAICM knowledge platform, GPML Digital Platform, etc.</p>

<p>GP8 Were the stakeholders (including affected communities) informed of the projects and grievance redress mechanism? If yes, describe how they were informed.</p>	<p>Y</p>	<p>City, national, regional and international stakeholders were informed of the project at the PPG inception meeting on 26th January 2021. During the PPG phase the project team also has been interacting with stakeholders in particular city and national level stakeholders.</p> <p>Stakeholders will be informed of the grievance redress mechanism situated on the project website.</p>
<p>GP9 Does the project consider potential negative impacts from short-term net gain to the local communities or countries at the risk of generating long-term social or economic burden?<a href="#">[1]</a></p>	<p>Y</p>	<p>All activities will follow a sustainable economic model that should make activities financially feasible in the long term.</p>

GP10 Does the project consider potential partial economic benefits while excluding marginalized or vulnerable groups, including women in poverty?	N	Vulnerable groups related to waste management practices (e.g. informal recyclers, waste pickers) will be informed, trained and involved in project activities to ensure equal benefits. More specifically, vulnerable groups will be approached as relevant stakeholders and collaborated with to ensure full involvement in demonstration activities. If their livelihoods are affected, for example through the formalisation of jobs, they will be provided affordable alternatives. In this way tangible benefits are expected beyond the executing timeline.
<b>Safeguard Standard 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management</b>		
<i>Would the project potentially involve or lead to:</i>		
1.1 conversion or degradation of habitats (including modified habitat, natural habitat and critical natural habitat), or losses and threats to biodiversity and/or ecosystems and ecosystem services?	N	The project is expected to improve marine habitats through the reduction of marine plastics and plastic pollution.
1.2 adverse impacts specifically to habitats that are legally protected, officially proposed for protection, or recognized as protected by traditional local communities and/or authoritative sources (e.g. National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)?	N	



1.3 conversion or degradation of habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	
1.4 activities that are not legally permitted or are inconsistent with any officially recognized management plans for the area?	N	
1.5 risks to endangered species (e.g. reduction, encroachment on habitat)?	N	
1.6 activities that may result in soil erosion, deterioration and/or land degradation?	N	
1.7 reduced quality or quantity of ground water or water in rivers, ponds, lakes, other wetlands?	N	
1.8 reforestation, plantation development and/or forest harvesting?	N	
1.9 support for agricultural production, animal/fish production and harvesting	N	
1.10 introduction or utilization of any invasive alien species of flora and fauna, whether accidental or intentional?	N	
1.11 handling or utilization of genetically modified organisms?	N	
1.12 collection and utilization of genetic resources?	N	
<b>Safeguard Standard 2: Climate Change and Disaster Risks</b>		
<i>Would the project potentially involve or lead to:</i>		
2.1 improving resilience against potential climate change impact beyond the project intervention period?	Y	It is expected that the sustainable production of plastics and sound plastic waste management practices implemented through the project will lead to increased resilience against climate change impacts.

<p>2.2 areas that are now or are projected to be subject to natural hazards such as extreme temperatures, earthquakes, extreme precipitation and flooding, landslides, droughts, severe winds, sea level rise, storm surges, tsunami or volcanic eruptions in the next 30 years?</p>	<p>Y</p>	<p>The highest risk from natural hazards present in all 6 cities are wildfires and floods. These are truly relevant to plastic pollution as flooding can cause transportation of plastic waste to the oceans and collapsing waste management by increasing leakage. Floods considered high risk is due to inundations depth above 0.5-2m with high probability of occurrence. Furthermore, wildfires can intensify floods but also end up in burning of waste. See section 5 on risks in the project document.</p> <p>The output 2.2 on solutions to plastic waste collection and recycling at cities will also take into account the risks of floods when designing the waste management practices.</p>
<p>2.3 outputs and outcomes sensitive or vulnerable to potential impacts of climate change (e.g. changes in precipitation, temperature, salinity, extreme events)?</p>	<p>N</p>	

2.4 local communities vulnerable to the impacts of climate change and disaster risks (e.g. considering level of exposure and adaptive capacity)?	Y	As the project countries are vulnerable to the impacts of climate change, so are the local communities. See section 5 on risks in the project document.
2.5 increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	N	The project will lead to a net reduction of GHG emission, as a result of reduced open burning of plastics, more reuse and recycling of plastic waste to avoid consumption of virgin plastics.
2.6 Carbon sequestration and reduction of greenhouse emissions, resource-efficient and low carbon development, other measures for mitigating climate change	Y	Through project implementation, it is expected that the circular economy approach for plastics will be applied by stakeholders along the value chain, which will lead to the reduction of GHG emission caused by unsustainable production and consumption of plastics, and the increase of efficiency of resources used by the sector. The benefits related with the reduction of GHG emissions have been calculated in the Global Environmental Benefits section in the project document.

<b>Safeguard Standard 3: Pollution Prevention and Resource Efficiency</b>		
<i>Would the project potentially involve or lead to:</i>		
3.1 the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	N	The project will reduce marine plastics and plastic pollution in the Latin America and the Caribbean region by facilitating circular actions and cooperation between governments and businesses at the city-level to accelerate the transition to a circular economy.
3.2 the generation of waste (both hazardous and non-hazardous)?	N	The project will contribute to the reduction of waste generation through supporting local governments in setting up waste reduction policies, promoting reusable products and solutions, identifying alternatives to single-use plastic products, etc. Elimination of problematic and unnecessary plastics is a key principle to guide the design and implementation of project activities.

3.3 the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	N	The project will assist participating countries in managing the disposal of hazardous chemicals in plastic waste in an environmentally sound manner.
3.4 the use of chemicals or materials subject to international bans or phase-outs? (e.g. DDT, PCBs and other chemicals listed in international conventions such as the <a href="#">Montreal Protocol</a> , <a href="#">Minamata Convention</a> , <a href="#">Basel Convention</a> , <a href="#">Rotterdam Convention</a> , <a href="#">Stockholm Convention</a> )	N	<p>The project will support cities to identify alternatives to plastic products containing Chemicals of Concern and develop restriction or ban on single-use plastic products and products with hazardous chemicals. The project will also improve the waste management practices of POPs contained plastics.</p> <p>Basel Convention Secretariat will be a key stakeholder to be involved in the project implementation phase.</p>
3.5 the application of pesticides or fertilizers that may have a negative effect on the environment (including non-target species) or human health?	N	
3.6 significant consumption of energy, water, or other material inputs?	N	
<b>Safeguard Standard 4: Community Health, Safety and Security</b>		
<i>Would the project potentially involve or lead to:</i>		

4.1 the design, construction, operation and/or decommissioning of structural elements such as new buildings or structures (including those accessed by the public)?	N	
4.2 air pollution, noise, vibration, traffic, physical hazards, water runoff?	N	
4.3 exposure to water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable or noncommunicable diseases?	N	<p>The project will support the recycling industry and the informal sector to improve their Environment, Health and Safety performance, and take sanitary measures against COVID-19.</p> <p>Furthermore, plastic pollution is known to promote vector-borne diseases as they provide breeding sites for the vectors of these diseases. As the project will reduce plastic pollution, communities are expected to see a decrease in them.</p>
4.4 adverse impacts on natural resources and/or ecosystem services relevant to the communities? health and safety (e.g. food, surface water purification, natural buffers from flooding)?	N	<p>Through its reduction of plastic pollution, the project is expected to reduce the risk of flooding caused by plastics as these are known to clog draining systems and have a positive impact on ecosystem services.</p>

4.5 transport, storage use and/or disposal of hazardous or dangerous materials (e.g. fuel, explosives, other chemicals that may cause an emergency event)?	Y	The project will support the private sector to test and apply circular actions on improving collection, storage and recycling of plastic waste and hazardous fractions in plastic waste. The collection and recycling activities will follow ESG standards and guidance and will be implemented by collectors and recyclers to be selected by the project team based on technical performance and compliance to health, safety and security criteria.
4.6 engagement of security personnel to support project activities (e.g. protection of property or personnel, patrolling of protected areas)?	N	
4.7 an influx of workers to the project area or security personnel (e.g. police, military, other)?	N	
<b>Safeguard Standard 5: Cultural Heritage</b>		
<i>Would the project potentially involve or lead to:</i>	Y	Y
5.1 activities adjacent to or within a Cultural Heritage site?	N	Y
5.2 adverse impacts to sites, structures or objects with historical, cultural, artistic, traditional or religious values or to intangible forms of cultural heritage (e.g. knowledge, innovations, practices)?	N	
5.3 utilization of Cultural Heritage for commercial or other purposes (e.g. use of objects, practices, traditional knowledge, tourism)?	N	
5.4 alterations to landscapes and natural features with cultural significance?	N	
5.5 significant land clearing, demolitions, excavations, flooding?	N	

