



ISLANDS - Caribbean Child Project

Part I: Project Information

Name of Parent Program

Implementing Sustainable Low and Non-Chemical Development in SIDS (ISLANDS)

GEF ID

10279

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT

NGI

Project Title

ISLANDS - Caribbean Child Project

Countries

Regional, Latin America and Caribbean

Agency(ies)

UNEP, FAO

Other Executing Partner(s)

BCRC Caribbean

Executing Partner Type

Others

GEF Focal Area

Chemicals and Waste

Taxonomy

4/12/2021

Global Environment Facility (GEF) Operations

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Submission Date

12/4/2020

Expected Implementation Start

4/1/2021

Expected Completion Date

1/31/2026

Duration

60In Months

Agency Fee(\$)

990,000.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CW-2-3	Sound management of chemicals and waste addressed through strengthening the capacity of sub-national, national and regional institutions and strengthening the enabling policy and regulatory framework in these countries	GET	11,000,000.00	47,041,860.00
		Total Project Cost(\$)	11,000,000.00	47,041,860.00

B. Project description summary

Project Objective

To prevent the build-up of materials and chemicals in the environment that contain POPs and Mercury and other harmful chemicals in SIDS, and to manage and dispose of existing harmful chemicals and materials in SIDS

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1. Preventing the Future Build-Up of Chemicals Entering SIDS	Technical Assistance	Countries have adopted environmentally sound policies and control the import of chemicals, materials and products that lead to the generation of hazardous waste	<p>1. The legislative and institutional framework is developed to support the environmentally sound management of hazardous chemicals in materials, products and wastes at national and regional levels in the Caribbean</p> <p>2. Sustainable training programme is developed to assist countries with implementing the Chemicals and Wastes MEAs at a national level</p> <p>3. National, institutional and technical capacity to reduce/control the current and future trade of chemicals and products containing hazardous chemicals is strengthened</p> <p>4. Increased capacity for the development and implementation of national and regional chemicals and products standards including GHS</p> <p>5. Sustainable Procurement is promoted to key stakeholders to reduce the manufacture/import of products containing hazardous chemicals</p>	GET	3,848,702.00	2,788,160.00

2. Safe Management and Disposal of Existing Chemicals, products and materials	Technical Assistance	Harmful chemicals and materials present and/or generated in the countries are being disposed of in an environmentally sound manner	<p>1. Capacity for environmentally sound management of SC POPs and MC Hg products strengthened, and obsolete pesticides and chemicals, PCBs and DDT eliminated</p> <p>2. Capacity to manage other hazardous waste streams specific to the Caribbean improved</p>	GET	3,802,000.00	13,396,900.00
3. Safe management of Products entering SIDS/Closing Material and Product loops for Products	Technical Assistance	Build-up of harmful materials and chemicals is prevented through establishment of effective circular and life-cycle management systems in partnership with the private sector	<p>1. EPR and Regional Approach to manage WEEE pilot tested in three participating countries</p> <p>2. Capacity built for the ESM of ELVs</p> <p>3. Improved management of plastics (including PVC) through the life-cycle approach and coordination with the public and private sectors</p>	GET	1,588,950.00	17,300,000.00
4. Knowledge Management and Communication	Technical Assistance	Knowledge generated by the project is disseminated to, and applied by, SIDS in all regions	<p>1. Caribbean communities are informed and engaged with in the sound management of chemicals and waste</p> <p>2. Programme reports on project activities developed and disseminated</p>	GET	777,431.00	10,750,000.00
Monitoring and Evaluation	Technical Assistance			GET	459,117.00	600,000.00
				Sub Total (\$)	10,476,200.00	44,835,060.00
Project Management Cost (PMC)				GET	523,800.00	2,206,800.00
				Sub Total(\$)	523,800.00	2,206,800.00
				Total Project Cost(\$)	11,000,000.00	47,041,860.00

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Gov of Antigua and Barbuda/Ministry of Health, Wellness and the Environment	In-kind	Recurrent expenditures	1,100,000.00
Recipient Country Government	Gov of Barbados/The Environmental Protection Department, Ministry of Environment and National Beautification	In-kind	Recurrent expenditures	264,100.00
Recipient Country Government	Gov of Belize/Ministry of Fisheries, Forestry, the Environment and Sustainable Development	In-kind	Recurrent expenditures	737,500.00
Recipient Country Government	Gov of Guyana/Environmental Protection Agency	In-kind	Recurrent expenditures	323,500.00
Recipient Country Government	Gov of Saint Kitts and Nevis/Solid Waste Management Corporation, Saint Kitts	In-kind	Recurrent expenditures	925,000.00
Recipient Country Government	Gov of Saint Kitts and Nevis/Saint Kitts and Nevis Bureau of Standards	In-kind	Recurrent expenditures	112,400.00
Recipient Country Government	Gov of Saint Lucia/Ministry of Education, Innovation, Gender Relations and Sustainable Development	In-kind	Recurrent expenditures	619,500.00
Recipient Country Government	Gov of Saint Lucia/Ministry of Education, Innovation, Gender Relations and Sustainable Development	Public Investment	Investment mobilized	558,300.00
Recipient Country Government	Gov of Suriname/Cabinet of the President, Coordination Environment/National Environmental Authority	In-kind	Recurrent expenditures	2,310,000.00
Recipient Country Government	Gov of Trinidad and Tobago	In-kind	Recurrent expenditures	3,720,500.00
Other	BCRC Caribbean	In-kind	Recurrent expenditures	600,000.00
Other	Organization of Eastern Caribbean States (OECS)	In-kind	Recurrent expenditures	3,000,000.00
Private Sector	Carnival Cruise Line	Grant	Investment mobilized	20,000,000.00
Donor Agency	International Union for the Conservation of Nature (IUCN)	In-kind	Recurrent expenditures	1,500,000.00
GEF Agency	FAO	In-kind	Recurrent expenditures	11,271,060.00
			Total Co-Financing(\$)	47,041,860.00

Describe how any "Investment Mobilized" was identified

Co-financing from the countries: Recurrent expenditures spent on the management of chemicals and waste as well as direct external budget support for the issue. Co-financing from Carnival Cruise Line: Costs of global food waste discharge/landing reduction program (a significant portion of this is destined for ships principally sailing in the Caribbean region). Co-financing from OECS: Grants received from Norway on the management of plastics. Co-financing from USAID: waste management projects in the Dominican Republic.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)
UNEP	GET	Latin America and Caribbean	Chemicals and Waste	POPs	5,500,000	495,000
UNEP	GET	Latin America and Caribbean	Chemicals and Waste	Mercury	2,000,000	180,000
UNEP	GET	Latin America and Caribbean	Chemicals and Waste	SAICM	500,000	45,000
FAO	GET	Latin America and Caribbean	Chemicals and Waste	SAICM	3,000,000	270,000
Total Grant Resources(\$)					11,000,000.00	990,000.00

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required



PPG Amount (\$)

300,000

PPG Agency Fee (\$)

27,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)
UNEP	GET	Latin America and Caribbean	Chemicals and Waste	POPs	151,250	13,613
UNEP	GET	Latin America and Caribbean	Chemicals and Waste	Mercury	55,000	4,950
UNEP	GET	Latin America and Caribbean	Chemicals and Waste	SAICM	13,750	1,237
FAO	GET	Latin America and Caribbean	Chemicals and Waste	SAICM	80,000	7,200
Total Project Costs(\$)					300,000.00	27,000.00

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)

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)

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



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)
	150,000.00		

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	451.60	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)
Polychlorinated biphenyls (PCB)		152.00		
Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride		3.70		
Tetrabromodiphenyl ether and pentabromodiphenyl ether		6.90		
Highly Hazardous Pesticides		220.00		

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
	69.00		

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

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

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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)
	9		

	9		
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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)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
	9		

	9		
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Indicator 9.6 Quantity of POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
	52,595.00		

	52,595.00		
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Indicator 10 Reduction, avoidance of emissions of POP to air from point and non-point sources (grams of toxic equivalent gTEQ)

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
	319.00		

	319.00		
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Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

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

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9

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

Number (Expected at PIF)

Number (Expected at CEO Endorsement)

Number (Achieved at MTR)

Number (Achieved at TE)

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

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)
Female		1,450,818		
Male		1,450,818		
Total	0	2901636	0	0

Part II. Project Justification

1a. Project Description

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

The request for CEO endorsement below is in line with the original child project submitted as part of the ISLANDS Programme Framework Document (PFD) (GEFID 10185), approved by the GEF Council on 11 June 2019. Consultations with partners at the national and regional levels and site investigations carried out during the Project Preparation Grant (PPG) phase confirmed the initial findings presented in the PFD. The baseline analysis assisted in refining the proposed activities under this project.

The project is being submitted in the context of the ongoing COVID-19 pandemic. As such, the proposal has been adapted to reflect the potential impacts of the pandemic. The COVID-19 pandemic has affected every economic sector in Caribbean SIDS and all segments of society, however with differential impacts depending on age group, gender, disabilities, socioeconomic status and geographic location. Furthermore, the Child Project was expected to be completed in June 2020. However, due to the impacts of the COVID-19 pandemic, which materialized in March 2020 during the key development phases, a six (6)-month extension to the PPG Phase was granted by the GEF to accommodate delays in the finalization of the alternative scenario and the CEO Endorsed Document.

COVID-19 related impacts in SIDS include (but are not limited to): impact on human health; reduced economic growth; significant decline in tourism and remittances, that have led to reduced foreign exchange earnings; reduced income from major income contributing sectors (e.g. tourism, fishery, agriculture, services, etc.); job losses, especially in the informal sector; reduced access to basic services; household food insecurity (often worsening as a result of a decline in the economy and a breakdown in supply chains); fragile healthcare systems that will be stretched further in the short run but could emerge stronger in the medium- to long- term; and women and girls more adversely affected.

Caribbean SIDS' governments have responded to the crisis through rolling national lockdowns and the enforcement of social distancing practices and in some cases, the wearing of facemasks. The impact of COVID-19 has been considered and included as part of the risk analysis for this project. Risks and their mitigation measures have been described in detail in the risk table completed under Section 5.

1a. Project Description.

1) Global environmental and/or adaptation problems, root causes and barriers that need to be addressed

1.1 Global Environmental Problems

The sound management of chemicals throughout their lifecycle and waste is crucial for the protection of human health and the environment. Globally, in 2016, municipal solid waste (MSW) generation was estimated to be 2.01 billion tonnes, and this figure is expected to rise to 3.4 billion tonnes by 2050^[1]. In terms of global waste composition, 44% of all waste is food and green waste, 17% paper, 12% plastics, 5% glass, 4% metal, and 18% other types of waste. In developing countries, organic waste accounts for the largest fraction of all waste. With increasing wealth, the shares of paper, plastic, glass and metal rise; solid waste in OECD states consists mainly of recyclables, followed by organics^[2].

Due to their small size and narrow resource bases, SIDS are import-dependent economies. Limited landmasses mean SIDS also often have very high population densities, for example the Maldives ranks 11th globally with 1,102 individuals per square kilometre^[3] but with a landmass placing it at the 187th position. On a per capita basis, waste generation in SIDS is rising. In 2014 it was slightly lower than in OECD countries (1.29 kg/capita/day, compared to 1.35 kg/capita/day), but as of 2019 it is 2.3 kg/capita/day, 48% higher than that of OECD countries^[4]. However, the large number of tourists often skews the per capita waste generation of the permanent population.

In common with the Pacific and Indian Ocean SIDS, the Caribbean SIDS lack the infrastructure to manage the wide variety of wastes generated by imported products. The disposal of non-biodegradable materials and industrial and agricultural chemicals pose an increasing challenge³.

As SIDS progress so do their import-dependent development pathways. As a direct result, the quantities and variety of products that are being imported (ranging from mercury containing thermometers to plastic packaging, from second hand electronic products to motor vehicles, from agricultural chemicals to industrial chemicals) is rapidly increasing. This is leading to the generation of a large variety of different types of hazardous and toxic wastes which SIDS, including those in the Caribbean, do not have the installed capacity or required treatment facilities to address alone^[5]. Waste volumes are also increasing due to changing consumption patterns, and the disposal of growing levels of imports of non-biodegradable materials.

The disposal of non-biodegradable materials, industrial and agricultural chemicals pose an increasing challenge^[6]. Furthermore, the excess amount of waste produced by tourism^[7], an important economic sector for most SIDS, is posing additional burden on existing infrastructure. In the Caribbean for example, the approximately 75 million-night stays per year, are estimated to generate as much of 166 million tonnes of waste annually⁵. This places additional stress on already limited and often basic landfill/open dumping infrastructure. Additionally, the complexity and hazard of waste streams such as e-waste, pesticides, asbestos, used oil, items containing heavy metals and biomedical wastes is adding pressure and complexity to local waste management systems, since facilities for their treatment and disposal are often not in place⁷. This has led to action in Indian Ocean SIDS, like Mauritius, and Caribbean SIDS like Antigua and Barbuda where important investments have been made in the establishment and operation of municipal waste management systems and related infrastructure, however more complex and hazardous waste streams (HCWM, e-waste, Hg containing wastes, pesticides) still pose challenges and systems for their recycling, treatment and disposal in-country or abroad need to be set up urgently.

In many Caribbean countries, like in the SIDS of the Pacific and Indian Ocean, collection services are inadequate, or nonexistent, and open burning of accumulated waste is widely practiced, or wastes are disposed of in water sources. In many cases the most prevalent method of disposal is open and uncontrolled dumping, which leads to human health problems, as well as risks to the marine ecosystems, and other sensitive land areas and watercourses. The health problems are compounded by the additional risk to human health as a result of the informal waste removal undertaken by waste pickers in the region. Moreover, uncontrolled burning is also typical in uncontrolled dumping sites, resulting in the emission of harmful chemicals such as mercury and dioxins and furans.

There is an urgent need in SIDS, including Caribbean SIDS, to move to integrated waste management. Extensive evidence shows the costs of inaction in SIDS are significant in terms of the economic costs of impacts to health, environment, tourism, and fisheries. In Palau for example, poor solid waste management results in pharmaceutical costs, time in hospital and lost labour costs of over US\$700,000 per year, or US\$36 per individual, per year⁴. The SIDS Waste Management Outlook 2019 suggests that waste reduction can save SIDS municipalities between US\$35 and US\$400 per tonne, depending on the location and the waste management technologies used⁴.

SIDS' environments are particularly vulnerable to pesticides (including POPs and Highly Hazardous Pesticides (HHPs)) damage^[8]. The close physical and cultural relationship of the islands with the marine and mangrove environments makes these countries even more susceptible to the adverse effects of pesticide run-off. SIDS are rich in biodiversity hotspots including primary rainforests and coral reefs. Pollution and sedimentation negatively affect the marine environments by smothering coral reefs, killing fish and reducing the recreational value of beaches. For instance, in 2010 coastal sediments in the Caribbean with high concentrations of chlordecone (a POP used for 30 years in banana production) were identified as the source of contaminated fish and lobsters that local communities depend on. The Global International Waters Assessment^[9] pointed out that the use of agro-chemicals within the agricultural sector is a source of significant damage to both surface and groundwater resources and highlighted the indiscriminate and improper disposal of agricultural wastes (including stockpiles of obsolete pesticides as well as empty pesticides container) as a priority issue.

1.2 Root Causes

1.2.1 Global Root Causes

International economic development in the past decades has improved the livelihoods of many people across the world, including in SIDS, but has also given rise to resource-intensive societies that are not sustainable in the long term. In particular, SIDS globally share a number of characteristics that can be identified as root causes for chemicals and waste issues. Consequently, SIDS governments have recently started dedicating themselves to finding solutions for the most pressing development issues, including the root causes listed below. A sustainable chemicals and waste management programme will serve to alleviate the pressure on SIDS by tackling waste management barriers to sustainable development, and thereby help create the socio-economic room needed to find solutions for these root causes.

1. **largely import-dependent economies:** Due to limited resources, SIDS economies are defined by high imports and relatively low exports. This has led to limited economic opportunities for SIDS and a high dependence on volatile economic sectors such as tourism.
2. **located remotely from global markets and commonly with outer islands spread across vast distances:** SIDS are characterised by a high degree of isolation, sometimes located hundreds of miles from the nearest neighbouring country. Additionally, SIDS are often comprised of tens, hundreds or even thousands of islands which may also be located distantly from each other. This leads to high transport costs not just internationally, but also within SIDS, to ensure all islands benefit from development opportunities. This has led to some internal migration in SIDS in recent years from outer islands to inner islands.
3. **limited available landmass to manage wastes:** Excepting European micro-states, almost all of the world's smallest countries by area are SIDS. Given generally high population densities, this means SIDS have very limited access to land for waste management infrastructure. Paired with geographic isolation and high transport costs, SIDS-generated wastes become a particularly difficult and costly waste stream to manage^[10].
4. **high economic vulnerability to exogenous shocks:** Due in part to their largely import-dependent economies (see above), and their dependence on volatile economic sectors, SIDS economies are highly vulnerable to exogenous shocks. This has been particularly visible during the COVID-19 pandemic, as various SIDS—especially those reliant on tourism—have experienced considerable falls in GDP in 2020, some dropping by as much as 15% or more^[11].
5. **lack of critical mass of people, infrastructure and investments:** Many development solutions are dependent on reaching a critical mass of people, infrastructure and investments. Likewise, waste management solutions are often dependent on a critical mass of waste. Due to their small size, SIDS are unlikely to be able to reach the critical masses needed for conventional development and waste management solutions.
6. **economic migration of qualified individuals (brain drain):** Due to limited opportunities in SIDS, educated individuals will often leave their countries at a young age for higher education or career opportunities, and not return at least until old age. This creates a void of qualified individuals in SIDS to solve pressing development issues. This has been a point of action for many SIDS in recent years with the establishment of regional universities and the diversification of SIDS economies.

1.2.2 Regional Root Causes

During the project preparatory period, the root causes have been further analyzed and the following regional root causes were identified.

1. **Economic dependence on tourism:** The Caribbean region is one of the most tourism-dependent regions in the world. The region caters to tens of millions of visitors every year both through land-based tourism (mainly hotels) and off-shore tourism (cruise ships). The high presence of tourists has led to a sharp increase in waste generation for the region and partially explains the above-average per capita waste generation of Caribbean countries. Furthermore, high dependence on tourism as a volatile economic sector increases the region's sensitivity to exogenous shocks.
2. **High sensitivity to environmental disasters:** Hurricanes, earthquakes and to a lesser extent volcanic activity are a common occurrence in the Caribbean region. Hurricanes are a yearly occurrence and are particularly devastating; large storms have the capacity to cause hundreds of millions or sometimes even billions of dollars worth of property damage in a single year. Additionally, hurricanes are becoming more destructive financially due to increases in population and infrastructure concentration, and the frequency and intensity of storms is increasing due to climate change. All of these environmental disasters tend to cause high amounts of disaster waste which can overload Caribbean countries' waste management systems. The economic cost of environmental disasters also decreases countries' capacities to effectively tackle long-term development issues.

1.3 Barriers to be Addressed

1.3.1 **Global Barriers – Common to all SIDS:** According to the Global Waste Management Outlook (2015)^[12], waste management is recognized as one of the areas for priority attention for SIDS. Despite SIDS economies ranging from least developed country status to middle income, the following barriers to improved chemicals and wastes management are common to all SIDS:

- a. **Lack of regulations and limited capacity at customs level to manage and monitor imports of chemicals contained in products:** Most SIDS lack comprehensive regulatory frameworks and standards to adequately curb and control the influx of products that are challenging to dispose of when they become wastes. As well as improved regulations, institutional capacity building is required to effectively implement and enforce these policy and regulatory frameworks effectively.
- b. **Lack of technical capacity and infrastructure to manage, safely store and dispose of hazardous substances:** Generally, the only disposal option available for SIDS is export, which is expensive and often unfeasible. SIDS therefore require assistance to avoid and minimize the import of products that cannot be treated with the local constraints, while at the same time introducing best practices and technologies fit for SIDS settings to improve the systems, capacity and physical infrastructure to properly manage, isolate, store, dispose and (occasionally) export toxic substances, wastes and products containing hazardous and toxic substances. Improved disposal of hazardous waste, including chemical, medical and electronic waste as well as lead-acid batteries, asbestos and used oil is critical for SIDS, should be considered a top priority requiring coordination between SIDS⁴.
- c. **Limited adequate landfills and poor solid waste management systems:** Many SIDS lack engineered landfills and, in these instances, rely on "dumps" where uncontrolled burning, resulting in releases of unintentionally produced Persistent Organic Pollutants (POPs), is common. In atolls particularly, space available for landfills is extremely limited. While some SIDS do not have functioning waste collection systems, in others, particularly within the Caribbean region, the public administration provides for a municipal waste collection system to transport household wastes to landfill sites. However, this is often hampered by lack of financial resources and/or limited accessibility of remote villages, and is further

compounded by inadequate waste treatment and disposal systems.

- d. **Limited recycling opportunities in SIDS:** Due to small population sizes, geographical isolation and associated high shipping costs, economies of scale cannot be reached. Segregation of waste streams in is still uncommon, meaning that a high percentage of potentially recyclable waste (e.g. compostable material, plastics, paper, glass) is dumped, or ends up in a landfill. Limited human capacity and lack of incentives to encourage recycling, including the absence of legal and regulatory provisions for recycling, economic instruments for citizens and businesses or voluntary agreements with the private sector, are additional constraints to recycling.
- e. **Lack of awareness:** of the broader community of the need to manage wastes, in order to prevent adverse health and environmental impacts. SIDS populations are often unaware of the potentially hazardous nature of many consumer products, and what "proper" disposal constitutes. There is very little public information available in SIDS aimed at educating communities on improved waste management practices.
- f. **Waste generated by the tourism, hotel, agricultural and cruise industry:** For many SIDS, tourism, agriculture and the cruise industry are very important in terms of job creation and GDP. However, the waste generated by the agriculture, cruise industry and the tourism and hotel sector places a significant burden on SIDS' limited infrastructure and makes it even harder to improve the management of chemicals and wastes. For example, Antigua and Barbuda accepts an average of 360 tonnes cruise waste per year and Saint Lucia accepts approximately 1,786 tonnes cruise waste.
- g. **Additional burden of waste generated by natural disasters:** these include disasters such as cyclones, hurricanes, tsunamis, volcanoes and earthquakes. These events add additional waste burden to already fragile waste management infrastructure. In a matter of seconds, a disaster can generate the equivalent of decades of waste⁴, and SIDS require strategies, procedures, methods and facilities to deal with this. Recovery from disasters also diverts public funds from planned investments to emergency response.
- h. **Climate Change and rising sea levels:** In many SIDS, climate change is considered one of the greatest threats to the livelihoods, security and wellbeing of their people. Areas of the Bahamas, Barbuda, Cook Islands, Federated States of Micronesia, Maldives, Kiribati, Marshall Islands, Tonga, and Tuvalu are only a few metres above present sea level and may face serious threat of permanent inundation from sea-level rise. SIDS lack the resources to adequately address vulnerability to climate change. This presents a significant barrier to the sound management of chemicals and wastes as landfills and dumpsites also risk inundation. In addition, poor waste management leads to greenhouse gas emissions, with between 8-10% of annual greenhouse gas emissions in SIDS attributed to poor waste management⁴.

1.3.2 Region-Specific Barriers to the Sound Management of Chemicals and Wastes: Caribbean SIDS face these and several other unique barriers to improved chemicals and waste management. These include:

- a. **Limited information collection and exchange:** Detailed information on the quantities and flows of chemicals and products that may be harmful throughout their lifecycle is seldom collected and analysed by relevant authorities in Caribbean SIDS. There is limited ability of decision makers, for example, and private enterprises to gather, exchange and access information required to drive the reduction in use of chemicals and the resulting wastes. In the agricultural industry, there is also limited technical capacity for pesticide risk assessment and monitoring of highly hazardous pesticides.
- b. **Lack of private sector engagement:** The inability to form economies of scale has always proved to be a deterrent to engaging private sector stakeholders in recycling activities. With regards to e-waste and end of life vehicles (ELVs) this is compounded by a lack of treatment capacity and storage space that leads to inadequate final disposal of this waste stream.
- c. **Lack of chemicals and waste financial mechanisms:** The amount of knowledge regarding how to design financial mechanisms to support reductions in chemicals and pesticides use while building improved production is very limited. There are no practical models that provide governments, producers, and suppliers a framework upon which to formulate financial structures designed to incentivize sustainable practices. There is little access to expertise needed to provide innovative economic models in the region to show that a reduction in the use of pesticides can improve production and profitability, both directly as well as through the reduction of external risks.
- d. **Limited promotion of alternative products:** There are relatively low levels of investment in funding for alternative and sustainable production practices. Private and/or public funding for agroecological research and development is limited. Investment in the promotion of sustainably produced commodities is not sufficient. The ability of governments to access and exchange information and to be able to afford to apply this information is lacking.

In moving the chemicals and waste agenda forward, certain changes must be made to the 'business as usual scenario' that is taking place at present. The key drivers that will inform the strategic positioning in relation to transformation include the government buy in and support of systems such as sustainable agricultural practices, integrated waste management, recycling initiatives and measures to improve extended producer responsibility. Due to the size of the countries, many of these options cannot be implemented sustainably at the national level. The economies of scale in the Caribbean must be analysed and a determination made on the feasibility of such initiatives at the regional level.

The aforementioned root causes, and barriers, together with the resulting problems are analysed diagrammatically in the following problem tree.

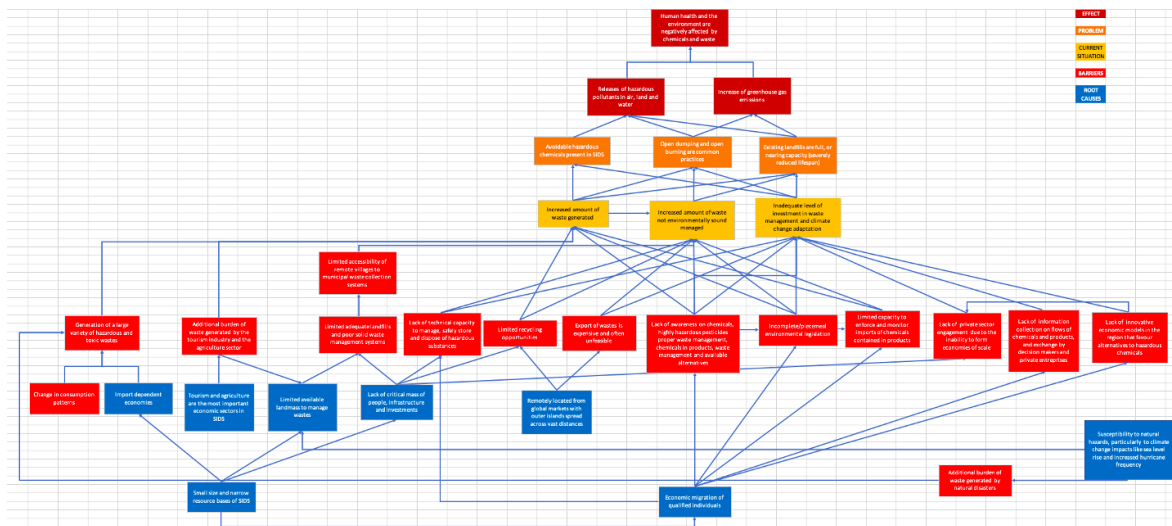


Figure 1: 10279 Caribbean Child Project problem tree

2) The Baseline Scenario and any Associated Baseline Projects

2.1 Global, regional and national baseline scenario

2.1.1 Global baseline scenario:

SIDS are a distinct group of 38 countries across the: Caribbean, Pacific, Atlantic, Indian Ocean and South China Sea (AIMS). SIDS are characterized by their small physical scale, geographic isolation, unique biodiversity, exposure to natural hazards and disasters, limited resource base, remoteness from global markets and small economies of scale. There are multiple drivers and pressures affecting SIDS and hampering their development. These include vulnerability to climate change, local access to potable water, nutrition and food security, energy and transport demand, exploitation of natural resources, local sectoral development, poor management of waste and pollution (including from chemicals), coastal squeeze and loss of ecological resilience.

Globally, development in SIDS is guided by the 2014 SIDS Accelerated Modalities of Action (SAMOA) Pathway, being implemented from 2014-2024. The SAMOA Pathway recognizes the adverse impacts of climate change and sea-level rise on SIDS' efforts to achieve sustainable development as well as on their survival and viability, and addresses economic development, food security, disaster risk reduction and ocean management, and chemicals and wastes management. On chemicals and wastes management, the SAMOA Pathway recognises the need to reduce, reuse, recycle, recover and return approaches according to national capacities and priorities *inter alia* through capacity-building and environmentally appropriate technologies[13]. A SIDS Partnership Framework was also established, designed to monitor progress of existing partnerships, and stimulate the launch of new, genuine, and durable partnerships for the sustainable development of SIDS[14].

In September 2019, a high-level meeting convened at UN Headquarters, NYC, to review midterm progress in implementing the SAMOA Pathway[15]. The political declaration from the meeting calls upon relevant institutions, funds, and facilities to review their financing instruments to maximize accessibility, effectiveness, transparency, quality, and impact. It also underscored the need to foster enabling environments to attract foreign direct investment, and strengthen capacity of SIDS to effectively participate in the multilateral trading system¹².

A midterm review of progress on the SIDS Partnership Framework was also completed[16], addressing the impact of partnerships on beneficiaries and sustainable development of SIDS, as well as challenges faced, and lessons learned. The report concluded further attention is needed to address: the multi dimensions of poverty; inclusion of marginalized groups; issues of market development; issues related to health and noncommunicable diseases; gender considerations, particularly in regard to income inequality; and addressing sustainable consumption and production holistically in the context of small island environments.

The fourth meeting of the UNEP Assembly led to further commitment of governments to act to improve the management of chemicals and wastes, in line with the SAMOA pathway. These include the resolutions related to marine plastics and marine litter; sustainable consumption and production, including green procurement; addressing single use plastic pollution; the environmentally sound management of chemicals and wastes; and sound management of chemicals and wastes[17].

The opportunity for SIDS to learn from each other to address common issues is lacking in the current project-by-project landscape. As identified in the SIDS Waste Management Outlook (2019), SIDS require opportunities to cooperate with other SIDS to learn from each other's experiences by working regionally and globally to make headway and improve chemicals and wastes management⁴.

SIDS in each region are at different stages of development and have varying levels of capacity to address the challenges posed by chemicals and wastes. For example, a number of the Indian Ocean SIDS have existing commercial waste management companies operating at national level generating knowledge on the best mechanism for contracting of services over multi-year contract periods. The Pacific has a regional overarching policy framework under the "Cleaner Pacific 2025" programme which sets the regional context under which all Pacific SIDS are set to manage chemicals and wastes. The opportunities for the Pacific and Indian Ocean SIDS regions to exchange experience and knowledge with the Caribbean region, to ensure a general raising of standards for management of chemicals and wastes exist and need to be acted upon. All SIDS, however, share a similar development trajectory. They are all highly vulnerable to climate change, which threatens SIDS population's health, livelihoods, food security, water supply, human security, cultural heritage and economic growth[18]. Simultaneously, common opportunities exist across SIDS to mitigate vulnerability and dependency.

One of the world's fastest growing sectors, tourism, is becoming a main economic contributor for many SIDS, creating employment, and generating foreign exchange earnings (equivalent to 20% of GDP in two fifths of SIDS where data is available)⁴. That being said, the sector also generates large amount of wastes and draw on already limited local resources and as such requires regulation to prevent unmanageable buildup of wastes and hazardous materials in SIDS. The situation is the same with the agricultural sector.

Globally, development in SIDS with relation to agriculture is guided by the Sustainable Development Goals that call for *inter alia* efforts to promote sustainable agriculture (Goal 2, in particular targets 2.3; 2.4 and 2.A). there is a focus on ensuring access by all people, in particular the poor and people in vulnerable situations, to safe and sufficient food, doubling the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples and family farmers and ensuring secure and equal access to productive resources and inputs, knowledge, financial services, markets and ensuring sustainable food production systems. However, achieving these goals includes agricultural research and extension services and technology development in order to enhance agricultural productive capacity. In this goal, a call for a reduction in the use of highly hazardous pesticides would make a significant contribution by reducing exposure to, and hence adverse impacts on health and the environment from, these pesticides.

2.1.2 Regional baseline scenario:

2.1.2.1 Regional summary of waste generation and distribution

Hazardous chemicals and waste systems in the Caribbean region are in the process of modernization, but practices vary based on income level and other limiting factors. The project countries generate over 1.5 million tonnes of waste on a yearly basis, with significant variation between individual countries as seen in Table 1. The municipal per capita waste generation in the project countries shows an average that in some cases exceeds the regional and global average as shown in Figure 2 below. The project countries also show significant amounts of quantities/emissions of pesticides, POPs and mercury products as seen in Table 2.

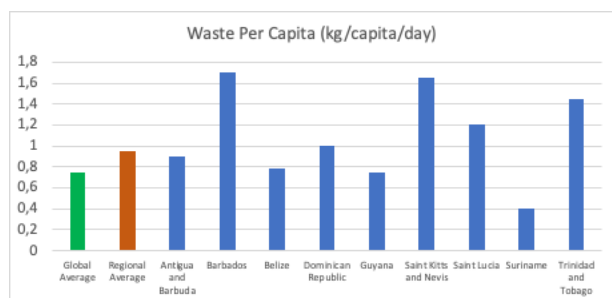


Figure 2: Waste Per Capita (Kg/capita/day) for the participating countries

The table below shows the distribution of the selected waste types and the amounts generated by each project country.

Table 1 Waste Distribution per Country by Tonnage (Tonnes/yr)

Waste Type	ANU	BDOS	BZE	DR	GUY	SKN	SLU	SUR	TT
WEEE ⁽¹⁾	1,735	7,956	6,931	73,878	9,184	2,046	3,478	2,099	47,288
Plastics	18,062	50,839	7,634	156,226	16,800	1,380	10,439	18,181	139,460
Agriculture Plastics	34.2 ⁽²⁾	0.213 ^{**}	29.17	nd	5.38	0.060 ⁽²⁾	30	12.31	24
End of Life Vehicle (ELV) ⁽³⁾	3,813	7,338	7,801	116,666	5,145	1,609	4,617	9,878	39,170
Waste Oil	232.7 ⁽⁴⁾	476.4	211	10,530	826	188	233	817.8	99,120 ⁽⁵⁾
Used Tires	1,330	2,698	1,200	15,057	4,680	1,066	1,322	4,632	8,602
Used Lead Acid Batteries	471	947	425	102,700 ⁽⁶⁾	1,657	376	468	1,640	5,861 ⁽⁵⁾

Notes:

¹ Acosta & Corallo (2020) – Trade Flows report on EEE/WEE, GEF ISLANDS PPG

²Estimates as actual data is not collected or is not readily available for this waste stream.

³Acosta & Cutina (2020) – Final Recommendations report for ELVs, GEF ISLANDS PPG

⁴This does not include the quantities of sludge, oil rags and filters which end up in the landfill per year.

⁵Estimates as actual data is not available or has not been willingly supplied

⁶Estimate based on quantity of ULABs exported as per the Dominican Republic's National Report to the Basel Convention (2016)

Table 2 Status of Pesticides, POPs and Hg products in each country (kg), based on NIP and MIA data for 2016¹

Type		ANU	BDOS	BZE	DR ⁽²⁾	GUY ⁽³⁾	SKN	SLU	SUR	TT
Pesticides		Annual imports of pesticides into the region are estimated at approximately 10,000 tonnes. ⁽⁷⁾ In 2016, 209 tonnes of obsolete pesticides from 8 project countries were disposed abroad under the GEF/FAO 5407 project. In a separate GEF funded project in Belize 23.93 tonnes DDT, 4.3 tonnes solid pesticide and 2,000 L liquid pesticide was disposed abroad in 2017.								
PBDE in use (2016)	C-Penta BDE	386	48	734	nd	nd	nd	557	620	2,894
	C-Octa BDE	210	665	253	nd	nd	95	378	130	nd
HBCD		nd	nd	nd	nd	nd	nd	nd	16,795	nd
PFOS		64	23	0.35	nd	nd	79	772	2,756	nd
PCBs		A rapid inventory assessment of obsolete equipment in 2016 (except Guyana and DR) identified 46.54 tonnes of PCBs oil and contaminated equipment for disposal abroad. The process is ongoing with disposal expected by 4Q 2020. Another inventory is underway in 4 project countries (ANU, BZE, SLU and SUR) as part of the GEF 5558 project, with disposal expected in the next year. Dominican Republic and Guyana estimates 114 tonnes (2009 NIP) and 20 tonnes (2013 NIP) of PCBs and equipment, however more detailed and updated assessments are needed.								
Hg Products ⁽⁴⁾		24	nd	nd	38,704	1,505	30	49	554	440
UPOPs g TEQ ⁽⁵⁾		0.89	32.68	4.48	160	18.9 ⁽⁶⁾	0.06	1.07	77.70	23

Notes:

¹Quantities/Emissions are likely underestimated due to missing/incomplete datasets.

²Data source is the most recent NIP (2009). UPOPs emissions are for 2005 and calculated using the old UNEP dioxins/furans toolkit

³Data source is the most recent NIP (2013). The NIP is currently ongoing an update, with expected completion in 2021.

⁴Hg in its liquid form is also used in the ASGM sector in Guyana and Suriname. The total estimated Hg releases for those countries inclusive of Hg and Hg Products are 29,688 kg of Hg in Guyana and 174,710 kg of Hg in Suriname.

⁵UPOPs emissions data in g TEQ/annum

⁶Revised emissions based on the 2013 UNEP Dioxins/Furans toolkit.

⁷Country Presentations at the 19th Meeting of the Coordinating Group of Pesticides Control Boards of the Caribbean. Antigua and Barbuda June 2-3, 2014

nd – no data available at this time.

2.1.2.2 Regional summary of hazardous chemicals and waste management situation

1. Hazardous chemicals

There are currently two main GEF-funded regional projects focused on the management of hazardous chemicals, namely the sustainable management of POPs (GEF 5558) and management of pesticides (GEF/FAO 5407) and which are due to be completed in 2021/2022. These projects collectively address legislation, action plans, training and capacity building, information storage, storage and treatment facilities, source separation, alternatives and communication and awareness and disposal of stockpiles.

There are no facilities available in project countries which carry out the environmentally sound management (ESM) of POPs and other chemicals. Therefore, the practice of collecting and storing obsolete chemicals pending export for ESM is common to all countries. The most recent consolidation and export was done in 2016/2017. The Dominican Republic exported 21 metric tonnes of PCBs to France for recovery in 2013; other transformers with PCB-containing oil are stockpiled but details on the quantity could not be obtained. It is noted that their storage is guided by the management protocol established under the Dominican Corporation of State Electric Companies' Network Rehabilitation Programme. The adequacy of temporary storage facilities varies across the project countries with most, except for Dominican Republic, Guyana and Belize, having none or very basic infrastructure. An activity of the GEF 5558 project assessed the temporary storage facilities for hazardous chemicals and waste in the four OECS project countries and will develop detailed engineering designs for a model temporary storage facility and country specific design for Antigua and Barbuda, since they will co-finance its construction. The upgrade will meet international standards and will consider current and future capacity needs.

2. Hazardous chemicals in agriculture

Annual imports of pesticides into the region are estimated at approximately 10,000 tonnes^[19]. A conducted field survey with the purpose of collecting chemical and non-chemical alternatives targeted three main types of pesticides^[20] namely nematocide, herbicide and insecticide. The survey revealed that herbicides play a strong role in weed management across the Caribbean, except for Trinidad and Tobago, where 20% of respondents recorded no chemical pesticide use^[21].

Several potential Highly Hazardous Pesticides (HHPs) have been identified in 7 out of 9 project countries by FAO (Table 3) as well as through surveys carried out by the Rotterdam Convention Secretariat. Priority pesticides, which have been identified in several countries, include the herbicides paraquat and glyphosate, and the insecticides methomyl, diazinon and malathion.

Table 3 Priority potential HHPs identified

Country	Pesticide active ingredients for priority action?	In which crop (or non-ag contexts) is each mainly applied?	Against which target pest or disease organisms or type of weeds?
Antigua & Barbuda	Glyphosate methomyl malathion	Food (veg) & non-food crops Fogging (public health)	Weed control Insects Mosquitoes
Barbados	paraquat; 2,4-D methomyl; carbaryl malathion	Food (veg) & non-food crops Fogging public health	Weed control Insects Mosquitoes
Dominican Republic	methomyl; chlorpyrifos; diazinon	food crops	Insects
Guyana	Paraquat Diazinon; chlorpyrifos	All crops	Weeds insects
Saint Lucia	Oxamyl (vydate) Paraquat (gramoxone) malathion	Bananas Public health vectors	Nematodes/ borers Weed control Mosquitoes
Suriname	glyphosate; paraquat imidacloprid; diazinon	Food & non-food crops	Weed control Insects
Trinidad and Tobago	glyphosate; paraquat; 2,4-D chlorpyrifos; spinosad [spinosaurs]; abamectin diamethomorph; mancozeb; Bellis (boscalid and pyraclostrobin)	Mainly veg crops	Weed control Insects Fungal diseases

With the expansion of the global trade in agricultural commodities, food quality and food safety have become critical to both export and import countries. Pesticide residues in food are a major concern related to food safety. The Maximum Residue Limits (MRLs) are commonly used all over the world as the maximum acceptable pesticide residue levels in food. Food safety standards, e.g. pesticide MRLs, are an increasingly important issue in the region for safeguarding domestic consumers and for facilitating the international trade of agricultural products.

Poor pesticide management can result in pesticide residues in food exceeding the MRLs set by international standards like the Codex Alimentarius. Lack of adherence with the pesticide residue regulations published by the European Union (EU), the USA and Japan could affect commodity trade. This is well reflected in the European Union report^[22] on pesticide residues in food in 2017. In this report, the Dominican Republic and Suriname were among the 12 countries with the highest MRL exceedance rates (more than 10% of the samples, more than 40 samples analyzed) reported in 2016 and 2017. Furthermore, according to the Rapid Alert System for Food and Feed^[23] of the European Union, in the period between 2015 and 2019 there were 64 notifications due to pesticide residues for the Dominican Republic and 4 notifications for Suriname. For the other islands, no notifications could be found for this time period. The main products affected were beans, peppers and mangoes.

A preliminary hazard based analysis of 18 pesticide compounds, which were identified as pesticides of concern in the Caribbean islands, was conducted using toxicity data and environmental classifications from the Pesticide Property Database^[1]. Regarding human health, the ECHA^[2] database was consulted, applying the Globally Harmonized System^[3] on labelling chemicals^[4].

4 out of the 18 compounds revealed a high persistency in soils, 6 moderate and 8 low persistency. Persistent pesticides can have long lasting effects on soil functions including soil fertility, as well as effects on the crops grown in the polluted site. One compound revealed high toxicity to soil organisms. The use of agrochemicals by smallholder farmers has been cited as a concern for the sustainable use of soil on the islands. A major cause of soil degradation is acidification caused by the overuse of agricultural chemicals mainly in cropland areas, such as herbicides used in land clearing, pesticides, and mineral fertilizers^[5].

These baseline findings can be directly linked to the "CSIDS-SOILCARE Phase1/ GEF ID 10195: Caribbean Small Island Developing States (SIDS) multicountry soil management initiative for Integrated Landscape Restoration and climate-resilient food systems" project. This project will support the improvement of soil management and soil organic content and the minimisation of the use of agro-chemicals, as well as attract private sector investment, in SLM.

^[1] PPDB; <https://sitem.herts.ac.uk/aeru/ppdb/en/>

^[2] ECHA <https://echa.europa.eu/information-on-chemicals/registered-substances>)

^[3] GHS 2019, https://www.unece.org/trans/danger/publi/ghs/ghs_rev08/08files_e.html

^[4] These parameters are indicators to provide a general indication of hazard only. They are either based on the phys-chemical properties of the chemical or on endpoints deriving from toxicity tests with standard fish species and do not take into account the local environmental conditions, the field application rate, application timing or formulation (exposure). Therefore, it cannot be taken as a substitute for a full risk assessment

^[5] Grenada Land Degradation Neutrality Report, 2015 https://prais.unccd.int/sites/default/files/ldn_report_unccd/grenada%20ldn%20country%20report.pdf

The availability of biopesticides as alternative control measures to synthetic pesticides is limited in the Caribbean Region. As many Caribbean farmers are small holder farmers with less than two hectares of farmed land, the preparation of homemade insecticides is common. An FAO survey on this matter conducted in 2018 revealed that 18% (84 farmers) in the six Caribbean survey countries provided examples of homemade biopesticides^[24]. However, there is a lack of evaluation of efficacy of homemade biopesticides. Despite high use of homemade biopesticides and bioherbicides, commercial synthetic herbicide use for weed control remains high across the Caribbean region.

3. Municipal Solid Waste Management

Waste management practices in the project countries remain less than adequate in most cases. Whilst improvements are being made in all countries, there are still critical areas that require addressing. These include disposal practices, source separation and recycling, leachate treatment and energy recovery.

The disposal of waste in each of the project countries is through landfilling methods, either of the open type, converted landfill or sanitary landfill. In Saint Lucia, four (4) pyrolysis units will be commissioned before the end of 2020; however, waste incineration, waste-to-energy have only been considered in two other Caribbean countries, namely Barbados and Trinidad and Tobago. Anaerobic digestion of waste has not been considered by any Caribbean country.

It should be noted that whilst countries such as Barbados, Guyana and Belize have developed and are currently utilizing engineered sanitary landfills for the final disposal of waste, some others such as Saint Kitts and Nevis and Antigua and Barbuda have reverted to open dumpsites because their landfill sites have reached capacity. In Barbados, two satellite quarries were opened to receive construction and demolition waste and relieve the pressure on the main landfills. In Saint Lucia, the Deglos Sanitary Landfill is presently operating at sub-optimal conditions and through the GEF 5558 project actions will be undertaken to improve its operations and the Vieux Fort Solid Waste Management Facility has been transitioned into the Vieux Fort Waste Transfer Facility. Trinidad and Tobago, Suriname and Dominican Republic do not have any sanitary landfills, with the former at the planning stages of constructing a new engineered landfill site at Forres Park. Suriname has detailed engineering designs and plans for a new engineered landfill at Ornamibo; however, the landfill requires funding for its construction. In the Dominican Republic, all landfills are open type and most are located near to environmentally sensitive areas, such as aquifers, rivers, streams and coastal areas. The newly instated administration has indicated its intentions to formalise several dump sites across the southern part of the country, but work towards this initiative is only being conceptualised.

Most of the existing landfills have compactors at the sites to ensure optimal compaction of waste and the extension of the life of the landfill; however, several of these sites do not have water tenders for dust and fire controls. This situation increases the risk of prolonged landfill fires and increases the opportunity for production of Unintentional Persistent Organic Pollutants (UPOPs).

Since all countries lack any policy or regulatory directive on tourism waste (Belize is the notable exception), demolition waste and disaster waste, they are sent directly to the landfills or, as often the case with disaster waste, piled and burnt near to the disaster site.

Informal sector involvement varies across countries, with only Barbados and Belize able to successfully tackle this social problem. In the other project countries, the number of waste pickers at disposal sites are generally less than 30 individuals, except for Trinidad and Tobago and Dominican Republic where it is much higher, approximately 400 individuals.

4. Hazardous Waste

All project countries' solid waste authorities have various initiatives to manage hazardous waste; however, they are constrained by an inadequate regulatory environment and poor infrastructure and consequently only a few hazardous wastes streams are managed. A registration and permitting system for generators of hazardous waste does not exist in any project country, although recently drafted legislation in Trinidad and Tobago and the Dominican Republic, when instituted, will address this issue. As it relates to disposal, of the three project countries with an engineered landfill, only Belize has a dedicated cell for hazardous waste, which is underutilized as a result of some gaps on collection and the types of wastes allowed under the Hazardous Waste Regulations, 2009. In some project countries, certain types of hazardous waste (asbestos and medical waste) are encapsulated and buried separately on the landfill. In instances where the hazardous waste is treated by incineration by a private entity, the ash is sent to the landfill where it is comingled with regular waste.

Waste management in rural areas is typically challenging and more so in countries with a large geographical area like Belize, Dominican Republic, Guyana and Suriname. The solid waste management authorities of these countries have acknowledged that there is lower implementation of solid waste management practices in these areas. Rural areas are characterized by a combination of lower per-capita solid-waste generation rates and equal or higher hazardous-waste generation rates than urban areas[25]. Thus, the fraction of hazardous waste in a rural landfill may be larger than that in an urban landfill. In Guyana, the EPA and Ministry of Communities have recognized as a priority the closure of dumpsites and the need for a more modern, appropriate manner to manage waste which will have fewer negative impacts on human health and the environment. In mid-2019, Belize received a grant from the IDB, through the Japan Quality Infrastructure Initiative, which will act as the second phase of the Solid Waste Management Project and has among one of its three objectives the design of a system to facilitate solid waste collection and transportation in rural villages for final disposal in the Mile 24 Regional Sanitary Landfill.

There is an emerging concern that due to international health and safety policies and guidelines in the international transport sector[26] (airlines and cruise ships) associated with the COVID-19 global pandemic, there may be increased strain on the hazardous waste management sector. It is expected that service providers will be (i) providing disposable PPE (e.g. masks, towels, gloves and tissues) for customers and staff and (ii) increasing the use of chemicals during constant sanitisation efforts. This concern is expected to be significant in several project countries (e.g. Caribbean Airlines in Antigua and Barbuda, Barbados, Guyana and Trinidad and Tobago) which serve as major ports of call and aviation hubs where there is the existing responsibility for waste management and/or disposal. This magnifies the already existing need for the management of ship-generated waste in the region and compliance in according to international standards in the region[27].

There is also a recognised need for the current waste management systems of the region to address other priority and emergent waste streams such as disaster waste[28]. The exacerbation of climate change issues and related increased intensity and frequency of natural disasters have been directly recognised in the Caribbean islands[29]. As such, there is a recognised need to address the preparedness of the islands to appropriately mitigate and manage the post-disaster wastes/debris, which can evolve into human health and environmental concerns if not properly addressed[30]. In Barbuda, whilst quantities not available, the lack of a strategy has seen the development of indiscriminate burning of the post-disaster waste following Hurricane Irma in 2017. The need to 'Develop and implement a debris and waste management plan' was recognised as a priority following the World Bank's Recovery Needs Assessment[31]. Dominica, whilst not a project country under this child project, provides a recent snapshot of this issue, whereby the amount of debris generated after Hurricane Maria was approximately 4 million m³ and the projected amount for the years 2030 and 2050, reaches up to 5 and 6 million m³ of debris respectively if another Category 5 storm strikes the island. Key findings of the by the UN Environment / OCHA Joint Unit mission to Dominica included the need to 'develop a clear long-term waste management strategy' including the aspects for chemicals and hazardous waste management[32].

5. Recycling

All countries have some recycling initiatives, some encouraged by regulations, but most are driven by entrepreneurial activities within the private sector. Of the project countries, Barbados, Suriname and Trinidad and Tobago possess elaborate facilities for the processing of waste materials prior to shipment to recycling companies. In other countries, there are only basic amenities for recycling, such as storage facilities as well as baling/shredding machines. Recycling rates are highest for materials such as aluminium, paper, and plastic. All municipal waste in Barbados passes through the well-established SBRC who diverts the recyclable portion (paper and cardboard, glass, beverage containers, other plastics and metals) to private recyclers for exportation. Suriname has a privately owned recycling facility, AMRECO, who collects and processes plastics, cardboard and aluminium cans prior to export. They utilize a hybrid collection system (drop off and collection from the generator), owing to high transportation costs. In Trinidad and Tobago, the state-funded project, Recyclable Solid Waste Collection Project (iCare), is geared towards increasing public awareness and participation in recycling of beverage containers and establishing the infrastructure necessary to sustain a national recycling system in anticipation of the passing of the Environmental Management (Beverage Container) Regulations, 2019. Approximately 60,000 kgs of recyclables are collected and processed quarterly. The programme is funded entirely by the Green Fund and does not require the consumer to pay a disposal fee. SWMCOL and some municipal corporations piloted some localized curb side collection of recyclables; however, the sustainability of this initiative is unclear since there is no self-financing mechanism.

Antigua and Barbuda and Saint Lucia have structured but more basic processing recycling facilities while in Belize, Guyana and Saint Kitts and Nevis, it is mostly done on an ad-hoc and very limited scale. All are private sector initiatives.

The Institute of Applied Science and Technology (IAST) (public sector) in Guyana has successfully operated several pilot-scale recycling programmes involving domestic and industrial solid wastes, which it is currently working to commercialise. These include production of roof shingles/tiles from waste high-density polyethylene (HDPE) plastics and sawdust, processing of used tyres to produce crumbed tyre which is combined with rubber and has been used to surface the Demerara bridge and the creation of activated carbon from coconut shells to replace the use of mercury in recovering gold during the mining process. Additionally, the Ministry of Public Infrastructure is in the process of installing a new 160 tonne per hour asphalt plant that will be able to utilize waste tyres along with plastic bags and plastic bottles.

7. Waste Electrical & Electronic Equipment (WEEE)

The estimated WEEE generation for 2020 for all project countries is 154,594 tonnes, with the highest generation in the Dominican Republic (48%) and Trinidad and Tobago (31%). Due to challenges in obtaining data, WEEE generation was based on import data from the Trademap database for selected EEE 4-digit HS codes and categorized based on the EU Framework Directive, with assumptions on lifespans derived from previous WEEE assessment in Suriname and Trinidad and Tobago (BCRC-Caribbean, 2013, 2014). Four categories of WEEE accounted for approximately 80% of the total WEEE generated, namely large household appliances (LHA) (32%), consumer equipment (CE) (30%), IT and telecommunications equipment (IT&T) (11%) and electrical and electronic tools (E&ET) (9%). PBDEs contained as flame retardants in plastics of TV and computer casings, and PCBs, are present mainly in categories IT&T and CE. The categories lighting equipment (LE) (2%) and monitoring and control instruments (M&CE) (3%) may include mercury components, regulated by the Minamata Convention, such as mercury-containing energy efficient lights and primary batteries.

WEEE management in the project countries is mainly undertaken by the private sector. Barbados is the only country where there is some support from the Government whereby e-waste is collected by SSA and delivered to the privately operated SBRC who then diverts the e-waste to private recyclers.

None of the project countries have source separation policies for e-waste therefore the onus is on the generator to engage a private recycler, which means the majority of e-waste enters the landfills or, as is often the case with government agencies, is stockpiled in warehouses. Smouldering of e-waste and cables by the informal sector at landfill sites is a common occurrence in the project countries and was identified in their updated NIPs.

In all project countries, except Dominican Republic, there is private sector involvement (mostly unregulated), typically to accept the e-waste (for a fee), dismantle to various degrees and export the materials recovered. The discarded material, including the plastics, are sent to the landfill or illegal dumpsites. While none of the countries adequately manages the lifecycle of EEE, three countries (Barbados, Saint Lucia and Trinidad and Tobago) have progressed in certain aspects, and in Suriname the Bun Suni Foundation recently received a grant from the UNDP, which is currently being used to assess companies for e-waste management potential. In Barbados, in addition to involvement of SSA, who greatly increases the collection rates of e-waste, there are two recycling facilities which coordinate directly with SBRC, namely Caribbean E-waste Management Inc, who exported 40 tonnes on average/per annum, although they do not accept certain categories (LHA, MD and LE), and B's Recycling, who exported 2 tonnes in 2019. Both companies undertake manual dismantling and some refurbishment. Greening the Caribbean in Saint Lucia accepts all WEEE except refrigerators and exported 600 tonnes between 2015-2019. Trinidad and Tobago has at least three (3) companies who collect, dismantle and export recovered materials from WEEE. Information was obtained from only one (1) company, Piranha Ltd, where they indicated they export 4 containers per year, in accordance with the Basel Convention procedures. The company either dismantles and exports (without a broker) or refurbishes and donates (estimated 85% is repaired for donation).

A key consideration for all private sector companies is their financial sustainability, which is influenced by external market prices, and when these prices are too low, the companies resort to storing the collected WEEE on their compounds until the markets are agreeable. Storage space is very costly, and this is compounded in project countries with lower WEEE generation rates, where the timeframe to acquire a reasonable export quantity also becomes a factor.

8. End of Life Vehicles (ELVs)

The estimated ELVs generation for 2020 for all project countries is 196,037 tonnes, with the highest generation in the Dominican Republic (60%) and Trinidad and Tobago (20%). The management practices of ELVs is heterogenous in the project countries, from a formal public-private mechanism in Antigua and Barbuda and Saint Kitts and Nevis, to informal private sector driven or acceptance at public landfills in Belize, Barbados, Saint Lucia and Trinidad and Tobago and finally where there are no practices in place (Dominican Republic, Guyana and Suriname). In all countries depollution and dismantling is carried out in a rudimentary manner and at a basic level. In Antigua and Barbuda, the plant receives, on average, 50 ELVs (cars) per week and they can bail about 200 per week. In January 2020 the government undertook a project to collect derelict vehicles, collecting an estimated 5,000 to date, which will be sent to the processing plant. The Saint Kitts and Nevis government has had an exclusive arrangement with Enclave since 2018 to collect ELVs and scrap, process and then export the metal components to NuCor Steel in the USA. Approximately 5,000 – 6,000 tonnes of scrap metal were exported. There is a discontinued private sector initiative in Saint Lucia by Renew Saint Lucia Inc. where users were paid to bring in their ELVs and the dismantled components were exported; however, without Government or other financial assistance, the endeavour was not sustainable. For the remaining countries, ELVs treatment is largely done by scrap metal dealers to obtain certain valuable components such as scrap metals, waste oils and used batteries; however, there is no data collection system to differentiate ELVs from other sources. In all project countries, the hazardous components of the ELVs, which are comingled with non-valuable components, are mostly disposed in landfills, burnt or illegally dumped.

Several countries have collection programmes for automotive waste oils, which are reprocessed for use in local industries (Antigua and Barbuda, Barbados, Belize, Saint Lucia and Trinidad and Tobago) or stored in holding tanks/pits at the landfills (Saint Kitts and Nevis). Trinidad and Tobago and the BCRC-Caribbean have embarked on a demonstration project for the establishment of a small-scale waste oil processing facility for the island of Tobago. Once successful, this project can be replicated within other countries. Collection rates are generally low due to limited investment by the private and public sectors and since it is mostly unregulated there is virtually no enforcement of good practices. Overall, the estimated annual regional quantity of waste oils from ELVs is 102,104 tonnes.

Used tyres is a major waste management issue in the project countries, generating on average 25,530 tonnes annually, and whilst the disposal management is unregulated, the solid waste management authorities in some countries have initiated some management programmes. Antigua and Barbuda, Saint Lucia and Trinidad and Tobago have a tyre shredder at each of their landfills where they collect and store used tyres and, in Guyana, a new asphalt plant will utilize waste tyres. Collection rates are generally low and the crumbs from the tyre shredder are buried in the landfills. Barbados collects and stores used tyres at their Mangrove Landfill and are in the process of purchasing a tyre shredder and developing a sound management plan for the crumbs. In the Dominican Republic, tyres are used as a secondary fuel source at a cement kiln, collected through informal means. The privately owned cement kiln in Trinidad and Tobago has shown interest in using waste tyres and oil as a source of secondary fuel; this is in the planning and approval stage.

9. Plastics

Across a sample of Caribbean countries, an estimated 322,745 tonnes of plastic go uncollected each year, resulting in 22% of households discarding waste in waterways or on land where it can end up in waterways (World Bank). According to the United Nations Environment Programme (UNEP), 92% of marine litter in the Caribbean comes from land-based sources, as compared to the global average of 80%.

Management of plastics is a relatively recent (5-10 years) initiative in the project countries and is mostly related to single-use plastics. Three (3) project countries, Dominican Republic, Suriname and Trinidad and Tobago, have more elaborate processing plants for plastic waste. AMRECO in Suriname collects mainly three (3) types of plastic waste (PET, HDPE and LDPE) and shreds to produce plastic flakes which are exported to China, and more recently other countries in Asia. The flakes are separated by source (pre- and post-consumer and post-industrial), type of plastic and colour. In 2017, approximately 210 tonnes of plastics flakes were exported to China; this volume is estimated to be <10% of the plastic packaging imported to Suriname. Foundation Suresur is an NGO which focusses on the collection of plastic bottles and aluminium cans (est. 60 tonnes/year), particularly in the rural interior areas, and delivers to AMRECO for further processing. In 2019, there was indication that a Chinese owned plastic recycling company will be established in Suriname within the next 2 years. Very few details were available; however, it appears the company will have advanced techniques to recycle plastic into the raw material. The company will receive pre-processed or bulk material from plastic recyclers such as AMRECO and other facilities in the Caribbean but is not expected to accept PET or PVC. The estimated processing capacity will be 200-500 MT/month of plastic waste.

Trinidad and Tobago has the first PET wash plant in the English-speaking Caribbean, producing 99.5% pure high-grade PET flake, which is used as a raw material in the manufacturer of fabric, carpets and stuffing for toys. The recycling facility, which is run by state-owned SWMCOL is supported by a PET Sort plant, located at its Guanapo Landfill Site in Arima. At this sorting plant, commingled recyclables are sorted into its components: PET, HDPE, glass and aluminium cans. The recyclables collection system is largely supported by the iCare project which has over 600 collection points nationally. There are also several private entities involved in recycling, but operational data could not be obtained.

In the Dominican Republic, plastics, glass, aluminium and cardboard are recycled. However, due to gaps in the collection of resources, 78% of resources generated are not used and therefore the recycling plants only operate at 40 to 55% of their total installation capacity, which is just over 260,000 tonnes per year. In the remaining countries, there are small scale recovery facilities which perform limited pre-processing (baling) prior to export. ABWREC in Antigua and Barbuda formed a partnership with the Government to facilitate collection of recyclables and they ship approximately 18 tonnes/year of plastics. In Belize, Mile 8 Recycling exports approximately 1,000 tonnes/year; however, with depressed market prices, they developed basic design plans to construct a plastic lumber plant, based on existing ones in nearby Guatemala, but are seeking funding and collaboration with the Government.

Saint Lucia is participating in a sub-regional project, RePLAST-OECS Pilot Plastic Recycling Project, which is a two-year public-private initiative, being implemented by UNITE Caribbean and is aimed at setting up an incentivized plastic waste collection and recycling scheme. The plastic collected (PET and HDPE) will be exported to a recycling plant, initially in Honduras and Martinique in the future. To date, 11,793 kg of baled PET bottles were shipped from Saint Lucia to Honduras. The intent is to replicate the programme in other OECS countries.

Belize launched their Marine Litter Action Plan in September 2019, which especially addresses plastic pollution and includes actions such as sustained long-term outreach campaign, development and implementation of legislation, and reduction in land-based sources of pollution. Belize was selected as the 'incubator country' for the Caribbean and thus their experience and solutions will be shared with the other Caribbean countries.

2.1.3 National baseline scenarios:

Caribbean countries share a common development trajectory with other SIDS globally as import dependent economies. However, there are nuances among Caribbean countries, including the nine (9) participating countries, which impacts their position along that trajectory.

During the project preparation phase, a comprehensive national review was undertaken to assess each of the nine (9) participating countries' status and progress on chemicals and waste management. These reviews also sought to identify the key priorities for each country at a national level. Each country assessment provides a snapshot of basic country data, waste statistics, legislative environment, and other relevant activities currently being undertaken in each project country.

The national baseline is presented below as follows:

- a. Status of Ratification of Chemicals and Waste Management Conventions
- b. Principal hazardous chemicals and waste legislation in each country
- c. Assessment of the regulatory environments
- d. Institutional assessment

a) Status of Ratification

The project countries are at varying stages of ratification of the BRS&M Conventions. Table 4 below highlights the status of each country.

Table 4 Status of Ratification of Chemicals and Waste Management Conventions

Target Country	Basel	Rotterdam[33]	Stockholm	Minamata[34]
Antigua and Barbuda	1993	2010	2004	2016
Barbados	1995	1998(signature) (no entry into force)	2004	-
Belize	1997	2005	2010	-
Dominican Republic	2000	2006	2007	2018
Guyana	2001	2007	2007	2014
Saint Kitts and Nevis	1994	2012	2004	2017
Saint Lucia	1993	1999 (signature) (no entry into force)	2004	2019
Suriname	2001	2004	2011	2018
Trinidad and Tobago	1994	2009	2004	-

b) Principal hazardous chemicals and waste legislation in each country

Antigua & Barbuda

The Pesticides and Toxic Chemicals Act, 2008 (PTCA) focuses on the regulation of pesticides, there are apparent gaps in the management of toxic chemicals as it regards to aspects such as transportation and disposal. For example, it mainly regulates the POPs-containing pesticides listed the Stockholm Convention. However, this list has not been updated since 2008. The National Solid Waste and Management Act, 2005, which was made to amend the act of 1995, is relatively comprehensive and the new EPMA is positive with regards to waste management and updates the old law. Still, there is still no legislation which adequately prescribes how chemical stockpiles and waste containing POPs should be managed, as per the obligations of the Stockholm Convention. These regulations therefore leave regulatory gaps in terms of the other obligations under the Stockholm Convention. There is, however, intent to harmonise and consolidate the legislative framework for pesticides and toxic chemicals (including mercury) using the model Integrated Chemicals Management Act developed under the GEF 5558 project; this is pending the completion of the GEF/FAO 5407 legislative guidance for pesticides.

Outdated provisions in several key laws require revision, such as the Public Health Act. There is an absence of laws and guidelines addressing certain waste streams such as clinical waste, incinerator ash, mercury, ELVs and e-waste. Transportation of waste is not adequately provided for under the National Solid Waste Authority Amendment Act, the Public Health Act, 1957 or the Litter Act, 2019. The Customs (Control and Management) Act, 2013 is quite general in that it has a broad application to prohibit imports and exports as required by law; however, there are no express provisions within this Act in relation to prohibiting import or export of hazardous waste in the terms outlined in Article 4 of the Basel Convention. The Environmental Protection and Management Act No 10 of 2019 (EPMA) attempts to regulate of the emission of environmentally toxic and persistent or carcinogenic substances and also prohibits the discharge of certain

pollutants to water and air. It also provides for the development of subsidiary legislation which will facilitate the regulation of the import, export manufacture, use or distribution of substances which may harm the human health and the environment. However, some aspects from the Basel Convention which must be domesticated have not been covered, for example the illegal trafficking of waste. It also does not make specific provisions for the domestic transportation of hazardous waste within the Act.

Barbados

The number of laws which deal expressly with the regulation of chemicals in Barbados is limited. The Pesticides Control Act, 1973, provides for the control of the importation, sale, storage and use of pesticides, and is supported by the Pesticides Control Regulations, 1974 and the Pesticides Control (Labelling of Pesticides) Regulations, 1976. Although these regulations are dated, the prescribed regime for the registration of pesticides is still applicable. Subsidiary legislation is required to implement control on the disposal of pesticide containers and stockpiles of obsolete pesticides; however, these regulations are yet to be developed. Still, there are gaps in the overall management of pesticides and there is a lack of comprehensive legislation with respect to the management of other chemicals.

Although there is some legislation which refers to waste in Barbados (primarily the Sanitation Service Authority Act (CAP 382), 1963, Sanitation Service Authority (Amendment) Act, 2018 and Health Services Act (Cap. 44), 1969), there are no clear provisions on hazardous waste and its transportation, whether domestic or transboundary, as recommended in the Conventions. While there are draft Acts which intend to introduce important concepts in relation to dealing with hazardous waste such as the Waste Management Act and the 2009 Draft Environmental Management Act (EM Act), these have become quite dated, are yet to be gazetted. Last updated in 2013, this Draft EM Act has a section addressing toxic substances from import to disposal. At present, the Environmental Protection Department (EPD) reviews any hazardous waste disposal and export on a case-by-case basis.

Belize

Two (2) of the principal laws dealing with chemicals are the Pesticides Control Act Chap. 216 and the Environmental Protection Act, Chap. 328, though neither regulate chemicals to the extent required under the Stockholm Convention. There is a draft Integrated Chemicals Management Bill, 2017, which seeks to combine chemical and waste management in relation to the BRS Conventions, as well as the Draft Industrial Chemicals Management Regulations, 2017 which seeks to control industrial chemicals.

While the Environmental Protection Act, Chap. 328 defines hazardous substances, it does not explicitly define "hazardous waste" as per the requirements of the Basel Convention. The Solid Waste Management Authority Act, 1991 considers "solid waste" to include garbage and refuse but expressly excludes derelict vehicles, construction waste material and chemical by-products. Hazardous waste management is specifically governed by the Hazardous Wastes Regulations, 2009, which seek to implement some of the provisions of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. The Regulations also provide for the storage and domestic transport of hazardous waste. Still, more work is necessary in terms of updating the EPA and the regulations. Regulation 20 prohibits the import of hazardous waste for disposal; however, importation may be considered if the waste will be used as a raw material for an industry in Belize, for example, such as used lead-acid battery recycling. However, no express provisions are found on export of chemicals or hazardous waste. The domestic transportation of waste is prescribed but the procedure for transboundary movement of chemicals or waste is not covered under this legislation. Cruise ship waste is considered hazardous under these regulations.

Dominican Republic

The General Law of Environment and Resources No 64-00 provides the legal framework for environmental protection and management in the Dominican Republic. It defines toxic wastes and dangerous residues and prohibits their improper disposal. It also directs municipalities to collect, treat and dispose of non-hazardous solid waste. Chemicals and solid waste are further regulated via several regulations administered by the Ministry of Environment and Natural Resources. Currently, there is no overarching legislative framework for the management of chemicals and solid waste, but steps are being taken towards the promulgation of the draft Law on Comprehensive Management of Solid Waste Co-processing of the Dominican Republic. This bill was developed to regulate the generation and management of solid waste, including the reuse, recovery, recycling and final disposal, as well as the importation and transit of waste.

The Regulations for the Management of Hazardous Chemicals and Waste Substances in the Dominican Republic, 2013 establish the requirements for the treatment and final disposal of chemical substances and their containers and wastes and also enacts a licensing regime to give effect to the Prior Informed Consent Procedure under the Basel Convention. Resolution No. 445-06 was created to regulate the initial "dirty dozen" persistent organic pollutants (POPs) under the Stockholm Convention but it has not been updated since 2006. Polychlorinated biphenyls (PCBs) are specifically regulated under the Environmental Regulations for the Use, Handling, Transportation and Disposal of PCBs, 2013, but regulations for other POPs have not been drafted. Chemicals used in the agricultural sector are specifically regulated by the Regulation on the Use and Environmental Management of Agrochemicals and their Residues in Horticultural Production, 2013.

The Single Window for Foreign Trade (VUCE) was implemented in January 2017 to facilitate the digital streamlining of procedures relevant to the import and export of good. In addition to Customs, seven (7) other institutions have access to this electronic data management facility, including the Ministry of the Environment and Natural Resources and the Ministry of Agriculture.

Guyana

The Environmental Protection Agency's (EPA) Hazardous Waste Regulations, 2000 have made impressive strides to implement a permitting system for the operation of a facility to generate, transport, treat, store and dispose of hazardous waste. While this regime may be extended to the regulation of transboundary movements, there are significant gaps as the legislation does not define critical terms under the Basel Convention, including export, import, transit and illegal traffic. However, the Regulations empower the EPA to develop guidelines related to the handling of hazardous waste and they clearly define the hazardous wastes to be controlled within the territory. The draft Solid Waste Management Bill, 2014 when passed will establish a Solid Waste Management Authority and establishes licencing and permit systems for waste management facilities and waste haulers. There is potential for an overlap in jurisdictions between this draft legislation and the aforementioned regulations with respect to permitting of waste management facilities. Guyana has legislation dealing with attempts to reduce the effects of mercury, particularly in relation to small scale gold mining, from broad powers in the EPA Act to the Mining Act; however, there are gaps in management and disposal of mercury as the codes of practices are yet to be gazetted.

The 2007 amendment to the Pesticide and Toxic Chemicals Act, 2000 provides for the application of the Rotterdam, Stockholm and other similar international agreements in country. The amendment regulates the exports and management of chemicals by providing for the adoption of obligations assumed under the international agreements through the Act. For example, the amendment facilitates the implementation of the Basel Convention with a more direct link to the management of hazardous waste under the Environmental Protection Act. Guyana Customs has enabled data exchange and integration with the Pesticides and Toxic Chemicals Control Board and the Environmental Protection Agency (EPA) to allow for an integrated approach to chemical management using ASYCUDA World system.

Saint Kitts and Nevis

The Solid Waste Management Act, No. 11 of 2009 provides, *inter alia*, for the management of solid waste in conformity with the best environmental practices (BEP). The Act governs both solid and hazardous wastes and provides an extensive definition of hazardous waste, which is similar to the requirement under the Basel Convention; this definition excludes hauled sewage, residential waste, agricultural waste used tyres, used oil and radioactive wastes. The National Conservation and Environmental Protection (NCEP) Act No. 5 of 1987 addresses the pollution from sources including solid waste, garage oil, or other waste and enforces through the 2001 amendment. The Stockholm Convention is not included on the list of MEAs in the Fifth Schedule of this Act, nor listed in the Second Schedule to the draft National Conservation and Environmental Management (NCEMA) Bill, 2017 in the event that the draft legislation is adopted. The Public Health Act regulates drugs, offensive trades, and the disposal of refuse, particularly in relation to nuisances, but some provisions may be considered as being outdated.

The Pesticides and Toxic Chemicals Control Act Chap 9:18 of 2009 is the umbrella legislation governing pesticides and toxic chemicals; however, only one piece of subsidiary legislation (Pesticides Labelling and Storage of Containers) Regulations has been promulgated under the Act to date even though the PTCCB has identified several priority issues that should be regulated. The Customs (Control and Management) (Amendment) Act, No. 7 of 2001 which amends the Customs (Control and Management) Act, includes a list of items to be prohibited or restricted from importation or exportation. However, it should be noted that no POPs have been included on the list. Furthermore, despite acceding to the Minamata Convention in 2017, there has been no progress beyond a draft Cabinet Note to address the Convention's obligation in national law. As it relates to the movement of wastes, the Department of the Environment applies an administrative control through the Prior Informed Consent (PIC) principles.

Saint Lucia

The Waste Management Act, 2004 is the main instrument through which waste is managed in Saint Lucia. It contains enabling provisions to manage stockpiles and wastes, however, not specifically for POPs or mercury, but for waste in general, including hazardous waste. However, pursuant to Section 51, it is meant to be supported by regulations, some of which are yet to be formulated. There are several draft legislation and policy which addresses various aspects of hazardous waste management, namely, the draft Waste Management (Biomedical Waste Transport, Treatment and Disposal) Bill and the draft Environmental Management Act, 2018; however, the timeline for their enactment is not fixed. The Styrofoam and Plastics (Prohibition) Act 2019 which entered into force in August 2019 serves to ban the importation of all Styrofoam and single-use plastic containers into the territory.

The Pesticides and Toxic Chemical Control Act (Cap. 11:15) is a comprehensive principal piece of legislation dealing with chemical management; however, in practice, the law focusses mainly on pesticides, as did its precursor, the Pesticides Control Act, 1975, with limited management of toxic chemicals; however, if the full provisions for making Regulations are implemented, the Act is suitable for domesticating the legal requirements of the Stockholm Convention. The Customs (Control Management) Act 1990 lists goods which are prohibited and restricted for import and export. Although no prohibitions are made for chemicals and waste in this Act, it provides for the prohibition of the importation of goods referred to in other legislation. This can facilitate the implementation of some of the country's obligations under the Stockholm Convention.

Suriname

In May 2020, the Environmental Framework Law 2020 was enacted, and it is a principal umbrella legislation for environmental management. It will enable domestic, regional and international compliance with some of the mandates and agreements to which Suriname is party. While it will provide general aspects for environmental management, there are enabling provisions which will strengthen hazardous chemicals and wastes management, the extent to which will need to be further explored as the Law is implemented. The legislation framework prior to the enactment of this Law is still intact and is described as follows.

Suriname does not have a comprehensive framework for chemicals management, specifically it does not sufficiently accommodate the various classes of chemicals and did not address the different stages of the chemical lifecycle. Pesticides are the only type of chemicals that are specifically regulated from import to the phase of disposal through the Pesticides Act, 1972. The Act on the Movement of Goods and its subordinate regulation, the State Order Negative List manages the import of goods including the aforementioned pesticides, chemicals, including mercury and Ozone Depleting Substances (as per obligations under the Montreal Protocol). It does not, however, regulate mercury-added products. Liquid mercury imports are regulated to an extent under a permitting system. As of 2014, it was noted that a comprehensive law to regulate the use, import, export and handling of mercury and mercury compounds was lacking. The Act on the Movement of Goods prohibits the importation of any wastes. The Business and Professions Act, 2017 has an operating licenses system for companies and professions where hazardous substances are involved, provided they are not listed as prohibited.

There is generally no legal obligation to dispose of wastes in a proper manner. There is a draft Waste Bill 2004; however, it was never adopted. Currently, there is a draft Standard for waste disposal and processing and Export procedure under Basel Convention and a draft Hazardous Substance Implementation Regulations Bill, within which the definition of 'hazardous substances' can be updated to adequately cover the general obligations of the definition under the Convention. The Act on the Movement of Goods prohibits the importation of any wastes.

Although its list of promulgated legislation for waste management is limited, Suriname has still been recognised for taking progressive steps towards ensuring the environmentally sound management of plastic waste through the project entitled "*Replacing single use plastic commodities in the economy of Suriname*", which was recently granted approval for implementation by the Basel and Stockholm Conventions' Regional Centre Small Grants Programme on Plastic Waste (SGP on Plastic Waste). It includes a pilot project aimed at replacing single-use plastic bags in stores with more sustainable and locally available products. This project will be implemented by Suriname Waste Management (SUWAMA) and has an execution timeframe of twelve months between 2021 and 2022.

Trinidad and Tobago

The Pesticides and Toxic Chemicals Act, Chap. 30:03 is the principal piece of legislation governing the manufacture, import and export, sale, use, storage, disposal and transportation of pesticides and toxic chemicals. A number of Regulations under the Act have been developed; however, this legislation is dated and there are still deficiencies as it relates to fully meeting the obligations of the Stockholm Convention. Provisions are lacking in terms of dealing with contaminated land, whilst there is no clear responsibility shown with regard to clean ups and costs relating to such. While the Environmental Management Act regulates hazardous substances and PTC Act regulates both pesticides and toxic chemicals, there is no clear identification between the jurisdiction of each law with respect to which chemicals they regulate. This indicates that there may be a duplication of efforts in the regulation of chemicals. The Pesticides and Toxic Chemicals Control Board (PTCCB) under the Ministry of Health drafted a National Pesticides Management Policy, which is expected to be in force within the next year. Trinidad and Tobago Customs and Excise Division has enabled data exchange and integration with the Pesticides and Toxic Chemicals Control Board and other relevant agencies to allow for an integrated approach to chemical management using the ASYCUDA World system. The country is not yet party to the Minamata Convention; however, under the Air Pollution Rules, 2014, mercury is classified as an air pollutant and maximum permissible limits have been established for its emission. Similarly, under the Water Pollution Rules, 2019, the quantity, condition or concentration for the parameter "Total Mercury" as a water pollutant have also been established.

Waste is presently managed through several pieces of legislation (primarily, the Litter Act No. 27 of 1973, Public Health Act 1950, Environmental Management Act 2000, and the Municipal Corporations Act of 1990). The Draft Waste Management (Registration and Permitting) Rules, 2018 developed under the EM Act intends to regulate the generation and handling of both hazardous and non-hazardous wastes. However, neither of these legal instruments addresses the importation, transit and exportation of waste. A gap assessment is therefore required as it regards to the domestication of the Basel Convention in Trinidad and Tobago.

c) Assessment of the regulatory environments

	Regional summary of the current enabling environment
Pesticides and Toxic Chemicals	All project countries have a parent law which manages pesticides and toxic chemicals; however, most emphasize the regulation of pesticides. None are underpinned by national policy. Trinidad and Tobago recently developed a draft 2019 policy with a focus on pesticides. Other than Guyana, the suite of chemicals management legislation in the project countries needs to be updated to adequately address the Stockholm, Rotterdam and Minamata Conventions obligations, and in particular toxic chemicals. Most countries have signalled their intent to either adopt the model Integrated Chemicals Management Act (developed in 2019 under the GEF 5558 project) or at least elements of same in existing legislation through amendments. This is pending the recommendations from the FAO review of regional pesticides legislation (GEF 5407 project) before updating and harmonizing their national laws.
Waste and Hazardous Waste	Three (3) countries (Barbados, Belize and Trinidad and Tobago) have instituted strategic waste management policies/plan. While most countries have fairly updated waste management legislation, there are deficiencies in certain aspects such as disposal practices. Most countries opted to include hazardous waste in the parent act. In Belize, Dominican Republic and Guyana, there are separate regulations for hazardous waste and in Barbados there is no reference to hazardous waste in existing Acts. None of the countries adequately regulate hazardous wastes nor sufficiently transposed the Basel Convention into national legal provisions; however, the hazardous waste regulations instituted by the Dominican Republic covers some of their obligations under the Basel Convention. While the Governments of the project countries do not support the importation of waste, none have enacted legislation to prohibit it. The exportation of waste is controlled by licensing systems managed by the Department of Environments (or equivalent) of each country with authority from the Environmental Protection and Management Act (or its equivalent).
EEE	None of the project countries have legislation to manage EEE. Three (3) countries, Trinidad and Tobago, Belize and Saint Lucia have attempted to provide some direction at a quasi-policy level; however, there is no adoption and very limited progress beyond the drafting of the documents. In Belize, the E-Waste White Paper was brought to Cabinet approximately 2 years ago and in Saint Lucia an E-waste Management Policy and Regulatory Framework (2017) was prepared. In Trinidad and Tobago, the EMA published a brochure on guidelines for proper E-waste management (2019); however, it does not cover brominated flame retardants, which is a constituent of concern in several EEE. The project countries rely on the provisions of the Basel Convention to regulate exports; however, since there is no national clear definition of the legal classification of these exported materials, the compliance of Basel Convention procedures could be vulnerable.
ELVs	ESM of ELVs in the Caribbean is still not a well-recognized public policy issue and this is reflected in the absence of any national policy and only four countries having some reference to ELVs in their legislation. In Antigua and Barbuda, the Litter Act No 3 of 2019 looks at removal and disposal of derelict vehicles. Both Saint Kitts and Nevis and Saint Lucia addresses it through their parent waste management acts, and in Saint Lucia, there are some proper handling mechanism in place, including enforcement dispositive, as fines in case of non-compliance. In Trinidad and Tobago, the Litter Act, which is antiquated, covers only the removal of derelict vehicles; however, in the recent National Environment Policy, 2019, while it does not specifically mention ELVs, it provides a major opportunity for the effective design and implementation of waste management systems, including ELVs management system. As import countries - Barbados, Belize, Dominican Republic, Guyana, Saint Kitts and Nevis, Suriname and Trinidad and Tobago – adopted certain policies governing the intake of used vehicles, such as age restrictions, environmental parameters or fiscal instruments.