5.6 identification and protection of cultural heritage sites or intangible forms of cultural heritage		
Safeguard Standard 6: Displacement and Involuntary Resettlement		
<i>Would the project potentially involve or lead to:</i>		
6.1 full or partial physical displacement or relocation of people (whether temporary or permanent)?	N	
6.2 economic displacement (e.g. loss of assets or access to assets affecting for example crops, businesses, income generation sources)?	N	
6.2 involuntary restrictions on land/water use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	
6.3 risk of forced evictions?	N	
6.4 changes in land tenure arrangements, including communal and/or customary/traditional land tenure patterns (including temporary/permanent loss of land)?	N	
Safeguard Standard 7: Indigenous Peoples		
<i>Would the project potentially involve or lead to:</i>		
7.1 areas where indigenous peoples are present or uncontacted or isolated indigenous peoples inhabit or where it is believed these peoples may inhabit?	N	
7.2 activities located on lands and territories claimed by indigenous peoples?	N	
7.3 impacts to the human rights of indigenous peoples or to the lands, territories and resources claimed by them?	N	
7.4 the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	
7.5 adverse effects on the development priorities, decision making mechanisms, and forms of self-government of indigenous peoples as defined by them?	N	
7.6 risks to the traditional livelihoods, physical and cultural survival of indigenous peoples?	N	
7.7 impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	



<b>Safeguard Standard 8: Labor and working conditions</b>		
8.1 Will the proposed project involve hiring or contracting project staff ?	Y	The Executing Agency will be responsible for hiring project staff. As per PCA conditions, UNEP guiding principles on selection process and labour and working conditions will have to be adopted.
<i>If the answer to 8.1 is yes, would the project potentially involve or lead to:</i>		
8.2 working conditions that do not meet national labour laws or international commitments (e.g. ILO conventions)?	N	The Executing Agency will ensure that the recruitment of local project staff (e.g. project manager, national consultants, technical experts) meet national labour laws and international commitments.
8.3 the use of forced labor and child labor?	N	
8.4 occupational health and safety risks (including violence and harassment)?	N	The project will improve the working conditions, health and safety, well-being, income and health insurance of the informal workers on plastic collection and recycling, by setting requirements for the procurement of the collection and recycling pilots.
8.5 the increase of local or regional unemployment?	N	

8.6 suppliers of goods and services who may have high risk of significant safety issues related to their own workers?	N	The project will collect and treat plastic waste in environmentally sound manner (whereas hazards only take place during primitive recycling processes). It will also support policy development and business action to reduce substandard recycling.
8.7 unequal working opportunities and conditions for women and men	N	The collection and recycling pilots may create a risk of unequal hiring process, and the project will ensure that the selection of collection proposals considers gender balance. A gender consultant will be hired under the project to give specific support.

[1]For example, a project may consider investing in commercial shrimp farm by clearing the nearby mangrove forest to improve the livelihood of the coastal community. However, long term economic benefit from the shrimp farm may be significantly lower than the mangroves if we consider full costs factoring safety from storms, soil protection, water quality, biodiversity and so on.

Screening checklist	Y/N/ Maybe	Justification for the response (please provide answers to each question)
Guiding Principles (these questions should be considered during the project development phase)		

<p>GP1 Has the project analyzed and stated those who are interested and may be affected positively or negatively around the project activities, approaches or results?</p>	<p>Y</p>	<p>A wide range of stakeholders have been identified. Please refer to the stakeholder engagement plan and appendix 6 on stakeholders of the project.</p>
<p>GP2 Has the project identified and engaged vulnerable, marginalized people, including disabled people, through the informed, inclusive, transparent and equal manner on potential positive or negative implication of the proposed approach and their roles in the project implementation?</p>	<p>Y</p>	<p>The project has developed a Gender Analysis. Under component 2 of the project, informal collectors and recyclers will be engaged with in the plastic waste collection and recycling pilots. The pilots aim to improve plastic waste management practices in the project cities, including by exploring the approaches to formalise the waste management practices. Informal collectors and recyclers will be included in any activities that may affect their livelihoods as relevant stakeholders and they will be fully engaged with in identifying and applying the alternatives if informal collection and recycling activities are affected by project activities.</p>

GP3 Have local communities or individuals raised human rights or gender equality concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	N	Local communities are expected to gain from the project in terms of environmental and human health and even economic benefits.
GP4 Does the proposed project consider gender-balanced representation in the design and implementation?	Y	In the design phase 10 female staff were involved in the UNEP team (53% of the project team). In the project implementation phase gender-balanced representation will also be ensured.

<p>GP5 Did the proposed project analyze relevant gender issues and develop a gender responsive project approach?</p>	<p>Y</p> <p>A Gender Analysis (Appendix 7) has been developed to ensure gender equality concerns are tackled appropriately, if concerns are raised.</p> <p>The project will explore key gender aspects of addressing plastics reduction and will identify action priorities. Over the course of the project, project team will: assess the various gender dimensions of the project and its interventions; determine entry points across the plastics value chain; and develop associated project activities that consider the impact on various occupational and population groups. Efforts will be made to collect data disaggregated by sex across the four project components. Data will be used to help adjust the design and interventions of the project so that gender equality and women empowerment can be better achieved throughout the project's implementation.</p> <p>Activities will be designed to enable participation in project activities by community-leaders and champions. Local participation</p>
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<p>GP6 Does the project include a project-specific grievance redress mechanism? If yes, state the specific location of such information.</p>	<p>Y</p>	<p>A grievance redress mechanism will be built into the project website, which will include specific contact details (e-mail address and phone number) where persons can raise grievances.</p>
<p>GP7 Will or did the project disclose project information, including the safeguard documents? If yes, please list all the webpages where the information is (or will be) disclosed.</p>	<p>Y</p>	<p>In the project implementation phase, a project website will be created to share information and knowledge products developed by the project. The project website will be integrated with the IW: Learn website. The project team will also seek advice from and collaborate with the Green Growth Knowledge Platform (GGKP) on the development and management of the project website, and disseminate the knowledge products to be generated under the project on GGKP, SAICM knowledge platform, GPML Digital Platform, etc.</p>

<p>GP8 Were the stakeholders (including affected communities) informed of the projects and grievance redress mechanism? If yes, describe how they were informed.</p>	<p>Y</p>	<p>City, national, regional and international stakeholders were informed of the project at the PPG inception meeting on 26th January 2021. During the PPG phase the project team also has been interacting with stakeholders in particular city and national level stakeholders.</p> <p>Stakeholders will be informed of the grievance redress mechanism situated on the project website.</p>
<p>GP9 Does the project consider potential negative impacts from short-term net gain to the local communities or countries at the risk of generating long-term social or economic burden?<a href="#">[1]</a></p>	<p>Y</p>	<p>All activities will follow a sustainable economic model that should make activities financially feasible in the long term.</p>

GP10 Does the project consider potential partial economic benefits while excluding marginalized or vulnerable groups, including women in poverty?	N	Vulnerable groups related to waste management practices (e.g. informal recyclers, waste pickers) will be informed, trained and involved in project activities to ensure equal benefits. More specifically, vulnerable groups will be approached as relevant stakeholders and collaborated with to ensure full involvement in demonstration activities. If their livelihoods are affected, for example through the formalisation of jobs, they will be provided affordable alternatives. In this way tangible benefits are expected beyond the executing timeline.
<b>Safeguard Standard 1: Biodiversity, Ecosystems and Sustainable Natural Resource Management</b>		
<i>Would the project potentially involve or lead to:</i>		
1.1 conversion or degradation of habitats (including modified habitat, natural habitat and critical natural habitat), or losses and threats to biodiversity and/or ecosystems and ecosystem services?	N	The project is expected to improve marine habitats through the reduction of marine plastics and plastic pollution.
1.2 adverse impacts specifically to habitats that are legally protected, officially proposed for protection, or recognized as protected by traditional local communities and/or authoritative sources (e.g. National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)?	N	



1.3 conversion or degradation of habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	
1.4 activities that are not legally permitted or are inconsistent with any officially recognized management plans for the area?	N	
1.5 risks to endangered species (e.g. reduction, encroachment on habitat)?	N	
1.6 activities that may result in soil erosion, deterioration and/or land degradation?	N	
1.7 reduced quality or quantity of ground water or water in rivers, ponds, lakes, other wetlands?	N	
1.8 reforestation, plantation development and/or forest harvesting?	N	
1.9 support for agricultural production, animal/fish production and harvesting	N	
1.10 introduction or utilization of any invasive alien species of flora and fauna, whether accidental or intentional?	N	
1.11 handling or utilization of genetically modified organisms?	N	
1.12 collection and utilization of genetic resources?	N	
<b>Safeguard Standard 2: Climate Change and Disaster Risks</b>		
<i>Would the project potentially involve or lead to:</i>		
2.1 improving resilience against potential climate change impact beyond the project intervention period?	Y	It is expected that the sustainable production of plastics and sound plastic waste management practices implemented through the project will lead to increased resilience against climate change impacts.