	Initial parameters of fiscal instruments.
Mercury and mercury-added products	Guyana and Suriname have some legislation and protocols to manage the import and use of liquid mercury in mining practices. However, all countries lack adequate legislation to manage the use of mercury-added products. Most other project countries (except Barbados) have either completed or are soon to complete their Minamata Initial Assessments, which included recommendations to domesticate the obligations of the Minamata Convention; however, to date none have applied these recommendations to their national laws. While an MIA has not been done for Barbados, a mercury inventory is currently being completed under a capacity building Quick Start Programme. From an import perspective, the import classification for some products containing mercury are not distinguishable from those that do not contain mercury as they fall under the functionality of the product, and ASYCUDA World data reports are based on the general HS Code of these commodities which include both items that do not contain and those that contain mercury. For liquid mercury and mercury compounds, procedures and protocols exist to permit registered personnel to import for artisanal and small-scale gold mining in both Guyana and Suriname; however, the issue of illegal imports across both countries has been noted to occur due to the porous borders and lack of capacity of border control agencies.
Medical Waste	There is an absence of policies and laws on the sound management of medical waste in most project countries. The Standard for the Comprehensive Management of Infectious Waste, which was established in the Dominican Republic in 2004, classifies types of medical waste and regulates their generation and management. Belize recently drafted regulations on licencing of medical facilities, which includes provisions for the management of medical waste, as part of the GEF 5558 project; however, they are not yet passed. In Saint Lucia, the Waste Management (Biomedical Waste Transport, Treatment and Disposal) Bill is one of many pieces of waste related legislation that is yet to be enacted. A code of practice for the management of bio-medical waste was drafted in 2005 for Trinidad and Tobago; however, it was not adopted and is highly likely in need of updating.
Post-Disaster Waste	Very few countries have national guidelines or legislation which specifically addresses disaster waste, given the vulnerability of the Caribbean to hurricanes.
Tourism Waste	Three (3) project countries considered tourism waste in their legislative framework. Antigua and Barbuda and Saint Kitts and Nevis both have very limited coverage in their NSWMA Act and Shipping Act, No. 24 of 2002, respectively. Belize classified cruise ship waste as hazardous under the Hazardous Waste Regulations, 2009 and does not allow the landing of any such waste.
Plastic Waste	Within the past five (5) years, most project countries have started to regulate primarily single-used plastics in certain products like bags, straws, utensils and disposable containers. However, the legislation often does not regulate the lifecycle of the commodity and there are numerous exemptions, for example, agricultural plastics. Plastic beverage containers are also managed in a few countries. Beyond these commodities, there is no regulation of other types of plastics.
Customs and Trade	Customs departments from all project countries are equipped with the legislative and institutional framework for control of imports and exports in general. As it relates to the control of trade in chemicals, chemicals in products, and wastes. Some customs legislation makes provisions for the control of restricted and prohibited goods under other national legislation; however, a more coordinated approach is required for the sound control of trade in chemicals and waste. The lack of regulatory instruments to mandate continuous updates of prohibited lists through inter-agency collaboration further weakens the effectiveness of Customs to identify prohibited imports.
Recycling	Trinidad and Tobago is the only project country with a recycling policy, where one of its stated objectives is the <i>reduction by 60% of the quantity of waste requiring final disposal by the year 2020, based on a 2010 baseline</i> . The progress status is

	unknown. No project country has specific legal provisions to separate recyclables from non-recyclables at the source; however, legislation related to extended producer responsibility, such as the Returnable Containers Act, 1986 in Barbados provides a financial incentive for consumers to separate some of their recyclables.
EPR	Most project countries generally have some measure of EPR schemes, but only four (4) of the Project countries (Barbados, Belize and Saint Kitts and Nevis and Guyana) have provided legislated measures regarding such. These schemes primarily involve returnable containers, and more recently bans on single use plastics. Saint Lucia and Trinidad and Tobago recently drafted legislation to manage beverage containers which includes an EPR mechanism. The Dominican Republic is the only country to include EPR in its principal solid waste management legislation, which is still to be enacted. It addresses the extended responsibility of the producer and importer to promote a special waste management regime under which producers and importers are responsible for the organization and financing of the product throughout its life cycle, including the post-consumer phase. The Draft Act lists eight (8) prioritized products and it includes WEEE and batteries.
GHS	There are no systematic national approaches to hazard classification and labelling and no law which addresses the requirements of GHS from a national perspective. Only Barbados and Guyana have policies but there is limited implementation.
Labelling and Standards	All the project countries have Standard Acts and bodies which look after the standards component of the jurisdictions; however, it differs in terms of the capacity to deal with chemical and hazardous wastes. All project countries, except Dominican Republic, are members of the regional body, CARICOM Regional Organisation for Standards and Quality (CROSQ). Chemicals are not regulated beyond labelling. The Trinidad and Tobago Bureau of Standards prepared a draft compulsory standard for safety of toys which applies to maximum acceptable limits for various elements and chemicals including mercury and phthalates; labelling requirement; and prohibits the importation, donation and sale of used toys. This standard is expected to become compulsory by end of 2020. CROSQ developed a regional standard on labels of all pesticides which is aligned to the GHS. The standard is at the public comment stage.
Sustainable Procurement	There are limited initiatives to promote or incentivise sustainable procurement in the import of chemicals, and even less so for the domestic manufacture of chemicals. Procurement practices in the Caribbean are mainly driven by the cost factor. With recent legislative bans on single-use plastic in several Caribbean countries and discussions on potential bans in other countries, there has been a noticeable change in the packaging and materials used for carry bags, food containers and straws. The National Recycling Policy in Trinidad and Tobago has as an objective to encourage product substitution by giving financial incentives on product of at least 70% recycled materials and proposes incentives to encourage business to extend life span of EEE; however, the extent of implementation is unknown. Antigua and Barbuda, Barbados and Belize have signed on the CARICOM Protocol on Public Procurement which encourages its members to apply green procurement policies in their procurement regimes as a non-revenue instrument for improving the chemicals and waste management situation in their respective countries. Awareness on sustainable procurement in Caribbean countries is generally perceived as low.

d) Institutional assessment

There is no single institution which is currently responsible for the lifecycle management of chemicals including POPs in the project countries. Guyana has possibly made the greatest strides in having a structured institutional framework across the various institutions. In the Dominican Republic, the Ministry of the Environment and Natural Resources shoulders most of the responsibility for chemicals and waste management as per the General Law of Environment and Resources No 64-00, although the Ministry of Agriculture also plays a role in the management of agrochemicals.

Institutional capacity for traditional waste management in Caribbean countries has developed very significantly over the last two decades as a result of investments by Caribbean countries into their waste management authorities, agencies and departments of government. Training provided by multilateral donor institutions in administrative and technical aspects of waste management have contributed to these developments. However, the institutional capacity to deal with these special and problematic wastes requires further development. Common barriers are related to human and financial constraints, and in some instances the political will to take these issues forward without some pecuniary benefit.

There are common themes which can be identified in relation to the project countries. These themes include the following:

- All countries face issues due to a lack national infrastructures in terms of human resource, technical capabilities, and the capacity to assess and manage the risks posed by widely produced and traded hazardous chemicals.
- With regards to chemicals management, the countries' have attempted to place duties and responsibilities on various bodies, which would have been constituted decades ago, thus expanding its mandate. In many instances this does not effortlessly seam into operations, thus providing issues in operations, primarily in the human and financial resources area.
- Across all countries there is insufficient staffing of inspectors from the Pesticides Boards.
- There is a struggle to combat the challenge of a significant and constant increase in the amount of products and materials imported that lead to hazardous waste.
- There are deficiencies in the national coordination between various entities, such as the Pesticides Boards and Health Authorities, focal points and customs departments. Often the identification of institutional roles, responsibilities and functions of agencies in the relevant legislations are not clearly defined and there is overlap in jurisdictional powers.
- There is no overarching waste management authority in some countries (Guyana, Suriname and Trinidad and Tobago).
- Filling of positions at agencies in accordance with required competencies is an issue.
- Customs departments and other border control agencies must undergo continuous training and capacity-building tools to further build awareness and enforcement capacities as it relates to trade in chemicals and wastes.
- Customs recognizes the need for Customs Officers to be able to recognize hazardous classification and labelling. Currently, there exists a rudimentary understanding of chemical classification and labelling. This knowledge gap presents a weakness in control and enforcement to prevent the smuggling and illicit trade of chemicals.
- For several recently implemented pieces of legislation, such bans on single use plastics, it is too early to assess if the current institutional capacity can effectively implement, monitor and enforce the legislation.

Analytical capacity varies across the project countries; however, through recent GEF projects, a regional approach to the improvement and upgrade of some laboratories is ongoing thereby expanding their capabilities. The more complex chemicals such as PCDD/PCDFs, PFOS and PBDEs are still outside the ability of regional laboratories.

2.2 Associated baseline projects

The Caribbean Region is made up of island nations in the Caribbean Sea and mainland countries on the South and Central American continents. These countries are SIDS with varying levels of economic status. Some countries have primarily tourism-based economies, including Antigua and Barbuda, Barbados, Saint Kitts and Nevis and Saint Lucia, and others, including Belize, Dominican Republic, Guyana, Suriname and Trinidad and Tobago, rely on commodity exports such as agriculture, minerals and petrochemical products, respectively. There are several regional and sub-regional entities that support coordination among countries for varying purposes. These include, *inter alia*, entities such as the Caribbean Common Market (CARICOM), the Organization of Eastern Caribbean States (OECS), CARICOM Regional Organisation for Standards and Quality (CROSQ), the Caribbean Development Bank (CDB), the University of the West Indies (UWI) and the BCRC-Caribbean.

As predominantly import-dependent countries with limited existing capacities for the environmentally sound management of growing streams of chemicals and wastes, Caribbean nations have continued to work towards improving national and regional frameworks for chemicals and waste management through ratification of international multilateral environmental agreements and participation in national and regional projects. Both regional and international organizations have undertaken projects in collaboration with Caribbean governments and private sector entities to achieve more sustainable chemicals and waste management nationally and regionally.

As early as 1994, the World Bank worked with 22 countries in the region through the Wider Caribbean Initiative for Ship Generated Waste Project^[35], with the overall objective of supporting countries with the ratification and implementation of the International Convention for the Prevention of Pollution from Ships (MARPOL). Additional aims of the initiative included, *inter alia*: assessing existing waste management systems, formulating regional engineering criteria for waste reception facilities at the ports; coordinating with shipping and cruise lines on reducing waste, and developing integrated waste management alternatives. More recently, in 2019, the World Bank announced the Unleashing the Blue Economy of the Eastern Caribbean (UBEEC) Programme which aims to improve the competitiveness of the OECS blue economy and strengthen the resilience of marine and coastal assets on blue economy development in the OECS. UBEEC will include activities related to solid waste and marine litter management. This project is still in a very early phase, including preliminary communications with countries (Dominica, Grenada, Saint Lucia, Saint Vincent and the Grenadines). The World Bank is also developing a budget support to help the Dominican Republic tackle issues with solid waste and wastewater management and provide support in emergency debris management.

The Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean (BCRC-Caribbean), was established in 1998 as the Regional Centre to support Caribbean Parties to the Basel Convention and subsequently the Rotterdam, Stockholm and Minamata Conventions, with fulfilling their national chemicals and waste management obligations to the Conventions, has executed several national and regional projects. Most notable is the GEF-funded Project #5558: "Development and Implementation of a Sustainable Management Mechanism for Persistent Organic Pollutants (POPs) in the Caribbean" which is benefitting eight (8) Caribbean countries including: Antigua and Barbuda, Barbados, Belize, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago. Activities conducted between 2015 to 2020 included the update of national implementation plans (NIPs), development of model legislation for integrated chemicals management, improved landfill management to reduce the production of UPOPs, mapping of contaminated sites requiring remediation, removal and disposal of obsolete stocks and the development of a communications campaign entitled Stop the POPs.

The Centre has also worked with the region to conduct Minamata Initial Assessments (MIAs), having completed four (Jamaica; Saint Kitts and Nevis; Saint Lucia; Trinidad and Tobago) to date with the remaining six (Antigua and Barbuda; Bahamas; Belize; Dominica; Grenada; Saint Vincent and the Grenadines) being completed in the period 2020 – 2022. The National Action Plan for Guyana is also underway through the execution of the BCRC Caribbean.

Another GEF-funded project conducted throughout the region was the FAO-implemented GEF #5407 Project "Disposal of Obsolete Pesticides including POPs, Promotion of Alternatives and Strengthening Pesticides Management in the Caribbean". Key activities under this project include, safely destroying POPs and obsolete pesticides, remediating pesticide-contaminated sites, establishing mechanisms to deal with empty pesticides and other waste plastic containers, strengthening the institutional and regulatory framework for managing pesticides through their lifecycle, and increasing the uptake of alternatives to the most hazardous chemical pesticides on key crops. This project provided a regional baseline for pesticides management which highlighted that approximately ten thousand (10,000) tonnes of pesticides are imported annually into the region. Large quantities of pesticides are indiscriminately used to increase agricultural production in short-term crops for local and regional markets and pesticides residues on produce regularly exceed maximum residue levels, thereby raising food safety concerns and jeopardizing export potential. Further, the widespread use of

pesticides is threatening agricultural production, harming vital ecosystem services, reducing soil quality, polluting aquatic systems and having negative impacts on human health due to direct and indirect exposure. Some of these challenges were addressed throughout the Project and under other regional initiatives such as: the Common Agricultural Policy, the CARICOM Regional Food and Nutrition Security Policy and Action Plan, the Caribbean Agricultural Health and Food Safety Agency, Caribbean initiatives to regionally integrate climate resilience and climate change adaptation policies, and the CARICOM Youth Development Action Plan (CYDAP) which further commit governments to act to improve the management of agrochemicals, in line with the SAMOA pathway.

The FAO has also initiated several projects on sustainable agricultural practices in the Caribbean. Focus has included integrated pest management (IPM), with several training workshops being conducted. Assessment of the use of biocontrol mechanisms as countries are being encouraged to promote alternatives to synthetic pesticides. Furthermore, there has been work with farmers to improve on education and awareness of the dangers of Highly Hazardous Pesticides (HHPs) and how to minimize such dangers. The FAO and stakeholder entities (including the World Bank, CDB, Development Bank of Latin America (CAF) and the IDB) have also engaged in soliciting support from governments and the private sector to provide investment in agricultural projects to reduce the use of HHPs and improve the sustainability for the sector within the region. Supporting projects in the Caribbean for the ISLANDS Programme include the Sustainable Agriculture Market Access project in Suriname; Resilient Agriculture and Integrated Water Resources Management project in the Dominican Republic; the IOMC Toolbox for Decision-Making in Chemicals Management; the Green Jobs for Youth programme; and Phase III (HHPs) of the ACP-MEAs Programme.

The CARICOM Secretariat's Sustainable Development and Environment Programme is the implementer for the "Programme for Capacity Building Related to Multilateral Environmental Agreements in African, Caribbean and Pacific MEAs" (ACP-MEAs) in the region. This Programme, which is funded by the European Commission and coordinated by the UNEP, aims to strengthen Caribbean countries' capacities to effectively implement the MEAs to which they are Party to. One of the outputs of this Programme is a Customs Handbook (2013) that serves as a guide to MEAs including the BRS Conventions for Customs Departments.

Additionally, CARICOM, through the Revised Treaty of Chaguaramas 2001, has also provided its member states with the directive to take environmental concerns into account when trading as a bloc. In this regard, and through the projects with which they become involved, the Caribbean countries, as a region, have indicated their commitment to promote sustainable environmental policies as part of their ongoing development and trade agenda. The commitment of the countries to the protection of the region from the adverse impacts of export and transport of hazardous chemicals and waste is seen in the CARIFORUM European Union Economic Partnership agreement 2008 between CARICOM and the EU. The agreement highlights the need to ensure adequate environmental protection during the execution of the agreement under its provisions to facilitate trade in goods and services that the parties consider beneficial to the environment. Such products may include environmental technologies, renewable- and energy-efficient products and services and eco-labelled goods. Through provision of assistance to enhance the technological and research capabilities of the CARIFORUM countries, the Agreement also facilitates development of, and compliance with, internationally recognised sanitary and phytosanitary measures and technical standards and internationally recognised labour and environmental standards^[36]. But CARICOM is unable to take advantage of these provisions currently as Member States do not have the capacity to provide efficient trade and waste management services among each other or internationally. CARICOM's continued commitment to the safety of the region's environmental quality, has been further advanced with the establishment of the CARICOM Regional Organization for Standards and Quality (CROSQ). It is the regional centre for promoting efficiency and competitive production in goods and services, through the process of standardization and the verification of quality. In this regard, CROSQ aims to support international competitiveness for the enhancement of social and economic development of the region. CROSQ helps to promote standards and quality across the Caribbean to ensure environmental protection is maintained. CARICOM also has a draft harmonized Customs Model Bill and Regulations which, when passed, will help to advance and harmonize the customs regulations in the region and present an opportunity for a harmonized position on chemicals and waste management as well as move the GHS process forward.

These project examples underscore the overall principles of sustainable development that govern the operations of the key regional entities in the Caribbean. They also highlight the commitment of the region to the SAMOA pathway. For example, the OECS, through the St George's Declaration in 2006, adopted the prevention and control of pollution and the management of waste as a core principle under which the regional body, consisting of Ministers of Environment, operates. To further the achievement of its mandate, the organization has also encouraged its member states to endorse the Caribbean Waste Management Action Plan proposed by UNEP and to mobilize resources to ensure the implementation of the action plan. Furthermore, the OECS has taken strides to encourage its member states to work on the reduction of marine plastics pollution and the effective management of ship generated waste through legislation enactment, developing management strategies and implementing activities aimed at recycling and containing plastic pollution in the OECS region. The organization has also embarked on projects aimed at improving management of solid waste through composting and other sustainable land management practices for organic waste. Presently, the OECS is implementing a 3 million USD project aimed at building the resilience of marine ecosystems through a reduction in marine litter in the Eastern Caribbean countries. They have also joined with the International Union for Conservation of Nature (IUCN) to further move this agenda forward through the Norwegian Agency for Development Corporation (NORAD) Plastic Waste Free Island Project to address the issue of plastic waste leakage from island states. This will be complemented with an additional project funded by the French Ministry of Foreign Affairs through an 828,000 EUR recycling project involving the French overseas territory of Martinique.

There are also other initiatives within the Caribbean basin that support the ISLANDS Programme. The Metabolism of Islands programme is currently conducting research on waste and resource flows including e-waste in Aruba, Barbados, Cuba, Grenada, Jamaica and Trinidad and Tobago. The Climate Technology Centre and Network (CTC-N) has a number of waste management projects in the Caribbean region. The IMO is also currently undertaking initiatives aimed at improving the region's compliance under the MARPOL, Cartagena and London Conventions in relation to the transporting of hazardous waste that will be considered under the ISLANDS project. Further collaboration can also be made with the Cartagena Convention Secretariat in areas of mutual benefits through their complementary projects on International Waters and nutrients as well as marine litter and wastewater management. Initiatives under the Cartagena Convention Secretariat include the development of a Regional Action Plan. As previously mentioned, initiatives under the current Plastic Waste Free Islands project, funded by NORAD and being executed by the IUCN regional office for Mexico, Central America and the Caribbean, can complement the anticipated benefits of the GEF ISLANDS Programme. The project, which focusses on the elimination of plastics from the islands, is being implemented in three (3) Caribbean countries; Antigua and Barbuda, Grenada and Saint Lucia. Furthermore, it is part of a larger initiative that includes the Pacific Ocean islands as well. Similar projects for the management of chemicals and waste in the Caribbean region are also currently being undertaken by the US Environmental Protection Agency (USEPA), specifically in Puerto Rico and the US Virgin Islands. The USEPA also has waste management projects in the Dominican Republic, particularly in the design of controlled and sanitary landfills and providing workshops on landfill design. Projects on municipal waste management are also being funded by the USAID in the Dominican Republic as they seek to improve the waste management system currently in place. Other governmental agencies providing development support in the Caribbean include the Japan International Cooperation Agency (JICA) and the UK Department for Environment, Food and Rural Affairs (DEFRA). DEFRA has a number of ongoing projects in waste management in the Caribbean, such as: the Commonwealth Clean Ocean Alliance (CCOA); Commonwealth Litter Programme (CLiP); Technical Assistance Facilities helping member countries of the Commonwealth develop a waste management plan (including Saint Lucia, Belize); Blue Planet fund; and Tide Turners Plastic Challenge Badge. Collaborations here could mean great strides in the overall management of hazardous chemicals and waste across the Caribbean region.

Finally, there is work being undertaken in the private sector. Individual companies and organizations have been embarking on the drive to better manage chemicals and waste in the Caribbean. For example, there is currently exploration in the use of microwave technology as an alternative to incineration and autoclaving for the management of waste through RS Caribbean in Curaçao. The possibilities offered by this company are potential alternatives to explore under the ISLANDS project. The Florida Caribbean Cruise Association and Cruise Lines International Association (CLIA) through their own initiatives, have been working with members to ensure effective management of chemicals and waste from their ships. Carnival Cruise Line, for example, has a number of ports in the Caribbean region where collaborations in waste management could be beneficial for local communities, such as Amber Cove in the Dominican Republic. In the manufacturing sector, the MSC Foundation is setting the stage with their work on projects aimed at recycling plastics to create building materials within the Caribbean. In Guadeloupe, work has also been ongoing for the pretreatment of electronic waste, the recycling of PET plastic products, and the recycling of food oils into biodiesel. In the Dutch Caribbean, a motor oil/tyre recycling plant provides a regionally relevant and appropriate solution to the issue of used tyres and used oil on small islands, which could be replicated within ISLANDS project countries. In the USA, Ecovation Global Holdings offers a tapestry of proven Environmental and Technology Solutions to sustainability issues that are financially feasible, benefit the health and well-being of communities and the environment, and improve the all-around resilience of small island states.

3) The Proposed Alternative Scenario with a Description of Components of the Project

The overarching objective of the ISLANDS programme is to support SIDS to enter into a safe chemical development pathway. Thirty (30) SIDS in the Indian Ocean, Pacific and Caribbean regions will benefit from six (6) child projects expected to be conducted under this Programme during a five (5) year period. The program aims to strengthen each country's ability to control the flow of chemicals, products and materials into their territories and to unlock resources for the long-term management, including integrated management, of chemicals and waste in SIDS. Achieving this under a global programme is ideal as this approach has the advantage of leveraging more resources than single countries or regions. The programme also has the potential to attract private sector investments which are more sustainable at a scale not achievable by single SIDS. As a global programme, the ISLANDS project will also promote exchange of knowledge and experience across regions which would not be possible with regional interventions. In this regard, this programmatic approach is desirable to bring much needed resources to SIDS to remove the stress on the environment caused by the unsustainable use of chemicals, materials and products. The programme looks to build on the principle of "think globally, act locally" through a combination of interventions and initiatives which address specific needs at country level but at the same time, reinforce regional and global cooperation as well as address the challenges facing SIDS. The exchange of information and knowledge amassed at the national level will also be shared between regions to achieve impacts at the global level. Working with SIDS at a global level also ensures that the introduction of legislation and standards through the projects reduces loopholes created in the regions in relation to countries which would not be covered in a traditional approach. The program also seeks to access regionally appropriate technologies and best practices for the management of chemicals and wastes in SIDS and incubate and accelerate these through catalyzing entrepreneurship in the small and medium enterprises (SMEs) across all regions. This will ensure solutions to challenges from chemicals and wastes are appropriate to the needs of specific SIDS but fall within a larger framework built around knowledge exchange and transfer.

The programme also focuses on assisting SIDS in transforming the management of chemicals and wastes in support of multiple chemicals related multi-lateral environmental agreements (including the Basel, Rotterdam, Minamata, and Stockholm Conventions, the Montreal Protocol and SAICM). ISLANDS will use the Conventions as an entry point to improve capacity for import monitoring and customs, policies and legislation pertaining to chemicals and wastes; introduction of best practices and approaches for SIDS in chemicals and wastes management (e.g. building capacity for export; creating sustainable opportunities for circular local waste management and treatment systems and supporting infrastructure; phasing out products that result in hazardous wastes).

Like the global programme, the UNEP/FAO Child Project aims to build a sustainable model for the sound management of chemicals and wastes in the Caribbean so that countries can continue to sustainably develop without a build-up of toxic and hazardous substances in their territories. This will be achieved through harmonizing, among other things, mechanisms for implementing the chemicals and waste MEAs, border control procedures, standards and labelling and capacity building. The Child Project will support the global programme in creating and supporting long term cooperation among SIDS to achieve the overall goal. While working at the regional level to harmonize practices the programme will identify, incubate and accelerate SIDS' appropriate technologies and practices to manage chemicals and wastes. This will allow much needed action at the national level to be taken and lessons learned at the national level to be scaled up to the regional and global level through the coordination mechanism developed by the programme.

As noted, activities regarding the agricultural sector will be designed and integrated into all components of the project, as follows:

The project will develop and enhance global instruments to strengthen the decision making process for phasing out the use of harmful chemicals in agriculture. This will be achieved through supporting countries to build the capacity necessary to sustainably manage agricultural chemicals that pose environmental and public health concerns. Moreover, the project aims to develop global tools to assist any country in the determination of agrochemicals pollution based on user friendly indicators that tackle pollution at the social, environmental and economic levels.

These tools and expanded instruments will be essential to many countries to undertake planning processes that can assist governments to prioritize interventions in the elimination of HHPs/POPs Pesticides from national agricultural systems. A Pesticide Registration Toolkit and specific Guidelines on Highly Hazardous Pesticides will provide guidance to the countries when taking action on phasing out the use of harmful chemicals in agriculture.

To increase access to the information required to identify and adopt improved practices in Caribbean SIDS, there is a necessity to increase the capacity and incentives to promote these practices. Therefore, ISLANDS activities will emphasize building the capacities of national extension units and distributors to promote sustainable agricultural practices. Much of this effort will be directed towards building and strengthening training programs focused on the reduction of harmful agrochemical use.

Collaboration between national and international organisations, academia, civil society, and the private sector, will help to improve the effectiveness with which knowledge is shared through global instruments such as SAICM. ISLANDS will support feeding of this information in a more coherent and efficient way and this will improve global sharing of data and resources with the SAICM Knowledge Management platform developed under the "GEF Global Best Practices on Emerging Chemical Policy Issues of Concern" project.

The UNEP/FAO Child Project will help to overcome the common challenges facing Caribbean SIDS based on several core principles adopted from the global programme:

- **Operational Effectiveness:** By developing/ strengthening legislative and policy frameworks, promoting equivalence and where possible harmonization of regulations at the regional level. The project will also develop a series of tools and systems at the regional level which will benefit all countries, for example through working with CROSQ, to ensure that there are regional product and labeling standards;
- **Knowledge management and exchange:** By sharing of lessons learnt between countries and regions and facilitating access to information and experience (for example, Samoa and Barbados are in the process of introducing national bans on single-use plastic, and the Caribbean Child Project will be able to draw lessons from this experience). These experiences will be collated, packaged and disseminated, by the global Coordination, Knowledge Management and Communication Child Project;
- **Using the programme as a vehicle for change:** By working with importers of electronics / cars, plastics manufacturers and sectors such as agriculture to lobby for the improvement of environmental performance and development of procurement agreements with receptive private and public-sector partners that can be utilized across participating countries;
- **Alignment of activities with other initiatives operating at the regional, cross-regional and global level:** Several other major funds are coordinating efforts at the regional, inter-regional and global levels. These include the World Bank, EC ACP Secretariat and European Investment Bank. This provides the opportunity to link GEF activities with other development partners coordinating the work at the regional and global level, facilitating alignment of workflows and achieving economies of scale. Several other major sectors such as climate change and plastics management are also operating across the three regions and provide opportunities to build on and link with existing structures for improved coordination. According to the SIDS Waste Management Outlook 2019, regional approaches that utilize synergies between countries are key to improving waste management in SIDS;
- **Linkages to global agreements and initiatives:** Bodies such as the BRS and Minamata Conventions, SAICM, and processes linked to the S.A.M.O.A. (Small Island Developing States Accelerated Modalities of Action) Pathway and WHO projects in SIDS operate and coordinate at the global level. They also provide existing platforms for coordination across regions to achieve global impacts, knowledge exchange and policy dialogue;
- **Cost effectiveness:** Will be achieved by delivering on all the above. Participating Caribbean countries will share the costs of development of products, knowledge and standards, which can be utilized and applied across non-participating Caribbean countries and other regions. By linking with existing global platforms, the programme will also increase the visibility of the issues in SIDS and the impacts of the programme in a cost-effective way.

The Child Project's theory of change (Figure 3) has been developed around three complementary approaches, which serve to address the barriers to sound chemicals and wastes management faced by Caribbean SIDS (and outlined Section 1a.1 above). These three approaches are:

- avoiding future imports and use of chemicals and products/materials that lead to waste which cannot be disposed of in Caribbean SIDS;

- treating chemicals and waste that are currently present in Caribbean SIDS and cannot be disposed of under existing conditions or using existing infrastructure; and
- developing systems, circular, or otherwise, to ensure that those chemicals and subsequent wastes which cannot be avoided are used safely with capacity for recycling or environmentally sound disposal at end-of-life.

Together with a cross-cutting global component on Knowledge Management and Communications, these three approaches also form the Project Component framework (outlined below).

The integrated approach responds to and reflects the child project and full programmatic theory of change by focusing on interventions in line with the identified drivers including public health concerns; responding to climate change and sea level rise (through future proofing infrastructure); that tourism requires a clean environment; and the need to protect ecosystems.

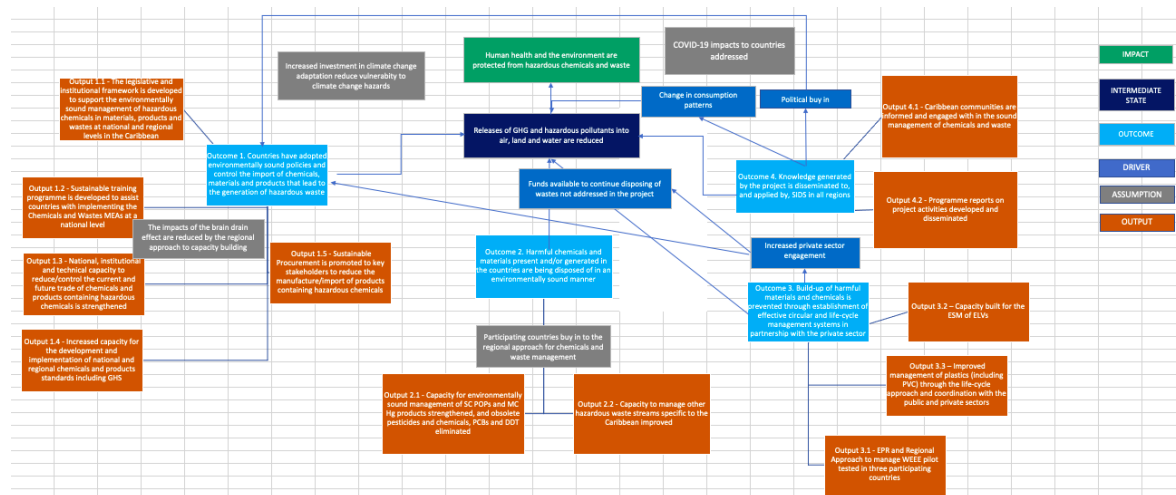


Figure 3: Theory of Change Diagram

The activities of the UNEP/FAO Child Project are directed at achieving the long-term objective of preventing the build up of POPs and mercury materials and managing and disposing of existing harmful chemicals and wastes across the Caribbean regions. It is envisaged that through the developed activities, the Caribbean will achieve the following outcomes, in line with the overall expected outcomes of the ISLANDS Programme:

- Caribbean SIDS have in place effective mechanisms to control the import of chemicals, and products that lead to hazardous waste;
- Harmful chemicals and materials present and/or generated in Caribbean SIDS are being disposed of in an environmentally sound manner;
- Build-up of harmful materials and chemicals is prevented through establishment of effective national and life-cycle management systems in partnership with the private sector; and
- Knowledge generated by the Child Project and the Global Programme is disseminated and applied by SIDS in all regions.

By achieving these outcomes through participation in the UNEP/FAO Child Project as well as a concurrent IDB-implemented Child Project and the Global Knowledge Management Child Project, the nine (9) participating countries are expected to benefit from: having in place financial and regulatory structures and associated enabling environments to foster entrepreneurship and private sector investment in the management of chemicals and wastes; partnerships and communication platforms forming a solid basis for ongoing and future investments; bans on single-use plastics to address locally derived marine litter; improved capacity for e-waste management; and regional cooperation leading to an upsurge of sustainable management and behaviors across SIDS.

Activities to be conducted under the UNEP/FAO Child Project were developed based on national priorities highlighted during initial consultations with stakeholders from the participating countries. The activities include national and regional level activities developed using baseline information collected during the Project Preparation Grant Phase to avoid duplication and maximise incrementality of the project. Global level knowledge transfer and management plus coordination will be achieved under Component 4. Regional level activities (under Component 1 and 2 will help ensure national equivalence of regulatory environments and allow all countries to benefit from project activities. National level activities under Component 3 are based on national priorities, as outlined in Section 7. Component 4 activities will include the development of mechanisms to manage knowledge and communications to promote learning regionally and globally beyond the life of the project.

Component 1 – Preventing the Future Build-Up of Chemicals Entering SIDS

There is a need for Caribbean SIDS to stop generating hazardous waste that is difficult to manage and likely to build up over time. To achieve this, the ISLANDS programme aims to work together with project countries and IDB constituencies to put in place effective mechanisms to control the import of chemicals, materials and products that lead to the generation of hazardous waste. This is the overarching goal of Component 1, which will be achieved through five (5) Outputs.

Specifically, activities under Outputs 1.1 through 1.5 will aim to: (i) develop the legislative and institutional framework for the environmentally sound management of Electrical and Electronic Equipment (EEE), End-of-Life Vehicles (ELVs) and mercury containing products, and develop national strategies for adoption and implementation (**Output 1.1**); (ii) train the customs/border control and trade officers, environmental inspectors, and officers responsible for the sound management of chemicals (**Output 1.2**); (iii) establish standards and build capacity to control/limit and prevent the import of hazardous chemicals, products containing hazardous chemicals or products that will result in hazardous waste (**Outputs 1.3, 1.4**), and; (iv) promote Sustainable Procurement to reduce the manufacture/import of products containing hazardous chemicals (**Output 1.5**).

All activities under this component are national-level activities taking part in all 9 project countries with two (2) national-level demonstration projects in Guyana and Suriname under Activity 1.3.2. The lessons learnt from these demonstration project will be communicated to the other countries through output 4.1 and to the other regions through the CCKM project 10266.

Output 1.1- The legislative and institutional framework is developed to support the environmentally sound management of hazardous chemicals in materials, products and wastes at national and regional levels in the Caribbean

Very few countries have developed legislation which address waste management and hazardous chemicals in materials and products. Moreover, none specifically highlight the products and waste streams which were identified in the updated NIPs and MIAs as problematic, and that will be considered in this output, namely; EEE, ELVs and mercury containing products. In accordance with the Stockholm and Minamata Conventions' guidance documents on the management of these chemicals, the entire lifecycle of the materials or products should be managed from manufacture or import to end of life. In this output, the legislative and regulatory enabling environment will be enhanced. This will facilitate the uptake of the regional solutions proposed in this project to manage these materials and products and wastes, particularly as it relates to regulating their import and informing safe transboundary movement. Consideration will also be given to the existing national situations and the ability to ably support these regional initiatives. Although a regional legislative framework at the CARICOM level does not exist, a regional model approach can still be adopted that promotes harmonisation of the national efforts across the region but still allows individual countries to customise the model policies and regulations to enhance their existing framework. This approach worked well for the GEF 5558 project which developed a regional model Integrated Chemicals Management Act.

Activity 1.1.1 - Assess relevant legislation, infrastructure and institutional capacities to manage hazardous chemicals in materials, products and wastes at national and regional levels

A detailed assessment of the existing legislation, infrastructure and institutional capacities in the individual countries will be conducted to determine the ability of each country to successfully implement the project activities proposed hereunder. Existing regional or sub-regional regulatory mechanisms to manage hazardous streams will also be assessed. Here lessons learnt from other SIDS will be considered.

In recent years legislative and institutional assessments were conducted in most project countries, looking at integrated chemicals management (GEF 5558), pesticides management (GEF/FAO 5407), mercury management (various MIAs) and even a preliminary assessment in the PPG phase of the ISLANDS Programme. The detailed assessment for EEE, ELVs, mercury added products and plastics will build on these previous assessments, filling the gaps in knowledge where needed.

Activity 1.1.2 - Specific hazardous chemicals and wastes policies and legislation developed to support management at national and regional levels

A regional model policy will be developed to guide regulations for the management of EEE, ELVs (considering the import age of used vehicles, emission standards of imported vehicles, vehicle deregistration and regulation of destruction/dismantling facilities) and mercury containing products. The formulation of the policy will also consider international obligations and the wider national legal frameworks, as well as the experiences of other SIDS. Furthermore, the institutional capacity to implement the policies will be examined at national and regional levels.

An understanding of the issues to be addressed will be derived from the data gathered from the inventories made in Activity 2.1.1 and extensive stakeholder engagement, particularly as it relates to how countries view their ability to manage the specific hazardous chemicals, products or waste streams and the regional approaches adopted. Technical support from the countries will be at a regional level and will be led by experts, primarily from the ministries with responsibilities for waste, chemicals and environmental management, legal affairs and trade. Policies will be developed in synergy with IDB to create the necessary enabling environment to allow countries to manage chemicals and waste with full participation from the private sector and the finance sector.

The regional model policies will form the foundation for drafting model regulations. Here, the assumption will be made that each country has the empowering legislation in place to enact the model regulations or the parts thereof which are relevant to the country's needs. Consultations with each country's legislative drafting department will be held and the core experts from each country will participate in periodic regional workshops as the regulations are developed. In order to formalize the model legislation at a regional level, engagement with CARICOM, specifically its CPC/Senior Legal Affairs Committee and bilaterally with the relevant authorities in the Dominican Republic will be considered to provide both high-level buy in and expediency. IDB constituencies will also be involved in formalization of the model legislation at a regional level.

The regional model policies and legislation will be shared with the global knowledge management platform (see Output 4.1).

Activity 1.1.3 - National strategies (one per country) developed for adoption and implementation of the model policies and legislation

Under this activity, the ISLANDS Programme will draw from Activities 1.1.1 and 1.1.2 to develop a harmonized strategy for each country to improve national chemicals and waste management which will facilitate the success of the proposed interventions by this project, and in so doing, help countries to achieve their obligations under the BRS and Minamata Conventions. In this activity, national working sessions with the various institutions, including IDB constituencies, will be held to identify the empowering legislation relevant to the recommendations and regional model policies and legislation developed in the preceding activity. It is expected that the different model regulations or parts thereof will be enacted under different parent acts and any amendments needed in these acts will be identified to ensure there is a harmonious approach to the national management of chemicals and wastes. The national workshops will also assess the financial, material and human resources needed to implement these recommendations and legislation. Finally, discussions will be held to identify and develop materials needed for implementation, such as practice guidelines, standard operating procedures, user-friendly and illustrative booklets/manuals, and reporting. The national strategy will document roles and responsibilities, description of tasks, supporting agencies, outputs and timelines.

Output 1.2 Sustainable training programme is developed to assist countries with implementing the Chemicals and Wastes MEAs at a national level

Priority areas of concern for project countries include: the absence of information on the waste and chemicals Multilateral Environmental Agreements (MEAs) tailored for the region; the concomitant challenge of meeting obligations under these Conventions; the limited capacity to stay abreast of the updates to the Conventions, and; the inherent need to improve implementation. In response, this output focuses on the development of a sustainable training programme which will develop materials to raise awareness on the Chemicals and Wastes Conventions and to ensure that Parties are aware of the obligations under these Conventions. The sustainable training programme will be developed based on an in-depth analysis of

the relevant stakeholders and through the development of a comprehensive training needs analysis. The IDB will be consulted to help identify and engage with relevant stakeholders. The recognised institutional challenges and barriers to the effective implementation of the MEAs will be prioritised according to a pre-determined criterion and the requisite training will be developed with built in mechanisms to ensure sustainability. The modality of each training will be determined based on the scope and dynamics of the training material. The activities also address the challenges surrounding the high turnover of national focal points within the relevant government ministries. It is envisioned that the BCRC-Caribbean will act as the repository for the information on its webpage and will be the custodian of the materials developed (see Activity 1.2.4). This will allow for a standard guided approach to access the training material and a continuous update on the subject matter based on new information. This repository will also include the training and awareness raising materials developed in all subsequent outputs and will be shared with the global knowledge management platform (see Output 4.1).

The training programme will include development of guidance and tools for the ecological risk assessment of pesticides in agriculture, which will be tested and trained in the region. These guidance and tools will be tailored to national challenges and needs, enhance capacity building for the implementation of MEAs in countries which have ratified the MEAs dealing with aspects of chemicals management, and assist countries in adhering to voluntary international initiatives such as SAICM and the International Code of Conduct on Pesticide Management. In addition, training and awareness raising materials will be available on the FAO e-learning academy (<https://elearning.fao.org/>) and will be linked to the BCRC-Caribbean virtual platforms and CCKM project. Accordingly, project and programme countries will: benefit from the services and information provided by various ongoing knowledge and policy processes in FAO; be able to influence policy dialogue, and; have access to human and financial resources in relevant areas.

Activity 1.2.1: Conduct a Training Needs Assessment (TNA) for implementation of the Chemicals and Wastes MEAs

The initial activity will be to conduct a Training Needs Assessment (TNA) for staff of key agencies in all participating countries as it relates to the Chemicals and Wastes Conventions. The TNA Assessment will include, but not be limited to: the stakeholder analysis; defined approach to identify the gaps and needs within these agencies; the prioritisation of the training needs; the development of the preliminary training plan which outlines the approach to each of the selected training topics, and; the recommendations for the execution of the training programme. A TNA report will be written.

FAO activities will contribute to the TNA conducted by the BCRC by providing assessments in relation to agriculture in the Chemicals and Wastes Conventions. A mixed methodological approach will be applied to complete this assignment. It will combine the Public-Private Dialogue (PPD) Stakeholder Mapping Tool Kit and the Participatory Stakeholder Analysis of the FAO. The PPD is a structured engagement among an inclusive group of relevant and local stakeholders that seeks to identify, prioritize, and recommend consensus. Together with the Participatory Stakeholder Analysis, the PPD will help to identify who are the key stakeholders, and to determine their linkages and levels of influence. The assessment instrument will assess capacities in three major dimensions or three entry points: the enabling environment areas, the individual dimension areas and the organizational/institutional areas. The enabling environment dimension will assess the context in which individuals and organizations exist. Therefore, policies, rules and regulations, which facilitate pesticide management in agriculture in the Caribbean both from a regional and national perspective, will be identified. The individual dimension will assess the awareness, knowledge and understanding by individuals of pesticide management in agriculture in the Caribbean. The attitudes of individuals will be assessed as well as what skills are practiced. It will also assess the possibilities of changing attitudes and skills through training and other activities. The third dimension or entry point will be the organizational or institutional dimension. This part will assess existing and possible partnerships and opportunities for knowledge sharing among organizations. In this context, partnership capacity, capacity for implementation as well as financial capacities will be evaluated.