<p>2.2 areas that are now or are projected to be subject to natural hazards such as extreme temperatures, earthquakes, extreme precipitation and flooding, landslides, droughts, severe winds, sea level rise, storm surges, tsunami or volcanic eruptions in the next 30 years?</p>	<p>Y</p>	<p>The highest risk from natural hazards present in all 6 cities are wildfires and floods. These are truly relevant to plastic pollution as flooding can cause transportation of plastic waste to the oceans and collapsing waste management by increasing leakage. Floods considered high risk is due to inundations depth above 0.5-2m with high probability of occurrence. Furthermore, wildfires can intensify floods but also end up in burning of waste. See section 5 on risks in the project document.</p> <p>The output 2.2 on solutions to plastic waste collection and recycling at cities will also take into account the risks of floods when designing the waste management practices.</p>
<p>2.3 outputs and outcomes sensitive or vulnerable to potential impacts of climate change (e.g. changes in precipitation, temperature, salinity, extreme events)?</p>	<p>N</p>	

2.4 local communities vulnerable to the impacts of climate change and disaster risks (e.g. considering level of exposure and adaptive capacity)?	Y	As the project countries are vulnerable to the impacts of climate change, so are the local communities. See section 5 on risks in the project document.
2.5 increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	N	The project will lead to a net reduction of GHG emission, as a result of reduced open burning of plastics, more reuse and recycling of plastic waste to avoid consumption of virgin plastics.
2.6 Carbon sequestration and reduction of greenhouse emissions, resource-efficient and low carbon development, other measures for mitigating climate change	Y	Through project implementation, it is expected that the circular economy approach for plastics will be applied by stakeholders along the value chain, which will lead to the reduction of GHG emission caused by unsustainable production and consumption of plastics, and the increase of efficiency of resources used by the sector. The benefits related with the reduction of GHG emissions have been calculated in the Global Environmental Benefits section in the project document.

<b>Safeguard Standard 3: Pollution Prevention and Resource Efficiency</b>		
<i>Would the project potentially involve or lead to:</i>		
3.1 the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	N	The project will reduce marine plastics and plastic pollution in the Latin America and the Caribbean region by facilitating circular actions and cooperation between governments and businesses at the city-level to accelerate the transition to a circular economy.
3.2 the generation of waste (both hazardous and non-hazardous)?	N	The project will contribute to the reduction of waste generation through supporting local governments in setting up waste reduction policies, promoting reusable products and solutions, identifying alternatives to single-use plastic products, etc. Elimination of problematic and unnecessary plastics is a key principle to guide the design and implementation of project activities.

3.3 the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	N	The project will assist participating countries in managing the disposal of hazardous chemicals in plastic waste in an environmentally sound manner.
3.4 the use of chemicals or materials subject to international bans or phase-outs? (e.g. DDT, PCBs and other chemicals listed in international conventions such as the <a href="#">Montreal Protocol</a> , <a href="#">Minamata Convention</a> , <a href="#">Basel Convention</a> , <a href="#">Rotterdam Convention</a> , <a href="#">Stockholm Convention</a> )	N	<p>The project will support cities to identify alternatives to plastic products containing Chemicals of Concern and develop restriction or ban on single-use plastic products and products with hazardous chemicals. The project will also improve the waste management practices of POPs contained plastics.</p> <p>Basel Convention Secretariat will be a key stakeholder to be involved in the project implementation phase.</p>
3.5 the application of pesticides or fertilizers that may have a negative effect on the environment (including non-target species) or human health?	N	
3.6 significant consumption of energy, water, or other material inputs?	N	
<b>Safeguard Standard 4: Community Health, Safety and Security</b>		
<i>Would the project potentially involve or lead to:</i>		

4.1 the design, construction, operation and/or decommissioning of structural elements such as new buildings or structures (including those accessed by the public)?	N	
4.2 air pollution, noise, vibration, traffic, physical hazards, water runoff?	N	
4.3 exposure to water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable or noncommunicable diseases?	N	<p>The project will support the recycling industry and the informal sector to improve their Environment, Health and Safety performance, and take sanitary measures against COVID-19.</p> <p>Furthermore, plastic pollution is known to promote vector-borne diseases as they provide breeding sites for the vectors of these diseases. As the project will reduce plastic pollution, communities are expected to see a decrease in them.</p>
4.4 adverse impacts on natural resources and/or ecosystem services relevant to the communities? health and safety (e.g. food, surface water purification, natural buffers from flooding)?	N	<p>Through its reduction of plastic pollution, the project is expected to reduce the risk of flooding caused by plastics as these are known to clog draining systems and have a positive impact on ecosystem services.</p>

4.5 transport, storage use and/or disposal of hazardous or dangerous materials (e.g. fuel, explosives, other chemicals that may cause an emergency event)?	Y	The project will support the private sector to test and apply circular actions on improving collection, storage and recycling of plastic waste and hazardous fractions in plastic waste. The collection and recycling activities will follow ESG standards and guidance and will be implemented by collectors and recyclers to be selected by the project team based on technical performance and compliance to health, safety and security criteria.
4.6 engagement of security personnel to support project activities (e.g. protection of property or personnel, patrolling of protected areas)?	N	
4.7 an influx of workers to the project area or security personnel (e.g. police, military, other)?	N	
<b>Safeguard Standard 5: Cultural Heritage</b>		
<i>Would the project potentially involve or lead to:</i>	Y	Y
5.1 activities adjacent to or within a Cultural Heritage site?	N	Y
5.2 adverse impacts to sites, structures or objects with historical, cultural, artistic, traditional or religious values or to intangible forms of cultural heritage (e.g. knowledge, innovations, practices)?	N	
5.3 utilization of Cultural Heritage for commercial or other purposes (e.g. use of objects, practices, traditional knowledge, tourism)?	N	
5.4 alterations to landscapes and natural features with cultural significance?	N	
5.5 significant land clearing, demolitions, excavations, flooding?	N	

5.6 identification and protection of cultural heritage sites or intangible forms of cultural heritage		
Safeguard Standard 6: Displacement and Involuntary Resettlement		
<i>Would the project potentially involve or lead to:</i>		
6.1 full or partial physical displacement or relocation of people (whether temporary or permanent)?	N	
6.2 economic displacement (e.g. loss of assets or access to assets affecting for example crops, businesses, income generation sources)?	N	
6.2 involuntary restrictions on land/water use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	
6.3 risk of forced evictions?	N	
6.4 changes in land tenure arrangements, including communal and/or customary/traditional land tenure patterns (including temporary/permanent loss of land)?	N	
Safeguard Standard 7: Indigenous Peoples		
<i>Would the project potentially involve or lead to:</i>		
7.1 areas where indigenous peoples are present or uncontacted or isolated indigenous peoples inhabit or where it is believed these peoples may inhabit?	N	
7.2 activities located on lands and territories claimed by indigenous peoples?	N	
7.3 impacts to the human rights of indigenous peoples or to the lands, territories and resources claimed by them?	N	
7.4 the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	
7.5 adverse effects on the development priorities, decision making mechanisms, and forms of self-government of indigenous peoples as defined by them?	N	
7.6 risks to the traditional livelihoods, physical and cultural survival of indigenous peoples?	N	
7.7 impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	



<b>Safeguard Standard 8: Labor and working conditions</b>		
8.1 Will the proposed project involve hiring or contracting project staff ?	Y	The Executing Agency will be responsible for hiring project staff. As per PCA conditions, UNEP guiding principles on selection process and labour and working conditions will have to be adopted.
<i>If the answer to 8.1 is yes, would the project potentially involve or lead to:</i>		
8.2 working conditions that do not meet national labour laws or international commitments (e.g. ILO conventions)?	N	The Executing Agency will ensure that the recruitment of local project staff (e.g. project manager, national consultants, technical experts) meet national labour laws and international commitments.
8.3 the use of forced labor and child labor?	N	
8.4 occupational health and safety risks (including violence and harassment)?	N	The project will improve the working conditions, health and safety, well-being, income and health insurance of the informal workers on plastic collection and recycling, by setting requirements for the procurement of the collection and recycling pilots.
8.5 the increase of local or regional unemployment?	N	

8.6 suppliers of goods and services who may have high risk of significant safety issues related to their own workers?	N	The project will collect and treat plastic waste in environmentally sound manner (whereas hazards only take place during primitive recycling processes). It will also support policy development and business action to reduce substandard recycling.
8.7 unequal working opportunities and conditions for women and men	N	The collection and recycling pilots may create a risk of unequal hiring process, and the project will ensure that the selection of collection proposals considers gender balance. A gender consultant will be hired under the project to give specific support.