Activity 1.2.2: Develop targeted training material and conduct training for the gaps identified from the Training Needs Assessment

Under this activity, the ISLANDS Programme will develop an interactive and detailed training plan with all accompanying background materials for the newly trained instructors to deliver to their agencies on the implementation of the Chemicals and Wastes Conventions. This will include identifying practical ways for creating and improving any existing training materials on these MEAs with a view to standardize the material. Training will be delivered as needed through existing training institutions. Toolkits, handbooks and other materials will be developed to ensure the institutionalization of the training plan and will be stored on the BCRC-Caribbean's webpage for ease of access. All FAO technical materials will be allocated and updated on the FAO regional Caribbean webpage and linked to the BCRC-Caribbean's webpage for ease of access. The BCRC-Caribbean will be responsible for updating the materials to address any future changes related to the Chemicals and Wastes Conventions, such as the addition of newly listed chemicals and adjustments to the Annexes of the Conventions. Consideration will also be given to the development of guidelines and procedures to outline national roles and responsibilities under the Chemicals and Wastes Conventions to address changes to the focal point designations or agency personnel.

FAO activities will contribute to development of the "Training of Trainers" programme by extending capacity in key agencies mandated with the implementation and monitoring of Chemicals and Waste MEAs in relation to agriculture.

The overall FAO Training of Trainers component will be based on a participatory learning process including short interactive lectures from experienced relevant regional agencies and FAO trainers, experiential learning and sharing of best practices between participants. The learning process will be designed to allow participants to review their training methodology and improve their training ability. The design will involve participants in a process of ongoing critical reflection, allowing them to link the course contents with their own experiences and apply techniques and training methods in their specific contexts. The coaching element and the development of a personalized plan for adaptation of this training for future capacity building back home is an important part of integrating the training into the participants work environment and to provide direction for the participants to achieve their desired outcomes. FAO will apply its own tools and methodology for identifying criteria for the Training of Trainers. The regional Training of Trainers will be designed as a practical learning experience for agricultural pesticide management practitioners and trainers from various Caribbean countries. National, regional and international agencies, NGOs and governments that are actively working on pesticide management and transformation processes and/or importantly involved in training will be invited to nominate suitable staff members for participation in the course. These organisations can nominate staff for the course provided that the organisations commit themselves to: providing trainings on pesticide management related topics on a continuous basis in the future and provide full institutional support to their staff in the design, development, and delivery of the regional and national level training on pesticide management during the Training of Trainers program.

Activity 1.2.3: Develop a "Training of Trainers" programme to extend the capacity in key agencies mandated with the implementation of and the monitoring of Chemicals and Wastes MEAs

Recognising the need to build techniques to conduct successful and sustainable training, a training programme entitled "*Training of Trainers*" will be developed for key personnel in key agencies [e.g. waste management, environment, health, agrochemical sector] and the staff of the BCRC-Caribbean. The Training of Trainers programme is intended to engage master trainers in coaching new trainers that are less experienced with the topic or skill, or with training overall. This Training of Trainers workshop will then build a pool of competent instructors who can revert to teach the material to others within their agency to facilitate the sustainability of the approach. The workshop aims to train 25 trainers, of which at least 40% (10 trainers) female.

Consideration will be given here to linking to ongoing training and platform development initiatives of other regional centres (e.g. CETESB - Companhia Ambiental do Estado de São Paulo), UNEP, and BRS Secretariats (e.g. linking to existing webinars, training material, available trainers and also considering ongoing projects such as the GEF/UN Environment project: "Integrated Stockholm Convention Toolkit to improve transmission of information under Article 7 & 15"). In addition, it will be designed as a practical learning experience for agricultural pesticide management practitioners and trainers from various Caribbean countries. The training will cover national, regional and international agencies, NGOs and governments that are actively working on pesticide management. FAO will contribute to the development of an interactive and detailed training plan, providing toolkits, handbooks and other materials adopted to the region in relation to agriculture and the Chemicals and Wastes Conventions. The plan will link to ongoing training and platform development initiatives of SAICM and the FAO e-learning academy.

The design of the training material and modules will consider the dynamics concerning changes in personnel at focal point levels, changes in governments and alignment of focal point departments. As such, the stakeholder analysis associated with the delivery of the training of trainers will focus on the most suitable mechanism to address institutional strengthening. A Knowledge, Attitudes and Perception Survey (KAP) will be conducted before and after the training workshop is executed. This will be completed by the participants to ensure that feedback can be incorporated into the improvement/finalization of the training materials to continuously strengthen the future delivery of the training programmes.

The Training of Trainers programme will be based on a participatory learning process which will be designed to allow participants to review their training methodology, share experience and improve their training ability. The programme will develop tools and methodology for identifying criteria for Training of Trainers and training materials and establish a team of masters of trainers for the future.

Activity 1.2.4: Develop, adapt or utilize an online training platform which is designed to promote sustainability

An online platform, hosted and managed by the BCRC-Caribbean, will act as a capacity building repository which will house all learning content, training materials and knowledge enhancing products developed under this output, all subsequent outputs of the project and any other training or awareness raising materials on Chemicals and Wastes developed under future initiatives. It will use creative learning approaches and methodologies, illustrations such as infographics and videos, modern technologies and eLearning tools. The online platform will be part of the suite of training/ awareness/ information dissemination tools the BCRC-Caribbean currently manages, including mercury videos, infographics and flyers developed under the MIA projects, the stopthepops.com website and the POPs Regional Information System currently in development. The platform will also seek to link to existing training portals and materials from the UNEP and BRS Secretariat. Within this activity will also be included the possible development of a demonstration open online course on reporting requirements under the Chemicals and Wastes Conventions.

All materials will also be located on the FAO Subregional webpage (<http://www.fao.org/americas/caribe/en/>) and the FAO e-Learning academy portal, as well as any platforms developed in the context of the IDB child project, linking to the BCRC-Caribbean's webpage for ease of access. This will offer free access to content in a range of formats, including e-learning courses for self-paced learning, blended learning programmes, massive open online courses (MOOCs), technical webinars, online tutored courses, mobile learning, face to face training workshops, as well as University Master's Degree programmes and post graduate degrees.

A virtual regional training workshop will be developed to demonstrate the use of the platform and its resources and to ascertain from the stakeholders in the key agencies of the participating countries how they expect to use and share the platform at a national level. The outcomes of this workshop will inform the development of the awareness raising programme in the following activity and will be shared with the CCKM under Output 4.1.

Activity 1.2.5: Develop and implement an awareness raising programme on the Chemicals and Wastes MEAs Training Platform

Following the development of the online platform during Activity 1.2.4, a communications programme will be created to increase the awareness of the existence of the platform. This will include the catalogue of resources and tools available, suggestions of stakeholders who can benefit from the available material and guidelines to access and use the platform. A survey will be conducted before and after the completion of the awareness raising program to provide insight on the awareness spread, and the platform will be continuously monitored for viewer traffic.

A detailed strategy will be developed focused on distributing the FAO content so that it gains the maximum amount of visibility. This will include details on when and how it should be published, including clear instructions for the site owners. Detailed dashboard reports will be created showing KPIs and progress for all content/tools, such as downloads, interactions with the tools and disaggregation by country.

Output 1.3: National, institutional and technical capacity to reduce/control the current and future trade of chemicals and products containing hazardous chemicals is strengthened

The existing national and regional frameworks related to the control of trade in chemicals, products containing chemicals and wastes governed by the various chemicals and waste MEAs are generally weak. Some countries within the region do not have standardized systems in place for the identification and quantification of chemicals or product imports containing chemicals of concern. For items that are restricted and/or prohibited, several barriers exist which reduce the effectiveness and enforcement of the relevant legislation. These include: lack of awareness among customs and border control officers and the public on restricted items; limited capacity for identification of imports before entry and at port facilities; few labelling requirements for imported chemicals and products containing chemicals of concern; aggregated import data, and; informal or non-existent institutional arrangements between customs and border control agencies, port owners, environmental departments and agencies with responsibility for pesticides, chemicals and waste.

Activities under this Output will address the identified gaps in the enforcement, institutional and technical frameworks in order to strengthen national and regional capacities to reduce and control the current and future trade in specified hazardous chemicals, products containing chemicals, and waste. They will focus on improving mechanisms for:

- Identification of restricted or prohibited hazardous chemicals, products containing chemicals or waste prior to their import or export
- Identification and seizure of illegal imports upon their arrival
- Environmentally sound storage, handling and testing of imported chemicals and products
- Institutional coordination and communication for data collection and management

Activity 1.3.1 – Develop a formal mechanism for inter-institutional collaboration and communication as it relates to the trade of restricted or controlled chemicals, products and waste and management of data generated by relevant agencies

Inter-agency collaboration regarding the monitoring and enforcement of the illegal trade in chemicals and waste is recognized as weak in several participating countries. Under this activity, the ISLANDS Programme will seek to identify existing inter-agency coordination mechanisms and opportunities to strengthen them. It will also develop formalized arrangements for inter-agency collaboration and communication, including conduct of activities such as: routine information and data exchange between border control agencies and other stakeholders; notification of relevant agencies of suspicious and illegal imports and exports, and; integration of the updated ASYCUDA World System into the operations of stakeholder agencies. The recent successes and lessons learnt under the Montreal Protocol, as it relates to improved inter-agency collaboration of border control and training of agencies, will be considered.

The project will lead to the development of a Model Memorandum of Understanding (MOU) for formal institutional arrangements and Terms of Reference for member agencies. The results of this activity will build on efforts being conducted under the Environmental Network for Optimizing Regulatory Compliance on Illegal Traffic (ENFORCE), of which the BCRC-Caribbean is a member, and the Green Customs Initiative. The existing successful mechanisms of countries such as Guyana and Trinidad and Tobago will be considered during the development of the Model MOU.

The project will establish a special collaborative mechanism between customs and national pesticide management agencies for control of illegal trade of pesticides. An information exchange system will be built between the registration authority and customs for sharing registration information and importing products to enable customs to check the legality of products pending import. Joint law enforcement will be organized between agriculture and customs for pesticide trade.

Another aim of this activity is to support the amendment of the regional Common External Tariff HS Codes based on the guidance report to be submitted by the United Nations Environment Programme Global Mercury Partnership–Mercury in Products partnership area (Products Partnership) at the fourth Conference of the Parties for the Minamata Convention (consideration will also be given to additional developments and decisions made at COPs within the lifecycle of the project).

This activity is key to reduce the imports of mercury-added products (MAPs) over the next 5 years and thus limit the build-up of mercury wastes in countries. Participating countries generally follow the World Customs Organization's 6-digit

Harmonized System (HS) Codes for classification of traded commodities. However, trade statistics obtained from using the 6-digit HS Codes are often aggregated by commodity-type, and quantities of imported products containing harmful substances, such as mercury, are often totalled with imports of their chemicals-free alternatives, thereby hindering analysis and understanding of the true nature of chemicals imports. Assistance for this activity will be sought from the Global Mercury Partnership (GMP)[37] and regional bodies (e.g. the CARICOM Council for Trade and Economic Development (COTED)).

Activity 1.3.2 – Improve capacity of customs and border control agencies for the identification of trade in restricted and prohibited hazardous chemicals, products containing chemicals and waste

Existing pre-screening and inspection procedures employed by customs and border control agencies will be assessed, including: officers' awareness of HS codes; use of ASYCUDA World for data collection and management; requirements for importer/exporter licenses and registration of imports/exports; awareness of restricted and prohibited chemicals and products; notification procedures; sampling and testing, including analytical and technical capacity; chain of custody at port facilities; process for seizures; return or disposal of seized goods, and; implementation of fines for importers of illegal or restricted goods. Recommendations to improve procedures will be provided. The activity also aims to support the standardization of institutional capacity for countries to quickly adapt to the global identification of new POPs of concern and their inclusion in the Stockholm Convention Annexes. The initial assessment will be conducted in tandem with Activity 1.3.1 which seeks to explore the existing inter-agency coordination mechanisms.

Additionally, in order to address the direct prevention of mercury imports, based on the results of this assessment and identified priority areas for improvements relevant to mercury added products, localized pre-screening and inspection guidelines will be developed[38]. The capacity of the border control agencies, in project countries where there are significant issues (e.g. Guyana and Suriname), to detect and control liquid mercury will be improved through the provision of X-Ray Fluorescence (XRF) devices. A pilot exercise in a selected country will be conducted to test the effectiveness of the developed guidelines and support their finalisation. The developed guidelines may be presented to CARICOM for inclusion in their Customs Handbook (2013)[39].

Further, in response to increasing illegal international trade of pesticides, training materials for Pesticides and Customs Inspectors/Officers on the import/export Inspection and Control of Pesticides will include modules on: pesticides regulation; registration law enforcement including the procedure of confiscation, safe transportation, storage and disposal; the role of Pesticides Inspectors and Types of Inspections; the roles of Customs and Border Control in the Control and Inspection of Imported Pesticides; Pesticides Import and Export Control, and; collaboration among and between government agencies.

A training plan, inclusive of supporting training material, will be developed and executed to support national and regional customs and border control agencies in adopting the developed guidelines. The training plan will also support building capacity of customs and border control agencies for monitoring and enforcement of requirements for chemicals identification and examination, notification procedures, and reporting and coordination, for activities related to the control of restricted and prohibited hazardous chemicals and product imports[40]. All developed training materials will be incorporated into the online training platform developed in Output 1.2 to ensure sustainability. The training activity will include a workshop activity on the development of a Model Memorandum of Understanding (MOU) for formal institutional arrangements and Terms of Reference for member agencies as detailed in Activity 1.3.1.

Output 1.4: Increased capacity for the development and implementation of national and regional chemicals and products standards including GHS

Standards are important to ensure the safety and consistent quality of products and processes. Each project country has a department with responsibility for the development of national standards with respect to goods, services, processes and practices. These departments also generally have responsibility for testing of products to ensure compliance with developed standards; however, limited capacity for testing in most countries has been noted.

Additionally, the project countries, except for the Dominican Republic, are Member States of the CARICOM Regional Organization for Standards and Quality (CROSQ). CROSQ is a regional inter-governmental organisation which coordinates the development of harmonized regional standards based on requests by members states. As such participation by all Member States, including the Bahamas and Dominica who are beneficiary countries in the GEF ISLANDS 10472 child project, will be encouraged. The Dominican Republic is not a member of CROSQ. However, as a beneficiary project country in a project implemented by the BCRC-Caribbean, provisions will be made to allow them to participate and derive the benefits from the activity. Once regional standards are developed by CROSQ, countries are responsible for implementing, monitoring and assessing the effectiveness of the developed standards. CROSQ provides support for countries by developing and suggesting mechanisms that can be used for implementation of the developed standards, providing training on the requirements of the standard, advising on conformity assessment procedures, and identifying necessary equipment and calibration for testing. CROSQ has developed a Technical Regulation Development Guide (Good Regulatory Practice Guide) that countries could use to ensure that they are using best practices in developing their regulations including development of a regulatory impact assessment.

There is a need for the development and implementation of product standards which can assist countries with regulating the import of products with harmful chemicals, and standards for classification and labelling of chemicals and products containing harmful chemicals to support the identification of imports by border control officers. This Output will address this need through the development of two (2) regional standards in collaboration with CROSQ, and the creation of roadmaps to support countries with developing and implementing national and regional standards. Hazard classification and labelling of chemicals will also be considered under this Output in Activity 1.4.3 which focuses on developing an adaptive implementation strategy for the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in each project country.

Activity 1.4.1 – Develop two (2) regional labelling and product standards for relevant chemicals and products

This activity will include an assessment of existing national and regional labelling and product standards related to hazardous chemicals and products containing hazardous chemicals, and the identification of gaps in available standards that would support countries with fulfilling their obligations under the chemicals and waste management MEAs, particularly the Stockholm and Minamata Conventions. Standards that can feasibly be developed and harmonised regionally will be assessed, and two (2) regional standards will be selected based on national priorities and feedback from national stakeholders and IDB constituencies. Products that will be considered include skin-lightening creams with mercury and PBDEs-containing toys or kitchen utensils. Support will be provided to develop draft technical specifications for the two (2) standards and these will be submitted as new work item proposals to CROSQ. Once approved, the regional standards will be formulated in accordance with CROSQ's standards development process. Consultation with stakeholders, those who will be affected by the regional standards and those who wish to contribute to its development, will be conducted throughout the process[41]. CROSQ's Regional Technical Committee, which consists of members from the National Standards Boards, will regularly collaborate with the national Project Working Committees and the BCRC-Caribbean to ensure technically sound and appropriate regional standards are developed. The National Standards Boards will spearhead extensive national consultations. The developed standards will include: guidance for implementation of the standards; identification of necessary equipment and calibration for testing and mechanisms for capacity building of regional laboratories to conduct required testing; training on requirements of the developed standards; stakeholder education and awareness raising, and; templates for effectiveness evaluations and conformity assessments.

Continued cooperation between the BCRC-Caribbean and CROSQ will be established through development of a Memorandum of Understanding (MOU) specifying the requirement for the BCRC-Caribbean to participate in technical work for development of regional standards related to chemicals and waste as well as to notify CROSQ on the need for future regional standards based on additions to the Stockholm Convention.

Activity 1.4.2 – Create national roadmaps to support countries with future development and implementation of labelling and product standards for relevant chemicals and products

National roadmaps will be developed to support countries with the development, implementation, monitoring and enforcement of new and existing national standards for which standards were not developed in Activity 1.4.1. The roadmaps will incorporate lessons learned from the implementation of existing standards, the results of an assessment of national and regional processes and requirements for developing new labelling and product standards, barriers to the development, implementation and enforcement of new standards and recommendations to improve processes and circumvent the identified barriers. These roadmaps will be developed using existing guidance documents^[42] and will include considerations for testing in support of monitoring efforts, criteria for conducting effectiveness evaluations, private sector incentives and public sector engagement.

Activity 1.4.3 – Detailed multi-institutional assessment of current implementation of GHS, gap analysis and recommendations as it relates to capacity to respond and control chemicals imports at the borders

The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) is an international standard developed to support the classification and identification of hazardous chemicals and their risks.

It is acknowledged that there are some limitations to GHS as it does not adequately address chemicals in products and wastes, which is a major issue and problem for POPs and other hazardous chemicals in products and related waste management. Nevertheless, it is considered a frontline tool to support regulation of the import of chemicals and is another aspect that can be strengthened in each country.

The baseline indicated that the extent of implementation of GHS in the project countries varies but is generally non-existent to low. It was noted, however, that where appropriate, GHS has been considered in the development of standards. For example, CROSQ is in the process of establishing regional pesticides labelling standards which will conform to GHS. Overall, there is a need for coordinated national GHS implementation strategies which involve all the key institutions and complements the existing mechanisms within the national framework to manage chemicals. Stakeholder mapping will be conducted to include the private and public sectors. In this activity, an assessment of current implementation of GHS will be conducted for each country. This will include assessing: the existing coordinating infrastructure; legal framework including extent of enactment in various pieces of legislation; data management framework and inter-agency communication mechanisms with respect to managing the import of harmful chemicals, and; the presence of built in mechanisms to cope with the future addition of more POPs to the Stockholm Convention.

A gap analysis and recommendations will also be conducted based on the needs of the country, whereby the existing situation in each country will be benchmarked to the GHS 'Purple Book' and best practice examples of implementation in the other project countries and internationally. This includes the ongoing work currently being undertaken by the Secretariats of the Conventions. Crucially, the gap analysis and recommendations will consider the integration of hazard classification into countries' existing systems going beyond pesticides to include, for example, occupational health and safety. It will also outline means for quicker hazard identification, particularly for newly listed hazardous chemicals. As regards hazard communication, in addition to awareness and training from government agencies, the role of the Bureau of Standards and related labelling legislation will be assessed, in tandem with Activity 1.4.1. A training and awareness raising plan will be developed to complement the recommendations. Government agencies' and organizations' communication platforms will be considered, and the training will be integrated into BCRC-Caribbean's sustainable training programme (Activity 1.2).

Further, the Training on Guidelines on Good Labelling Practice for Pesticides in agriculture will cover information about pesticide hazards, risks, main routes of exposure and general principles of effective personal protection when working with pesticides, and thus highlight the risks for different uses and for various stakeholders. This will build upon lessons learned from the GEF 5407 project, and on the work of FAO and CGPC (the Coordinating Group of Pesticides Control boards of the Caribbean) in the development of pesticides labelling standards.

Output 1.5 - Sustainable Procurement is promoted to key stakeholders to reduce the manufacture/import of products containing hazardous chemicals.

The principles of sustainable procurement involve the purchasing of goods, supplies and services that are less harmful to human health and the environment thereby promoting sustainable development and shifts to green economies. It is well acknowledged by the international community that establishing mechanisms to ensure green procurement can play a major role in, not only contributing to achieving the Sustainable Development Goals (SDGs), but also promoting compliance with the chemicals and waste multilateral environmental agreements like the Stockholm and Minamata Conventions. In the Caribbean region, it is noted that while there may be challenges, there exists some level of sustainable procurement initiatives being implemented, such as: nationally driven activities to replace incandescent light bulbs with fluorescent and LED bulbs; promotion of other energy saving activities and initiatives under the Montreal Protocol that aim to reduce greenhouse gas emissions, and; more recently, initiatives to reduce the use of single use plastics. The intent of this output is to assess the enabling environment and promote the procurement of safer chemicals and products that traditionally may contain POPs and/or mercury or generate UPOPs as by-products of their use or destruction, with a focus on the public and/or private sectors that import chemicals and products for use in industry, fire safety, cosmetics and healthcare. The Chemicals without Concern knowledge platform (UNEP, funded by the GEF) will be a key resource for this output.

Activity 1.5.1 - Assess enabling environment for Sustainable Procurement in countries and determine which products lend themselves to such policy

This activity will seek to assess the legislative framework and institutional capacity, including the purchasing policies and practices, that exist for promoting and enforcing sustainable procurement in the public and private sector in each project country. Focused stakeholder consultations with key actors in government, as well as relevant Chambers of Commerce and importers, will be conducted to assess the sectors most impacted by POPs or mercury containing products. The assessment will include a cost-benefit analysis considering reliable available alternatives to products that may contain POPs or mercury and financial and other incentives to facilitate uptake of these alternatives. The activity will allow for recommendations to be made that can facilitate the drafting or updating of national or regional technical policies and procedures for sustainable procurement. Recommendations should give guidance for ensuring that all steps of procurement consider the chemicals and waste Conventions.

Activity 1.5.2 - Assess and select sustainable suitable alternatives to PFAS, POP-PBDEs, SCCPs/PCBs/PCNs and mercury added products

This activity focusses on the following categories of chemicals: PFAS, POPs-PBDEs, SCCPs/PCBs/PCNs and mercury added products. These categories were selected because the baseline, updated NIPs and/or MIAs indicated their presence and use in the region, for example, PFOS fire-fighting foams and cosmetics containing mercury or, for the newly listed chemicals under the Stockholm Convention, such as PFOA, deca-PBDE and SCCPs for which inventories will be complemented in Activity 2.1.1. Based on the global use of these chemicals, it is expected that significant quantities are imported in the region, particularly in products which may be commonly used in everyday life. The main alternatives to pesticides considered in this project will be biopesticides since the majority of alternatives are currently addressed by the FAO GEF 5407 project.

Measures to identify and promote suitable alternatives will focus on two areas: cleaner production methods and the supply chain, particularly the distributors. These are synergistic with SAICM's approach.

An assessment of usage will be undertaken based on the inventories conducted between 2016-2020 as part of the updated NIPs and MIAs and projected future usage. Based on these data, selected products containing these chemicals will be prioritised according to usage/import, level of risk, and a more detailed assessment of its existing use and functionality in each project country.

In countries where the chemicals are used in manufacturing processes, such as SCCPs in metal-working fluid applications and polyvinyl chloride processing and POPs flame retardants in protective clothing, an iterative approach will be undertaken which includes (i) compiling suitable alternatives considering costs and efficacy, (ii) education and capacity-building of the key stakeholders, and (iii) promoting the most suitable alternatives, including awareness raising and training to support the phase in of the alternatives. The assessment will rely on the inventories made in Activity 2.1.1 to identify manufacturing processes in the region which use POPs. The proposed GEF funded Global Greenchem and Innovation

Network Programme can provide useful guidance.

For products which are imported to the region, for example, PFOS/PFOA fire-fighting foam, POP-PBDEs in kitchen non-stick products, mattresses, textiles, and mercury and PFAS containing products, this activity will target two (2) products based on the assessment of usage which considers quantities and ecological and human health impacts and engage the importer/distributor/user to import a safer alternative. An example of this approach is the assessment of alternatives and phase out of PFOS/PFOA fire-fighting foam imported by the Fire Services in Saint Lucia as part of the GEF 5558 project. To achieve maximum benefit, products which are distributed regionally will be given preference.

Activity 1.5.3 - Training and sensitization of stakeholders and consumers on the benefits of Sustainable Procurement

This activity seeks to promote and increase regional awareness raising and capacity for sustainable procurement development, implementation, and its benefits. The target audiences will be institutions involved in procurement (public and private sectors) and consumers. For the institutions, the target training group will include government procurement managers, relevant policy makers and technical project officers. In the private sector the Chamber of Commerce will be the key collaborative institution. The training will be developed to give an understanding of the concepts of sustainable procurement; awareness of standards; identify key drivers, barriers and benefits; provide a strategy for organized sustainable procurement using proposed recommendations of Activity 1.5.1 and useful tools and guidance documents for implementation, and; promote awareness among key stakeholders on how to integrate environmental criteria for procurement of products and services. In order to tackle the common problem of accumulation of pesticide stocks due to unsustainable procurement, detailed training tools for farmers, distributors and governments will be developed on sustainable procurement and on existing bio pesticides alternatives. In collaboration with the private sector, training materials will be developed and delivered to the relevant targeted groups. Round table consultation meetings will be conducted to share good practices, business cases, success stories, new methods, tools and innovative approaches for SIDS farming communities.

Special training will be given to agencies involved in the donation of pesticides for emergency response to urgent outbreak of plant pests.

The training can be delivered face-to-face or via webinar, and the training materials produced can remain available on the training platform developed in Activity 1.2.4. For consumers, the POPs communication toolkit from the GEF 5558 project as well as the communication products developed for the MIAs in the region have already laid a foundation for general awareness and will now be expanded to specifically engender the public's purchasing power to select a safer alternative products on the market.

Component 2 – Safe Management and Disposal of Existing Chemicals, Products and Materials

In many Caribbean SIDS, harmful chemicals and materials may already be present and/or generated due to past or present activities. Therefore, there is a need to dispose of harmful chemicals and materials in project countries in an environmentally sound manner. To achieve this, the ISLANDS programme aims to work together with project countries to implement a number of interventions, including the collection, safeguarding, export and disposal of PCBs, obsolete pesticides and chemicals, DDT stockpiles and selected mercury added products. Where stocks cannot be addressed by the ISLANDS programme, the programme will work together with the IDB to find suitable solutions. The ISLANDS programme also aims to assist countries in improving their capacities to manage hazardous waste, and to develop tools for countries to access additional funding for these activities in the future. These are the overarching goals of Component 2, which will be achieved through two (2) Outputs.

Specifically, activities under Outputs 2.1 and 2.2 will aim to: (i) strengthen capacity for the environmentally sound management of SC POPs and MC Hg products (**Output 2.1**); (ii) eliminate obsolete pesticides and chemicals, PCBs and DDT (**Output 2.1**), and; (iii) improve capacity to manage hazardous waste (**Output 2.2**).

All activities under this component are national-level activities taking part in all 9 project countries, except activity 2.1.3 and activity 2.2.3. Activity 2.1.3 which will include two (2) national-level demonstration projects for two countries to be determined based on: if illegal dumping is a major issue; if the national solid waste agency is a willing partner, and; critically, if there is robust waste management legislation and demonstrated institutional capacity in enforcement. Activity 2.2.3 will include one (1) national-level pilot project in Suriname, and (1) national-level demonstration project of a model agrochemical waste management strategy tentatively in Belize. The lessons learnt from these demonstration project will be communicated to the other countries through output 4.1 and to the other regions through the CCKM project 10266.

Output 2.1 – Capacity for environmentally sound management of SC POPs and MC Hg products strengthened, and obsolete pesticides and chemicals, PCBs and DDT eliminated

It is recognized that the Caribbean region is import dependent with very few countries having a developed manufacturing sector. Component 1 dealt with implementing mechanisms to control the import of avoidable hazardous chemicals and chemicals in products into the countries. However, for chemicals and products containing hazardous chemicals that are already in the countries, those that are considered intrinsic to daily life and those without suitable alternatives, systems need to be in place to safely manage them on a national level and, where possible, as a region.

As such, the activities outlined below address the removal and destruction of stockpiles, while raising awareness to reduce UPOPs emissions from open burning, the main UPOPs contributor in the Caribbean.

In addition, under this output, inventories of pesticides and their usage (including Highly Hazardous Pesticides and POPs Pesticides) in the project countries will be recorded and monitored. This will assist countries to manage pesticides in the most efficient way possible, help to reduce the creation of obsolete pesticide stocks, and enable countries to plan strategies for a more effective response to pest outbreaks and over-supply of pesticides.

Through these activities, countries will be able to: (i) ensure traceability of their stock from purchase to the return and disposal of empty pesticide containers, (ii) be informed on the availability of pesticide stocks, their locations and compliance with standards, and (iii) recover empty containers at the end of use.

Additionally, the ISLANDS Programme will work together with IDB to develop tools for countries to access additional funding for the elimination of obsolete POPs in the future.

Activity 2.1.1– Develop management and destruction/stabilisation strategies to eliminate PCBs, obsolete pesticides and chemicals, DDT stockpiles and selected mercury added products

This activity aims to develop management and destruction strategies to eliminate PCBs, obsolete pesticides and chemicals, DDT and selected mercury added products to be disposed of under this project. The development of the management and destruction strategies will rely heavily on the mechanisms that worked well for previous projects and capitalize on the benefits including the network of government agencies and personnel familiar with the key stakeholders and identified centralized storage sites. The management of empty pesticide containers is currently the focus of the GEF FAO 5407 project and is not considered here.

The first task will utilise the information from the updated NIPs and MIAs and supplement where needed to identify the quantities for disposal. This is especially required for obsolete pesticides and chemicals which have accrued since the last disposal in 2016/2017, particularly PCBs in Guyana and the Dominican Republic since their PCB data stems from their first NIP. As a result of the previous work conducted for the 2016 POPs inventories and the MIAs, stakeholder networks already exist, and these will be leveraged for this project.

Since there are still no available mechanisms to safely dispose of all these chemicals within the region, they will need to be exported for safe disposal. High shipping costs means funding from this project may not be possible to cover the entire disposal. Synergies in the centralized storage and consolidation of the different categories of chemicals will be explored for cost saving benefits. However, the strategies developed will also need to identify public and private sector financing opportunities to either supplement disposal costs or undertake separate disposal operations for wastes that could not be disposed of in this project.

For obsolete pesticides, strategies implemented under the GEF FAO 5407 project and national initiatives in Belize have slowed the build-up of these chemicals since existing quantities were disposed of in 2016 and 2017. However, since the region still does not have an environmentally sound disposal facility for hazardous chemicals and wastes, there will be a need to conduct another disposal operation within this project's timeframe, approximately 7-8 years after the first.

The baseline indicated that the elimination of PCBs is at different stages in each beneficiary country, depending on the project which funded the activity. Inventories will be verified to identify the remaining quantities of the newly listed chemicals under the Stockholm Convention, such as PFOA, deca-PBDE and SCCPs; POPs, including uPOPs; PCBs oils and equipment in each country. Since at least two regional laboratories (Antigua and Barbuda, and Suriname) will have the capacity to analyse for PCBs at the time of implementation, the inventory of obsolete and in-service equipment will include analytical testing. Based on the quantities of contaminated PCBs oil and equipment inventoried, technological options for disposal and/or decontamination will be recommended. It is worth noting large quantities of PCBs oils are anticipated in the Dominican Republic, based on the 2009 NIP, and thus cost effective and appropriate methods for management, such as dechlorination, should be considered.

According to the updated NIPs, none of the countries have any recent registered importation or use of DDT and only one known stockpile exists. It is located in Suriname and was identified for excavation and export for destruction.

Regarding mercury added products, the outcomes of each party's initial assessments indicate that no clear measures are currently in place for the disposal of mercury-added products currently in use. Through this activity, the updated volumes of specific mercury added products will be obtained. This will inform the identification of priorities for the development of disposal strategies of key mercury-added products. Currently, waste mercury added products are typically disposed of in general waste. This activity will assess the potential collection, storage, treatment and disposal options for each major mercury-added product for the development of targeted strategies for their disposal. Holistic approaches to link the disposal of mercury-added products with other hazardous waste streams will be explored.

Activity 2.1.2 – Elimination of obsolete chemicals, PCBs, DDT and mercury added products through safeguarding, centralization and destruction/stabilisation

Under this activity, in each country, the identified chemicals and chemicals in products will be packaged, labelled and consolidated at centralized secured sites prior to export for destruction at an approved facility. Within the previous 5 years, the region has gained experience (e.g. GEF 5407, Belize national initiative) with processes involved in safeguarding and safely disposing of chemicals abroad. As such, this activity will capitalize on this knowledge and other operational aspects that were put in place, including government agencies and personnel familiar with the key stakeholders, trained in-country personnel, and identified centralized storage sites.

For PCBs, if decontamination is the technology selected in Activity 2.1.1, the services for a dechlorination unit will be procured (for example a mobile unit) and the decontamination will be conducted in each relevant country in accordance with the PCB management and destruction strategy.

The Pesticide Stock Management System (PSMS) will be digitally updated (on the principal of distributed ledger technology) and linked with the POPs Regional Information Systems Database. A regional network will be activated in the Caribbean to use the PSMS for sustainable data collection to record and monitor inventories of pesticides and their usage, as well as obsolete stocks in the agricultural and health sectors.

This activity will be conducted in the second half of the project to enable as large as possible quantities of these chemicals to be accumulated to have maximum impact. A collaboration with IDB is expected to find solutions for the stocks that this project cannot address.

Activity 2.1.3 – Awareness campaign to promote or apply BAT/BEP to minimize UPOPs emissions from open burning

In many Caribbean countries, open burning of accumulated waste, particularly plastics, is widely practiced, largely due to insufficient waste management infrastructure and lack of awareness of the risks to human and environmental health. Assessment data from the NIPs estimated total annual release for 2015/2016 was 202 g TEQ of which approximately 30% was from open burning.

In this activity, targeted awareness campaigns will be carried out to emphasize health and environmental risks and exposure hazards from open burning. The audience for the campaign will be relevant stakeholder groups, as guided by the UPOPs inventories for 2015/2016 and updated inventories made in Activity 2.1.1. This activity will use the outputs from Activities 2.2.1 – 2.2.3 to promote BAT/BEP in the awareness raising campaign. An awareness raising plan focused on open burning will be developed by building on the Regional Communication Strategy to manage POPs which was developed under the GEF 5558 project and implemented nationally. The POPs Communications Toolkit for the GEF 5558 project, which includes brochures, infographics and a dedicated POPs website, already exists and will be expanded to align with this campaign.

One potential new product is the development of an app to empower the public to report illegal open dumpsites to the relevant authorities, since often, these sites are eventually burnt (accidentally or on purpose), resulting in dioxins/furans emissions. The National Solid Waste Authority in Jamaica launched such an app in 2020 and lessons learnt from its use will be incorporated into this activity. This app will be developed for two countries where illegal dumping is a major issue, the national solid waste agency is a willing partner and, critically, there is robust waste management legislation and demonstrated institutional capacity in enforcement.

Output 2.2 - Capacity to manage other hazardous waste streams specific to the Caribbean improved

Several of the project countries currently lack Waste Management Strategies and Integrated Waste Management systems with the considerations for problematic and hazardous waste streams generally absent in the region. Regionally, focus is placed on the collection aspect of the existing waste management systems. While collection rates are generally high in the smaller islands, there are several challenges with the integration of the rural areas of the larger project countries into the waste management systems and this is reflected in the significant gaps of waste collection in these areas, especially in relation to agricultural waste produced by farming activities. For example, used pesticide containers are often burned or buried on farms and small holdings. Worse still, farmers often use empty pesticide containers for household purposes such as food and water storage.

In addition, the tourism industry is identified as a key contributor to waste generation rates in several of the countries, and there is a recognised need for the current waste management systems of the region to address this and other priority and emergent waste streams such as disaster waste. The region is also now faced with emerging concerns associated with the COVID-19 global pandemic where there may be increased strain on the hazardous (medical) waste management sector.

There are also recognised gaps in the integration of post-disaster waste management into disaster plans and response procedures and this has led to inefficient segregation and management of hazardous waste streams and also indiscriminate open burning of waste piles. In addition to a paucity of requisite legislation and the need for sustainable financing, the main barriers to the proper management and incorporation of hazardous waste in the region are due to limited technical capacity and infrastructure.

Key activities under this output will consider the existing hazardous waste management strategies and initiatives, explore lessons learnt and harmonise participating project countries to a similar standard and approach to hazardous waste management. The proposed approach to the hazardous waste management will align with the BRS and Minamata Conventions' guidance on the management of the chemicals and wastes streams within the context of international best practices on integrated waste management. The activities will assist countries in managing empty pesticide containers from agricultural waste in the most efficient way possible, through the establishment of monitoring systems and strengthening capacity development, as well as awareness raising and behaviour change activities at the farm level. This will reduce risks posed by the misuse of pesticides and reduce chemical pollution from rinsing practices and the open burning of containers.

Additionally, the ISLANDS Programme will work together with IDB to develop tools for countries to access additional funding for the implementation of the hazardous waste strategy in the future. The outputs of this activity will contribute to the project targets of UPOPs reduction, avoidance of emissions of POPs and avoidance of chemicals of global concern and their waste in the environment.

The output will be delivered via the following activities:

Activity 2.2.1 – Develop roadmaps for the implementation/execution of national hazardous waste management strategies in nine (9) project countries

Recognising that the management of hazardous waste is a component of the overall waste management landscape, this activity will support the project countries with a streamlined approach to hazardous waste management through integrated management systems. The activities will directly address the barriers identified such as the ad-hoc approach to hazardous waste management, lack of hazardous waste management policies, lack of political buy-in (with associated financial and institutional constraints) and limited capacity/lifespan of the existing landfill infrastructure. The activity will include the following:

- Assess the status of the project countries' hazardous waste management plans in the context of the national waste management strategies (with a focus on the wastes and chemicals under the BRS and Minamata Conventions). This will follow the consultations and findings of the previous regional GEF 5558 project¹⁸ where the existing waste management infrastructure of four (4) project countries was examined in order to improve landfill operations, source-segregation strategies and hazardous waste storage in several project countries in an effort to reduce UPOPs emissions.
- Assess the gaps and barriers to the effective implementation of the project countries' national waste management strategies. The findings of this activity will also support the project activities that are addressing the policy, legislation and institutional constraints on the management of wastes and chemicals under Component 1.
- Develop a regional model for the development or enhancement of waste management strategies to include strategic hazardous waste management planning in the sector. Acknowledging that there is an ongoing need for periodic revision and updates of national waste management strategies and plans, the project will provide this regional model and the modality for the finalisation will include trainings and workshop activities. The model will include the fundamental elements of the strategy as outlined in the UNEP's Guidance Document 16: (i) establishing the scope of the national strategy; (ii) identifying an overarching goal and supporting targets; (iii) estimating expected national benefits; (iv) identifying initial options for financing and resourcing the process of strategy development, and building capacities for, and during development of the strategy; (v) setting a timeline for the development of the strategy, and; (vi) identifying linkages to other plans and areas of national policy
- Develop, in consultation with the key stakeholders, national roadmaps towards the effective implementation of a comprehensive national hazardous waste management plan. This will include an overview of the key activities, resource requirements, identification of potential funding opportunities and detailed stakeholder mapping and guide. Consideration will be given to the need for a cost benefit analysis (where the cost of inaction is clearly demonstrated) and a monitoring and evaluation plan. This activity will synergise with the need for legislation to support the implementation of the plans through Component 1.
- Present/deliver the national roadmaps to the management of the waste management entities and key decision makers within the waste management sector. Technical backstopping will also be provided in order to support requisite endorsements and high-level political buy-in.

Activity 2.2.2 – Establish regional guidelines for the management of various hazardous waste streams specific to the Caribbean Region in nine (9) project countries.

Following the assessments and recommendations of Activity 2.2.1, this activity will provide strategic guidance and planning on the management of priority hazardous waste streams. This will include, but not be limited to, the health care/biomedical waste, post-disaster waste (including hurricanes, earthquakes, and COVID-19), and tourism wastes (including hotels, cruise ship and airline wastes). The emerging issues surrounding COVID-19 will be built into the activity where the experiences, challenges and lessons learnt will be considered in order to equip the region with the institutional strengthening and training needed for future events of this magnitude. The proactive approach of this activity and the proper management of these waste streams within a comprehensive and integrated waste management system will directly reduce the pressures on the already strained waste management entities. It will also prevent the improper management of the related hazardous components (e.g. chemically treated or infused furniture and equipment and plastics from the hotel industries and surplus health care waste/infectious waste from the national tourism industry operators, and household disaster waste with hazardous components).

The development of guidelines specific to the region would consider existing regional and global assessments, recommendations and guidelines and project initiatives. The activity will include:

- Prioritise and recommend three (3) waste sectors or scenarios for which regional hazardous waste management guidelines are required. The scope of this plan can be prioritised based on the national waste management strategies, problematic waste streams and sectors based on the findings of Activity 2.2.1.
- Develop regional guidelines for management of three (3) priority waste sectors or scenarios (e.g. regional post-disaster hazardous waste management guidelines, regional medical waste management guidelines, and regional guidelines on the management of tourism sector wastes and chemicals). The regional guidelines will identify and focus on the hazardous wastes and chemicals streams in the context of the effective management of the BRS and Minamata wastes and chemicals. The guidelines will be developed in keeping with international best practices on ESM and disposal of hazardous waste giving consideration to national and regional context on resource availability, institutional capacities and previous experiences.
- Activities on regional guidelines for health care waste management will take into account the ongoing GEF/ UNDP initiative on '*Promoting a Coordinated Approach to the Sustainable Management of Healthcare Waste during and beyond the COVID-19 Pandemic*'. The project outputs from this initiative will be synergised and embedded into the GEF ISLANDS programme as the findings will be incorporated into the regional guideline. Relevant aspects will include guidance on procurement, management options, available disposal technologies to treat with possible future events which will result in the surge of health care waste quantities

- Train key stakeholders and agencies (e.g. WM entities, public health, tourism, disaster management) in the selected priority waste scenarios on the use of the guidelines. This will include but not be limited to practical training on available tools on the prioritisation, identification and management relevant chemicals and wastes. Where applicable, the management of specific waste streams will also synergise with other project activities (Output 1.2) and other regional initiatives on recycling and the circular economy (Component 3). The aim is to train 25 waste management professionals, of which at least 40% (10 trainers) female.

Activity 2.2.3 – Assess hazardous waste management in the rural areas and develop a model hazardous waste management strategy

In response to the constraints associated with ESM of hazardous waste in the rural and interior areas of project countries including Belize, Dominican Republic, Guyana, and Suriname, the project will seek to assess and then strategize the incorporation of these areas into the national waste management strategies and national roadmaps (developed under 2.2.1) to hazardous waste management. These constraints include the small, dispersed populations; the large geographic size of the countries, and; the need for customised systems as traditional urban systems may not be suitable. This activity will directly address the concerns surrounding open-burning and illegal dumping through waste prevention and rural sustainability. The activities address the hazardous waste streams associated with sectors of gold mining, agriculture, and municipal waste (e.g. bulk white waste, e-waste, batteries, oils, solvents, paints, contaminated wood, pharmaceutical products, insecticides, pesticides, fungicides, herbicides, chemical fertilizers, empty pesticide containers, chemicals used for fumigation, cleaning agents used in animal husbandry, and medical waste). The activity will also address the disadvantages faced in these communities, their unique contributions to the mismanagement of chemicals and wastes and also address their susceptibility/vulnerability to the human health and environmental concerns from hazardous wastes and chemicals. Focus will be placed on the susceptibility of the indigenous communities. The activity will assess all aspects of the integrated waste management infrastructure, including collection, separation, recycling and disposal. It will also examine the gaps and barriers as it relates to the integration of the rural and interior areas into the national management landscape/ infrastructure, and examine/consider the contribution and exposure of these communities. The activity will also demonstrate the incorporation of the rural areas into the hazardous waste management landscape in the project countries. The activity is broken down as follows:

- Assess the level to which the rural areas are integrated into the existing hazardous waste management infrastructure of Belize, Dominican Republic, Guyana, and Suriname (in union with assessment of the overall waste management strategies in 2.2.1). This will include the identification of key concerns surrounding the hazardous waste management in rural areas, seek to quantify the issues and also identify the gaps and barriers to the incorporation of these areas into the national integrated waste management system. This will explore all aspects including generation of hazardous waste, collection, storage and recycle/disposal opportunities.
- Develop one (1) model national hazardous waste management plan to include the rural areas of Belize, Dominican Republic, Guyana, and Suriname. The model rural hazardous waste management plan will be developed on a regional level to address the significant cross-cutting issues recognised between the project countries. The model plan will give consideration to an overall systemic approach involving technical, financial, social, cultural, environmental, and governance aspects. Consideration will also be given to increased waste diversion rates in order to curb uncontrolled waste disposal practices (open burning, wild-dumps, and river/marine dumping).
- Demonstrate one aspect (e.g. collection, source segregation, recycling) of the hazardous waste management plan in Suriname through a demonstration pilot project. This pilot should include the requisite public awareness and behaviour change activities.
- Demonstrate a model agrochemical waste management strategy. The strategy will be based on provided tailored to the region guidelines on Management Options for Empty Containers, and Toolkit for Management of Empty Pesticide Containers at the farm level. This pilot will include a pesticide containers management traceability system to monitor pesticide containers from the day they are imported or even before, until they are collected and disposed of. The information will be collected from container barcodes or RFID tags technology and analyzed with information generated from import permits, prescriptions and other systems in relation to pesticides. Monitoring will expose illegal trafficking and misuse of pesticides, making room for legal actions to be taken against it. It will include public awareness and behaviour change activities for rinsing practices and avoidance of the open burning of containers.

Component 3 – Safe Management of Products entering SIDS/Closing Material and Product Loops for Products

There is a need to halt the build-up of harmful materials and chemicals in Caribbean SIDS. To achieve this, the ISLANDS programme aims to work together with project countries and IDB constituencies to establish effective circular and life-cycle management systems in partnership with the private sector. This is the overarching goal of Component 3, which will be achieved through three (3) Outputs.

Specifically, activities under Outputs 3.1 through 3.3 will aim to: (i) develop an Extended Producer Responsibility (EPR) system and regional approaches to manage Waste Electrical and Electronic Equipment (WEEE) (**Output 3.1**); (ii) promote the environmentally sound management of end-of-life vehicles (ELVs) (**Output 3.2**), and; (iii) improve the management of plastics (including PVC) through the life-cycle approach and coordination with the public and private sectors (**Output 3.3**).

Component 3 includes regional-level activities and national-level activities, specified in below outputs.

Output 3.1 - EPR and Regional Approach to manage WEEE pilot tested in three participating countries

WEEE management is a priority issue for the project countries. The baseline revealed that only the private sector (formal and informal) is involved in WEEE management and since it is unregulated, the majority of WEEE actually ends up in landfills. This output intends to develop and test two strategies to manage WEEE namely, EPR and a regional approach. The focus will be on the categories of WEEE with the highest rates of generation in the project countries, which are Large Household Appliances (LHA), Consumer Equipment (CE), IT and Telecom (IT&T) and Electrical and Electronic Tools (E&ET), which would also contain WEEE with the highest PBDE content. The categories Lighting Equipment (LE) and Monitoring and Control instruments (M&C) will also be included as they may include mercury components. In most countries there is private sector involvement in WEEE management, to varying levels of complexity, largely influenced by the national WEEE generation rates and market prices for the recovered materials. Unfortunately, a common practice in all countries is the disposal of the plastics and other non-valuable parts of the WEEE (which often contain PBDEs and mercury) to landfills or illegal dumpsites. Therefore, increased collection rates and improved dismantling practices will significantly divert WEEE and its hazardous components from landfills and improper disposal practices.

The baseline revealed that very few project countries have legislated EPR schemes and they consider only returnable containers or plastics. One approach to divert WEEE from landfills is to shift the responsibility of its management to the producers of the products to manage its entire lifecycle. In the import-dependant Caribbean region, the definition of producers is understood to be those responsible for putting the products into the market. The EPR activity will develop WEEE related EPR legislation and carry out pilot activities to collect at least 300 tonnes of e-waste through establishing take-back systems and exploring the most efficient collection channels for various types of e-waste such as collection points, mobile collection trucks, governmental and business-to-business (B2B) collection and working with the informal collectors.

The regional approach to manage WEEE activity will also carry out a regional pilot project to collect at least 50 tonnes of e-waste from: (a) WEEE stored in Governmental agencies, and (b) used equipment retailers' and importers' stockpiles. The WEEE collected will be treated at a Regional Hub recycling facility (location to be determined—see 3.1.3). The objective is to put in place institutional instruments of coordination with different stakeholders, taking advantage of the strengths of each country and enhancing the system for the region as a whole. The Project will test the interaction with different project countries, the required logistical mechanism and costs for regional shipment and the legal clearances required.

Activities 3.1.1 and 3.1.3 will be regional-level activities, whereas activity 3.1.2 will include three (3) national-level pilot projects in three countries to be determined based on a feasibility study. The lessons learnt from these demonstration project will be communicated to the other countries through output 4.1 and to the other regions through the CCKM project 10266.

Activity 3.1.1 - Feasibility assessment for WEEE management, focussing on EPR and a Regional Approach

This is a foundation activity for this output and will inform the subsequent two activities. The intent of this activity is to assess WEEE management within the context of EPR and a Regional Approach and develop a framework for the cohesive and harmonised implementation of recommendations. The first task will be to establish a working committee which will consist of members of the PWC and public and private stakeholders involved in the entire lifecycle of WEEE management. A participative process where stakeholders assume an active role will be essential. For that purpose, inter-ministerial and inter-sectorial tables of discussion will be held. In this sense, it is necessary to consider suitable and efficient participation and information schemes that allow actors to have a picture of the whole process, particularly scaling up to establish public-private partnerships and economic instruments to manage and finance the EPR system.

In this activity the data required to conduct feasibility assessments for an EPR policy and Regional Approach to the management of WEEE will be obtained. It will build on the data from the NIP inventories and information derived from Output 1.1 (EEE legislation). Data will be gathered on the environmental, economic and technical capacity in the project countries in terms of: (i) collection, storage and transport capacity; (ii) WEEE streams currently treated; (iii) current capacity of treatment; (iv) BAT/BEP in place; (v) technologies used for WEEE treatment; (vi) level of training of the personnel involved in WEEE management; (vii) informal sector involvement; (viii) final disposal alternatives; (ix) Basel Convention procedures followed, and; (x) data collection and data management.

An assessment of EEE/WEEE management initiatives in other regions, such as the GEF funded UNIDO implemented project in 13 Latin American countries, the STEP initiative and UNEP projects in Africa, will be reviewed for their effectiveness and their successes and lessons learnt will factor into the proposed WEEE management strategy.

For EPR in particular, this assessment report will include a cost-benefit analysis of implementing a Take-Back system or Advanced Deposit Fee (ADF) for WEEE, or their combination, considering the peculiarities of each country. These instruments were identified in the baseline assessment (EPR Report, Acosta & Corallo, 2020) as most suitable for the Caribbean. The report should provide policy makers and stakeholders with sufficient information on the alternative scenarios of implementation, taking into account, at a minimum, the following costs:

- a. Costs for establishing a separate e-waste collection system;
- b. Net costs for e-waste management, including transport, recovery and final disposal;
- c. The cost to dispose of accumulated hazardous wastes (POPs, mercury and others);
- d. Administrative costs, i.e. costs linked to the running of Producer Responsibility Organisation (PRO)s;
- e. Costs for public communication and awareness-raising (on waste prevention, litter reduction, separate collection) as long as producers have a say in their design and implementation, and;
- f. Costs for the appropriate monitoring of the system (including auditing and measures against free riders).

For the regional approach, an assessment of installed capacity for treating WEEE and identify gaps in project countries in order to leverage current initiatives in WEEE treatment from a regional perspective is critical. Collaborations with the public and private sector at regional and national levels will be formed. This will include the Caribbean Association of National Telecommunications Organizations (CANTO), various Chambers of Commerce and other representative groups involved with the target categories of WEEE.

Based on the above feasibility assessments, a framework strategy for WEEE management through a combination of EPR and Regional Approach will be developed. The project countries will be selected to represent the diversity of the domestic situations in the region, including geography, size, level of industrialisation, island/continental, and existing enabling environment as detailed by the earlier work. Details on the number of project countries are given in the two activities below. It is envisaged that the framework strategy will present a harmonised approach to WEEE management.

Activity 3.1.2 - Extended Producer Responsibility (EPR) system for environmentally sound management of WEEE developed in the project countries

In this activity, the EPR elements from the framework strategy will be further detailed into implementation plans for each deliverable. In this activity the Extended Producer Responsibility mechanism and its applicability in the Caribbean will be assessed and applied, using EEE as the product to be managed. The intention is to establish the enabling environment and test/implement the mechanism through a series of pilot projects. Experiences and lessons learnt from this project can be scaled up and applied to other consumer products such as ELVs, batteries and packaging. The main outputs from this activity are drafted EPR legislation and an associated roadmap for implementation, and elaborated design and implementation of three (3) EPR pilot projects.

Although EPR can be either voluntary or mandatory, it has been demonstrated that legislation and enforcement schemes should be established if effective and sustainable results are sought. The baseline has shown there are very few examples of EPR legislation in the Caribbean region. In the development of the EPR legislation, the relationship with EEE policy and legislation which will be developed in Output 1.1 will be considered and for each pilot country, the model EEE policy and legislation will be tailored to ensure complementarity with the EPR legislation. For the development of this EPR legislation, target countries will review their current legal frameworks and analyse the feasibility of the implementation of the norm from a holistic perspective. Participation and guidance from the working committee will be critical to the success of this task. As a mid-term result of this activity, a detailed roadmap for implementing EPR legislation will be developed for at least 3 Project Countries. The Roadmap will cover: policy/action plan/regulation/White Paper for EPR legislation considering inputs of activities in Output 1.1; roles of stakeholders; priority categories of e-waste to be addressed, and; function and monitoring of the governance system (e.g. PROs), drawing on relevant experience from other sectors in other countries and within Project Countries, especially the beverage sector. The draft legislation will consider results of activity 3.1.1 and will establish a reliable system for the ring-fencing of adequate funds to ensure the environmentally sound management and disposal of these wastes when a critical mass has been collected and establish a procedure for appropriate destruction or export if there is no solution available within the Project Countries. At the same time, this activity may also consider a possible regional approach in order to facilitate the fulfilment of Activity 3.1.3. The attendant capacity development and awareness raising for institutions, stakeholders and the public will be conducted.

In parallel with the development of the legislation, the 3 pilot projects identified in Activity 3.1.1 will be implemented to test the applicability and effectiveness of the implementation of a take-back system in the project countries. Refer to Appendix 11 B, which will be used to guide the development of the pilot project. Detailed implementation plans for each scheme will be developed considering the following:

- a. Multiple ownership of the same device;

- b. Strong public awareness campaign, promotion at retail stores;
- c. Separate collection and transport of WEEE to the dismantling facility;
- d. Training to improve capacity for the detection, separation and handling of plastics and polyurethane foams containing brominated flame-retardants (PBDEs) and other Persistent Organic Pollutants listed under the Stockholm Convention. Quantify the reduction in the release of unintentional POPs;
- e. Strengthen the capacity of manual dismantling facilities to obtain the more valuable components for recycling;
- f. Activities (e.g. training) to involve informal waste pickers in the collection, transportation and / or treatment phases;
- g. Training on Basel Convention provisions for National Authorities and Exporting Companies, e.g. on Basel Convention Technical Guidelines on WEEE;
- h. Promote international certifications e.g. e-Stewards, R2, and;
- i. Final disposal of wastes according to ESM practices.

Activity 3.1.3 - Improve the Capacity of WEEE Management through a regional approach

A regional approach would imply that used and waste EEE collected in certain project countries is processed at a specific country that would act as a regional hub. Within the project countries, more industrialized economies, such as the Dominican Republic or Trinidad and Tobago, would probably show more openness to act as regional hub. On the other hand, a regional approach would imply big challenges for coordination, logistics and legal harmonization. In this regard, although every country will develop its own policies and legislation, consultations should be done to ensure the applicability of the whole system. The design of MOUs, or similar collaboration mechanisms, should be addressed in order to coordinate activities among the project countries on a WEEE specific regulation and an EPR system approach. Also, the "not in my back yard" (NIMBY) effect should be addressed, since importing WEEE could result in high levels of resistance from citizenship.

Under this activity, the regional approach proposed in Activity 3.1.1 will be developed with an in-depth analysis considering, at least the following aspects: (i) common definitions in terms of EEE/UEEE/WEEE; (ii) storage, transportation and treatment requirements; (iii) accountability and economic aspects; (iv) social aspects (such as NIMBY effect and informal sector involvement); (v) priority chemicals/waste streams to tackle; (vi) long-term needs (including infrastructure, PPEs, technical assistance and investments).

A pilot project to test the proposed regional approach will be undertaken, with the regional hub in one (1) project country strengthened. The idea of this pilot is to test the interaction with different project countries, the regional shipment and the mechanisms and legal clearances required, focussing on two WEEE streams: (a) WEEE stored in Governmental agencies, and (b) used EEE retailers' and importers' stockpiles. The objective is to put in place institutional instruments of coordination with different stakeholders, taking advantage of the strengths of each country and enhancing the system for the region as a whole. Appendix 11 A may also be used to guide the selection of an appropriate location for a regional hub.

The proposed tasks include:

- a) Draft a MOU, or similar collaboration mechanism to coordinate activities among the project countries (and private sector) on a WEEE EPR system;
- b) Separate collection and transport of (i) WEEE stored in Governmental agencies and (ii) UEEE (used equipment) retailers' and importers' stockpiles to the regional hub recycling facility, which will be identified in Activity 3.3.1;
- c) Training to improve WEEE management at the regional hub recycling facility;
- d) Strengthen the capacity of dismantling facilities to obtain the more valuable components for recycling;
- e) Quantify the reduction in the release of unintentional POPs and mercury;
- f) Training on Basel Convention provisions for National Authorities and Exporting Companies, e.g. Basel Convention Technical Guidelines on e-waste, and;
- g) Strengthening technical and institutional capacity in public sector involved and raising awareness through communication campaigns.

Output 3.2 – Capacity built for the ESM of ELVs

This project output addresses the barriers to ESM of ELVs in the region, including: the lack of information regarding quantities and flows of vehicles and ELVs; the lack of formal inter-ministerial and inter-stakeholder coordination mechanisms and exchange of information and weak institutional frameworks for ELVs management; the lack of specific policies and legal framework to ensure ESM of ELVs; weak to non-existent regulations related to EPR; the lack of formal processes for the deregistration of vehicles or for their disposal; the lack of storage and treatment capacity and inadequate final disposal alternatives; the difficulties to reach economies of scale in ELVs treatment, and; the high level of used vehicle imports.

Activity 3.2.1 is a regional-level activity. Activity 3.2.2 and activity 3.2.3 will include three (3) national-level demonstration projects in three countries to be determined based on technical, material flow and economic assessments. The lessons learnt from these demonstration project will be communicated to the other countries through output 4.1 and to the other regions through the CCKM project 10266.

Activity 3.2.1 Material Flow, Economic and Technical Assessment in order to design ELVs management scheme, considering a regional approach

Under this activity, the following will be conducted:

- Material Flow Assessment. This will assess in detail the generation of ELVs in the Project Countries, both in quantities and in methods for its generation. It will focus on understanding the inter-regional flows of ELVs and of the materials obtained from its treatment. The output here will assess the environmental, economic and technical capacities in place and gaps in the project countries in terms of: (i) ELVs generation and detailed materials flow; (ii) collection, storage and transport capacity; (iii) need of establishing authorized treatment facilities (ATF) in order to receive and issue CoDs; (iv) BAT/BEP implementation; (v) technologies used; (vi) level of training of the personnel involved in ELVs management; (vii) informal sector involvement; (viii) final disposal alternatives, and; (ix) Basel Convention procedures followed.

- Technical Assessment. The assessment will review installed capacity for managing ELVs (collection, transport, storage and treatment) and identify gaps, considering a regional approach alternative. The capacity of treating or disposing of residual waste if implementing a regional approach will be assessed. A draft MOU for regional ELVs treatment will be elaborated. The activity will identify gaps to be addressed and opportunities for improvement in terms of ELVs management and determine the best alternative to feed the design of the ELV legislation (including improvement in current schemes of levies/taxes on certain imports, implementation of an EPR approach, and regional approach to ELVs treatment). This assessment will also give consideration to the findings of Output 1.1, where the policies and legislation developed to support management of ELVs are addressed (giving consideration to the import age of used vehicles; emission standards of imported vehicles; vehicle deregistration, and; regulation of destruction/dismantling facilities).

- Economic assessment in order to choose the best alternative to finance ELVs management, including through an EPR approach and the establishment of an ELV fund. A revolving fund to scale up recycling facilities will be designed to outline where seed funding would be provided to scale up recycling facilities through micro-finance / loans to buy new equipment and then repaid to allow reinvestment. The assessment of the EPR approach will include the level of levy needed, modality to charge the levy (such as visible fee to consumers, or invisible fee included in the price), the use of the collected funds (e.g. to cover collection and transportation but not operation and final disposal) and monitoring the spending of the funds. It is essential that the funds insured are used exclusively to cover costs related to ELVs management and are not diverted for other purposes. This is to guarantee the transparency and profitability of the system.

The feasibility of the national approach and the regional approach to ELVs treatment to be assessed under this activity is elaborated in Appendix 11 C. Consideration will also be given here to the role of the provisions of the Basel Convention in addressing transboundary shipments of hazardous materials, the global trend of stimulating and encouraging the use of new, less polluting technologies for vehicles, and the need for requisite management systems (e.g. Antigua and Barbuda's GEF EMobility Project). Existing infrastructure in non-participant Caribbean countries will be considered (i.e. Guadeloupe).

Activity 3.2.2 Improve ELVs treatment capacity

Under this activity, the following will be conducted:

- Training and capacity building on the BAT and BEP guidelines for collection, storage, transport and treatment facilities, with special emphasis on the proper management of POPs. In the absence of binding legislation for the ESM of ELVs, the training and capacity building activities can form the basis for national guidelines. As such, adequate training will be provided for all stakeholders involved in ELVs management. The aim is to train at least 15 waste management professionals in each project country, of which at least 40% female.

- Training and regularization of existing ELV facilities in three (3) countries, considering the impact of the informal sector, if involved. This activity will address inadequate health and safety measures for workers employed in existing ELV facilities. The issues surrounding the de-pollution process (sometimes depollution and dismantling are being carried out together and identified as dismantling) and the handling of hazardous materials will be addressed to include strict health and safety rules and proper storage and labelling to prevent contamination of the environment. Though the three pilot countries have not been identified yet, the project will ensure that project countries receive equal benefits and as such, the countries under this activity will most likely differ from those participating in other pilot activities.

- Establishment of a roadmap for the adequate and sufficient ELVs management infrastructure in three (3) countries. As an end-term outcome, the regularization of existing downstream handlers / informal scrap iron dealer is important and a low hanging opportunity to action. This would improve substantially good practices and reduce the environmental and health risks associated with improper disposal of ELVs. This will build upon the database of existing companies involved in handling and dismantling of ELVs in the participating countries developed during the preliminary assessments conducted in the PPG phase.

Based on the results of activity 3.2.1, a roadmap for establishing the adequate and sufficient ELVs management infrastructure will be designed, for at least three (3) Project Countries for both scenarios, if acting independently from the region. If a regional approach is defined, the infrastructure will be designed for a regional hub and two feeder countries. This decision will be based on the results of the feasibility studies conducted under 3.2.1. This activity will support Activity 1.1.3.

Activity 3.2.3 Demonstrate improvement of three (3) existing national ELV treatment facilities

Under this activity, the following will be conducted:

- Detailed assessment of one (1) existing facility in three (3) project countries - Based upon the results of the technical assessment carried out under 3.2.1 and building from the activities developed under 3.2.2, the project will initially cover costs to conduct a general evaluation and screening process to identify the three (3) facilities that should be up-scaled. In order to select the industries to be upscaled, it is suggested that they have a proven track record in the handling of vehicles and spare parts. A set of indicators such as legal status, certifications, volumes, range of services, existing customers, facility, processes, documentation and, even more important, willingness for cooperation and full transparency, are proposed as appropriate to conduct the screening process.

- Comparison/gap analysis against international criteria for BAT/BEP for ESM of ELVs (with a focus on the POPs treated components). An in-depth assessment of the facilities will be carried out in order to assess the gap against international criteria for BAT/BEP for ESM of ELVs and prepare a customised roadmap for establishing an adequate and sufficient ELVs treatment facility.

- Development of a customised roadmap for establishing an adequate and sufficient ELVs treatment facility. This will outline the required equipment and processes to ensure an environmental treatment of streams such as: lead-acid batteries, coolants, engine oils, tires, plastics and foam.

- Technical backstopping, training and improvement of the enabling environment will be provided to support the pilot projects in three (3) countries to upgrade existing facilities. It is envisaged that the requisite funding mechanism for the procurement of equipment will be facilitated under the GEF ISLANDS IDB Child Project. Customisation of the national policy or legislation required to address the import age of used vehicles, emission standards of imported vehicles, vehicle deregistration, and regulation of destruction/dismantling facilities, will be piloted in these three (3) countries. The three pilots will be documented in a systemized manner, compiling lessons learned and experiences, in order to facilitate the replication of the up-scaling process in later stages among other facilities and countries.

Output 3.3 – Improved management of plastics (including PVC) through the life-cycle approach and coordination with the public and private sectors

From the baseline, it is evident that project countries are taking measures to recycle certain plastic waste streams; however, there remain gaps in the knowledge and management, both from certain sources of plastic waste and of certain streams of plastics that are not typically recycled in the region nor disposed of in an environmentally sound manner.

This output seeks to address two areas: plastic waste from the cruise ship industry, and PVC, a halogenated polymer which when burnt produces dioxins and furans and is a contributor to marine plastic litter.

As it relates to cruise ship generated waste, this issue is poorly managed in the Caribbean with only Belize having legislation for disposal of waste on land.

The baseline also noted that no project country has policies or legislation to manage PVC waste or promote its separation from general waste streams, whether considered as part of construction and demolition waste, EPR or as standalone policies. As such, they are typically comingled with regular waste and sent to the landfills and illegal dumpsites where they may contribute to UPOPs production due to open burning or enter the ocean via water courses. If PVC wastes are collected separately for environmentally sound management and thus diverted from these sites, UPOPs emissions from the burning of these waste, which have a high chlorine content, will be reduced. The reduction of UPOPs, through the management of PVC plastic waste, will be examined by conducting an inventory to understand the existing situation and propose informed options to manage PVC waste in an environmentally sound manner and in coordination with the private sector.

This output includes two (2) national-level activities. Activity 3.3.1 is a national-level demonstration activity in the Dominican Republic. Activity 3.3.2 is a national-level activity held in Barbados, Guyana, and Trinidad and Tobago. The lessons learnt from these demonstration project will be communicated to the other countries through output 4.1 and to the other regions through the CCKM project 10266.

Activity 3.3.1 Assess plastic waste generation from the cruise ship sector in the DR, identifying ways to process cruise ship plastic streams parallel to municipal waste in an environmentally sound manner

The aim of this activity is to reduce the stress of plastic waste on the environment and small island states and municipalities reliant on the cruise industry. Cruise ships have been compared to “floating cities” due to their size and the related magnitude of resource consumption and waste production. Moreover, the cruise industry is a waste intensive sector and there is no single law in place for cruise ship waste management. Rather, cruise ship waste is governed by a number of international protocols, domestic laws, regulations and standards. Therefore, a concentrated aim to manage cruise ship waste is needed and supported by international cruise line associations. Specifically, the development of policy that can be adapted to national contexts and adopted across regions would be greatly beneficial.

Cruise tourism is a large and growing economic sector in the Dominican Republic. In a planned pilot project, Carnival Cruise Line will collaborate with Puerto Plata Province, Dominican Republic, to establish joint waste management practices that will process cruise ship waste streams parallel to municipal waste in an environmentally sound manner. Amber Cove, operated by Carnival Cruise Line, is one of five cruise terminals in the country and situated in Puerto Plata Province, making this location ideal for a collaboration.

This activity will assess plastic waste flows from the cruise ship sector in the Dominican Republic and provide recommendations on the environmentally sound co-management of plastic waste with municipal waste management stakeholders. Recommendations will follow 3R and circular economy approaches, including the phase-out of single-use plastics. A demonstration pilot project will be held in Amber Cove, Puerto Plata Province, with the possible expansion to two (2) additional locations. Additionally, success of the demonstration pilots will lead to policy development for cruise ship waste that can be adopted throughout the Caribbean region and extended to the Pacific and other regions.

Activity 3.3.2 – Assess the material flow of PVC wastes from selected sectors in 3 pilot countries and identify environmentally sound management options.

The aim of this activity is to determine: the quantities and types of PVC plastics produced, and waste generated; the generators of the waste; the activities or products which produce the waste, and; existing disposal methods, if any. This will inform the development of strategies to divert PVC waste from landfills and treat it in an environmentally sound manner. The Caribbean is a high consumer of PVC, particularly in piping, e.g. water pipes or ducts for power and telecommunication cables, piping in construction such as ceilings and windows, and piping in consumer products like pools and garden hoses. Additionally, as a tourism driven region, construction and renovation rates are high in this sector in order to meet updated standards. Other than a preliminary qualitative assessment for four project countries in the GEF 5558 project which established PVC as a waste stream of concern under the Construction and Demolition Waste category, the preliminary baseline assessment for this PPG Phase did not unearth any other existing studies or data on PVC usage and waste in the Caribbean and it is clear that no mechanism to capture this data currently exists.

PVC applications are wide ranging and thus, the scope of this inventory will be limited to PVC manufacturers and distributors and the construction industry, including piping. The WEEE assessment in Output 3.1 will be taken into consideration when conducting the inventory in order to synergise the efforts. Medical waste, some of which contain PVC, is addressed in the GEF 5558 project as well as in Activity 2.2.2. PVC containing packaging waste will be partially addressed through Activity 2.1.3 since it is a contributor to UPOPs emissions and thus will be the focus of an awareness campaign on the dangers of open burning and UPOPs and targets the household level.

Three pilot countries have been selected to assess the material flow for the selected PVC wastes and the process will be properly documented since it is the first activity of its kind in the Caribbean and can therefore be replicated. Additionally, the assessment can be later expanded to include other types of PVC plastic wastes which are not considered in this project.

The three pilot countries include Trinidad and Tobago since it is one of the larger and more industrialised project countries and therefore, it is reasonable to deduce that it is a high generator of PVC waste. Further, it is the only project country which produces PVC (the updated NIP identified two manufacturers) which is then distributed to region. The remaining countries include: Guyana, which is expected to have a construction boom due to projected increases in GDP from the commercialisation of their fossil fuel resources, and Barbados which has a tourism-based economy with high renovation rates in the hospitality industry.

In this activity, an assessment of the possible options to manage PVC wastes from the targeted sectors will be conducted, informed by the material flow results. The assessment will identify options to manage the PVC wastes in an environmentally sound manner and consider the feasibility of each option. This will include: disposal options; recycling technologies; markets available for recycled products; feedstock quantities; separation and collection mechanisms, and; national, sub-regional or regional approaches. The report will also provide recommendations on the gaps in the enabling environment to support each option and the measures to address them.

In response to the more urgent need to divert the PVCs wastes from the landfill and illegal dumpsites, the assessment will also engage the main generators (private sector) to develop and implement a pilot separation, collection and temporary storage scheme until a more sustainable means of managing the waste can be implemented. The scheme will be scaled based on the response from the main generators and the extent of their financial and in-kind contributions.

This activity will lay the foundation to encourage the private sector to invest in the management of the PVC waste and can inform the development of policy or legislation by the beneficiary country.

Component 4 - Knowledge Management and Communication

A key component of the project is the overall coordination, knowledge management, communication and outreach, within the Caribbean Region, and to the Communication, Coordination Knowledge Management (CCKM) child project. The CCKM project is responsible for receiving and disseminating knowledge from all projects and will provide templates for the development of knowledge assets. The CCKM project is also responsible for executing the Programmatic communication strategy which sets out and monitors the overall coordination and communication of knowledge generated by child projects of the ISLANDS Programme.

Under this Component of the Caribbean project, activities will be undertaken to generate and disseminate knowledge from project activities as well as from the wider Programme. Specifically, Component 4 the project will communicate national systems on sustainable financing, to assist in improving the uptake, and ultimate success of these initiatives. It will also include activities related to changing behaviours related to waste management, through extensive community education, and specific activities targeted at youth and indigenous peoples. The project will also support activities related to a regional campaign to work towards a POPs and Mercury Free Caribbean. All these activities will involve the generation of specific knowledge assets to be shared with the CCKM project and disseminated to other SIDS regions through other regional child projects. The outcome of Component 4 is that knowledge generated is disseminated to and applied by SIDS.

Information will flow between the CCKM Project and the child project through the project coordinators. Information will also flow between regional child projects through moderated communities of practice on issues of global relevance including end of life vehicles, e-waste and healthcare waste. Interested stakeholders will be invited to join relevant communities of practice. These communities will be moderated and facilitate direct information exchange, peer-to-peer learning, and network building.

Component 4 is made up of regional-level outputs and activities which will be fed into the CCKM project 10266.

Output 4.1 – Caribbean communities are informed and engaged with in the sound management of chemicals and waste

For projects under the ISLANDS Programme to be truly effective, active engagement with Caribbean communities is needed. This will ensure that project activities are widely supported throughout and beyond the project execution timeline, as well as that the most affected demographics (youth, indigenous peoples and the informal sector) benefit from project activities. Finally, engagement with Overseas Countries and Territories in the Caribbean is critical to ensure regional collaboration and cooperation, as these countries and territories make a considerable part of the region and have additional resources which would allow them to cooperate with the countries of the project. These are the roles of this output, broken down into the activities below.

Activity 4.1.1 Creation and dissemination of knowledge products based on project implementation

Knowledge products are important tools to ensure that the material that is developed is shared in a manner that allows for action by the user. The knowledge products that will be developed under this activity include, but are not limited to: guidelines for updating restricted and prohibited import lists; regional strategy for implementation of 8-digit or 10-digit HS Codes for specified mercury added products; roadmap for national and regional response to the addition of new POPs to the SC Convention; pre-screening and inspection guidelines for the identification of imports of mercury added products; training plan and supporting material to build customs and border control agencies' capacity, and; roadmaps for development of standards and monitoring and enforcement of new standards.

In addition, a number of roadmaps for implementation of standards, national/regional strategies and legislation, and the establishment of facilities, have been developed in this project. Under this activity, these roadmaps will be collated and shared in a manner that allows for action by the users. The roadmaps developed under this project and collated under this activity are described in Table 5 below.

Table 5 Roadmaps collated for dissemination

Activity	Roadmap description
1.4.2	National roadmaps will be developed to support countries with the development, implementation, monitoring and enforcement of new and existing national standards.
2.2.1	Roadmaps will be developed for the implementation/execution of national hazardous waste management strategies towards the effective implementation of a comprehensive national hazardous waste management plan.
3.1.2	A detailed roadmap will be developed for the effective implementation of EPR legislation. The roadmap will cover: policy/action plan/regulation for EPR legislation; roles of stakeholders; priority categories of e-waste to be addressed, and; function and monitoring of the governance system.
3.2.2 & 3.2.3	A customised roadmap will be developed for establishing an adequate and sufficient ELVs treatment facility. This will outline the required equipment and processes to ensure an environmental treatment of streams such as: lead-acid batteries, coolants, engine oils, tires, plastics and foam.

To add to the knowledge products, lessons learned under Components 2 and 3 and specifically from pilot projects will also be collected. Knowledge products and lessons learned will be disseminated within the Caribbean to ensure that they reach the largest possible audience in the region. This includes European Overseas Countries and Territories and other Caribbean SIDS not participating in the ISLANDS Programme.

Activity 4.1.2 Behavioural change activities related to a POPs and Hg free Caribbean including indigenous peoples and CSOs

Behavioural communication change is an interactive process with communities (as integrated with an overall program) to develop tailored messages and approaches using a variety of communication channels to develop positive behaviours; promote and sustain individual, community and societal behaviour change, and; maintain appropriate behaviours. Behavioural change activities and community education in the Caribbean region will happen through the development of a campaign for a Mercury and POPs Free Caribbean and include engagement with youth groups, CSOs and indigenous peoples.

This campaign will build on the existing materials developed under the Minamata Initial Assessments conducted in the Caribbean as well as the BCRC – Caribbean's Stop the POPs campaign.

Activity 4.1.3 Raising awareness on plastic pollution among Caribbean youth through implementation of the Tide Turners Challenge Badge

The Caribbean is the second most plastic-contaminated sea in the world[43]. Many countries in the region have already banned, or are considering bans on single-use plastics, including plastic bags and styrofoam. The UN Environment Tide Turners Plastic Challenge Badge is a successful global programme to raise awareness on the impact of plastic pollution with youth movements such as the World Organization of Scout Movement, Junior Achievement and the World Association of Girl Guides and Girl Scouts. The Tide Turners Plastic Challenge has already successfully been piloted in three countries in the Caribbean region, namely Saint Lucia, Belize and Antigua and Barbuda. To build on this, Activity 4.1.4 will adapt and extend this programme into the wider Caribbean region, and will aim to not just raise awareness of the challenges and solutions related to the production of waste of single use plastics in the region, but also to shift behaviour and support young people in having advocacy skills to raise these issues with key decision makers. The aim is to reach up to 100,000 participants, of which a minimum of 40,000 girls, who would take part in the Tide Turners Plastic Challenge in circa 10 countries in the Caribbean region during a two-year period of 2020-2022.

Output 4.2 – Programme reports on project activities developed and disseminated

For projects under the ISLANDS Programme to equate to something greater than the sum of their parts, effective coordination is required. This is the role of the CCKM child project. For the CCKM Project child project to be successful, it requires consistent, high quality inputs from the project. Implementing partners will also use their own channels to disseminate the results of this project to the other projects of the programme and beyond.

Activity 4.2.1 Global guidance and tools on sound management of pesticides developed by FAO are disseminated to participating countries and applied by SIDS

Under this activity, FAO will develop and enhance instruments for strengthening the decision-making process in relation to agrochemicals. The instruments will provide an opportunity to build human and institutional capacities in countries. ISLANDS will synthesize and organize the outputs developed by this regional child project to produce resources / knowledge products, in the form of databases, data visualizations and publications. It will also deliver knowledge services in the form of round tables. These resources will be synthesized and packaged into knowledge products to be shared with ISLANDS SIDS across the three regions.

This activity also includes links to the several communities of practice. These communities consist of a social learning method through a group of people with similar interests willing to regularly work together towards specific objectives. Such objectives in the GEF ISLANDS context relate to increasing capacity around sound management of agrochemicals in SIDS, and to advancing behavioural change. The activity will link to digital communities of practice to motivate and engage individuals, such as the SAICM Highly Hazardous Pesticide Community.

Activity 4.2.2 Quarterly reporting to the Communication, Coordination and Knowledge Management Project on project activities

Knowledge products will be developed and shared with the CCKM project for use or for modification in the Indian Ocean and Pacific regions. Project case studies and fact sheets will also be shared with the Communication, Coordination and Knowledge Management Project for finalization and distribution to other SIDS. Other materials shared under this activity include: the model policies and legislation for ELVs, WEEE, mercury-added products and specific plastics waste streams; various training plans and information on BAT and BEP related to wastes and chemicals management, and; lessons learnt from the experience in the Caribbean.

Activity 4.2.3 Regular receipt of knowledge assets and information from Communication, Coordination and Knowledge Management Project packaged and distributed to relevant stakeholders.

Knowledge products received through the CCKM from the Indian Ocean and Pacific regions will be used or modified as needed for adoption or implementation in the Caribbean region, and/or for packaging and distribution to relevant stakeholders.

4) Alignment with GEF Focal Area and/or Impact Program Strategies

The Chemicals and Wastes focal area is the only GEF focal area with a specific programme for SIDS and Least-developed countries to promote advancement and ensure progress on these issues. The ISLANDS Programme and by extension, this child project, is designed in alignment with GEF-7 Programming direction on SIDS[44], which supports:

- Implementing Sustainable Low and Non-Chemical Development Strategies in SIDS and LDCs;
- Promoting Best Available Technologies (BAT) and Best Environmental Practices (BEP) to reduce UPOPs releases from sectors relevant to the Minamata and Stockholm Conventions in SIDS and LDCs;
- Promoting cleaner health-care waste management based on the lessons learnt from GEF funded healthcare waste projects to reduce UPOPs and mercury releases;
- Strengthening the management system for e-waste, addressing all stages of the life cycle (i.e. acquisition of raw materials, design, production, collection, transportation and recycling) in SIDS and LDCs;
- Phasing out of mercury-containing products;
- Undertaking gender mainstreaming and project monitoring and evaluation; and
- Developing a strategy to ensure that technical assistance and investments are solidly linked to enhance countries' ability to deal with the management of POPs and mercury in a sustainable manner.

The GEF-7 investment framework for chemicals and wastes seeks to:

- eliminate/restrict/control emissions from chemicals listed under the Stockholm Convention;
- eliminate mercury emissions and releases;
- support SAICM objectives, including building capacity for e-waste management and HHPs;
- make efforts to deal with marine littering / micro-plastics from nationally derived sources and so influence industrial manufacturing and pollution management from plastics across SIDS;

inform decisions and actions in the agricultural sectors in countries in order to better integrate the work of the Conventions into national level agricultural policy.

This UNEP/FAO Child Project is in alignment with the GEF-7 investment framework, as well as the GEF-7 principles of cost-effectiveness; sustainability; innovation; private sector engagement; promotion of resource efficiency (including circular economy approaches); and building on the use of existing networks.

GEF-7's chemicals and wastes approach focuses on sectors as an entry point to change, rather than taking a chemical-by-chemical approach. In response, the Project's components were designed to facilitate meeting the aims of the investment framework in the Caribbean through engaging with specific sectors.

In Component 1, preventing the future build-up of chemicals, the project will focus on assisting countries with instituting legislative measures to implement the chemicals and waste MEAs, control imports and emissions, and establish sustainable procurement mechanisms. In Component 2, managing and disposing of existing hazardous chemicals, products and materials, the project will build national and regional capacities to eliminate emissions and releases through chemical disposal. In Component 3, preventing the future build-up of chemicals entering SIDS through the development of end-of-life systems, activities will support sustainable partnerships with the private sector to address potentially hazardous wastes, such as extended producer systems for e-waste and end of life vehicles. Opportunities for regional recycling systems will also be developed, in partnership with the private sector, and working with communities and civil society group to establish remaking and repair spaces to reduce e-waste through device repair. In Component 4, the project will generate, communicate and share the knowledge developed from the above components among SIDS, through the Communication, Coordination and Knowledge Management (CCKM) Child Project.