[1]For example, a project may consider investing in commercial shrimp farm by clearing the nearby mangrove forest to improve the livelihood of the coastal community. However, long term economic benefit from the shrimp farm may be significantly lower than the mangroves if we consider full costs factoring safety from storms, soil protection, water quality, biodiversity and so on.

#### Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
marine CE LAC PRC SRIF	CEO Endorsement ESS	

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Outcome/Output	Indicators	Baseline	Targets and monitoring milestones	Means of verification	Ris
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<b>Objective:</b> Reducing marine plastics and plastic pollution in the Latin America and the Caribbean region by facilitating circular actions at the city level to accelerate the transition to a circular economy, in line with government and business commitments on addressing marine plastics and plastic pollution.	<b>GEBs:</b> <ul style="list-style-type: none"> <li>- Indicator 5.3 Amount of Marine Litter Avoided</li> <li>- Indicator 6.2 Emissions Avoided Outside AFOLU</li> <li>- Indicator 7.3 Level of National/Local reforms and active participation of Inter-Ministerial Committees</li> <li>- Indicator 7.4 Level of engagement in IWLEARN through participation and delivery of key products</li> <li>- Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)</li> <li>- Indicator 10 Reduction, avoidance of emissions of POPs to air from point and non-point sources</li> <li>- Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment</li> </ul>	See baseline for each output below	<ul style="list-style-type: none"> <li>- 5,065 metric tons/tonnes Marine Litter Avoided (indicator 5.3)</li> <li>- 9,382 tonnes of CO<sub>2</sub>e indirect Emissions Avoided Outside AFOLU (indicator 6.2)</li> <li>- At least 2 shared water ecosystems benefiting from local reform on the management of plastic pollution (indicator 7.3)</li> <li>- At least 2 shared water ecosystems engaged in IWLEARN through participation and delivery of key products (Indicator 7.4)</li> <li>- 54,9 tonnes of Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type) (Indicator 9.1)</li> <li>- 1.16 grams of toxic equivalent gTEQ emission eliminated (Indicator 10)</li> <li>- 990,162 direct beneficiaries disaggregated by gender as co-benefit of GEF investment (Indicator 11) (w/ 559,306 (F) and 430,856 (M))</li> </ul>	Mid Term and Final Evaluation reports; quarterly reports; websites and public awareness resources; publications	As - f g p c e h p e c - c t a n Ris - b i - s t e l s e - c t
<b>Component 1. City Led Promotion of Circular Economy Policies to Reduce Marine Plastics and Plastic Pollution in Targeted Cities</b>					
<b>Outcome 1</b> Circular economy policies developed or adopted by city-level governments to reduce marine plastics and plastic pollution in targeted cities	<ul style="list-style-type: none"> <li>- Number of cities with new policies/strategies developed or existing policies improved[1]</li> </ul>		<ul style="list-style-type: none"> <li>- 6 cities with new policies/strategies developed or existing policies improved, with municipal capacity in policy planning strengthened</li> </ul>	Documented evidence to show policies developed or approved at the city level (such as draft policy documents, press release, news, web stories)	See

<p><b>Output 1.1</b> Policy action plans developed by municipalities to promote circular economy approaches for plastics</p>	<ul style="list-style-type: none"> <li>- Number of city-level policy action plans developed[2]</li> <li>- Number of consultation meetings with city governments and relevant stakeholders organised[3]</li> <li>- Percentage of female decision makers involved[4]</li> </ul>	<p>-All project countries have policy frameworks/ action plans to reduce marine plastics and plastic pollution through circular economy, but these are partially or not implemented yet. Jamaica is part of the RAPMALI 2014, and Colombia of the Regional Marine Litter Action Plan for the Northeast Pacific Region. This latter is starting its implementation in Q4-2021. Colombia also has a national plan for the sustainable management of single-use plastics. Panama has its national actional plan which will be starting its implementation by the end of 2021.</p> <p>-City level policy action plans do not exist.</p> <p>-</p>	<ul style="list-style-type: none"> <li>- 1 global review of policy framework on circular economy for plastics with recommendations for LAC by Y1</li> <li>- 6 city-level policy action plans (1 per city) developed by Y2</li> <li>- Policy development and enforcement meetings at city level</li> <li>- At least 40% decision makers involved are female</li> </ul>	<ul style="list-style-type: none"> <li>- Global review report</li> <li>- Documented evidence to show action plans developed or approved at the city level (such as draft policy documents, press release, news, web stories)</li> <li>- Meeting reports</li> </ul>	<p>Ris</p> <p>-</p> <p>-</p>
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<p><b>Output 1.2</b> Targeted policy interventions carried out to improve circularity</p>	<ul style="list-style-type: none"> <li>- Number of selected policies developed, improved or prepared for consideration /submission[5]</li> <li>- Tonnes of marine plastics reduced</li> </ul>	<p>-The project countries do not have a legal framework to reduce or eliminate the Unintentional Persistent Organic Pollutants (UPOP?s).</p> <p>-The 3 countries possess policies and programmes for the reduction of plastic consumption and the application of reuse models restriction on problematic and unnecessary plastics. However, these are partially implemented or has not been implemented (e.g., Colombia recently launched their programme in June 2021 and will start implementing by 2022)</p> <p>-The 3 countries have regulations of plastics with hazardous chemicals. (Part of the National Implementation plan for managements of POP?s). However, there is a need to enhance the implementation of these National plans at city level.</p> <p>-Jamaica and Panama lack of an integrated waste management system or a policy framework on comprehensive waste management including actions conducive to the circular economy and a municipal plan in accordance with the local policy.</p> <p>- Panama and Jamaica count with</p>	<ul style="list-style-type: none"> <li>- 1 overview of global best practices on policy instruments with recommendations for LAC by Y1</li> <li>- 6 selected policies developed, improved or prepared for consideration/submission (1 per city) by Y4</li> <li>- Avoidance of 144 tonnes of marine plastics as a result of reduction in unnecessary, avoidable, and problematic plastic products (including single-use plastics), through policies (such as banning single-use plastic products) and business innovation (reuse and redesign to reduce single-use plastic products)</li> <li>- Reduction of 1,627 tonnes as a result of improved waste management policies and business action.</li> </ul>	<ul style="list-style-type: none"> <li>- Report on global best policy practices</li> <li>- Documented evidence to show policies developed or approved at the city level (such as draft policy documents, press release, news, web stories)</li> <li>- Summary of results and learning from policy development</li> <li>- Data on the reduction of marine plastics reported by using the indicators and methodology developed under output 4.3</li> </ul>	<p>As</p> <p>-</p> <p>Ris</p> <p>-</p> <p>-</p>
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<p><b>Output 1.3</b> Implementation plans for financial instruments developed to facilitate responsible plastics management</p>	<ul style="list-style-type: none"> <li>- Number of implementation plans for financial instruments developed, improved or prepared for consideration /submission[6]</li> </ul>	<p>None of the countries under this project has policies, programmes or initiatives about financing mechanisms and incentives to facilitate responsible plastic management. However, Colombia and Jamaica have a policy framework of Extended Producer Responsibility (not specifically for plastics). Panama has legislation that establishes environmental and tax incentives to promote business practices, business reconversion, and the development of the recycling industry (mainly for plastics).</p> <p>Some of the financial instruments lacking in the 3 project countries are:</p> <ul style="list-style-type: none"> <li>- incentives to reduce the use of raw materials in plastic production</li> <li>- economic incentives to stimulate the port facilities and tourism industry to reduce the waste generation of plastic.</li> <li>- Deposit refund schemes</li> <li>- Incentives to reduce the use of raw materials to produce</li> </ul>	<ul style="list-style-type: none"> <li>- 1 overview of global best practices on financial instruments with recommendations for LAC by Y1</li> <li>- 3 implementation plans for financial instruments developed, improved or prepared for consideration /submission (1 per country) by Y4</li> </ul>	<ul style="list-style-type: none"> <li>- Report on global best practices on financial instruments</li> <li>- Implementation plans for the financial instruments in 6 cities</li> <li>- Summary of results and learning from the development of the implementation plans</li> </ul>
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Component 2 Private Sector Led Promotion of Circular Economy Actions to Reduce Marine Plastics and Plastic Pollution in 7					
<b>Outcome 2</b> Circular economy innovations and practices adopted by the private sector to reduce marine plastics and plastic pollution in targeted cities	- Number of businesses engaging in the project and/or adopting best practices or sustainable business solutions[7]		- 120 businesses engaging in the project and/or adopting best practices or sustainable business solutions	Documented evidence to show circular economy solutions developed with the private sector at the city level (such as patent, product profiles, business model and plans, press release, news, web stories)	Se
<b>Output 2.1</b> Approaches developed and tested to facilitate more circular design, production, and consumption of plastics	- Number of solutions on sustainable production and consumption pilot tested[8]	-Colombia is the only country that possess a policy framework to promote circular design in products but this is partially implemented. -The 3 countries do not possess waste reduction policies and solutions focused on different commercial premises and business sectors.	- 1 compilation of global best practices on upstream business solutions, with recommendations for LAC by Y1  - 6 business solutions on sustainable production and consumption pilot tested (1 per city) by Y4	- Report on global best practices on upstream business solutions  - Documented evidence to show circular economy solutions developed with the private sector at the city level (such as patent, product profiles, business model and plans, press release, news, web stories)  - Summary of results and learning from the pilot test of business solutions	Ris - - -