5) Incremental/Additional Cost Reasoning and Expected Contributions from the Baseline, the GEFTF, LDCF, SCCF, and Co-Financing

Globally, there is an immense need for investment in the waste management sector in Small Island Developing States (SIDS). According to the Global Waste Management Outlook, of the funding made available to support improved waste management in the last decade, two-thirds of this has been invested in just ten middle-income countries⁷. Making the necessary finance for investment available to least developed countries (LDCs) and SIDS which face unique challenges and often lack basic infrastructure is a major challenge which this ISLANDS Programme aims to overcome.

In the case of chemicals and wastes management in SIDS, GEF financing has a significant catalytic role in orientating countries onto a more sustainable development pathway. That catalytic effect is achieved through the focusing on achieving global environmental benefits (GEBs). In all child projects under the ISLANDS Programme the achievement of the GEBs will be based on activities linked to promoting the avoidance of specific chemicals through stronger import controls and promotion of alternatives, the integration of principles such as circularity at national and regional level, through investment in waste collection and associated recycling systems and, through the strengthening and where possible harmonization of national policies and regulations at the regional level.

The ISLANDS programme is proposed as a cost-effective way to link a series of individual, yet interlinked projects in three SIDS regions that will amplify the results throughout each of the SIDS regions by ensuring that best available technologies/techniques and best environmental practices are applied consistently across all regions. By ensuring coordination and exchange of knowledge at the global, regional and national level between SIDS and subsequently supporting the introduction of best practices, approaches and technologies for chemicals and wastes management in SIDS, it is anticipated that the programme will achieve at scale, positive impacts on the global environment, with benefits to all regions. The outcomes of this programme are intended to equate to more than the sum of the outcomes of each individual child project by building the capacity to leverage larger amount of investments and through exchange of knowledge and experiences among SIDS through the global project.

GEF financing under this project is focused on enabling Caribbean SIDS to align and integrate priorities in a manner that will minimize trade-offs in generating GEBs, while achieving sustainability and development goals. All outputs proposed deliver both local and global benefits. The relationship of the national and regional level outputs to global benefits, that is, GEF's incremental contribution, is outlined in Table 6, below. These global environmental benefits are expected to contribute to healthier terrestrial and marine ecosystems in the Caribbean (e.g. increased biodiversity), which will lead to socio-economic benefits through associated environmental services (e.g. the Caribbean Sea as tourism product).

Table 6 Incrementality of proposed project outputs

Project Component	Outputs	GEBs achieved through interventions at national level
1. Preventing the Future Build-Up of Chemicals Entering SIDS	<p>1.1: The legislative and institutional framework is developed to support the environmentally sound management of hazardous chemicals in materials, products and wastes at national and regional levels in the Caribbean</p> <p>1.2: Sustainable training programme is developed to assist countries with implementing the Chemicals and Wastes MEAs at a national level</p> <p>1.3: National, institutional and technical capacity to reduce/control the current and future trade of chemicals and products containing hazardous chemicals is strengthened</p> <p>1.4: Increased capacity for the development and implementation of national and regional chemicals and products standards including GHS</p> <p>1.5: Sustainable Procurement is promoted to key stakeholders to reduce the manufacture/import of products containing hazardous chemicals</p>	<ul style="list-style-type: none"> · Indirectly decreased emissions, through improved management of wastes · Toxic chemicals reduced, through – reduction and avoidance of chemicals of global concern · Reduction/elimination of Mercury
2. Safe Management and Disposal of Existing Chemicals, products and materials	<p>2.1: Capacity for environmentally sound management of SC POPs and MC Hg products strengthened, and obsolete pesticides and chemicals, PCBs and DDT eliminated</p> <p>2.2: Capacity to manage other hazardous waste streams specific to the Caribbean improved</p>	<ul style="list-style-type: none"> · Reduction/elimination of Mercury · Toxic chemicals reduced, through disposal/destruction of chemicals of global concern and their waste in the environment and in processes, materials and products. · Toxic equivalent TEQ reduced through - reduction, avoidance of emissions of POPs to air · To facilitate investment mobilization by develop banks.
3. Safe Management of Products entering SIDS/Closing Material and Product loops for Products	<p>3.1 EPR and Regional Approach to manage WEEE pilot tested in three participating countries</p> <p>3.2 Capacity built for the ESM of ELVs</p> <p>3.3 Improved management of plastics (including PVC) through the life-cycle approach and coordination with the public and private sectors</p>	<ul style="list-style-type: none"> · Toxic chemicals reduced, through disposal/destruction of chemicals of global concern and their waste in the environment and in processes, materials and products · Avoidance of marine litter · Toxic equivalent TEQ reduced through - reduction, avoidance of emissions of POPs to air
4. Knowledge Management and Communication	<p>4.1 Caribbean communities are informed and engaged with in the sound management of chemicals and waste</p> <p>4.2 Programme reports on project activities developed and disseminated</p>	<ul style="list-style-type: none"> · Increased beneficiaries resulting from project interventions · Avoidance of marine litter · Reduction/elimination of Mercury

It is recognized that GEF resources are limited so the use of this project and the concurrent IDB Child Project to leverage additional support to Caribbean SIDS and identify opportunities for future investment into the public and private sector is a key element in the projects' designs. In the Caribbean it is expected that Governments and project partners, including the private sector, will provide substantial and significant co-financing. These leveraged contributions are expected to include investments in modernizing and extending the waste recycling and waste to product industry, as well as the production and (where necessary) importation of sustainable product alternatives.

There have been many initiatives on chemicals and wastes across the Caribbean countries and other SIDS. These have largely been delivered discretely and thus have failed to share and learn from experience (both positive and negative) and resources. For example, in the Pacific region national unintentional POPs (uPOPs) action plans have been developed under a regional project, but no mechanism or platform exists for sharing these resources that can be tailored to, and then replicated for other SIDS including countries in the Caribbean. Under the ISLANDS programme, the GEF resources will be targeted to address both deficiencies, thus ensuring true incrementality. The developed activities under the UNEP/FAO implemented child project are intended to build on existing and past work, as identified in the alternative scenario, to supplement GEF resources. Additionally, Component 4 of the project will develop knowledge products and promote SIDS learning, through transfer of these products to the global CCKM Child Project. The CCKM will develop a repository for knowledge, and communicate this knowledge to child projects in all regions. This will extend the benefit of project investments and thereby ensure important and costly resources developed under the project are available to all relevant stakeholders. Better use of resources means additional SIDS beneficiaries for a marginal investment.

A collaboration with the Cartagena Convention Secretariat is particularly relevant in the Caribbean region. The Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (WCR) or Cartagena Convention is a regional legal agreement for the protection of the Caribbean Sea. The Convention is supported by three Protocols, of which the one on pollution from land-based sources and activities (LBS Protocol), is particularly relevant. Within the framework of the LBS Protocol, the Cartagena Convention Secretariat is developing a new project proposal for 3-5 Caribbean SIDS to address the management of plastic waste and specifically plastic pollution of the coastal and marine environment to be financed by the Government of Germany. ISLANDS will work together with the Secretariat to ensure that activities under this project are in synergy with the Convention's plastic pollution project. The Secretariat also co-hosts the Regional Marine Litter Node for the Caribbean with the Gulf and Caribbean Fisheries Institute (GCFI) and has developed a Regional Marine Litter Action Plan and Strategy which will complement the work of this project. The joint Regional Activity Centre—RAC REMPEITC Caribe—that the Secretariat shares with the International Maritime Organization (IMO) further supports the Caribbean Governments with the implementation of pollution related IMO Conventions including MARPOL and the London Convention, and will be an additional strategic partner. Furthermore, ISLANDS will consult and engage with the Secretariat before and during execution of Output 3.3 (on cruise ship plastic waste and PVC plastic waste) and in Component 4 (knowledge management and communications).

Some of the initiatives on chemicals and wastes across the Caribbean countries specifically have been identified for their particular relevance to the ISLANDS Programme. For example, the cruise industry is a potential partner in the Caribbean region with relevant initiatives for ISLANDS. Cruise ships have sometimes been compared to "floating cities," due to the number of persons at any given time sailing aboard as either passengers or crew. The waste streams generated by cruise ships are governed by a number of international protocols (especially MARPOL) and domestic laws, regulations, and standards, but in general there is no single law for cruise ship waste. However, the cruise industry has voluntarily undertaken initiatives to improve pollution prevention, by adopting waste management guidelines and procedures and researching new technologies. In Amber Cove, a transit cruise port developed and operated by Carnival Corporation and the Rannik family, which is located in the Puerto Plata province of the Dominican Republic, there is a unique chance to both improve the municipal waste management and consider a pilot program for potential offload of some waste generated by the

cruise ships but managed separately. Carnival has already worked with local government and consultants in exploring strategies and potential ways to partner in the development of a new and improved waste management facility near Amber Cove. A collaboration with the ISLANDS programme would help to establish partners and assist in establishing links with chemicals-containing products and other potentially hazardous waste streams. This project would be a first of its kind and a collaboration with ISLANDS could also help to establish best practices and guidelines for future plans in other destinations where either Carnival operates ports or visits with cruise ships.

Other potential partners include IGOs like the Organization of Eastern Caribbean States (OECS). Unsustainable waste management practices in the Eastern Caribbean region have had a direct impact on the resilience of marine ecosystems through an increase in marine litter. Therefore, the OECS in collaboration with the Norwegian Government, through its Ministry of Foreign Affairs, has developed the "Building Resilience in the Eastern Caribbean through a reduction in Marine Litter" (ReMLit) project in the Eastern Caribbean, including the following countries: Antigua and Barbuda, Dominica, Grenada, Montserrat, Saint Lucia, and Saint Vincent and the Grenadines. This project aims to contribute to building resilience in marine ecosystems through a waste management focused approach. In particular, the project aims to update and enhance the enabling environment for waste management, reduce plastics and Styrofoam use, encourage reduce, recycling and reuse where appropriate, undertake public awareness campaigns, and improve the transboundary movement of waste. A collaboration with the ISLANDS programme would support these activities in project countries (Antigua and Barbuda, Saint Lucia) and assist in establishing links with chemicals-containing products and other potentially hazardous waste streams such as plastics leading to uPOPs emissions. A collaboration with ISLANDS would also ensure there is no duplication of efforts and provide mutual support in regional initiatives such as the transboundary movement of waste and promotion of transnational recycling enterprises.

Another partner is the Partnership Initiative for Sustainable Land Management (PISLM) that has been recognized as a supporting agency for the Latin American and Caribbean Soil Partnership (ASLAC) for the Caribbean. The project SOILCARE Phase 1/GEF ID 10195 will be updating and strengthening national and regional soils information, technical capacity and coordination as a basis for improved decision making including on SSM and SLM. One of the key dimensions of the SOILCARE project is mainstreaming sustainable soil management into National and Regional Policy and Legislative Frameworks with the view to strengthen agricultural policies and maintaining, improving and enhancing the use of productive lands. An important element of the SOILCARE project will be the promotion of the application of FAO Code of Conduct for Pesticide Management. Collaborations are possible in data related activities under component 1 on the assessment of soil resources. Findings from that component will contribute to activities on the development of a Pesticide Stock Management System for sustainable data collection to record and monitor inventories of pesticides and their usage, and obsolete stocks in agricultural and health sectors, in component 2.

It is planned that the outcomes and outputs from the SOILCARE project will be integrated into the various Community Policy Instruments (e.g. Caribbean Community Agricultural Policy, Draft Community Environment and Natural Resources Policy Framework etc.). To facilitate this, the PISLM will work closely with the Caribbean Community Secretariat through its Sustainable Development Directorate to ensure complementarity and integration of the concepts, outcomes and outputs which the SOILCARE project will be promoting. It is anticipated that the PISLM High Level Ministerial Group will play a leading role in this endeavor by providing the policy links with COTED [Environment] and COTED [Agricultural].

The work done by OECS has some overlap with the work done by the UK in service of the Commonwealth. Many Caribbean SIDS are part of the Commonwealth and thus, the UK would be a good potential partner as well. Most Caribbean SIDS lack an integrated waste management policy and the public awareness to put sustainable management practices in place and prevent waste streams such as plastics from entering the ocean. To tackle marine plastic pollution in the Caribbean and beyond, the UK and Vanuatu co-lead the Commonwealth Clean Ocean Alliance (CCOA), a Blue Charter Action Group. The CCOA now has 34 members, of which 6 are Caribbean countries: Antigua and Barbuda, Barbados, Belize, Saint Lucia, Trinidad and Tobago and St Vincent and the Grenadines. To support the ambitions of the CCOA, the UK has committed a £70m support package, including funding for the Commonwealth Litter Programme (CLiP) which supported development of the Marine Litter Action Plan in Belize in 2019. The CCOA Technical Assistance Facility (TAF) launched in 2019 supports ODA-eligible member countries to implement their commitments under the CCOA through technical assistance funding, this includes working with recipients in areas such as building research capacity, public engagement/communications, improving regulation, and working with the public and private sector. Saint Lucia and Belize signed up for support under phase one of the TAF, with bespoke projects to be completed in phase two. A collaboration with the ISLANDS programme in project countries could amplify existing work in supporting the avoidance and reduction of waste streams and public awareness raising campaigns. A collaboration with ISLANDS would also help to share lessons learned with countries that are not members of the Commonwealth and ensure that chemicals containing products and other potentially hazardous waste streams are handled appropriately.

The CCOA acknowledges the role of plastics specifically in keeping the oceans clean. Indeed, this is a waste stream of particular importance for many chemicals and waste initiatives in the Caribbean. This is no surprise considering that up to 14 million tonnes of plastic debris enter the ocean every year. This has adverse impacts on the health of ocean ecosystems, the integrity of food supplies and people's livelihoods. Small island states are particularly vulnerable to plastic debris because of their dependence on fisheries and tourism and because of the isolation and inaccessibility associated with islands. With support from the Norwegian Agency for Development Cooperation (NORAD), IUCN launched the Plastic Waste Free Islands project in 2019. The overarching goal of the project is to reduce plastic waste generation and eliminate leakage to the ocean from six SIDS - three from the Pacific and three from the Caribbean. The Plastic Waste Free Islands project overlaps with the Caribbean ISLANDS project in Antigua & Barbuda and Saint Lucia. A collaboration with the ISLANDS programme in these two countries could support awareness raising activities and efforts to improve policy effectiveness. A collaboration with ISLANDS would also help to increase communication and cooperation with regional bodies and other Caribbean SIDS, which is a key strategy of the Plastic Waste Free Islands. Specifically, the ISLANDS programme could help to extend the Plastic Waste Free Islands Blueprint, one of the IUCN/NORAD project's outcomes, to other project countries.

Of the burgeoning issues to be tackled in the reduction of marine plastic pollution, single-use plastics can be considered to be at the forefront. Campaigns for the elimination of single-use plastic straws, shopping bags and other packaging continue are gaining momentum as more research and photographic evidence of marine life entangled by plastic debris surface in the media. The prevention and minimization of single-use plastic waste is critical to reversing the tide of plastic which plagues Caribbean marine ecosystems. Following the Basel and Stockholm Conventions' Regional Centre's first call for project proposals under the Small Grants Programme on Plastic Waste (SGP on Plastic Waste), seven (7) project proposals were awarded funding, including the project entitled '*Replacing single use plastic commodities in the economy of Suriname*'. The project seeks to create alternative solutions for the management of single-use plastics in Suriname. This entails establishing a baseline on Suriname's management of single-use plastics and undertaking a pilot project which will replace single-use plastic bags in stores with more sustainable and locally available products. It will also create three plastic-free high schools and provide recommendations to decisionmakers on how single use plastics can be replaced across the country. The project will be implemented between 2021 and 2022 by Suriname Waste Management (SUWAMA), a registered environmental foundation based in Paramaribo, Suriname, with execution by the BCRC-Caribbean. A collaboration with ISLANDS will assist in facilitating knowledge exchange across SIDS on practical solutions and business opportunities for the long-term replacement of single-use plastics. Lessons learnt from the development of a national baseline on single-use plastics will also benefit the programme.

Of course, the main issue with plastic waste is final disposal, as plastic often ends up in uncontrolled landfills, illegal dumps or even the ocean. The Japan International Cooperation Agency (JICA) has developed a project in the Dominican Republic that will build institutional capacity on nation-wide solid waste management (FOCIMIRS 2). Specifically, the management of final dumping sites will be improved with the aim to operate them sustainably. This will be achieved through the development of manuals for new landfills, existing landfills, and environmental and social coordination, as well as a pilot project at a selected dumping site, all through coordination, guidance and assistance from MARENA in coordination with key stakeholders. A collaboration with the ISLANDS programme would assist in establishing links with chemicals-containing products and other potentially hazardous waste streams such as plastics leading to uPOPs emissions, as well as the appropriate handling of these waste streams. A collaboration with ISLANDS would also help to share lessons learned and developed materials such as landfill manuals with other project countries. JICA has committed to working together with ISLANDS on these topics during project execution.

Also in the Dominican Republic, USAID has a number of ongoing waste management / ocean plastics activities related to the sound management of landfills, and the creation of sanitary landfills. This will be achieved through a pilot project in the Samaná Peninsula. A collaboration with the ISLANDS programme would assist in establishing links with chemicals-containing products and other potentially hazardous waste streams such as plastics leading to uPOPs emissions, as well as the appropriate handling of these waste streams. A collaboration with ISLANDS would also help to share lessons learned and developed materials with other DR municipalities and other project countries. USAID has committed to working together with ISLANDS on these topics during project execution.

Finally, in the French Department of Guadeloupe, the local directorate for the environment (Direction de l'Environnement, de l'Aménagement et du Logement DEAL) has been very proactive in supporting the local Small and Medium-size Enterprises in the management of locally generated waste. Innovative solutions, adapted to the volume of waste generated in the context of a small island, have been successful in the management of ELVs, the collection of PETs recycling of used oils and the transformation of sargassum into H2 and bio fertiliser. Lessons learnt from this local experience will be beneficial to the project.

6) Global Environmental Benefits (GEFTF) and/or Adaptation Benefits (LDCF/SCCF)

The GEF is the financial mechanism for the Minamata Convention on Mercury and the Stockholm Convention on Persistent Organic Pollutants (POPs) and provides some funding for the Strategic Approach to International Chemicals Management (SAICM). GEF investments in the chemicals and wastes focal area seek to prevent a toxic legacy through both reducing existing stockpiles and preventing the use and emissions, both current and future, of the chemicals covered under the Minamata and Stockholm Conventions. The GEF 7 results framework has set out its GEB targets in the following terms:

- *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 (thousand metric tonnes of toxic chemicals reduced)*
- *Reduction, avoidance of emissions of POPs to air from point and non-point sources (grams of toxic equivalent gTEQ)*

The programme is designed to provide support to SIDS to improve chemicals and waste management in line with international commitments and national plans (as outlined in Section 7). The programme is the first integrated attempt to assist SIDS across several regions to address chemicals and waste issues at the sectoral level. By addressing objectives of the Stockholm and Minamata Conventions and SAICM, the programme will look to broaden the scope of interventions to address the wider chemicals and waste management issues unique to SIDS. This will also be achieved through ensuring the GEF investment is fully integrated with the large number of other ongoing and planned interventions across the regions in this sector.

Using a broad array of national and regional interventions (outlined in Section 1a. 3), in accordance with the GEF mandate, the Caribbean Child Project will lead to the following measurable global environmental benefits:

- Elimination and avoidance of hazardous chemicals in Caribbean SIDS (including POPs, Hg, pesticides and other hazardous chemicals including those contained in products);
- Improved chemicals and wastes management in Caribbean SIDS leading to reduced releases of POPs, UPOPs, Hg and other hazardous chemicals/releases to the global environment;
- Disposal of obsolete stockpiles of chemicals that are POPs, including the improved management and treatment of mercury containing products;
- Through the management of land-based sources of waste, address the issue of chemicals and products in oceans and pollution of coral reefs, mangroves, and other fragile water systems;
- Replacement of POPs, mercury and relevant HHPs used in the global food supply chain, with alternatives, preferably non-chemical alternatives;
- Reduction in generation of non-biodegradable and hazardous waste generated and landfilled through diversion of recyclables and reusable material.

The UNEP/FAO Caribbean child project, through a combination of regional and country level activities, is anticipated to lead to the:

- *52,595 metric tonnes of toxic chemicals reduced, through - 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.*
- *reduction/elimination of 69 metric tonnes of Mercury and 382.6 metric tonnes of POPs.*
- *319 grams of toxic equivalent TEQ, through reduction, avoidance of emissions of POPs to air from point and non-point sources.*
- *Avoidance of 150,000 metric tonnes of marine litter.*

7) Innovativeness, Sustainability and Potential for Scaling Up

To date, the GEF has not yet financed a holistic project relating to chemicals and waste management in SIDS. Therefore, the ISLANDS programme, by its very nature, is innovative. Furthermore, the ISLANDS Programme is unique in its geographical and topical scope with thirty (30) SIDS participating from three (3) regions. The combined comparative experience that is brought by the different GEF implementing partners to the programme, coupled with the involvement and contributions made by key regional partners, ensures a wide range of perspectives without giving up the focused and unique qualities of each partner. In this way, the programme ensures that the identified barriers are addressed through adequate and relevant interventions, sourced from a broad range of expertise.

The ISLANDS programme is focused on developing robust public-private sector partnerships, combined with national level sustainable financial mechanisms. This approach will be optimised through the direct involvement of the IDB as a co-financer and implementing agency for one of the Caribbean Child Projects. The IDB Child Project will be executed parallel to the UNEP/FAO Child Project and the outputs of the latter will support the enabling framework for the IDB project's objective of creating sustainable and effective public and private sector investments in chemicals and waste management. Close collaboration with other agencies, such as CROSQ, and donor-funded chemicals and wastes activities in the regions is expected to create additional synergistic solutions based on coordination of the public and private sectors. This allows for an innovative approach to waste management that builds on new technologies and approaches, rather than duplications of the often expensive waste management solutions found in larger countries, without sacrificing the concept of waste as a resource.

Individually, Caribbean SIDS do not have sufficient resources to develop and maintain economically viable infrastructure projects to manage all waste streams at the local or national level. As such, most wastes continue to be landfilled and the economic value contained in waste is not realised. For a region so far characterised by fragmented waste management practices, regionally-focused solutions are an innovative approach to sustainable and scaled up activities for environmentally sound chemicals and waste management. However, comprehensive regional collaboration on chemicals and waste management, including between the European Overseas Territories and independent countries, has not existed on a significant scale until now. The ISLANDS Child Projects will identify and develop innovative regional solutions, such as material recovery hubs, which would support increased regional capacity to manage generated waste streams on a larger-scale. Solutions developed at the regional level ensure sharing of knowledge, resources and lessons learned. The Child Project envisions innovative solutions will run parallel with the establishment of effective circular and life-cycle management systems in partnership with the private sector. This would assist in minimising the quantities of difficult to manage waste streams ending up in landfills, especially e-waste and end-of-life vehicles.

The Child Project will take advantage of technological advancements to engender stakeholder participation in executed activities. The effectiveness of using virtual platforms to conduct remote meetings was demonstrated during the COVID-19 pandemic when meetings had to be conducted remotely due to travel restrictions put in place to protect countries. Moving forward, where possible, project meetings and consultations will be conducted remotely to engage as many stakeholders as possible without bearing the costs associated with regional travel. Similarly, an online training platform will be developed to host online training material that can be accessed by regional stakeholders during and after the project's execution. Considerations will also be made for the development of an app to empower the public to report illegal open dumpsites and to disseminate information on the hazards associated with open burning.

Overall, the Child Project will consider innovative and sustainable solutions for the environmentally sound management of chemicals and waste on a national and regional level, and support the implementation of these solutions in the project countries. The project activities will also seek to identify opportunities for scaling up the project outputs to other Caribbean countries not benefiting from the Child Projects and to ensure that the outputs are sustainable and can be continued even after the project is concluded.

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- [38] The Model Integrated Chemicals Management Act developed under the GEF 5558 Project includes SOPs for inspectors regarding the identification, handling and sampling of POPs.
- [39] CARICOM Customs Handbook: Guide to Multilateral Environmental Agreements, 2013 does not include a section on the MC or newly added SC POPs.
- [40] This will utilise training material developed under the GEF 5558 Project on the "Detection, Identification, and Classification of POPs by Border Control Agencies" has been developed.
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- [44] The GEF. (2018). GEF-7 Programming Directions. https://www.thegef.org/sites/default/files/council-meeting-documents/GEF-7%20Programming%20Directions%20-%20GEF_R.7_19.pdf

1b. Project Map and Coordinates

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

Figure 4 below shows the location in the wider Caribbean Basin of the nine (9) participating countries. Belize, Guyana and Suriname are land based countries which are qualified as SIDS.

The detailed maps of the participating countries and their location is detailed in Annex E. The maps show the location of potentially contaminated sites in each country.



Figure 4: Map of the Caribbean region with project countries highlighted

1c. Child Project?

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

This Child Project is the UNEP/FAO implemented Caribbean Child Project under the ISLANDS Programme. The objective of the ISLANDS Programme is to prevent the build-up of materials and chemicals in the environment that contain POPs and mercury and other harmful chemicals in SIDS, and to manage and dispose of existing harmful chemicals and materials in SIDS. The intervention logic for the ISLANDS Programme and the theory of change are included as Figure 5, below.

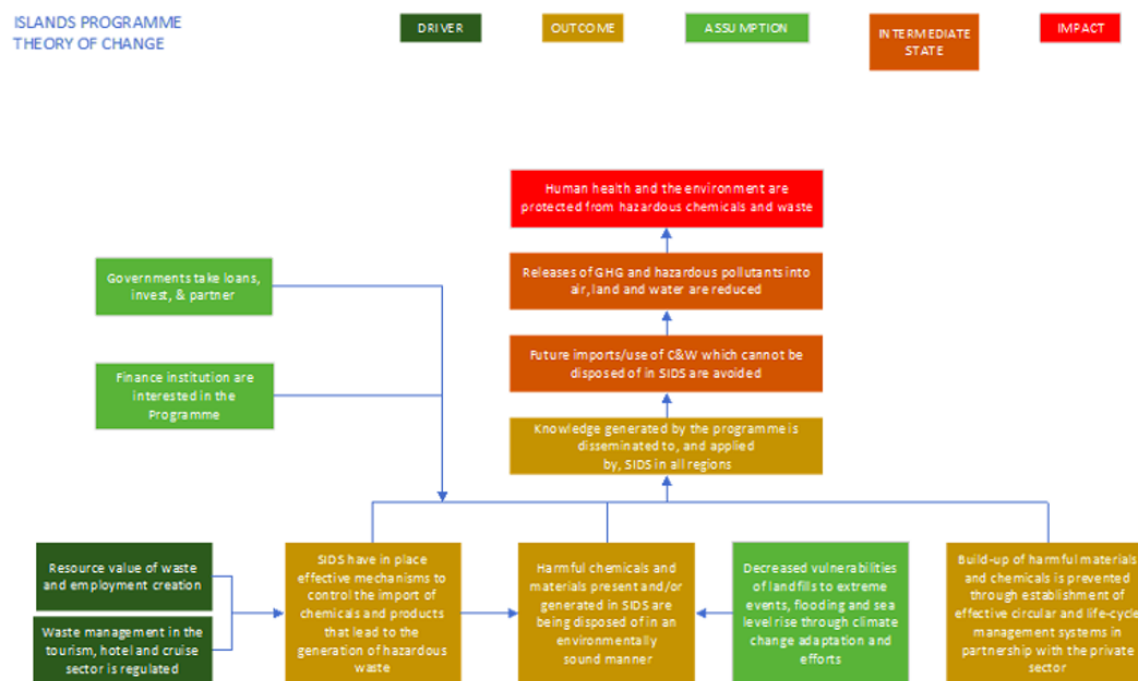


Figure 5: ISLANDS PFD Theory of Change

This Child Project's objectives are similar to that of the Global Programme with a focus on the nine (9) participating countries in the Caribbean region; i.e. to prevent the build-up of materials and chemicals in the environment that contain POPs and mercury and other harmful chemicals in Caribbean SIDS, and to manage and dispose of existing harmful chemicals and materials in Caribbean SIDS. The relationship of each project component to the overall programmatic impact is outlined below.

Activities under Component 1 are intended to achieve the outcome of Caribbean SIDS having in place effective mechanisms to control the import of chemicals and products that lead to the generation of hazardous waste. The activities are focused on providing support to the participating countries to improve legislation for chemicals and waste management, building capacity for implementing chemicals and waste MEAs and strengthening regulatory and institutional capacities for controlling the trade and procurement of chemicals and products containing chemicals. Outputs will include the development and implementation of policies and legislation to support hazardous chemicals and waste management, the development of a training programme on the chemicals and waste MEAs including an online training platform, updated restricted and prohibited import lists, regional project standards and green procurement strategies including the identification of suitable alternatives to PFAS, POP-PBDEs, SCCPs/PCBs/PCNs and mercury added products.

Activities under Component 2 are intended to achieve the outcome of environmentally sound disposal of harmful chemicals and materials present and/or generated in Caribbean SIDS. Activities include the update of POPs and mercury inventories, destruction of obsolete chemicals including PCBs, pesticides and DDT stockpiles and products containing harmful chemicals, awareness raising to promote best available techniques and best environmental practices to minimize UPOPs emissions from open burning and building national and regional capacity for managing hazardous waste streams.

Activities under Component 3 are intended to achieve the outcome of preventing the build-up harmful materials and chemicals through the establishment of effective circular and life-cycle management systems in partnership with the private sector. Activities under this component include development of and enabling framework for Extended Producer Responsibility for WEEE and regional capacity building for WEEE, ELVs and PVC management.

Component 4 is intended to achieve the outcome of dissemination and application of knowledge generated by the programme to SIDS in all regions. This Component will include the FAO-implemented activities which aim to develop monitoring and awareness raising tools to support regional pesticides management as well as a general knowledge management output in which all knowledge assets generated under the Child Project will be shared with the CCKM in addition to being linked to the BCRC-Caribbean's existing platforms. Developed communications material will be disseminated to public and private sector stakeholders based on a comprehensive awareness raising strategy to be developed under this Component.

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.

Stakeholder engagement plan – ISLANDS Child Template

1. Stakeholders, their relevant interests, and why they are included

GEF ISLANDS aims to collect and analyze stakeholder expectations and concerns as well as to take appropriate responsive measures throughout the Programme in order to ensure that there is enough support for the project. The tables below (Table 1; Table 2) identify social groups and persons that are associated with the project in different ways at all stages. In Table 1, under international stakeholders, "stakeholders affected directly or indirectly by...Project implementation" are stakeholders that will be consulted in some project activities, while "stakeholders that participate in the project" will be engaged in project execution. The roles of national stakeholders are defined in the table.

Table 1: General stakeholder classification

Stakeholders affected directly or indirectly by the outcomes of the Project implementation	Stakeholders that participate in the project directly or indirectly	Stakeholders who are able to influence and decide the outcomes and the manner of the Project implementation or make decisions based on the outputs of the project
International Stakeholders		
International Maritime Organization World Bank CLME+ Project UN World Tourism Organization ReSEMBid Project Cruise Lines International Association The Ocean Foundation Caribbean Youth Environment Network	International Union for the Conservation of Nature Organization of Eastern Caribbean States CARICOM COTED US Agency for International Development US Environmental Protection Agency Japan International Cooperation Agency Norwegian Embassy in Cuba UK DEFRA OCT Governments DEAL Guadeloupe Shipping companies Cartagena Convention Secretariat	GEF UNEP FAO IDB BCRC-Caribbean CARICOM CROSQ EcoRed Carnival Cruise Line
National Stakeholders		
Project country citizens Project country citizens will benefit from successful project implementation, through: job opportunities throughout life cycle management of chemicals; increased potential to enjoy services offered by the environment; increased environmental awareness.	Professionals invited to the workshops and meetings for capacity building	Professionals who provide feedback on workshops and meetings.

Offices of the Attorney General and other legislative bodies	Legal officers invited to workshops and meetings and who will champion the cause to pass legislation and implement roadmaps developed under the project. Legislative Review Committees and Chief Parliamentary Counsels for reviewing legislation and submitting to Parliament.	Permanent Secretaries in Ministries of Legal Affairs Attorney General
Ministries with portfolios of environmental, health, agricultural and tourism matters in project countries	Invited personnel from respective ministries who may be on National Working Groups or invited to workshops/meetings	Chief Technical Officers (e.g. waste management specialists, personnel with responsibility for implementing MEAs) and Permanent Secretaries for these ministries. Officers responsible for drawing up agreements with cruise ships and hotels regarding waste management.
Ministries with portfolios of environmental, health, agricultural and tourism matters in non-project countries in the region. They are likely to use models developed under this project to advance their own chemicals and waste management frameworks.	None	None
Focal Points and Competent Authorities for BRSM Conventions in project countries.	Focal Points and Competent Authorities for BRSM Conventions in project countries	Focal Points and Competent Authorities for BRSM Conventions in project countries
Regulatory Agencies in all project countries	Agencies involved in NWGs	Environmental agencies, solid waste management authorities, pesticides and toxic chemicals inspectorates, bureau of standards, disaster management offices.
Customs and Excise Divisions in all project countries	Customs personnel invited to training workshops	Customs personnel who provide feedback on training workshops (e.g. KAP surveys, feedback forms); customs officers who sit on NWGs.
Waste Management Facilities in all project countries. All companies required to comply with new regulations implemented through work under project.	Companies who enter competitions under IDB.	E-waste and ELV management facilities. Recycling facilities for plastics.
Waste Management Facilities in non-project countries	Foreign companies may be procured to manage waste which cannot be handled via ESM in project countries.	Companies procured to manage waste via ESM.
Chemical Manufacturers in all project countries who used POPs and Hg. All companies required to comply with new regulations implemented through work under project.	Companies who used POPs in their operations, and who use mercury in their operations	Uptake of alternatives by these companies is an indicator of project success. Therefore, the uptake or lack thereof by these companies directly affects metrics which indicate project success.
Chemical Manufacturers in non-project countries Many countries import their chemicals. Should certain activities be successfully implemented as describes in the Alternative Scenarios, some companies may lose customers while other companies who manufacture safer alternatives will gain clients. Other Caribbean countries	None	None

<p>Remained in the region. Other Caribbean countries may take up the models proposed under this project as there is support from CARICOM and CROSQ for the development of standards, which may affect their chemical manufacturing operations.</p>		
<p>Chemical importers in project countries.</p> <p>If a chemical which they import is restricted or prohibited by national law, this will affect their business.</p>	<p>Companies invited to participate in workshops and meetings through Chambers of Commerce.</p>	<p>This group must be willing to adopt alternatives. Their lobbying against alternatives can hinder progress outlined in roadmaps to adopting alternatives.</p>
<p>Electricity Companies in all project countries.</p> <p>All companies required to comply with new regulations implemented through work under project.</p>	<p>Companies having PCB-contaminated equipment; companies who will provide feedback on current industry practices.</p>	<p>Companies having PCB-contaminated equipment; companies who will provide feedback on current industry practices. Those who take up the BEPs and BATs proposed under the project will serve as an indication of project success.</p>
<p>Mining companies in project countries who use mercury.</p> <p>All companies required to comply with new regulations implemented through work under project.</p>	<p>Companies invited to partake in workshops.</p>	<p>Companies using mercury in operations; companies who will provide feedback on current industry practices. Those who take up the BEPs and BATs proposed under the project will serve as an indication of project success.</p>
<p>Farmers/ Agro-shops in project countries.</p> <p>All farmers and agro shops will be required to comply with new regulations implemented through work under project.</p>	<p>Farmers and shop owners who participate in trainings and who provide feedback on project activities.</p>	

Table 2: Key stakeholders Expectations and Concern Analysis

Stakeholder group	Key expectations	Key concerns	Recommendations for engagement
National Government	<ul style="list-style-type: none"> Increased capacity for implementation of BRSM Conventions (technical and financial) and managing chemicals and wastes as per the obligations of the Conventions. Improved infrastructure to support implementation of Conventions. 	<ul style="list-style-type: none"> Maintenance of infrastructure following termination of project- lack of financial resources may stymie continuity. 	Inclusion on national coordination committee
Waste Management Companies in project countries	<ul style="list-style-type: none"> Increased technical and financial capacity within operations. Increased revenue. 	<ul style="list-style-type: none"> Costs for implementing BEPs and BATs. Cost of integrating informal sector into operations. 	Members of national working groups; regular consultations through national technical assistants
Chemical Manufacturers (chemicals here also include plastics polystyrene materials)	<ul style="list-style-type: none"> Increased technical and financial capacity within operations. Opportunities for niche market with alternative products. 	<ul style="list-style-type: none"> Some chemical manufacturers may suffer losses when safer alternatives to harmful chemicals are promoted. 	Members of national working groups; regular consultations through national technical assistants
Chemical Importers	<ul style="list-style-type: none"> Increased technical and financial capacity 	<ul style="list-style-type: none"> Some chemical manufacturer 	Members of national working groups; regular consultations through national technical assistants

Global Environment Facility (GEF) Operations

	<p>city within operations.</p> <ul style="list-style-type: none"> · Opportunities for niche market with alternative products. 	<p>ers may suffer losses when safer alternatives to harmful chemicals are promoted.</p>	<p>nsultations through national technical assistants</p>
Companies who use POPs and mercury in their operations	<ul style="list-style-type: none"> · Opportunities to safely dispose of contaminated waste with limited costs involved. 	<ul style="list-style-type: none"> · Cost and effort required in retrofitting operations to integrate safe alternatives. 	<p>Members of national working groups; regular consultations through national technical assistants</p>
Farmers and agro-shops	<ul style="list-style-type: none"> · Increased capacity regarding integrated pest management and biopesticides · Opportunities for tapping into a niche market (e.g. persons concerned about organic content and pesticide content in food) · Opportunities for reaching foreign markets 	<ul style="list-style-type: none"> · Cost of IPM and biopesticides · Appearance of food for sale (e.g. big, shiny peppers as opposed to small, dull peppers) 	<p>Members of national working groups</p>
Gender groups	<ul style="list-style-type: none"> · Equality at decision-making levels 	<ul style="list-style-type: none"> · Health effects related to exposure to chemicals and waste (e.g. on reproductive health) 	<p>Members of national working groups</p>
Indigenous groups	<ul style="list-style-type: none"> · Increased quality of services offered by environment 	<ul style="list-style-type: none"> · Assistance in managing chemicals and/or waste, if needed 	<p>Members of national working groups</p>
Youth groups	<ul style="list-style-type: none"> · Increased environmental awareness · Sustainability for the future exploitation of environment for economic benefits and leisure 	<ul style="list-style-type: none"> · Loss of certain job opportunities 	<p>Members of national working groups</p>
Informal sector	<ul style="list-style-type: none"> · Opportunities for steady incomes 	<ul style="list-style-type: none"> · Loss of economic revenue if security measures are imposed at landfills and informal workers are not absorbed by a company 	<p>Members of national working groups</p>
Co-financing contributors	<ul style="list-style-type: none"> · ISLANDS activities harmonized with other activities being executed in the region 	<ul style="list-style-type: none"> · Project activities are coordinated with other ongoing activities 	<p>Invited as observers to national working group meetings</p>
Waste management companies in non-project countries	<ul style="list-style-type: none"> · Opportunities for collaboration on knowledge sharing on ESM of waste. · Opportunities for expansion into project countries where capacity increases. · Opportunities for sales where project countries have no capacity/infrastructure for ESM of waste streams. 	<ul style="list-style-type: none"> · Economic viability of sale or investment (quantity may not be feasible; logistics may thwart economics). · Increased capacity and infrastructure in Caribbean countries may decrease opportunities for sales. 	<p>Invited as observers to national working group meetings</p>
International private sector partners	<ul style="list-style-type: none"> · Ensure project activities related to recycling will facilitate involvement of private sector 	<ul style="list-style-type: none"> · Sustainability of regional activities including EPR and Regional Hub activities 	<p>Members of national working groups</p>
Inter-governmental organizations	<ul style="list-style-type: none"> · To be kept informed of project activities 	<ul style="list-style-type: none"> · Project activities are in line with regional priorities 	<p>Members of national working groups</p>

2. Stakeholder roles and responsibilities, and timing of the engagement throughout the project cycle:

Stakeholders will be engaged through meetings and workshops for trainings throughout the project cycle. Stakeholders at all levels will be able to access the training materials developed under this project through the online repository developed to house the materials. The BCRC-Caribbean will be responsible for establishing and maintaining this repository.

National working groups will be responsible for the review reports developed under the project. Their continued involvement will serve to increase the accuracy of the information being developed and published under the project.

National workshops and regional workshops will include round table discussions with different groups (e.g. GHS training workshops should have round table discussions with Comptrollers to understand the baseline in the first workshop and understand how GHS implementation has changed in by the second workshop). KAP surveys will also be conducted to illustrate the impacts of the project activities. Focus groups for private sector actors will also occur during workshops held throughout the project cycle in order to gain buy-in for project activities. It is important for this to start as early as possible. Updates on the project will also be shared via press releases, workshop reports and newsletters in order to ensure that the project is always seen as relevant and to therefore maintain support from all stakeholders involved.

The table below (Table 3) outlines stakeholder roles and responsibilities, and timing of the engagement throughout the project cycle, as well as detailing level of engagement during the project preparatory (PPG) stage.