<p><b>Output 2.2</b> Approaches developed and tested to improve collection and recycling of plastic waste</p>	<ul style="list-style-type: none"> <li>- Number of solutions on collection, recycling and disposal of plastic waste pilot tested<sup>[9]</sup></li> <li>- Tonnes of marine plastics reduced</li> </ul>	<p>-Colombia has implemented programmes and initiatives to better integrate informal waste collectors and independent sorters of plastics into the waste management systems along with the private sector and initiatives such as RedReciclo, Movimiento RE (both from CEMPRE), Recuperando Avanzo (EkoRed). Jamaica has partially implemented similar initiatives (Plastic Recycling Project), but Panama does not have a policy, a programme or initiative related to this matter (Recicla por tu futuro).</p>	<ul style="list-style-type: none"> <li>- 1 compilation of global best practices on plastic collection and recycling with recommendations for LAC by Y1</li> <li>- pilots on collection, recycling and disposal of plastic waste in 6 cities by Y4 Avoidance of 94 tonnes of marine plastics through collection and treatment of 1,480 tonnes of plastic products through recycling pilots</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Report on global best practices on collection and recycling of plastic waste</li> <li>- RFPs and contracts for collection and recycling pilots</li> <li>- Summary of results and learning from the collection and recycling pilots</li> <li>- Data on the reduction of marine plastics reported by using the indicators and methodology developed under output 4.3</li> </ul>	<p>In list Ris</p> <ul style="list-style-type: none"> <li>-</li> <li>-</li> <li>-</li> <li>-</li> </ul>
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<p><b>Output 2.3</b> Industry roundtable on plastic circular economy established and roundtable meetings organised</p>	<ul style="list-style-type: none"> <li>- Number of roundtable meetings organised [10]</li> <li>- Number of women entrepreneurs supported by the project in promoting the circularity of their business[11]</li> </ul>	<p>-There is no platform to converge a common vision and coordinate activities on circular economy among the companies and industrial players in order to address plastic pollution in the 6 cities. However, an entry point in Colombia are the regional working tables on circular economy aligned with their National Strategy on CE that include Barranquilla and Cartagena.</p> <p>-There is no committee led by stakeholders from the private sector entities along the value chain, such as innovation companies, waste collectors, recyclers among others, to design and implement innovative actions to improve the local circularity of materials and plastic products, generate green employment in the whole chain, share ideas, experiences, information, and data, etc.</p>	<ul style="list-style-type: none"> <li>- 1 strategy document elaborating the vision, approach, code of conducts, governance and activities of the industrial roundtable by Y1</li> <li>- 12 industry roundtable meetings organised (1 per city every 2 years)</li> <li>- 120 value chain businesses involved in the roundtable</li> <li>- At least 40 women entrepreneurs supported by the project in promoting the circularity of their business</li> </ul>	<ul style="list-style-type: none"> <li>- A strategy document elaborating the vision, approach, code of conducts, governance and activities of the industrial roundtable</li> <li>- Roundtable meeting reports with list of participant businesses and outcomes of the roundtable meetings (m/f documented)</li> </ul>	<p>Ris</p> <ul style="list-style-type: none"> <li>-</li> <li>-</li> </ul>
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**Component 3 Inter-City Network on Marine Plastics and Plastic Circular Economy**

<b>Outcome 3</b> Increased capacity and cooperation among LAC cities through the LAC Inter-city Network on marine plastics and plastic circular economy	<ul style="list-style-type: none"> <li>- Number of cities joining the inter-city network[12]</li> <li>- Number of governments, private sector stakeholders, NGOs involved in the inter-city network[13]</li> <li>- Number of global and regional initiatives collaborating with the network[14]</li> </ul>		<ul style="list-style-type: none"> <li>- 15 cities joining the inter-city network by Y4</li> <li>- 120 governments, private sector stakeholders, NGOs involved in the inter-city network by Y4</li> <li>- At least 8 global and regional initiatives collaborating with the network by Y4</li> </ul>	<ul style="list-style-type: none"> <li>- Official letters from cities to confirm the joining of the network</li> <li>- List of the global and regional initiatives collaborating with the network</li> </ul>	See
<b>Output 3.1</b> Inter-city network operationalised	<ul style="list-style-type: none"> <li>- Number of the network meetings organized [15]</li> <li>- Percentage of women actively participating in the inter-city network planning board/council[16]</li> </ul>	-There is no inter-city network in the region on addressing marine plastics and plastic pollution.	<ul style="list-style-type: none"> <li>- 1 framework document including the vision, objectives, governance and activities of the inter-city network by Y1</li> <li>- 1 functional network of LAC cities established by Y2</li> <li>- At least 40% of the members of the inter-city network planning boards/councils are women</li> <li>- 2 network meetings organized (1 in Y2 and 1 in Y4)</li> <li>- 1 network website and social media channels developed in Y2</li> <li>- 1 reporting mechanism</li> </ul>	<ul style="list-style-type: none"> <li>- Framework document</li> <li>- Reports of the inter-city network planning board/council meeting (m/f documented), and the network meeting reports (m/f documented)</li> <li>- Inter-city Network website</li> <li>- Reporting mechanism</li> </ul>	Ris -
<b>Output 3.2</b> Inter-city network expanded with more participating cities	<ul style="list-style-type: none"> <li>- Number of additional cities supported with the development of policy and action plan[17]</li> <li>- Tonnes of marine plastics reduced</li> </ul>	The project has not yet started. In the implementation phase of the project, the promotion of the action plan will be conducted.	<ul style="list-style-type: none"> <li>- 15 cities connecting to the network (6 project cities + 9 additional cities in the region) by Y4</li> <li>- 1 harmonised city action plan template developed for LAC cities Y3</li> <li>- At least 3 additional cities supported with the development of action plan by Y4</li> <li>- 2,800 tonnes reduction in marine plastics as a result of the inter-city network and capacity building activities at the regional level. The actual reduction data will be collected through the monitoring scheme of the inter-city network.</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Official letters from cities to confirm the joining of the network</li> <li>- Harmonised city action plan template developed for LAC cities</li> <li>- Action plans for the 3 additional cities</li> <li>- Data on the reduction of marine plastics reported by using the reporting mechanism developed under output 3.1</li> </ul>	As - par as  Ris lac sup exp to c act

#### Component 4 Capacity Development and Knowledge Management

<b>Outcome 4</b> Improved regional awareness and capacity in applying circular economy approaches to reduce marine plastics and plastic pollution	- Number of stakeholders trained [18]		- 1000 stakeholders trained in total	Participation list of the trainings	See
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<p><b>Output 4.1</b> Information, Education and Communication (IEC) strategy for the project developed and implemented using IW: LEARN platform, GGKP and GPML platforms</p>	<ul style="list-style-type: none"> <li>- Number of project website established [19]</li> <li>- Level of engagement in IWLEARN through participation and delivery of key products</li> <li>- % of completion on delivery of the communication strategy[20]</li> <li>- Number of selected case studies on circular policies and sustainable business practices[21]</li> <li>- Number of experience or best practices notes developed</li> <li>- Number of key IW: Learn events participated</li> <li>- Number of videos for communication [22]</li> </ul> <p>Gender related indicators:</p> <ul style="list-style-type: none"> <li>- Number of surveys conducted to assess role of women in plastic value chain</li> <li>- % of documents with explicit gender mainstreaming[23]</li> <li>- % of beneficiaries disaggregated by gender[24]</li> </ul>	<p>The project has not yet started. Therefore, no products have been developed or placed on the website yet.</p>	<ul style="list-style-type: none"> <li>- 1 project website compliant with IW:LEARN established by Y1 and deliverables uploaded to the website upon completion</li> <li>- 2 Shared water ecosystems engaged with IW:LEARN</li> <li>- Project learnings and knowledge products integrated into IW: LEARN, GGKP, GPML and other relevant platforms by Y4</li> <li>- 1 communication strategy compliant with IW:LEARN requirements developed by Y1 and implemented throughout the project duration</li> <li>- 6 selected case studies on circular policies developed based on the policy instruments of component 1; and 6 selected case studies on sustainable business practices developed based on the business solutions of component 2 by Y4</li> <li>- At least 3 experience or best practices notes on project learning developed by Y4</li> <li>- At least 3 key IW:LEARN events with participation from the project team by Y4</li> <li>- At least 2 videos made</li> <li>- 1 survey conducted to assess role of women in plastic value chain by Y1</li> <li>- 1 Gender Guidance Note prepared to be used by the project team to ensure gender mainstreaming, by Y1</li> <li>- At least 40% audience of the communication campaigns are female</li> <li>- 990,162 direct beneficiaries disaggregated by gender as co-benefit of GEF investment (Indicator 11)</li> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- Project website</li> <li>- Deliverables uploaded to IW: LEARN, GGKP, GPML</li> <li>- Project communication strategy (with a specific section on gender analysis and communication strategy towards female consumers, collectors, entrepreneurs)</li> <li>- Selected case studies on circular policies</li> <li>- Documents on the selected case studies on sustainable business practices</li> <li>- Report/notes on the experience or best practices of the project</li> <li>- Participation list/picture of the IW: Learn events joined by the project team</li> <li>- Videos</li> <li>- Survey to assess role of women in plastic value chain</li> <li>- Gender Guidance Note</li> <li>- Balance of male/female participation; female and male presenters/facilitators at consultations; proportion of interventions made by women at consultations documented in meeting reports</li> <li>- Gender disaggregated data collected by the gender specialist to be hired by the project</li> </ul>	<p>Ris</p> <p>-</p> <p>-</p> <p>-</p>
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<p><b>Output 4.2</b> Targeted capacity building activities conducted</p>	<ul style="list-style-type: none"> <li>- Number of people involved in the training and communication activities with gender disaggregated target[25]</li> <li>- Tonnes of marine plastics reduced</li> </ul>	<ul style="list-style-type: none"> <li>- Project cities indicated that capacity building and training activities will be beneficial to assist in addressing the challenge of marine plastics and plastic pollution, and enhancing circularity in the value chain by training all relevant stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>- 3 national level trainings organised and at least 50% female participants in Y2-Y3 (1 per country), targeting <ul style="list-style-type: none"> <li>o Policy and decision makers from governmental and municipal entities.</li> <li>o Businesses</li> <li>o Collectors and recyclers, including informal sector</li> <li>o Community based organizations</li> <li>o Academia</li> </ul> </li> <li>- 1 regional level training organised and at least 50% female participants by Y4</li> <li>- 1000 stakeholders trained in total</li> <li>- 400 tonnes reduction in marine plastics through awareness raising events, training, and clean-up campaigns in the six cities.</li> </ul>	<ul style="list-style-type: none"> <li>- Training materials and participant list for the national trainings (m/f documented)</li> <li>- Training materials and participant list for the regional trainings (m/f documented)</li> <li>- Data on the reduction of marine plastics reported by using the indicators and methodology developed under output 4.3</li> </ul>
<p><b>Output 4.3</b> Long-term monitoring conducted by cities on the implementation of circular economy approaches and associated reduction in plastic pollution</p>	<ul style="list-style-type: none"> <li>- Number of methodology and calculation tool to organize the data collection and assessment of chemicals for plastics [26]</li> </ul>	<ul style="list-style-type: none"> <li>-For the 6 project cities there is no standardized systems in place for the identification and quantification of hotspots or plastic leakage along the value chain. Moreover, there is no set of indicators to measure, and track the trends on marine plastics and plastic pollution.</li> </ul>	<ul style="list-style-type: none"> <li>- 1 set of indicators aiming to support plastic related GEF projects to monitor the performance and impacts of activities developed by Y3 and tested with the 6 cities by Y4</li> <li>- 1 methodology and a tool to enable cities to forecast on the potential impacts, cost and benefits, and trade-offs of adopting various circular strategies developed by Y3</li> <li>- 1 methodology and calculation tool to organize the data collection and assessment of chemicals for plastics developed by Y3</li> </ul>	<ul style="list-style-type: none"> <li>- Indicators to monitor the performance and impacts of activities in plastics related GEF projects</li> <li>- Methodology to forecast on the potential impacts, cost and benefits, and trade-offs of various circular strategies</li> <li>- Methodology and calculation tool on chemicals</li> </ul>

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- [1] C&W Outcome Indicator 4 - No. of countries adopting/passing new policies/strategies
- [2] C&W Output Indicator 4.2 - No. of sector master / national management plans prepared
- [3] C&W Output Indicator 11.2 - No. of national organizations/coordination mechanisms supported/communities organized
- [4] C&W Output Indicator 7.2 - % of beneficiaries disaggregated by gender
- [5] C&W Output Indicator 4.1 ? No. of new policies, strategies, laws, regulations, guidance, criteria prepared
- [6] C&W Output Indicator 4.2 - No. of sector master / national management plans prepared
- [7] C&W Outcome Indicator 3 - No. of beneficiaries adopting best practices/technologies
- [8] C&W Output Indicator 3.1 - No. new technology and/or equipment upgraded/provided to developing countries
- [9] C&W Output Indicator 3.1 - No. new technology and/or equipment upgraded/provided to developing countries
- [10] C&W Output Indicator 11.2 - No. of national organizations/coordination mechanisms supported/communities organized
- [11] C&W Output Indicator 7.2 - % of beneficiaries disaggregated by gender
- [12] C&W Outcome Indicator 11 - No. of beneficiaries committed to stay engaged after project ends
- [13] C&W Outcome Indicator 11 - No. of beneficiaries committed to stay engaged after project ends
- [14] C&W Outcome Indicator 11 - No. of beneficiaries committed to stay engaged after project ends
- [15] C&W Output Indicator 11.2 - No. of national organizations/coordination mechanisms supported/communities organized
- [16] C&W Output Indicator 7.2 - % of beneficiaries disaggregated by gender
- [17] C&W Output Indicator 4.2 - No. of sector master / national management plans prepared
- [18] C&W Outcome Indicator 10 - No. of people demonstrating increased knowledge and capacity
- [19] C&W Output Indicator 9.2 - No. of platforms and databases established
- [20] C&W Output Indicator 8.1 - % of completion on delivery of the communication strategy

[21] C&W Output Indicator 3.2 - No. of technical tools/toolkits and best practices (BAT/BEP) developed

[22] C&W Output Indicator 8.3 - No. of social media and media products published on platforms and websites

[23] C&W Output Indicator 7.1 - % of documents with explicit gender mainstreaming

[24] C&W Output Indicator 7.2 - % of beneficiaries disaggregated by gender

[25] C&W Output Indicator 10.1 - No. of end-users/beneficiaries trained

[26] C&W Output Indicator 3.2 - No. of technical tools/toolkits and best practices (BAT/BEP) developed

## **ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).**

### **Annex B: Response to Project Reviews**

STAP comments	Response
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While this is a good project and several aspects of the PIF were well prepared, including a detailed presentation of planned activities, there is significant concern that the estimation of expected GEBs has not been rigorously done. The proponent should complete this task before the project can proceed.

There is no information on how the expected GEBs from the project were derived. Without this information, the currently projected benefits cannot be verified. For example, how was the projected 3000 metric tons of CO<sub>2</sub>e emissions reduction estimated, especially when there are no specific interventions in the project explicitly targeted at greenhouse gas emissions mitigation? What are the data and baseline information that informed this estimate? Also, what methodology was used to calculate the amount of marine litter to be avoided? Without these details, it is impossible to ascertain that the predicted GEBs are valid or can be achieved.

The GEBs have been recalculated in the PPG stage based on baseline data collected by local consultants and desktop research. The section on GEBs in the PPG document explains the calculation of the GEBs in detail. Regarding the GEB 5 (Amount of marine litter avoided), and 6 (GHG emission):

**The project is expected to reduce marine plastics by 5,065 tonnes during the project lifetime.**

This will be achieved cumulatively through four major intervention pathways:

1- Avoidance of 144 tonnes of marine plastic litter as a result of reduction in unnecessary, avoidable and problematic plastic products, including single-use plastics through policies (such as banning single-use plastic products) and business innovation (reuse and redesign to reduce single-use plastic products) targeting the top 10 products as will be identified through marine plastic sampling of the six cities, The project is setting a target of 1,600 tonnes reduction of these products of

Furthermore, this is a multi-focal area project with equal contribution of programming funds from the International Waters and Chemicals and Waste (POPs) focal areas. However, from the PIF, there is no indication of GEBs that will accrue to the chemical and waste focal area.