Table 3: Outline of regional and national stakeholders engaged in project execution

Stakeholder	Engagement in project preparation	Engagement in child project	Timing (Years 1-5 of Project Execution)
Regional			
CROSQ	Virtual communications and consultations took place regularly throughout PPG phase	Component 1, Output 1.4	1-2
CARICOM	Virtual communications and consultations took place regularly throughout PPG phase	Component 1, Output 1.1-1.4 Component 2, Output 2.1	1-3
Carnival Cruise Line	Virtual communications and consultations took place regularly throughout PPG phase	Component 3, Output 3.3	Throughout
CANTO	Virtual communications and consultations took place regularly throughout PPG phase	Component 3, Output 3.1	3-4
COTED	Virtual communications and consultations took place regularly throughout PPG phase	Component 1, Output 1.3	1-2
National			
National governments	Consulted by national focal points, consultants and/or BCRC-Caribbean throughout the PPG, as well as at inception and validation workshops	All components and outputs	Throughout
Chambers of Commerce	Consulted by national focal points, consultants and/or BCRC-Caribbean throughout the PPG	Component 1, Output 1.5	Throughout
Border control agencies	Consulted by national focal points, consultants and BCRC-Caribbean throughout the PPG	Component 1, Output 1.3 – 1.4 Component 2, Output 2.2	Throughout
Waste management facilities	Consulted by national focal points, consultants and BCRC-Caribbean throughout the PPG	Component 3, Output 3.1 – 3.23	2-4
Chemical manufacturers	Consulted by national focal points, consultants and BCRC-Caribbean throughout the PPG	Component 1, Output 1.5	Throughout
Importers of chemicals and chemical-containing products	Consulted by national focal points, consultants and BCRC-Caribbean throughout the PPG	Component 1, Output 1.5 Component 3, Output 3.1 – 3.23	1-4
Farmers	Consulted by national focal points, consultants and BCRC-Caribbean throughout the PPG	Component 1, Output 1.5, Component 4	Throughout
Fire Services in Saint Lucia	Consulted by national focal points, consultants and BCRC-Caribbean throughout the PPG	Component 1, Output 1.5	1-2
Rural communities	Consultations moved to first part of implementation phase due to COVID-19	Component 2, Output 2.2	2-4
Indigenous communities	Consultations moved to first part of implementation phase due to COVID-19	Component 2, Output 2.2	2-4

3. The budget for stakeholder engagement:

The budget for stakeholder engagement is included in the consultants budget line and totals \$26,000.

4. Monitoring stakeholder engagement

GEF ISLANDS will monitoring stakeholder engagement as part of the monitoring activities of the CCKM project. ISLANDS is employing a harmonized set of indicators for engagement of stakeholders. The indicators in Table 9 are those proposed by the child project and are expected to be considered by the CCKM project.

Table 4: Monitoring stakeholder engagement

Proposed parameter	Reporting responsibility
No. of stakeholders attending national coordinating committee meeting (disaggregated by gender)	National technical assistant to Project Coordinator
No. of consultation meetings convened	National technical assistant to Project Coordinator
No. of international stakeholders attending national working groups (disaggregated by gender)	Project coordinator

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

As above

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier; Yes

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

Executor or co-executor;

Other (Please explain)

Stakeholders in the context of the ISLANDS programme are defined as organizations, institutions and groups which are directly or indirectly impacted by and/or which have a direct potential financial or administrative interest in the ISLANDS Caribbean child project interventions. Thus, the identification and engagement of stakeholders for project execution focus on those who have the most relevant and direct impact on project activities and outcomes, as well as those who will be direct project beneficiaries. All the stakeholders identified can bring a diversity of perspectives and expertise, connect issues and opportunities across programs, agencies and sectors and help to ensure the success of the project within the country. Stakeholder engagement is also critical to support the institutionalisation of the project's outcomes and to ensure its sustainability through continuation of the outputs after the project is completed.

Stakeholder groups consulted during the development of the project's activities included government agencies, civil society, the private sector, intergovernmental, regional and international organisations with responsibility over chemicals, waste and environmental management, customs and excise, standards development, legislation, health, gender, indigenous communities and public education. These stakeholders contributed to the overall understanding of national priorities and validation of the developed activities. They will continue to play a critical role in ensuring that national priorities are effectively addressed and that the overall goals of the ISLANDS Programme are met during the project's execution.

Stakeholders will be engaged at varying levels during the project's execution to ensure their support and active involvement in the project's activities, to raise awareness on the hazards associated with chemicals and waste and to highlight their role in the management of various chemicals and waste streams. National focal points, consisting of the main government agencies responsible for chemicals and waste in each country, the UNEP and FAO, as implementing agencies, and the BCRC-Caribbean, as the executing agency, will participate on a Project Steering Committee (PSC) that would serve as the project's decision making body and support monitoring and evaluation of the project. PSC meetings will be organised on an annual basis to discuss the progress of activities and amendments to the schedule, as needed. Additionally, the BCRC-Caribbean will provide regular project updates to the PSC. The national focal points will support the organisation of

National Working Groups (NWG), as necessary for specific project activities, and ensure that national stakeholders are continuously engaged and updated throughout the project. Stakeholders will be invited to national and regional meetings, training workshops and awareness raising activities and will also be engaged directly through dissemination of meeting notes, draft reports, and technical documents for their review. Regular project updates will be provided via email, meetings and online publications on the BCRC-Caribbean's and national media platforms.

Other national, regional and international stakeholders will be engaged as needed throughout the project.

The primary means of engaging the stakeholders will be through individual consultations, email correspondence, virtual meetings, and face to face communication during workshops and meetings, as needed for project activities. Supplemental communication will be conducted through, surveys and questionnaires, where necessary.

The table below identifies key project stakeholder groups critical to project implementation in the project countries. The table also highlights the present relevant role of the stakeholders in the project's area of influence, and their expected engagement and contribution to the project execution. It is noted that the table represents a summary of the project's stakeholders and a detailed list, identified by country, is included as Appendix 6.

Table 7 Stakeholder Assessment for Project Implementation

Stakeholder Group	National Role	Engagement in and Contribution to Child Project	Potential Impact
<i>Government stakeholders - Government stakeholders have a role to ensure that key issues are brought to the attention of decision makers across line Ministries. Coordination across involved Ministries will be important with exchange of information and sensitization of senior government officials being a key feature of the proposed stakeholder engagement strategy.</i>			
Environment Divisions within the Ministries with responsibility for the Environment and/or Sustainable Development	Partner agency for chemicals MEAs (some national focal points are within this Ministry, e.g. Environmental Management Authority, Trinidad and Tobago) Responsible for environmental management which includes monitoring and enforcement of pollution and hazardous emissions into the environment	Key stakeholder for all activities and national project implementing partner Continuous consultation on national priorities and to support data collection on impacts of pollution and environmental health, public awareness raising of chemicals and products of concern and the project Collaboration for the development and implementation of legislation, standard operating procedures, guidelines and strategies	High
Agencies with responsibility for Waste Management (including municipal/local governments, where relevant)	Responsible for solid and hazardous waste management including oversight of waste collection and disposal activities In some countries, municipal/local governments have oversight over local waste collection and management Some national entities are also responsible for national recycling efforts	Key stakeholder for all activities related to waste management Continuous consultation to gather information on national waste streams and existing public and private sector waste management activities and priorities Collaboration for the development and implementation of legislation, standard operating procedures, guidelines and strategies Pilot waste management projects will be supported by these agencies in collaboration with others, where relevant	High
Ministries with responsibility for Agriculture including Pesticides Boards	Partner agency for chemicals MEAs (some national focal points are within this Ministry, e.g. Department of Analytical Services, Antigua and Barbuda) Responsible for aspects of pesticides management including permit	Key stakeholder for activities related to pesticides management Consultation, as needed, to support data collection on the use and impact of pesticides and raising awareness among importers, users and disposers of pesticides	High

	ues management including permitting of licences for import and use, monitoring and enforcement of national legislation		
Ministries with responsibility for Health	<p>Chemicals management falls under some national Ministries with responsibility for Health, e.g Pesticides and Toxic Chemicals Control Board, Trinidad and Tobago</p> <p>Responsible for ensuring public health including mitigation of negative health impacts that may be caused by chemicals use and disposal, pollution and harmful emissions to the environment</p>	<p>Key stakeholders for all activities, particularly those related to public health, medical waste and chemicals management (for those countries in which chemicals management falls under the remit of this Ministry)</p> <p>Consultation, as needed, to support health impact data collection and collection of data on medical waste management and chemicals, where relevant</p> <p>Collaboration in support of awareness raising on the negative health impacts of exposure to hazardous chemicals and waste</p>	High
Customs and Excise Departments with in the Ministries with responsibility for Trade	<p>Primary border control agency responsible for the monitoring and enforcement of imports and exports</p> <p>These departments are supported by chemicals authorities for inspection and testing of imported chemicals at port facilities</p>	<p>Key stakeholder for activities related to trade in chemicals, products containing chemicals and waste, particularly Output 1.3</p> <p>Departments to provide import and export data and information on operational procedures in place at the national entry points</p> <p>Collaboration to support the development and implementation of Standard Operating Procedures (SOPs) for pre-screening and inspection of imports and formalised institutional coordination mechanisms and training on developed SOPs</p>	High
Bureau of Standards	<p>Responsible for the development, implementation and monitoring of standards, nationally</p> <p>In some countries, the Bureau of Standards have the capacity to test products to ensure compliance with developed standards</p>	<p>Key stakeholder for activities related to product standards, particularly Output 1.4</p> <p>Bureaus to provide information on existing standards and procedures for developing and implementing new standards</p> <p>Collaboration to support the development of regional standards through participation on the Technical Committee for CROSQ and national implementation of the developed standards</p>	High
Ministries with responsibility for Legal Affairs	Responsible for drafting and reviewing national policies, legislation and regulation	<p>Key stakeholder for activities under each output related to the development of model policies, legislation and regulations related to chemicals and waste management and the review of existing relevant laws</p> <p>Consultation for collection of information on existing legislative framework, gaps and opportunities to integrate model legislation into national laws</p> <p>Collaboration to support development and implementation of Extended Producer Responsibility Schemes (EPR)</p>	Medium
Ministries with responsibility for Finance	Approves use of national funds	Approval needed regarding co-financing from various government agencies and departments	Medium

		Buy-in is needed from this Ministry to ensure adequate future national budget allocations to the chemicals and waste management sector, development of levies (as needed) and to support national investment opportunities for private sector initiatives Consultations with these Ministries needed to inform possibility of implementing levies and taxes to support ESM of waste generated from imported products	
Ministries with responsibility for Tourism	Provides oversight of the tourism sector, including hotel and cruise ship industries, and ensures compliance with relevant legislation	Ministries to support quantification of waste generated by this sector and identification of opportunities for collaboration for integrated waste management	Medium
Ministries with responsibility for Education	Supports national education programs and various public awareness initiatives, including environmental awareness in some countries	Ministries to support with raising awareness on the project objectives and sharing developed educational and training tools to students at all levels	Medium
US Agency for International Development	USAID has ongoing waste management/ocean plastics projects in the Dominican Republic.	ISLANDS project activities are harmonized / coordinated with ongoing USAID activities.	Low
US Environmental Protection Agency	USEPA has ongoing waste management/ocean plastics projects in the Dominican Republic.	ISLANDS project activities are harmonized / coordinated with ongoing USEPA activities.	Low
Japan International Cooperation Agency	JICA has ongoing waste management projects throughout the Caribbean and specifically in the Dominican Republic.	ISLANDS project activities are harmonized / coordinated with ongoing JICA activities.	Low
Norwegian Embassy in Cuba	The Norwegian Embassy in Cuba has some ongoing waste management projects in the Caribbean region.	ISLANDS project activities are harmonized / coordinated with ongoing activities.	Low
UK DEFRA	UK DEFRA has some ongoing waste management projects in the Caribbean Commonwealth.	ISLANDS project activities learn from ongoing UK DEFRA activities.	Low
OCT Governments	OCT Governments are likely to use models developed under this project to advance their own chemicals and waste management frameworks.	Communications and knowledge management takes place in collaboration and cooperation with OCTs.	Low
DEAL Guadeloupe	Representative of the Ministry of Environment in the Department of Guadeloupe. In charge of environmental certification	Will provide links to successful examples of chemicals and waste management in the small islands context especially for Component 3.	Medium
<i>Private Sector – Public-private partnerships and co-financing for waste management and recycling systems are an expected outcome of the project's execution. To ensure these are feasible and sustainable post-project, the project will seek to engage and learn from potential private sector partners. In each Caribbean SIDS private sector stakeholders have been identified, together with the external drivers of their activities, the constraints they currently face, and their underlying interest. This information and further ongoing consultation will guide the development of interventions.</i>			
Importers and retailers of chemicals and products containing chemicals (including plastics, EEE and vehicles)	Little manufacturing of chemicals and products containing harmful chemicals is done in the region. As such, importers and retailers are the primary source of these hazardous materials in the project countries	Key stakeholder for all activities, particularly for Component 1 Entities to provide data on quantities and types of imported chemicals and products containing chemicals (including EEE and vehicles) Consultations on potential EPP take back contracts	High

		Consultations on potential EPR, take-back systems, levies and tax schemes to support environmentally sound disposal of generated waste, incentives for procurement of green alternatives to harmful chemicals	
Private Waste Managers and Recyclers (including informal waste handlers)	Private entities that collect and transport waste and operate landfills, waste storage and treatment centres and recycling initiatives, sometimes through contracts with governments and businesses	Key stakeholder for all activities Entities to provide information on national waste streams and existing public and private sector waste management activities and priorities Pilot waste management projects will be supported by these entities in collaboration with others, where relevant Consultations needed to verify their role and capacity for chemicals and waste management	High
Chambers of Commerce	Responsible for providing guidance to the private sector, monitoring their activities and ensuring compliance with national regulations	Key stakeholder for activities in which private sector support is needed Chambers to provide support with developing and implementing green procurement strategies (Output 1.5), and extended producer responsibility and take back systems (Output 3.1)	High
Carnival Cruise Line	Significant amounts of waste generated in the Caribbean	Carnival will be directly engaged in the activities planned for Output 3.3	High
Private industries in the tourism sector	Significant amounts of waste generated by these sectors	Key stakeholder for Activity 2.2.2 Industries to provide information on quantities and types of waste generated and mechanisms in place to minimise and manage the waste generated Can support the development and implementation of guidelines for managing waste streams specific to the tourism sector	Medium
Manufacturers and distributors of PVC plastics	Two manufacturers of PVC used for construction and consumer products exist in Trinidad and Tobago	Key stakeholder for Output 3.4 Manufacturers to provide support for the identification of quantities and types of PVC plastics produced, generation of PVC waste and existing disposal methods, and for awareness raising on the dangers of open burning of PVC plastics	Medium
EcoRed	A business association whose objective is to facilitate the incorporation of a culture of social responsibility and sustainable development in DR companies.	EcoRed may be directly engaged in the activities planned for Output 3.1	Medium
Shipping companies	Deliver freight transport by sea services in the Caribbean	Shipping companies will be identified during the inception phase and directly engaged in activities under Output 3.1, and Output 3.2 depending on if a regional strategy is developed.	Medium
<i>Civil Society Organisations (CSOs) and Non-Governmental Organisations (NGOs) - Given the importance of behavioural change in improved waste management in SIDS, engagement and well-defined roles for community groups, village leaders, and locally active CSOs and NGOs across the project countries is considered essential during the project's execution. Such groups will be viewed in the context as execution partners, as well as beneficiaries and their support for the various initiatives to be undertaken as part of this project is seen as a key element of local and community level engagement.</i>			
Indigenous Communities	These groups work to ensure equitable	Efforts will be made to include indigenous communities	Medium

ities	<p>able distribution of national resources among indigenous communities</p> <p>Countries with significant indigenous and rural populations include Belize, Guyana and Suriname</p>	<p>munities in the execution of the project's activities through consultation and, where possible, opportunities for employment, entrepreneurship and community enhancement</p> <p>The project will identify issues and associated mitigation/preventive measures related to indigenous communities, particularly in the context of the impacts of mercury and POPs on the populations, where applicable</p>	
Groups focused on Gender and Youth Affairs and other vulnerable communities	These groups work to ensure equitable distribution of national resources among vulnerable communities	<p>Groups to support gender mainstreaming, and identification and inclusion of vulnerable communities throughout the project</p> <p>Engagement will support awareness raising among vulnerable communities and ensure their participation in decision making processes throughout the project</p>	Medium
Universities and other Academic Institutions	Supports development and execution of tertiary level and/or technical educational content	<p>Key stakeholder for the development and distribution of technical material and training content under each output</p> <p>Developed material and tools can be incorporated into existing coursework on hazardous chemicals and waste management and training for national staff on an as-needed basis</p>	Medium
Environmental CSOs/NGOs	Varying aims by existing groups include lobbying for improved national environmental management, supporting national environmental management frameworks, and raising environmental awareness.	<p>Organisations to support national awareness raising and distribution of developed communication and training material under this project</p> <p>Can support waste diversion efforts</p>	Low
<p><u>Regional and Inter-Governmental Institutions</u> – Coordination with regional and inter-governmental entities is critical to ensuring the success of this regional project by capitalising on existing initiatives and lessons learned throughout the region. Further, existing regional mechanisms can be used to facilitate the project activities and engender support from national and regional entities.</p>			
BCRC-Caribbean	Supports Caribbean countries in implementing their international obligations to sustainably manage wastes and chemical through technical assistance and capacity building	<p>Project Executing Agency</p> <p>Facilitation of the delivery of project activities, outputs, and outcomes, coordination of communication between all project partners, and coordination of project activities with the other regional and global child projects</p> <p>Provision of technical, administrative, and management oversight, quality control and compliance with all UNEP reporting requirements</p>	High
IDB	Inter-regional development bank that provides investment support to countries in the Latin American and Caribbean Regions	<p>Implementing Agency for another Caribbean Child Project</p> <p>Opportunities for optimization of resources, coordination and collaboration between the UNEP/FAO Child Project and the IDB Child Project</p>	High
CARICOM	Political inter-governmental institution promoting economic integration and cooperation among its Caribbean member states	<p>Provision of regional project support and lessons learned from execution of other regional activities</p> <p>Engagement with Legal Affairs Committee will be considered to cooperative regional legislation</p>	Medium

		<p>be considered to concretize regional legislation and strategies developed</p> <p>Provision of support with updating the CARICOM Customs Handbook (2013) under Activity 1.3.3</p>	
CROSQ	Regional inter-governmental organisation which coordinates the development of harmonized regional standards based on requests by member states	<p>Provision of support with developing two (2) regional standards (Output 1.4)</p> <p>Project would provide technical and financial support to establish a Technical Committee throughout the standards development process</p> <p>Continued cooperation between the BCRC-Caribbean and CROSQ will be established through development of a Memorandum of Understanding (MOU)</p>	High
Organization of Eastern Caribbean States Commission	Political inter-governmental institution promoting economic integration and cooperation among its Caribbean member states	ISLANDS project activities are harmonized / coordinated with ongoing OECS activities.	Low
Cartagena Convention Secretariat	Regional legal agreement for the protection of the Caribbean Sea	<p>Through Component 4, ISLANDS project activities are harmonized / coordinated with ongoing Cartagena Convention activities.</p> <p>Additionally, the Cartagena Convention Secretariat will be directly consulted and engaged with in the activities planned for Output 3.3.</p>	Medium
Partnership Initiative for Sustainable Land Management (PISLM)	Serves as a mechanism to facilitate exchange of good land management practices between participating countries, and serves as a mechanism for stimulating the replication of approaches, tools and methodologies throughout the region.	Collaboration for the development and implementation of guidelines and strategies and data collection in relation to harmful agrochemicals use	Medium
<i>International Organisations</i> – International organisations can provide technical support and oversight of the project activities in addition to co-financing through other global initiatives.			
UNEP	Responsible for coordinating global activities in support of the UN's agenda for sustainable environmental management on an international level	<p>Project Implementing Agency and primary GEF Implementing Agency for the global ISLANDS Programme</p> <p>Overall accountability for the project outcomes and fiduciary responsibility to the GEF</p> <p>Provision of technical backstopping, oversight and compliance with all GEF reporting requirements</p>	High
FAO	Responsible for coordinating global activities in support of the UN's agenda for improved food security on an international level	<p>The Caribbean Regional Office is the Project Implementing Agency for activities related to pesticides management</p> <p>Expertise will support the development and use of tools and best environmental practices related to pesticides use in agriculture and awareness raising</p>	High
Global Mercury Partnership	Multi-stakeholder partnership that aims to reduce global releases and emissions of mercury	Will be engaged for assistance with investigating the requirements for regional implementation of 8-digit or 10-digit HS Codes for mercury added products (Activity 1.3.2)	Medium

		Products (Activity 1.3.2)	
International Union for the Conservation of Nature	IUCN has ongoing waste management/ocean plastics projects in the Caribbean.	ISLANDS project activities are harmonized / coordinated with ongoing IUCN activities.	Low
Secretariat of the Basel and Stockholm Conventions	Responsible for providing strategic direction to Parties of the Basel Convention to ensure its implementation. Administers the Regional Centre Small Grants Programme on Plastic Waste (SGP on Plastic Waste).	ISLANDS project activities are harmonized / coordinated with ongoing pilot project in Suriname which will be funded through the SGP on Plastic Waste.	Low

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

Increasing attention has recently been paid to the issue of gender in waste management and it is highlighted that waste production and management are not gender neutral – neither in concept nor practice (UNEP 2015; IETC 2015). Typically, the structure of waste management reinforces normative gender roles. The current gendered nature of the waste sector is the product of attitudes and stereotypes of men and women. These gendered norms play out through the entire value chain of waste management.

Even if hazardous substances, chemicals and wastes reach and expose populations equally, factors such as: (i) poverty and socioeconomic status, (ii) gender-based and customary norms, (iii) health access and equity, and (iv) overall representation in decision-making processes and management policies relating to chemicals and wastes, determine the extent of repercussions and ramifications of these on population subgroups. For example, in many societies, women are expected to fulfill roles of unpaid domestic work, including care of ill family members. In this way, chemical exposures and health effects (whether of men or women) can add to the existing and entrenched “time poverty” (i.e. the time required for non-productive or unpaid labour that limit women’s opportunities to participate in remunerative economic activities), thus further entrenching gender inequality. Further, in most SIDS, women are responsible for managing household waste, making them the primary users of waste management services globally (UNEP 2015).

The gender-specific context for chemicals and wastes is consistent with this programme in focusing on improving chemicals and waste management in SIDS. Gender dimensions are relevant to the success of the programme and meeting its objective of preventing the build-up of materials and chemicals in the environment, and of managing and disposing of existing harmful categories. Meeting this objective and sustaining programme outcomes requires the participation of all sections of SIDS societies, and as such, the programme will take a gender mainstreaming approach to ensure child project activities, either:

- do not reinforce existing gender inequalities (that is, are **Gender Sensitive / Accommodative**); or
- attempt to redress existing gender inequalities and re-define women’s and men’s gender roles and relations (that is, are **Gender Responsive / Transformative**).

Gender Analysis in the Project Countries

The participating Caribbean countries recognise gender equality as an essential element of the economic and social development of their societies and have demonstrated their political commitment to gender equality through participation in several international conventions related to gender. In addition, all of the countries fully acknowledge the United Nations Sustainable Development Goals (SDGs) which focuses on gender equality and empowerment in Goal 5. Gender equality is noted as a cross-cutting goal, and it is generally recognised that the full achievement of the other SDGs is dependent on the fulfilment of Goal 5.

Gender mainstreaming has been considered in some chemicals and waste projects conducted in the participating countries. For example, the “Review and Update of the NIP for Guyana under the Stockholm Convention” Project includes considerations for: 1) facilitating equal access to information and training; 2) encouraging equal participation in the PCU, PSC, working groups and any national consultations; 3) fostering equal recruitment of consultants to deliver the project outputs; and 4) collecting sex-aggregated data on vulnerable populations, particularly during the project’s socioeconomic assessment which will provide a basis for prioritization, development of action plans and drafting of post-NIP projects. Similarly, MIAs conducted throughout the region include an assessment of potential gender dimensions related to the management of mercury, and “Gender Sensitivity Guidelines for Chemicals and Waste Management in the Caribbean” was developed under the MIA Project in Antigua and Barbuda, Dominica, Grenada and Saint Vincent and the Grenadines (GEF ID: 9865). A gender analysis was also conducted as part of the design of child project 2 implemented by the IDB.

A review of the relevant literature confirms that Caribbean states are inherently masculinist and invariably patriarchal. While several of the countries have already instituted gender equality policies or action plans, others are still currently in the process of developing such policies. Further, population and demographic statistics of the project countries reveal that (i) women have higher life expectancies than men (ii) all countries except Guyana fall within the high human development category based on their Human Development Index (HDI); (iii) men have a higher income per capita than women. It was noted that only Guyana and the Dominican Republic have a quota system for women in their parliament.

A review of the sex disaggregated labour force statistics of the project countries reveals that (i) women’s labour force participation is lower than men in most countries - only Antigua and Barbuda and St Kitts and Nevis have a higher proportion of women in the labour force; (ii) women occupy lower paying positions as compared to their male counterparts; (iii) sectors related to chemicals and waste management have significantly more males overall and in managerial or supervisory positions than females resulting in both vertical and horizontal gender segmentation of the sectors (iv) in all the territories except St. Kitts and Nevis, the unemployment rate among women is higher than the unemployment rate of men.

As it relates to education, in all the project countries, the expected years of schooling of females is higher than that of males. Further, the OECS posits that nearly 1 in every 4 young people in the Caribbean is unemployed with young women’s unemployment being more than 30% as compared to 20% for young men.

In the project countries, women are exposed in varying degrees to ownership of micro, small and medium enterprises (MSMEs) since they have limited access to the means of production either due to high interest rates, limited collateral to access loans, intimidating application processes, or poor production and market records. Moreover, there are several gender-based and other economic factors that hinder the success of mainly female-headed businesses chief among which is the historical culture of reinforcing women’s domesticity which has impacted on the types of goods that women producers create and this limits the successful distribution of their produce in both the local and regional markets.

The project countries have ratified several international gender related agreements including the Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) and several International Labour Organizations’ (ILO) conventions. As such, they have demonstrated their political commitment to gender equality. As it relates to international chemical and waste management frameworks, all the project countries have ratified the Basel, Stockholm and Rotterdam Conventions and all except Barbados, Belize and Trinidad and Tobago have ratified the Minamata Convention. These conventions recognize gender equality as key to their success and to address the differentiated impacts of hazardous wastes and chemicals on men and women.

A review of the national gender framework of the project countries reveals that, (i) the Constitutions of these countries speak to varying degrees on gender equality and discrimination on the basis of sex. Only the Constitution of Guyana contains a specific article, clause or paragraph about gender equality; (ii) long-term development plans/strategies of all the project countries make specific reference to and include provisions for gender mainstreaming except St. Kitts and Nevis which does not currently have a National Development Plan; (iii) Antigua and Barbuda has no National Gender Policy, while the other project countries either have an existing Gender Policy or is currently developing one; (iv) the project countries have multiple pieces of legislation that govern gender issues as well as chemicals and waste management within their territory (v) all the countries have a national gender agency that is mandated to mainstream gender as well as several agencies that coordinate the management of chemicals and solid waste within their territory. A review of the policies and legislations related to gender and the national development plans in the various countries shows there is low to medium or no gender consideration in these policies. The exception is the national development policy of Trinidad and Tobago.

The major stakeholders in the project countries include, (i) national governmental and regulatory agencies; (ii) national sanitation agencies and bodies; (iii) municipal and regional waste management agencies; (iv) waste workers and collectors; (v) private waste collectors; (vi) private enterprises involved in waste management; (vii) recycling actors; (viii) NGOs; (ix) informal waste workers and their associations and (x) vulnerable population groups such as persons living close to landfills.

Despite these considerations, there is still limited availability of sex disaggregated data related to chemicals and waste management throughout the region.

The following is a brief gender analysis by project country.

Antigua and Barbuda has a working-age population of 66,549 with 31,746 males and 34,803 females. Antigua and Barbuda has a high Human Development Index that is higher than the Latin America and the Caribbean average. Both men and women are involved in economic sectors associated with chemicals use and emissions. However, since women's labour participation is lower than men in the economy overall, their participation is lower in most sectors. Men dominate the agriculture, mining, manufacturing, electricity and gas sectors and are therefore more involved in the handling of and potential exposure to chemicals. Women's roles in economic sectors through further disaggregation does not necessarily put them at increased risk within the sectors. For example, women participate in various agricultural value chains, but their roles tend to be as agro-processors, marketers of agricultural products and tending to nurseries. Women's exposure to chemicals in the other sectors mimics the segregation of the agriculture sector. In fishing, for example, women are mainly marketers. Women's handling of and exposure to chemicals mainly occurs in the domestic sphere and in the hotel and tourism sector where their participation outnumbers men.

Both men and women participate in the waste value chain in Antigua and Barbuda. Men are the majority owners of waste management and disposal businesses and also in the regulatory public service agencies. Anecdotal information from national stakeholders indicates that waste pickers are predominantly females, while labourers in charge of disposal activities are predominantly males. Waste pickers are more likely to be exposed to chemicals and other hazards than other workers in waste management and disposal. They are also less likely to be able to afford private health care to address health issues that may arise.

Men and women not involved in waste disposal services or waste picking tend to be equally likely to be exposed to pollution from dumpsites since population distributions are generally equally split. However, because of their vulnerable status, women are less likely to be able to access health care to manage the health impacts of pollution. Though there are state sponsored and subsidised health care facilities, health costs are increasingly borne by citizens at private facilities. Ability to pay to access health services is, therefore, an issue for vulnerable populations.

Barbados has a working-age population of 131,635 with 93,276 males and 98,359 females. Barbados has a multidimensional poverty index of 0.009, which is a significantly better value than the Latin American and Caribbean average. Gross National Income in Barbados is higher among men than women. Additionally, Barbados has a very high Human Development Index that is higher than the Latin America and the Caribbean average.

Men in Barbados are more likely to be exposed to and use chemicals, as indicated by their higher levels of participation in the main sectors of the economy associated with chemicals use and management. Labour participation for women ranks the highest for the CARICOM region and is higher than men. However, women's participation in the economic sectors associated with chemicals use and management is similar to the other project countries; i.e., much lower participation overall, except for the hotel and tourism, retail, wholesale and personal services sectors. Women are also exposed to chemicals at a higher level in the domestic spheres. Women and men participate in the technical fields associated with chemicals management almost equally. 70% of domestic waste is collected by the Sanitation Service Authority (SSA) while the remainder is collected through private entities contracted by the SSA; within the SSA, the gender disparity is the greatest for the agency at the technical level with 17% females and 83% males. In terms of waste workers overall, 81% are men and 19% are women. This percentage of formalised female waste workers is the highest of all the project countries in the public sector.

Belize has a working-age population of 248,936 with 122,661 males and 126,275 females. Belize has a multidimensional poverty index of 0.017, which is a better value than the Latin American and Caribbean average. Gross National Income in Belize is significantly higher among men than women. Belize has a high Human Development Index value that is below the average for countries in Latin America and the Caribbean.

Employment is higher for men than women in the agriculture and forestry, mining and quarrying, and electricity and water supply sectors. Men in Belize are more likely to be exposed to and use chemicals as indicated by their higher levels of participation in the main sectors of the economy associated with chemicals use and management. However, women's participation in the economic sectors associated with chemicals use and management is similar to the other project countries. Women are also exposed to chemicals at a higher level in the domestic spheres. Men's livelihood activities are heavily dependent on the major associated chemicals sectors of the economy.

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Dominican Republic has a working-age population of 6,901,285 with 3,443,501 males and 3,457,784 females. The Dominican Republic has a multidimensional poverty index of 0.015, which is a better value than the Latin American and Caribbean average. Gross National Income in the Dominican Republic is significantly higher among men than women. The Dominican Republic has a high Human Development Index value that is below the average for countries in Latin America and the Caribbean.

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Guyana has a working-age population of 508,962 with 255,910 males and 253,052 females. Guyana has a multidimensional poverty index of 0.014, which is a better value than the Latin American and Caribbean average. Gross National Income for women in Guyana is low compared to the Gross National Income for men. With regards to human development, Guyana is the only project country that falls within the medium human development category based on its 2018 Human Development Index value of 0.670. Additionally, Guyana's Human Development Index value is below the average for countries in Latin America and the Caribbean.

Employment in Guyana is higher for men than women in the following sectors: agriculture, forestry and hunting; mining and quarrying; manufacturing; electricity, gas and water. Inequality in gender labour participation is stark. Guyanese women have the lowest level of participation in the economic sector for the Latin America and Caribbean region. Males therefore dominate all of the major sectors of the Guyanese economy including the sectors associated with chemicals use, namely agriculture, mining, manufacturing and construction. The largest economic sector in Guyana by employment is the agriculture sector which also includes heavy chemicals use. Women's involvement in agriculture is mainly in the reaping and marketing segments. Therefore, women's exposure to chemicals in the agriculture sector is low. However, the misuse of agricultural chemicals in suicides is a problem in Guyana that is associated with both males and females.

The mining sector is a large user of chemicals in Guyana, especially mercury, which is used in small and medium scale mining operations. Mining operations of all scales mainly employ men. Women's involvement in mining does not generally involve the handling and use of chemicals. However, despite the lower numbers of women in mining, mining continues to be a threat to Indigenous peoples, women and other hinterland populations in Guyana. Hinterland and Indigenous populations tend to have diets that are greatly reliant on wildlife, including fish, which are often contaminated by mercury pollution from nearby mining activities. Indigenous women are particularly susceptible to the effects of mercury and other heavy metal pollutions. Health care facilities in Indigenous and hinterland communities are often of low quality or completely absent, increasing the vulnerability of these communities to mercury pollution.

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Saint Kitts and Nevis has a population of 52,441. Saint Kitts and Nevis has a high Human Development Index value that is higher than the Latin America and the Caribbean average. Review of chemical-related policies and development plans in Saint Kitts and Nevis indicates a low or non-reference to gender in the national policies. However, Saint Kitts and Nevis is in the process of developing a national gender policy. References and considerations to environmental management and chemicals and waste management in the national gender policy is unknown. Both men and women participate in the chemicals related sectors. However, women's participation is much lower than men's participation in the agricultural and electricity sectors. Women's participation is higher than men's participation in manufacturing and in the public sector (by almost double).

Saint Lucia has a working-age population of 130,343 with 63,893 males and 66,450 females. Saint Lucia has a multidimensional poverty index of 0.007, which is a significantly better value than the Latin American and Caribbean average. Gross National Income is significantly higher among men than women. Saint Lucia has a high Human Development Index value that is below the average for countries in Latin America and the Caribbean. Employment is higher among men than women in the following sectors: agriculture, forestry, hunting and fishing; manufacturing; water supply, sewerage, waste management and remediation activities. Employment is higher among women than men in the electricity, gas, steam and air-conditioning supply sectors.

Men in Saint Lucia are more likely to be exposed to and use chemicals than women, as indicated by their higher levels of participation in the main sectors of the economy associated with chemicals use and management. However, women's participation in the economic sectors associated with chemicals use and management is similar to the other project countries. Women are also exposed to chemicals at a higher level in the domestic spheres. Men's livelihood activities are heavily dependent on the major associated chemicals sectors of the economy. The management of solid waste is vested in the country's Solid Waste Management Authority (SLSWMA) which has responsibility for the collection of municipal solid waste generated from residential properties, public schools and institutions and government offices. The Authority operates and manages two (2) waste management facilities of which 100% of the waste workers at the SLSWMA are males.

A review of the national policies of Saint Lucia reveals a low to absent gender consideration in the environmental policies of the sectors. The national policies reveal a low to medium mention of gender but no gender considerations are given specifically to the chemicals, environmental or waste management sectors.

Suriname has a working-age population of 379,713 with 191,770 males and 187,943 females. Suriname has a multidimensional poverty index of 0.041, which is a relatively poor value in comparison with the Latin American and Caribbean average. Gross National Income is low for women when compared to the Gross National Income for men. Suriname has a high Human Development Index value that is below the average for countries in Latin America and the Caribbean. Suriname's chemicals and waste management reveals that, (i) agriculture/forestry/fishing, mining and quarrying and electricity/gas/water supply sectors are major users and emitters of chemicals; (ii) the chemicals imported into Suriname are mainly pesticides, fertilizers, petroleum products, industrial and consumer chemicals.

Trinidad and Tobago has a working-age population of 956,857 with 475,915 males and 480,942 females. Gross National Income is significantly higher for men than women. Trinidad and Tobago has a high Human Development Index that is higher than the Latin America and Caribbean average.

A review of the labour participation of the economic sectors associated with chemicals use and management in Trinidad and Tobago illustrates male dominance in all of the sectors except for wholesale and retail. The trends align with the other project countries and show that chemicals management and chemical use related sectors are traditionally male-dominated sectors. Women participate in all economic sectors related to chemicals management and use, but a lack of data and information prevents an analysis of women's roles in these sectors. Data available from the public sector indicates that women's participation in public management is high and as a result, they have significant roles in regulatory functions. In Trinidad and Tobago, the Environmental Management Authority (EMA), the Solid Waste Management Company Limited (SWMCOL), the Municipal Corporations of the Ministry of Rural Development and Local Government and the Tobago House of Assembly (THA) are the main public agencies involved in solid waste management. For the waste workers level of the SWMCOL, men dominate with 86% compared to a mere 14% of women.

Men and women working in waste management tend to work in segregated sections of the value chain. According to anecdotal information, men are the majority owners of the more lucrative ends of the value chain, such as private enterprises and businesses that benefit from waste disposal and management. However, there are also female owners of waste disposal and recycling enterprises. Women in Trinidad and Tobago also participate in the chemicals and waste management sectors in many ways. Among the various roles of women in the chemicals and waste management sectors of Trinidad and Tobago are: managers and technical officers in policies formulation, research, legislation, and metrology; educational roles; and advocates for waste management.

National policies related to chemicals and waste management are low in gender considerations except for the country's National Environment Policy (2018), which can be considered medium in gender considerations. However, Trinidad and Tobago's national development policies rank high in gender considerations.

Gender Considerations in the Project

The Project activities were designed to be gender sensitive and to provide equal opportunities for women and men. Stemming from the overview of the solid waste and chemicals management situation and the level of gender mainstreaming that exists within the project countries, it is evident that gender mainstreaming in the chemicals and waste management sectors of these countries presents a lot of potential. The entry point for gender mainstreaming in the project must be the creation of awareness for the need to develop gender-responsiveness in the sectors and increase the visibility of gender roles especially women's contributions and roles. In the development of mandates for gender mainstreaming in the sector, implementation must be a primary consideration. Towards successful implementation of gendered programmes, formalized frameworks must be developed with the national gender agencies and include women's NGOs and other social groups such as youth and indigenous people's representative organizations. Collection mechanisms can be built into already existing mechanisms in the environmental management agencies (some countries have Environmental Information Management Systems) and other agencies such as agriculture and energy have their own databases. Also, efforts must be directed at increasing the number of women in the technical roles in the sector. For the enterprise segment of the sector it is further recommended that; (i) the chemicals and waste management sector should be demystified and destigmatized through business awareness and entrepreneurial training; (ii) leadership and business training should be conducted with women to increase their participation in the lucrative sections of the waste value chain; (iii) funding and credit facilities specifically targeting women should be established to increase their access to credit and equipment; (iv) social programs should be leveraged to assist women waste pickers in the various countries; (v) gender awareness and equal employment opportunity training for business owners and the development of national gender seals is required; (vi) businesses should be assisted in adapting their work environments to better accommodate both genders.

The specific ways in which gender will be considered in Child Project's activities are outlined in the following paragraphs.

Gender consideration for Component 1 activities include ensuring that the roles of women are fully defined and understood in relation to the import of chemicals. Equal gender representation will be ensured in training activities envisaged for building capacities for implementing the chemicals and waste MEAs and for border control staff (on imports), by engaging stakeholders (such as local women's groups, NGOs, CSOs, where possible) on gender and socioeconomic aspects within policy solutions (such as specific hazardous chemicals and waste policies) and developing new product standards.

Activities under Component 2 will include exporting and local destruction of legacy wastes for final disposal including POPs and mercury containing products and the development of national strategies and regional guidelines for managing hazardous waste streams. Project activities will ensure that consultations with stakeholders on management of legacy wastes include consultation with women's groups and that women are aware of, and involved in, activities. Where possible, small-scale surveys near legacy waste sites for collection of gender-relevant data and information will be undertaken.

Activities under Component 3 of the programme which address chemicals and wastes that cannot be avoided in SIDS will involve establishing regional and national systems for dismantling, recycling and management of hazardous waste such as WEEE, ELVs and PVCs. The feasibility of such systems will be assessed during execution of the Child Project, and as part of this, gender will be considered in each stage of the value chain. Stakeholders (including women's groups) will be consulted, and opportunities and risks to women will be clearly defined in the feasibility assessment and resultant activity design. It is recognised that in some Caribbean SIDS, the most vulnerable groups in the waste management value chain are waste pickers living around dump-sites. It is essential that these groups can get access to and benefit from any levies put in place as part of the Projects, and do not lose out economically from losing access to informal recyclers for their collected materials.

Component 4 on knowledge management and communications will include the development knowledge products that will be disseminated in participating SIDS and used to guide project activities. Further, recognizing the responsibility of women in sorting and managing waste in the homes as well as in educating family members, targeted communication materials will be developed, and local women's NGOs will be used to assist in dissemination and education of women.

The Global CCKM Child Project will ensure consistency and coherence among Child Projects' approaches to gender during execution, through the development of a programmatic gender action plan. The plan will be developed in response to the Child Projects' specific gender reviews, and be executed by Project Executing Agencies, and coordinated by the Coordination, Knowledge Management and Communication (CCKM) Child Project. This will ensure that gender data is collected, monitored and evaluated; and lessons learnt, and best practices related to gender can be shared with all SIDS.

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.

The private sector is an important stakeholder in chemicals and waste management due to its role in the entire life-cycle of products and chemicals. Private sector entities consist of the major manufacturers, importers, retailers and users of chemicals and products. At the end-of-life stage, the private sector also plays a part in the collection and disposal of the products.

There is limited manufacture of chemicals and products containing chemicals within the Caribbean and most products of concern are imported into the region by local importers and retailers. The project will seek to engage these companies as well as the few private producers that exist in countries such as Trinidad and Tobago. Engagement will support data collection on the quantities and types of manufactured products and imports and to secure buy-in for developed strategies for reducing the trade in harmful chemicals and products such as additions to the import negative lists, development and implementation of product standards and green procurement initiatives (Component 1). Further, importers and manufacturers will be consulted on the development of EPR and take-back schemes and to garner their support for recommended levies and tax systems to fund the environmentally sound disposal of end-of-life products (Component 3).

Private sector industries such as the cruise ship industry and hotels will also be engaged throughout the project since these entities are major stakeholders in the tourism-dependent Caribbean countries and generate significant amounts of waste. Through consultations with representatives from these industries, strategies for managing waste streams specific to these sectors will be developed.