GEBs related to the CW focal area have been added and the project now contributes to GEB 5 (Amount of marine litter avoided), 6 (GHG emission), 7 (shared water systems), 9 (chemicals of concern), 10 (POPs to air) and 11 (direct beneficiaries). Regarding GEB 9 and 10:

**The project is expected to reduce Persistent Organic Pollutants (POPs) by 54.9 tonnes (HBCD and PBDE).** This will be achieved cumulatively through:

1- Upstream interventions (policy on eliminating Chemicals of Concern (CoCs) in plastic products such as furniture and building materials, and circular design by producers): Through implementing upstream policies and circular design by the private sector, the project is expected to reduce at least 200 tonnes of products containing HBCD and 1,000 tonnes products containing PBDE. This will result in a net reduction of 1.2 tonnes of HBCD and 30 tonnes of PBDE by applying an average concentration of relevant chemicals in such products.

2- Downstream interventions (collection and recycling pilot): Through collection, recycling, and disposal pilot in six cities, the project is expected to treat and

Figure 3 presents a preliminary theory of change, which includes assumptions, problems, outputs, outcomes, long term outcomes, and impacts. This is good. This may be improved by adding interventions that will help achieve the outputs and outcomes as well as alternative pathways. Please see STAP's theory of change primer for further guidance ([https://stapgef.org/sites/default/files/publications/STAP%20ToC%20Primer\\_webposting.pdf](https://stapgef.org/sites/default/files/publications/STAP%20ToC%20Primer_webposting.pdf)).

The theory of change (figure 4) was updated by refining the assumptions, drivers, outputs, outcomes, long term outcomes and impacts. To respond to this comment regarding showcasing the interventions that will help achieve the outputs and outcomes as well as alternative pathways, the problem tree was updated, and an objective tree was added. The updated problem tree (figure 1) provides a clearer logic on how the project will identify the linkages between the root causes, barriers, problem, and impacts. An objective tree (figure 3) was added to reflect what interventions are needed to address the barriers in order to achieve the objectives targeted by the project.

For example, as indicated in the problem tree, one of the root causes identified by the project is that policy design, waste

Potential for scaling-up: According to the PIF, scaling up will be achieved through "a global framework." It is not clear what this means or how it will work. STAP recommends that more details should be presented in the PPG to show how scaling up will be achieved. STAP recommends the following resources which may be useful in this regard: "nine steps for developing a scaling-up strategy" ([https://www.who.int/immunization/hpv/deliver/nine\\_steps\\_for\\_developing\\_a\\_scalingup\\_strategy\\_who\\_2010.pdf](https://www.who.int/immunization/hpv/deliver/nine_steps_for_developing_a_scalingup_strategy_who_2010.pdf)) and "scaling up in development cooperation - practical guidelines" by GIZ (2011) available at [https://www.shareweb.ch/site/Learning-and-Networking/sdc\\_km\\_tools/Documents/GIZ-Scaling-up-in-development-cooperation.pdf](https://www.shareweb.ch/site/Learning-and-Networking/sdc_km_tools/Documents/GIZ-Scaling-up-in-development-cooperation.pdf)

Relevant text was updated with useful guidance from the 2 reference shared. Key factors from the GIZ and WHO documents have been considered and integrated, including ownership and involving key stakeholders, substantiating the results achieved by pilot projects, evidence-based solution, communication and networking, and vertical and horizontal scaling-up.

In the PPG phase, key stakeholders from city governments and private sector have been reached out to and convinced of the value of the proposed activities under the project and the linkage of the project with their own agendas. In the implementation phase, the project will also create ownership of stakeholders to the project by supporting city governments and businesses to design and pilot test policies and solutions. When developing

Sustainability: The GEF IEO's terminal evaluation of projects under the chemicals and waste focal area revealed that there is little evidence that GEF's chemicals and waste projects are successful in developing sustainable strategies and financial mechanisms to scale up achieved results or to ensure continued engagement of private sector actors ([http://www.gefio.org/sites/default/files/ieo/evaluations/files/cw-study-2017\\_0.pdf](http://www.gefio.org/sites/default/files/ieo/evaluations/files/cw-study-2017_0.pdf)). According to the PIF, sustainability is expected to be achieved through assisting cities and municipalities to develop sustainable partnerships with the private sector involved in plastic waste and through improving understanding and awareness to help key stakeholders. These measures are not sufficient to guarantee the sustainability of the project. There is a danger of this project replicating the same drawback identified by the IEO. STAP recommends that more thought should be given to this.

The project will actively assist cities/municipal authorities to develop sustainable partnerships with the private sector involved in plastic waste collection and recycling (both formal and informal sectors). The sustainability will also be encouraged through improving understanding and awareness to assist key stakeholders attract new sources of financing to adopt circular economy approaches to reduce marine plastics and plastic pollution. The project will facilitate this increased understanding and awareness through the inter-city networks, round-table discussions, etc. This will also enhance the overall governance and improve engagement of stakeholders to address the issue of plastic pollution. The project will also support the sharing of lessons, experiences, and benefits from the circular economy.

Climate change impact and risks: The PIF is entirely silent about the potential effects of projected climate change on achieving the objectives of the project. Yet, the project is taken place in coastal cities of the targeted countries. Several climate data sources, including Climate Change Knowledge Portal (<https://climateknowledgeportal.worldbank.org/>), Relief Web (<https://reliefweb.int/>), and Climate Links (<https://www.climatelinks.org/>) shows that the three countries and targeted cities are considered highly vulnerable to climate change impacts. It is envisaged that climate change will influence the types of solutions that can be developed and tested. STAP recommends that a detailed climate risk screening should be carried out to ascertain vulnerability of the project is to climate change and what risk management options would be employed, where necessary.

In the section on risk in the PPG and appendix 8 on risk mitigation plan, the assessment of climate change related risk in the 6 project cities was added. The assessment evaluates the risk level of different natural hazards related with climate change in the cities, including wildfire, floods, tsunami, hurricane, extreme heat, earthquake, landslide and water scarcity. The highest risk from natural hazards present in all 6 cities are wildfires and floods. These are truly relevant to plastic pollution as flooding can cause transportation of plastic waste to the oceans and collapsing waste management by increasing leakage. Furthermore, wildfires can intensify floods but also end up in burning of waste. Other hazards need close attention too, depending on the location varies the degree of risk.

Through

We note that this project is similar to the "Plastik Sulit: accelerating circular economy for difficult plastics in Indonesia ? GEF ID: 10546" project in this same work program (June 2020). The two projects should seek to learn from each other even from the PPG stage. Also, given that the project will be implemented in cities, we encourage the project proponent to engage with the GEF Sustainable Cities Impact Program.

The project will coordinate with other GEF projects including GEF 10546 and the Sustainable Cities Impact Program during its implementation phase. Not much information about the GEF 10546 can be found on GEF website at this moment as it is in the same work programme with this project, but closer coordination will be sought with ADB once both the projects take shape. This project can benefit from the learnings and experience from the GEF Sustainable Cities Impact Program (2018-2022) in many aspects, including but not limited to:

- 1) adopting circular economy approaches at city level;
- 2) engaging with different stakeholders at city level and national level;
- 3) forging public-private partnership;
- 4) scaling up the project results to more cities/countries including through the operationalisati

**ANNEX C: Status of Utilization of Project Preparation Grant (PPG).**  
**(Provide detailed funding amount of the PPG activities financing status in the table below:**

**Annex C: Status of Utilization of Project Preparation Grant (PPG) and significant PPG outputs** (If requesting for PPG reimbursement, please provide details in the table below:

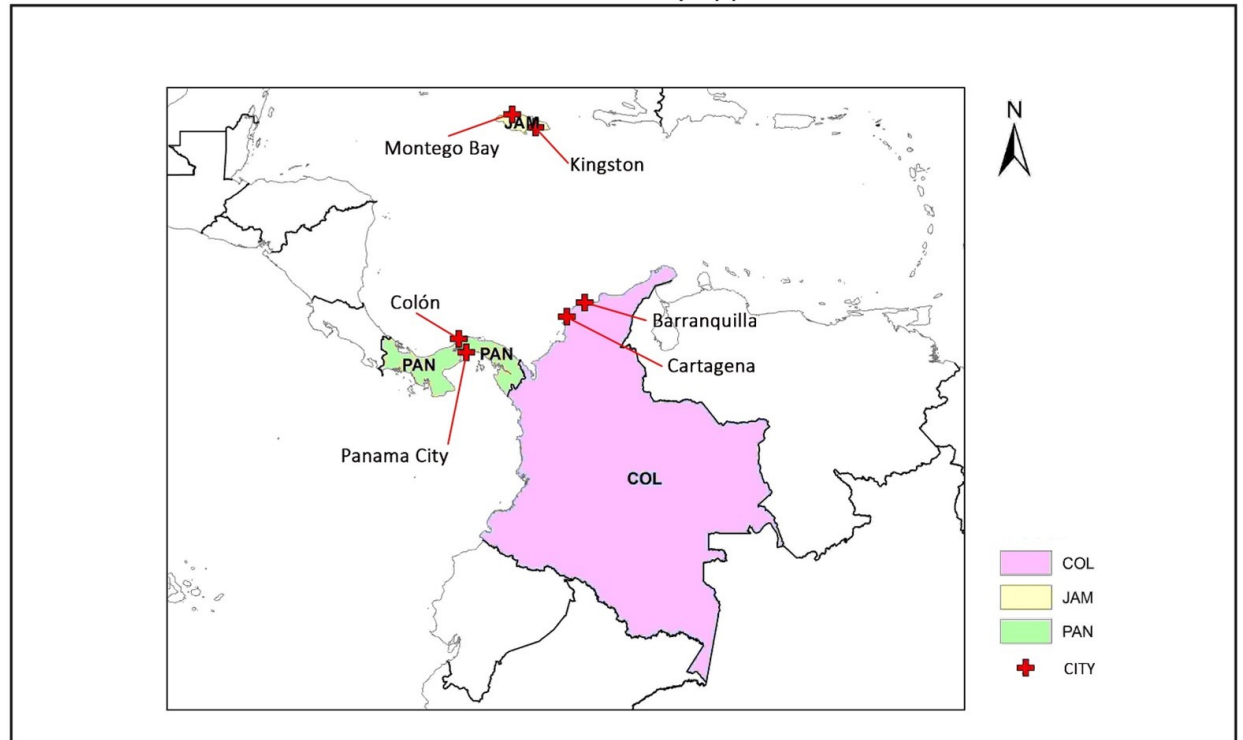
UNEP ? implemented PPG (\$200,000)

<i>Project Preparation Activities Implemented</i>	<i>GETF/LDCF/SCCF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Subcontract with UNEP RMB	105,000	49,129	55,871
Subcontract with UNEP ROLAC	65,000	38,712	26,288
Subcontract to support the technical design	15,000	15,000	0
Subcontract to support country liaison and consultation	15,000	0	15,000
<b>Total</b>	200,000	102,841	97,159

**ANNEX D: Project Map(s) and Coordinates**

**Please attach the geographical location of the project area, if possible.**





The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries  
 This map is intended for illustrative purposes only and should NOT be used to derive any information regarding the project's operations.  
 No activities planned in any disputed territories



- Cartagena (Colombia): 10°24'N 75°30'W
- Barranquilla (Colombia): 10°57'50"N 74°47'47"W
- Kingston (Jamaica): 17°58'17"N 76°47'35"W
- Montego Bay (Jamaica): 18°28'N 77°55'W
- Panama City (Panama): 8°59'N 79°31'W
- Colón (Panama): 9° 21' 26" N, 79° 53' 55" W

## ANNEX E: Project Budget Table

Please attach a project budget table.

		Comp 1:	Comp 2	Comp 3	Comp 4	M&E	PMC	Total
		US\$	US\$	US\$	US\$	US\$	US\$	US\$
<b>STAFF AND PERSONNEL</b>								
1100	Project Personnel (Project Management 5% of overall total)							

1101	Project Coordination	-	-	-	-	-	333,333	333,333
	Subtotal	-	-	-	-	-	333,333	333,333
<b>1200</b>	<b>Consultants w/m</b>							
1201	Global circularity consultants	170,000	55,000	-	70,000	-	-	295,000
1202	Inter-city network affairs consultants	-	-	275,000	-	-	-	275,000
1203	Gender and social expert	-	-	-	40,000	-	-	40,000
1204	City consultants for action plans in 3 new cities	-	-	180,000	-	-	-	180,000
1205	Long term monitoring specialist	-	-	-	55,000	-	-	55,000
1206	Consultant for the calculation tool on the chemicals for plastics	-	-	-	50,000	-	-	50,000
1207	procurement expert	60,000	60,000	30,000	50,000	-	-	200,000
	Subtotal	230,000	115,000	485,000	305,000	-	-	1,135,000
<b>1300</b>	<b>Administrative Support</b>							
1301	HR, procurement, financial management	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	-	-	-
<b>1600</b>	<b>Travel on official business (above staff)</b>							
1601	Travel for project personnel	60,000	60,000	70,000	-	-	-	190,000
	Subtotal	60,000	60,000	70,000	-	-	-	190,000
<b>SUB CONTRACT COMPONENT</b>								
<b>2100</b>	<b>Grants Issued to Implementing Partner (IP) on official business (above staff)</b>							
2101	Policy and business solution - Cartagena	235,000	310,000	-	-	-	-	545,000

2102	Policy and business solution - Barranquilla	235,000	310,000	-	-	-	-	545,000
2103	Policy and business solution - Panama City	235,000	310,000	-	-	-	-	545,000
2104	Policy and business solution - Colon	235,000	310,000	-	-	-	-	545,000
2105	Policy and business solution - Kingston	235,000	310,000	-	-	-	-	545,000
2106	Policy and business solution - Montego Bay	235,000	310,000	-	-	-	-	545,000
2107	City circularity support	90,000	130,000	-	-	-	-	220,000
2108	Best practices for policy and business solutions	40,000	80,000	-	-	-	-	120,000
2109	knowledge management and communication	-	-	-	230,000	-	-	230,000
	Subtotal	1,540,000	2,070,000	-	230,000	-	-	3,840,000
<b>TRAINING COMPONENT</b>								
<b>3200</b>	<b>Group training (field trips, WS, etc.)</b>							
3201	national level trainings	-	-	-	175,000	-	-	175,000
3202	Regional training	-	-	-	159,583	-	-	159,583
	Subtotal	-	-	-	334,583	-	-	334,583
<b>3300</b>	<b>Meetings/conferences</b>							
3301	Cities policy development and consultation meetings	90,000	-	-	-	-	-	90,000
3302	Business sectors consultations and industrial roundtable meetings	-	110,000	-	-	-	-	110,000
3303	Inter-city network meetings	-	-	229,584	-	-	-	229,584
3304	Inception meeting + SC meeting in Y1	-	-	-	-	35,000	-	35,000

3305	Steering Committee meetings in Y2- Y4, national and city working group meetings	-	-	-	-	138,000	-	138,000
3306	closing meeting	-	-	-	-	40,000	-	40,000
	Subtotal	90,000	110,000	229,584	-	213,000	-	642,584
<b>Supplies Commodities and Materials</b>								
4100	<b>Expendable equipment (under 1,500 \$)</b>							
4101	Office stationary/supplies	-	-	-	-	1,500	-	1,500
	Subtotal	-	-	-	-	1,500	-	1,500
4200	<b>Non expendable equipment</b>							
4201	IT equipment (laptop for project assistant)	-	-	-	-	3,000	-	3,000
4202	Software	-	-	-	-	-	-	-
	Subtotal	-	-	-	-	3,000	-	3,000
<b>MISCELLANEOUS COMPONENT</b>								
5200	<b>Reporting costs (publications, maps, NL)</b>							
5201	Translation	-	-	-	100,000	-	-	100,000
5102	Editor	-	-	-	80,000	-	-	80,000
5203	Graphic designer	-	-	-	80,000	-	-	80,000
	Subtotal	-	-	-	260,000	-	-	260,000
5300	<b>Sundry (communications, postages)</b>							
5301	Project website and inter-city work website	-	-	30,000	60,000	-	-	90,000
5302	Videos	-	-	-	80,000	-	-	80,000
	Subtotal	-	-	30,000	140,000	-	-	170,000
5400	<b>Monitoring and evaluation</b>							

5401	Midterm	-	-	-	-	40,000	-	40,000
5402	Terminal evaluation	-	-	-	-	50,000	-	50,000
	Subtotal	-	-	-	-	90,000	-	90,000
<b>TOTAL COSTS</b>		<b>1,920,000</b>	<b>2,355,000</b>	<b>814,584</b>	<b>1,269,583</b>	<b>307,500</b>	<b>333,333</b>	<b>7,000,000</b>

#### **ANNEX F: (For NGI only) Termsheet**

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

#### **ANNEX G: (For NGI only) Reflows**

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agency is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

#### **ANNEX H: (For NGI only) Agency Capacity to generate reflows**

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).