In the Caribbean, private sector entities are contracted by governments and businesses for waste collection and disposal and landfill management. Additionally, most recycling, material recovery, waste treatment and waste/material export activities are led by the private sector and are driven by prices in the international recycling commodity markets. These activities occur in several Caribbean countries for a few hazardous waste streams including waste oil, e-wastes (dismantled and then exported), and spent lead acid batteries (exported for recovery) as well as the recycling of non-hazardous wastes (paper, plastics). Engaging the private sector entities responsible for these activities during the project's execution is important to understanding ongoing initiatives and national and regional capacities for chemicals and waste management. Further, through consultations with relevant private sector entities, effective localised recommendations for best available technologies and best environmental practices can be determined to optimise processes and minimise harmful releases to the environment and opportunities to integrate these into existing initiatives can be identified.

Despite the above examples, private sector waste management in the Caribbean is generally poorly developed and there are limited public-private partnerships to support chemicals and waste management. While there is vast potential to engage the private sector in taking up the management of solid and hazardous waste streams, further intervention is required to catalyse this through the development of an enabling legislative framework to support and incentivize the creation of such initiatives. Identification, incubation and acceleration is therefore a key goal of the GEF ISLANDS Programme. The potential to further harness the comparative and competitive advantages of the private sector to improve the delivery of waste management and pollution control services is broadly recognised. To contribute to long term sustainable waste management in the Caribbean, there is a need to move private sector participation beyond consolidation and export of valuable commodities into more difficult and less valuable wastes including plastics, e-waste and used oil. There is also a need to organise activities regionally, to ensure that countries with smaller volumes of waste, which would not normally be appealing to the private sector, can be managed. There are however several constraints to this including differing capacities and experiences among Caribbean countries national and regionally and limited access to financial and human capital. This child project and the IDB-implemented Child Project have been designed to address these constraints. The Coordination, Knowledge Management, and Communications Child Project will also play an important role in developing relationships with original equipment manufacturers supplying equipment to SIDS, and other key private sector partners such as shipping lines (for export of waste) and re-insurers (on the issue of environmental insurance). The project's design to include the private sector in developed institutional arrangements and to develop extended producer responsibility programs is also key to this inclusion of the private sector into the overall solutions envisioned for the chemicals and waste portfolio in the Caribbean.

The listing of relevant private sector organisations identified during the PPG Phase is included in the Stakeholder Analysis annexed to this document.

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):

SIDS worldwide share similar development trajectories and vulnerabilities. Due to these common vulnerabilities, several risks are common to all SIDS. These global risks are outlined in the following paragraphs. Regionally specific mitigation measures are then included in the following table.

1. Global risks:

a. COVID-19

Direct risks from the COVID-19 pandemic to the project include travel restrictions and the generation of additional single use plastic waste. Some Pacific SIDS, for example, have indicated plans to close their borders until 2022, while SIDS in the Caribbean and Indian Ocean continue to be subject to rolling lockdowns. Restrictions on traveling to and within SIDS will impact project execution activities.

SIDS are also importing COVID-specific medical equipment, leading to increased pressure on medical waste management. These medical wastes include single use plastics and other impact-heavy waste streams that the ISLANDS programme seeks to reduce.

Indirect risks and decreased resilience from the COVID-19 pandemic include decreased local support due to shifted priorities and impacts to SIDS economies. SIDS governments have had to prioritise their COVID-19 response over other management issues, including waste management. Tourism-dependent countries in particular are facing significant decreases in GDP and sharp increases in state debt.

b. Climate change

SIDS are highly vulnerable to climate change, facing increased natural disasters and rising sea levels in the present and future. In particular, coral atolls and low-lying island regions, such as in the Bahamas, Barbuda, the Cook Islands, the Federated States of Micronesia, Kiribati, the Maldives, the Marshall Islands and Tuvalu are at high risk of damage to infrastructure and the economy due to rising sea levels and more frequent storm surges. SIDS globally are also at risk of more frequent and more intense cyclone activity that may result in infrastructure damage, disaster waste, shifts in political priorities, and delays in project outputs. For example, in recent years hurricane activity has been much more frequent and severe than the historical average in the Caribbean region.

Vulnerability to extreme climatic events poses risks to project activities. Consideration must be given to storage sites for waste, and also of the need for climate-proofing waste management infrastructure. Without such consideration, project gains in waste management improvements are at significant risk of being undermined or destroyed by extreme climate events.

All project countries face COVID-19 and climate change related risks. Regionally specific mitigation measures are needed to adequately address specific regional vulnerabilities.

2. Regional risks

The following table 8 outlines the risks and proposed mitigation measures for the Caribbean region.

Table 8 Identified project risks and mitigation measures

Risk	Risk ranking	Proposed mitigation measures
COVID-19 risks		
Restricted travel	Medium	Though most Caribbean SIDS have re-opened since the first wave of the COVID-19 pandemic, rolling lockdowns continue. Considerations will be made for hosting meetings, workshops and consultations on virtual platforms as much as possible.
Decreased local support due to shifted priorities	Medium	Due to the impact of the COVID-19 pandemic on Caribbean economies, it is expected political priorities may shift to recovery from the pandemic. Project activities will be validated with national stakeholders before finalisation to ensure continued support. Furthermore, the programme will support recovery from the pandemic through tackling medical waste.
Increase of new waste streams	Low	Considerations for management of COVID-19 related waste have been added to the alternative scenario.
Impacts to SIDS economies (especially due to tourism reduction)	High	Discussions have been held with all relevant stakeholders to ensure COVID-19 impacts are not exacerbated by the programme and new economic opportunities are supported. Development of in-country capacity will help to mitigate impacts.

Climate change risks		
Infrastructure damage due to increased hurricane frequency in the Caribbean	Medium	The impacts of climate change will be considered in the development and implementation of project infrastructure and strategies for sustainable chemicals and waste management.
Increase in disaster waste due to increased hurricane frequency in the Caribbean	Medium	The impacts of climate change will be considered in the development and implementation of project infrastructure and strategies for sustainable chemicals and waste management.
Shifts in political priorities	Low	Climate change is expected to increase the need for waste management as a political priority as climate change impacts is more likely to increase rather than decrease the need for sustainable waste management. Nonetheless, the impacts of climate change will be considered in the development and implementation of project infrastructure and strategies for sustainable chemicals and waste management.
Delays in project outputs	High	Considerations will be made for changes in the project execution timeline to minimise the probability of natural disasters affecting the project timeline, thereby delaying project execution.
Operational/delivery risks		
Political priorities, will and/or buy-in are not adequate for execution of key project activities	Medium	The institutionalisation of the project's activities will be encouraged. Government stakeholders were engaged throughout the project development phase to ensure that national priorities were being considered and that there was political buy-in for the project activities. Continuous communication and updates will be provided to the national focal point and key agencies to ensure sustained support.
Changes in governments and country personnel to persons with little awareness and buy-in to the project	Low	Project information will be disseminated to as many stakeholders as possible and multi-party political support for the project will be sought.
Private sector and/or community support and behavioural change are not adequate	Low	The private sector and CSOs/NGOs have been engaged throughout the project preparation phase and will continue to be engaged throughout the project's execution. Members will be included on National Working Groups to ensure that their needs are being met. Awareness raising campaigns will be developed and executed to engender additional support from these groups. Finally, the programme will create job opportunities through new formal economic opportunities, which is expected to benefit the Caribbean private sector as well as communities.
High shipping and recycling costs and low market price of recyclable materials reduce the viability of establishing material recovery and recycling initiatives	Low	Market analyses will be conducted to ensure the economic viability of recommended recycling and material recovery initiatives. Financial incentives and investment opportunities will also be highlighted to support public-partner partnerships. As islands in the Caribbean are generally closer together than in other regions, this is considered low risk.
Technical risks		

Inadequate data available to support activities	Medium	Historically, data collection within the Caribbean region is not adequate. Where required information is not available, the project executers and partners will work with stakeholders to collect raw data and develop mechanisms to ensure that sustainable data collection mechanisms are implemented.
Social risks		
Continued disregard for the environmental and health impacts of existing waste management activities	Low	Awareness raising campaigns will be developed and conducted for government and private sectors as well as the public to engage key community authorities and vulnerable groups (e.g. youth, Indigenous communities).
Economic displacement of informal sector workers through formalisation of chemicals and waste management systems	Low	Communities/relevant experts and the informal sector will be engaged in the execution of the project's activities to ensure that developed and implemented strategies provide safe economic opportunities for informal recyclers. These workers will also benefit from training on best environmental practices to protect them from the negative health impacts associated with improper waste management.

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.

Programme Level Coordination Framework

The ISLANDS programme is a multi-agency initiative that builds on the experience of several GEF Implementing Agencies (IA) across the Caribbean, Indian Ocean and Pacific SIDS. UNEP has been designated as the lead agency for the programme and as such will be responsible for the overall programme coordination and ensuring that the results at national / regional level benefit all regions. This role includes the monitoring of progress and delivery of programme results as well as providing a platform for knowledge sharing and exchange of information to all project beneficiaries. Making knowledge accessible to all partners and ensuring knowledge transfer between regions is seen as a major mechanism for ensuring that the programme makes progress towards achieving the objectives of preventing the build-up of harmful materials and chemicals in SIDS. UNEP will also work the other GEF implementing and executing partners to ensure equivalence of standards and adoption of international best practice across all three regions in the core components of the programme outlined in Section 1 of this document.

Under the ISLANDS programme, a series of Child projects are planned (see Figure 6). UNEP, UN Development Programme (UNDP), the Food and Agriculture Organization (FAO), and the InterAmerican Development Bank (IDB) will implement these Child projects. The identification of this group of agencies has been based on a set of criteria including comparative advantage as a GEF IA, experience of operation geographically and mandate. A summary of the four GEF IAs is provided in the following subsection.

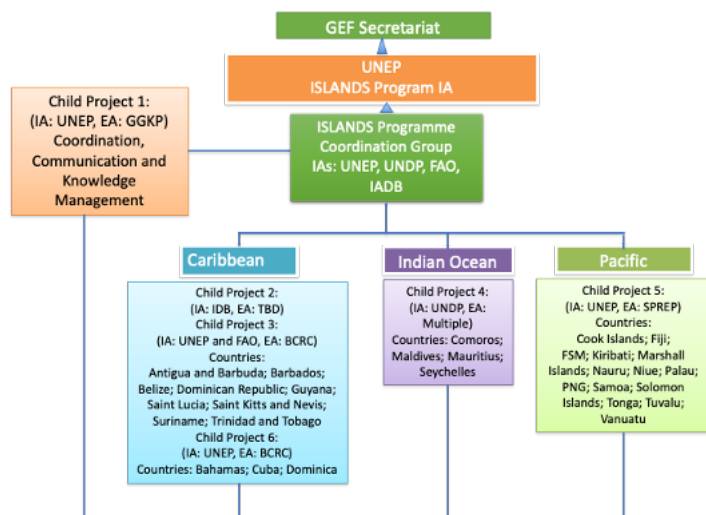


Figure 6: Global ISLANDS Programme Structure

The Programme will be coordinated through a Programme Coordinating Group (PCG) which will consist of the GEF Secretariat and the Implementing and Executing Agencies for the Child Projects (UNEP, FAO, UNDP, SPREP, BCRC, GGKP, IDB, and a government representative from the Caribbean, Indian Ocean and Pacific regions). The PCG will meet face to face annually, taking advantage of existing events in the chemicals and wastes calendar such as Conferences of the Parties of the Basel, Rotterdam, Stockholm and Minamata Conventions and events linked to the Strategic Approach to International Chemicals Management (SAICM). This modality serves to reduce cost and provides the opportunity for further interaction with a wider network of project stakeholders from the beneficiary countries, private sector and civil society through additional parallel events. The approach also ensures close collaboration with the Conventions and SAICM Secretariats.

Programme level coordination will also be supported by global coordination grant (Child project 1, Coordination, Knowledge Management and Communication) will be implemented by the UNEP and executed through the Global Green Growth Knowledge (GGKP) platform, an independent entity hosted by UNEP in Geneva. GGKP is a multi-agency knowledge management platform with an existing large constituency.

Child Project 1 will design the Child Project reporting format, as well as other procedures and modalities for sharing information across the regional and national focused child projects. This modality will allow regions to learn from each other's experience and foster an environment of south-south cooperation through peer-to-peer learning. This child project will provide reports on progress to the PCG as part of the annual reporting and monitoring process.

UNEP/FAO Child Project Institutional Arrangements

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Figure 7 shows the Institutional Arrangements for the UNEP/FAO implemented Caribbean Child Project.

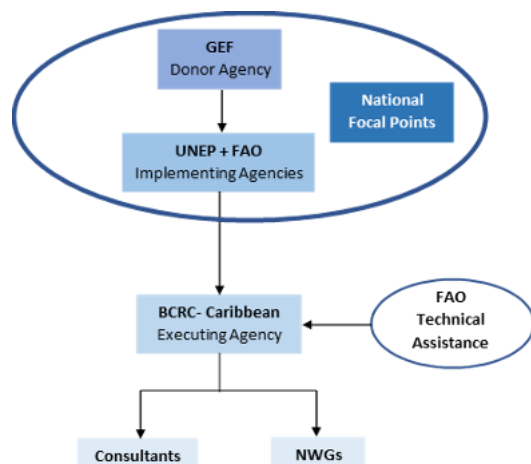


Figure 7: 10279 Caribbean Child Project structure

Implementing Agencies

United Nations Environment Program (UNEP) is the lead Implementing Agency for the Child Project. As lead agency, UNEP will oversee the development of the project and report to GEFSEC on progress. UNEP will coordinate dissemination of the project's activities and outcomes with the other child projects through regular meetings of a Programme Coordination Group made up of FAO, GEF C&W Focal Area team, IDB and UNDP. As Lead IA for the Child Project as well as the overall Programme, UNEP will provide all reports to the GEF Secretariat to allow for onward report to GEF Council.

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 programme level data flow and reporting to the GEF Secretariat as indicated in the organo-gram in figure 7 above.

The Food and Agriculture Organization (FAO) will act as GEF Co-Implementing Agency (co-IA) for the Project. As such, it will provide project cycle management and support services as established in the GEF Policy. As the GEF co-IA, FAO holds overall accountability and responsibility to the GEF for delivery of the results. In the co-IA role, FAO will oversee the execution of the activities falling within its responsibility. FAO will monitor and support the project cycle to ensure that the project is being carried out and reporting done in accordance with agreed standards and requirements.

Executing Agencies

BCRC-Caribbean is the lead Executing Agency for the UNEP/FAO Child Project and will execute, manage and be responsible for the project on a day-to-day basis. The Centre is well positioned for this role as it serves the Parties to the Basel, Rotterdam, Stockholm and Minamata Conventions within the Caribbean region, and has undertaken: provision of critical training (to relevant public officials and stakeholders) on hazardous wastes; identification and assessment of environmentally sound mechanisms for waste management; development and provision of awareness-raising activities; provision of technical support and expertise to member countries in the form of consultancy services.

With regard to chemicals management in agriculture FAO will provide technical assistance for the activities executed by BCRC. Relevant tools will be developed and published within the context of the FAO-hosted International Code of Conduct on Pesticide Management (ICC-PM). These tools will be adapted and applied by BCRC and partners in SIDS in the context of the ISLANDS programme. The review and quality assurance to ensure high levels of technical accuracy and scientific quality, will be conducted with FAO's technical departments as needed.

Any standard-setting publication such as guidelines, best practices, or reference documents will follow a formal publishing process. All guidelines regarding pesticide management should be reviewed and endorsed by expert panel of FAO and FAO/WHO Joint Meeting of Pesticide Management (JMPM) before publication.

In order to keep high levels of technical accuracy and scientific quality, FAO experts in HQ will develop Terms Of Reference for each activity. FAO will suggest experts from the technical rosters which allow for a recruitment process from the list of approved experts. FAO will review Outputs and will provide validation/clearance. Payment for output delivery will be done by BCRC as principal contracting partner based on FAO validation of quality of output.

The BCRC-Caribbean, from 2012-2020, secured over \$13,200,000.00 in donor funding to support over thirty-five activities in training and technology transfer for the region.

BCRC-Caribbean's Project Coordinating Unit (PCU) will constitute the necessary managerial and technical teams to execute the project, and will search for, hire and supervise any consultants necessary for technical activities. It will acquire any necessary equipment and monitor the project; in addition, it will organize independent audits in order to guarantee the proper use of GEF funds. Financial transactions, audits and reports will be carried out in accordance with national regulations and UNEP procedures. BCRC-Caribbean will provide regular administrative, progress and financial reports to UNEP.

As the lead Executing Agency for the Caribbean Child projects (implemented by IDB, UNEP/FAO and UNEP, respectively), the Centre will convene annual joint Project Steering Committee (PSC) meetings to ensure that the child project activities and interventions are balanced across the ultimately twelve (12) participating Caribbean countries and that activities are complimentary. These meetings will be scheduled back-to-back and in close coordination, to reduce travel and meeting related costs, and ensure prudent use of donor funds. Execution through the same agency in the region will ensure operational efficiencies and ensure integration of the three projects at regional and national level.

BCRC Caribbean will also organize an annual financial audit of the project and transmit the report to the implementing agencies.

Regional and National Coordination

National Focal Points will be an integral part of the project's execution as part of the decision making body. The focal point agencies will play a key role in ensuring the relevant stakeholders are invited to and engaged at the various meetings and during public awareness activities throughout the project. Engagement in these meetings will help to secure feedback on project progress on a continuous basis and help to facilitate a more positive project outcome. National Focal Points proposed for this project will be from the main agencies responsible for chemicals and waste management in each country. The various Government agencies expected to fill this role are as follows:

- Antigua and Barbuda – Department of Analytical Services
- Barbados – Environmental Protection Department, Ministry of Environment and National Beautification
- Belize – Ministry of Fisheries, Forestry, the Environment and Sustainable Development
- Dominican Republic – Ministry of Environment and Natural Resources
- Guyana – Environmental Protection Agency
- Saint Kitts and Nevis – Saint Kitts and Nevis Bureau of Standards
- Saint Lucia – Department of Sustainable Development, [Ministry of Education, Innovation, Gender Relations and Sustainable Development](#)
- Suriname – Coordination Environment, Ministry of Spatial Planning and the Environment
- Trinidad and Tobago – Environmental Management Authority and Ministry of Planning and Development

A Project Steering Committee (PSC) will be established consisting of the nine (9) national focal points, nine (9) nominated alternatives to the focal points, a representative each from UNEP, FAO and the GEF (top group in Figure 7). Key stakeholders will be participating to the PSC to provide guidance but without decision rights. The BCRC-Caribbean will act as the secretary to the PSC. The PSC members will support the establishment of national working groups in their respective countries, as needed for each particular 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. The TORs for a PSC will be developed during the inception phase of the project. PSC meetings will be organised on an annual basis to discuss the progress of activities and amendments to the schedule, as needed. Additionally, the BCRC-Caribbean will provide regular project updates to the PSC.

National Working Groups (NWG) will be established for each country as needed at the onset of each activity. The NWGs will support information gathering from respective entities, review national project outputs and ensure that national priorities are being met. 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. Indication of the composition of the NWG is provided in Appendix 4.

Coordination with Other Relevant Projects and Initiatives

GEF-funded programmes and projects have been carried out within the region, including the GEF #5558 and GEF #5407 projects, Minamata Initial Assessments, GEF GOLD and the Guyana National Action Plan for Artisanal and Small-Scale Gold Mining. Information on the project countries has been collected under these initiatives, and stakeholder frameworks have been developed. Further, awareness raising on the Chemicals Conventions and chemicals and waste management has been conducted which would assist with the coordination of activities under this Child Project. In this regard, the UNEP/FAO Child Project will build on the results of work conducted through these and other international, regional and national initiatives (described in Section 1a.2) existing knowledge management platforms and south-south collaboration approaches in order to capitalize on existing information, strategies and lessons learned. Coordination with other agencies will be conducted through consultations with relevant personnel and requests for their input on executed activities and outputs under this child project. Entities contacted during the PPG phase will be invited to participate to the project meetings as observers.

Exchange of experience, when relevant as mentioned above, will be sought with projects in LDCs and Cities Impact Programmes (IPs).

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.

The ISLANDS Child Project was designed to be consistent with Caribbean SIDS' national, regional and international chemicals and waste management commitments and priorities as outlined in the baseline. Initial consultations with the project countries supported the identification of national chemicals and waste management priorities and areas in which technical assistance was needed^[1]. Further consultations were conducted to ensure that the project was being developed in-line with the identified needs and that there was adequate buy-in from national representatives^[2]. Existing National Plans and initiatives were also used to ensure consistency of the project with national strategies and ongoing activities.

National plans and activities are primarily guided by countries' commitments to achieving the SDGs and associated targets at the national level. Therefore, this project is in line with SDG 12 on Sustainable Consumption and Production; SDG 3 on Good Health and Well-being; and SDG 6 on Clean Water and Sanitation. The programme is designed to assist Caribbean SIDS to meet the following specific SDG targets:

- 12.4 by 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment; and
- 12.5 by 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse. The programme is also consistent with the guiding global policy for SIDS' development, the SAMOA Pathway. On chemicals and wastes management, the SAMOA pathway recognises the need to reduce, reuse, recycle, recover and return approaches according to national capacities and priorities *inter alia* through capacity-building and environmentally appropriate technologies.

National priorities were also confirmed as being consistent with the eight priorities of the Draft Caribbean Regional Waste Action Plan developed by the Caribbean Water and Wastewater Association (CWWA) which, once implemented, would be adopted by the project countries and the UN Development Assistance Framework (UNDAF).

The relationship between the developed child project and areas identified by each country (through consultations and in National Plans) as key areas requiring technical assistance under this child project are summarized below.

Antigua and Barbuda – National capacities for chemicals testing and monitoring of imported products will be assessed and improved through activities including Activity 1.3.3 and 1.3.4. Specified waste streams of concern, including medical waste and e-waste will be addressed in Outputs 2 and 3, respectively. Additional priorities that will be addressed include improving the chemicals and waste management institutional, regulatory and management frameworks, providing opportunities for entrepreneurship in the waste sector, improved regional collaboration and awareness raising at the governmental, public and private sector levels. In line with priorities listed in the original and updated NIPs for the Stockholm Convention, the project aims to reduce UPOPs through raising awareness of the hazards associated with burning of municipal waste (Activity 2.1.4) and consider circular economy approaches to managing waste streams such as E-waste, ELVs and PVC plastics (Output 3). Further, in line with priorities listed in the Draft MIA Reports, the project aims to identify safe alternatives to mercury-added products and raise awareness on the issues posed by mercury. Overall, the project will contribute to the country's Medium Term Strategic Development Goals which include waste management and pollution control as priorities for Antigua and Barbuda.

Barbados – As with Antigua and Barbuda, Barbados indicated that development of laboratory analytical capacity was a national priority as well as the need for management strategies for difficult waste including e-waste. The NIPs indicated that disposing of existing POPs waste, preventing the generation of additional waste, prioritizing new POPs and improving the management of POP-PBDEs, PFOS stockpiles, and POPs waste and products were national priorities. These will be addressed under this child project thus further contributing to the identification of chemicals and waste as a priority in the 2009 National Chemicals Profile, the 2014 Chemicals Profile and the country's Integrated Solid Waste Management Strategy.

Belize – Belize's priorities include development of waste recovery facilities, introduction on levies for hazardous product imports, overall waste management with emphasis on wastewater/sludge treatment, e-waste, waste oils and agricultural waste, and monitoring of chemicals pollution in water bodies. The management of chemicals and waste is further highlighted in the country's 2015 National Solid Waste Management Policy and Strategy. Under the project, levies for imported EEEs will be considered (Output 3.1) and assistance will be provided to help the country build capacity for material recovery from WEEE (Output 3.2), managing other waste streams and monitoring chemicals and waste pollution. Additionally, as with the other countries, priorities highlighted in the initial and updated NIPs will be addressed through activities to reduce UPOPs emissions and POPs releases.

Dominican Republic – The project activities will address priorities identified through consultations and in the National Chemicals Profile (2013) including the development of strategies for managing mercury and its compounds (also highlighted by the MIA), implementation of GHS, inventories and strategies for hazardous waste, pesticides and e-waste management and improved recycling and resource recovery. While the ESM of marine plastics and microplastics will not be directly addressed, reduction in plastic wastes will be an indirect benefit of developed strategies for managing PVC plastics (Output 3.4) and other related activities.

Guyana – Like the other countries, improved capacity for hazardous waste management was identified as a priority by National representatives and in the 2013 NIP, the National Solid Waste Management Strategy (2013-2024) which specifies a need for resource recovery, and the Green State Development Strategy (2020-2040). Further priorities include incorporating Basel Convention text into national laws and regulations and improved management of products that contribute to releases of mercury and POPs. Mercury wastes from ASGM is a main issue in Guyana, however, this sector will not be addressed under this project as the country is currently conducting a separate national project focused on developing and implementing a National Action Plan for the ASGM sector.

Saint Kitts and Nevis – Similar priorities were highlighted by Saint Kitts and Nevis' national representatives and in the countries NIPs (2014 and 2019) and MIA Report (2018). As mentioned above, these priorities will be addressed throughout the project's execution. Further, requests for training, recommendation of environmentally accepted and cost-effective technologies and ESM of derelict vehicles and white waste will be considered through activities outlined in Outputs 1.2, 2.1, 3.2 and 3.3, respectively.

Saint Lucia – This child project will address the country's identified priorities including management of mercury added products, e-waste and POPs waste and overall hazardous waste treatment and storage. Saint Lucia will benefit from activities that will support phasing out mercury added products in keeping with its obligation to the Minamata Convention. Support for assessing sustainable and nationally appropriate waste treatment technologies will be provided as well as assistance with developing Extended Producer Responsibility schemes and implementing MEAs. The National Environmental Management Strategy (2014), 2007 and 2019 NIPs and MIA Report (2018) highlighted these areas as being integral to the country's overall development agenda.

Suriname – Sustainable management of chemicals is a priority for Suriname as per its National Chemicals Profile of 2011. Further national priorities, as with the other countries, include the disposal of POPs stockpiles (indicated in both the 2012 and 2019 NIPs), identification of alternatives to POPs containing products, financial and technical assistance for chemicals and waste management including training on hazardous materials, customs HS Codes and lab personnel, data collection and awareness raising. These will be addressed through various activities in the child project.

Trinidad and Tobago – Hazardous waste management, particularly for fluorescent bulbs, tyres, medical waste and e-waste will be addressed through the developed child project. The child project will also continue to build on the outputs of the GEF #5558 project to further fill gaps in the national framework for the environmentally sound management of POPs wastes, which was identified as a main issue in the 2015 and 2019 NIPs. Plastic waste streams are also a priority for this country as it is a producer of various types of plastics such as PVC and packaging, and it is a large generator of plastic wastes. Other key areas include access to reliable data to inform decision making, capacity building for border control and enforcement agencies, high-level government stakeholders and the public sector. The project has several expected outputs that aim to increase awareness at all levels (Component 4) and promote positive change in consumer behavior through the identification and dissemination of safe alternative products (Output 1.5). Promoting safe alternatives to chemicals added products is critical to correcting the concerns raised on mercury added products in the 2018 MIA. Mercury emissions from the extraction and use of fossil fuels will be indirectly addressed through awareness raising initiatives. Overall, the project's outputs will contribute to the chemicals and waste management priorities listed in the National Environmental Policy 2019, the 2013 Integrated Solid Waste/Resource Management Policy and the 2016 Solid Waste Management Strategic Plan.

[1] Regional consultations held 17-18 July 2018 and 26 – 28 August 2019 (Port of Spain, Trinidad and Tobago)

[2] Remote national consultations held May 2020

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.

As outlined in the approved ISLANDS PFD, effective knowledge management is required to ensure that ISLANDS' Child Projects equate to more than the sum of their parts. That is, accumulated knowledge assets, derived from each of the ISLANDS Child Projects and SIDS-relevant resources from other historical and future activities, will be captured, stored, and distributed by the CCKM to key stakeholders through knowledge products, services and assets. The aim is to foster an environment of cross fertilisation between regions to ensure best practice is applied at global level thus "raising the bar" of environmental compliance, promote the use of evidence-based learning to deliver benefits across SIDS into the future, and to ensure the project acts as an efficient "hub," to the regional child project "spokes."

Under the ISLANDS Programmatic knowledge management approach, each ISLANDS Regional Child Project includes Component 4: *Coordination, knowledge management and communications*. This component is expected to lead to the outcome of SIDS' experiences being available to other SIDS, and that SIDS' learning exchange is active. Figure 8 shows the information and data flow expected throughout the Programme.

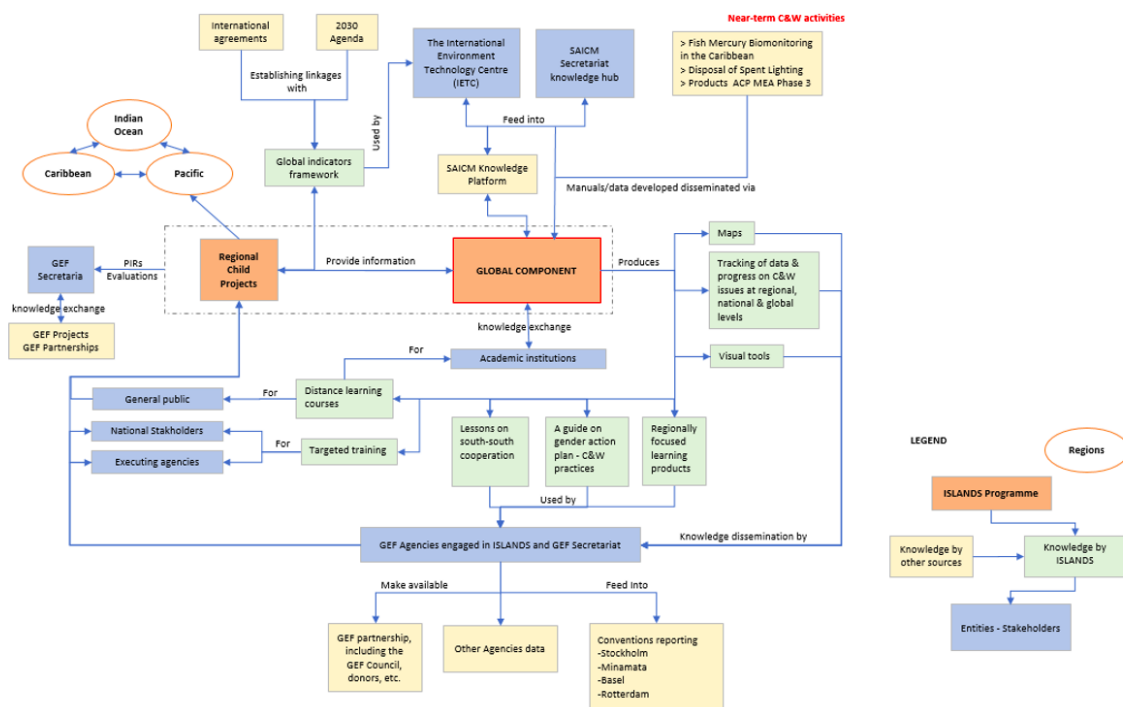


Figure 8: ISLANDS Programme flow of data and knowledge products

In the UNEP/FAO implemented Caribbean Child Project, activities under Component 4 will include dissemination of knowledge within the region using tools and material developed through the other project activities and the CCKM, as well as provide inputs to the CCKM for dissemination outside the region. The Caribbean project includes activities dedicated to the generation of case studies and sharing of lessons learned and knowledge on best practices and technologies related to chemicals and waste management for SIDS. The Child Project will also focus on developing regionally focused learning and awareness raising products derived from its completed activities. These are outlined in the Alternative Scenario (above) and budgeted under the respective Components. Key expected knowledge products include:

- Model policies and legislation to guide management of targeted waste streams and to enable EPR for WEEE
- Training plan and materials to train key stakeholders to execute training sessions on various aspects of chemicals and waste management
- Training plan and materials to fill gaps identified for implementation of the chemicals and waste MEAs; to build capacity of customs and border control agencies; to support the implementation of GHS; to sensitise stakeholders on the benefits of green procurement; to train key stakeholders on the use of developed guidelines; and to build capacity of personnel at WEEE treatment and recycling facilities
- Material Flow, Economic and Technical Assessment in order to design ELVs management scheme, considering a regional approach with a view to improve ELVs treatment capacity and develop pilot projects
- Training platform to house all training and awareness-raising material developed under the Child Project
- Strategies for improving national chemicals and waste management; implementing 8-digit or 10-digit HS Codes for specified mercury-added products; and managing and destroying PCBs, obsolete pesticides and chemicals, DDT stockpiles and selected mercury added products

- Database including findings of inventories conducted
- Guidelines to aid customs and border control agents with prescreening and inspecting imported goods and to support countries with managing hazardous waste streams specific to the Caribbean
- Awareness raising materials for identified safe alternatives to PFAS, POP-PBDEs, SCCPs, PCBs, PCNs and mercury containing products; to promote BAT/BEP and minimise UPOPs emissions from open burning; and to inform the public on developed take-back systems and other implemented waste management pilots

Detailed case studies and fact sheets will also be developed on the pilot projects conducted under the Child Project and the results of other activities.

The developed knowledge products will be disseminated regionally through training workshops with key stakeholders, awareness raising campaigns and the various online platforms that will be developed or enhanced under the project. Information will also be shared with stakeholders through PWC and NWG meetings. As previously stated, the products will be shared with other SIDS through the CCKM.

The timing of the development and delivery of these deliverables will be agreed and reviewed annually with the CCKM project, as part of the execution of the programmatic communications plan (Appendix 12). This plan will outline the links between knowledge creators with knowledge users, and sets out the timing of communications activities. The aim of the project's communications work is to increase the total number of ISLANDS beneficiaries by communicating information and disseminating knowledge on chemicals and wastes, increasing awareness among target groups, stimulating behaviour change, and expanding and extending project impact.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Periodic monitoring by the BCRC-Caribbean, 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^[1] (2019).

The BCRC-Caribbean will be responsible for monitoring day-to-day project activities and will develop and submit quarterly technical and financial reports UNEP and FAO on their respective components. 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. Templates for the quarterly progress and financial report will be provided by the implementing agencies.

The BCRC will develop the annual Project Implementation Report following a format provided by UNEP as lead implementing agency. The annual report will include progress towards programme-level outcomes, major milestones achieved through overall programme implementation, and engagement in regional or global fora as means to advance the overall programme goal.

In-line with the GEF Evaluation requirements the project will be subject to an independent Terminal Evaluation. Additionally, a performance assessment will be conducted at the project's mid-point. The UNEP Evaluation Office will decide whether a Mid-Term Review, commissioned and managed by the Task Manager, is sufficient or whether a Mid-Term Evaluation. Managed by the Evaluation Office, is required.

The Terminal Evaluation will be managed jointly by UNEP and FAO Evaluation Offices. The UNEP Evaluation Office will, however, lead the Terminal Evaluation (TE) and will liaise with the FAO Evaluation Office throughout the process. Key decision points in the evaluation process will be made jointly by both Evaluation Offices in a collaborative manner [finalisation of Evaluation ToRs, selection of evaluation consultants, review of draft report and acceptance of final report].

The Terminal Evaluation 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 learned among UNEP, FAO, GEF, executing partners and other stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget. The UNEP Task Manager will inform the UNEP Evaluation Office of the approaching Terminal Evaluation one year before the operational completion of the project.

The Terminal Evaluation report will be sent to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Offices 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 Offices of UNEP and FAO when the report is finalised. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process.

On a regional and national level, the project will be monitored by the PSC and NWGs. The PSC will meet annually to assess the project's progress and the effectiveness of its operations and technical outputs. Where needed, the PSC will also recommend changes to the work plan. NWGs will meet on an as-needed basis to review the project's national outputs and monitor its national impacts.

Table 9 Project Monitoring and Evaluation plan

M&E activity	Purpose	Responsible Party	Budget (US\$)	Timeframe
Inception workshop	Review of project activities, outputs and intended outcomes; detailed work planning	EA	15,000	Within two months of project start. Will convene virtually.
Inception report	Provides implementation plan for progress monitoring	EA	Included in EA fee	Immediately following Inception Workshop
PSC meetings	Provide for project level oversight	EA	302,665	Annually (convening virtually)
Ongoing monitoring (project execution)	This activity will be ongoing to allow continuous monitoring of the execution of the project. This will be completed by the project coordinator and the finance and procurement officer	Project coordinator and Finance and Procurement Officer		Ongoing
Gender mainstreaming	A gender consultant will monitor gender mainstreaming and overall opportunities for women on an annual basis	Gender consultant	Included in activities	Annually
Annual reporting on progress to CCKM	This will be completed annually by the Project Coordinator	EA	Included in EA fee	Annually
Midterm Review	To assess project progress and to recommend corrective actions	Consultant	51,600	At the midterm of the project
Terminal report	Reviews effectiveness against implementation plan Highlights technical outputs Identifies lessons learned and likely design approaches for future projects, assesses likelihood of achieving design outcomes	EA	Included in EA fee	At the end of project implementation
Independent Terminal evaluation	Reviews effectiveness, efficiency and timeliness of project implementation, coordination mechanisms and outputs Identifies lessons learned and likely remedial actions for future projects Highlights technical achievements and assesses against prevailing benchmarks	UNEP Evaluation Office	84,852	At end of project implementation
Total indicative Monitoring & Evaluation cost			\$459,117	

[1] The GEF. (2019). GEF/C.56/03/Rev.01. Policy on Monitoring. 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 ISLANDS programme will follow a holistic approach to chemicals and waste management that will result in environmental, social and economic benefits for SIDS in the Caribbean, Indian Ocean and Pacific. The planned project will be executed in a unique context. In following this approach, it is expected that environmental benefits for the Caribbean will stimulate better socioeconomic conditions and vice versa.

The UNEP/FAO Child Project first aims to reduce the quantities and variety of harmful chemicals and products containing harmful chemicals entering the project countries by strengthening the national and regional legislative, institutional and technical capacity to control the current and future trade of these items. The benefits of conducting such activities are the reduction in required costs for specialized waste management once these products reach their end-of-life and the reduced pressure on national waste management systems to treat and safely dispose of these complex waste streams.

A major gap identified was that of legislation. In Component 1, a detailed assessment of the existing legislation, in each of the participating countries for the specific hazardous chemicals and products and resultant waste streams. This includes examining EEE, ELVs and mercury containing products and the existing regional or sub-regional regulatory mechanisms to manage hazardous streams. Here lessons learnt from other SIDS will be considered.

Another aim of the Child Project is to support and promote low-cost options for the environmentally sound management of hazardous chemicals and waste that cannot be avoided in the Caribbean. Achieving this aim will increase public and private sector access to safe chemicals and waste treatment and disposal options and lead to improved human and environmental health through reductions in pollution and toxic releases of chemicals such as POPs and mercury. Further, the project will seek to identify opportunities for creating a circular market for material recovery and recycling from various waste streams including WEEE and ELVs. These opportunities will engender public-private partnerships, create jobs within the chemicals and waste management sector and incorporate existing activities being conducted by formal and informal recyclers. Training of existing recyclers and waste handlers will be facilitated to improve ongoing practices, thereby reducing occupational exposure to toxic chemicals and increasing the value of the waste handled by these persons. Support will be given to project countries to identify sustainable financial mechanisms for implementing innovative circular economy solutions.

Increased capacity for ESM of hazardous chemicals and waste in the participating countries will result in the diversion of wastes from landfills which are generally not effectively designed to hold hazardous wastes and which have limited capacities. This would relieve existing pressures on landfills and increase their remaining life-span. Additionally, more effective land use in waste management through destruction of stockpiled obsolete chemicals and wastes, will increase land availability for more productive purposes.

Sound chemicals and waste management also increases resilience to other environmental issues such as environmental degradation and natural hazards. For example, HHP free farming and other alternative agricultural methods that make use of more environmentally friendly practices and generate less (hazardous) waste are less likely to increase soil erodibility, a compounding cause of environmental degradation. Furthermore, preventing hazardous chemicals and wastes from entering the natural environment leads to healthier ecosystems that are more resilient in the face of natural disasters, a significant benefit for the participating countries, some of which have primarily tourism-based economies and all of which are vulnerable to the effects of climate change. Improved resilience will also lower the future costs to be incurred for adapting to the environmental impacts of climate change.

An additional social benefit to the Child Project is increased public awareness on the impacts of chemicals and wastes and their poor management. By promoting awareness among national stakeholders, consumers and waste generators will be educated on the associated risks and will be empowered to make safer decisions which may lead to increased use of safe alternatives, increased feeder material for developed material recovery and recycling systems and improved environmental and human health. In Component 4, there is a focus on educating and empowering the youth through joining the Tide Turners movement to address plastics waste. Engaging youth to make changes in their personal plastic consumption, and in becoming community leaders, is essential to changing long-term behaviours around plastic and waste management in the Caribbean. Socially, the focus is expected to engage as opposed to marginalise, and empower, as opposed to disenfranchise youth.

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.

This document will serve to support the impact, probability and risk values identified in the UNEP Safeguard Risk Identification Form (SRIF) for the GEF ISLANDS Caribbean child project.

1. Introduction to the ISLANDS Programme

Under the Programming Directions for the 7th funding cycle of the Global Environment Facility (GEF 7), a specific allocation was made for Least Developed Countries (LDCs) and Small Island Developing States (SIDS) for chemicals and waste management. The programme entitled ISLANDS – Implementing Sustainable Low and Non-Chemical Development in SIDS was approved by the GEF Council in June 2019, and a subsequent allocation was approved for three (3) additional Caribbean countries, Bahamas, Cuba and Dominica, in December 2019.

This global programme seeks to address the sound management of chemicals and waste through strengthening the capacity of sub-national, national and regional institutions, strengthening the enabling policy and regulatory framework in these countries and unlocking resources to implement sound management of chemicals and waste. This will be achieved by:

- Implementing Sustainable Low and Non-Chemical Development Strategies in SIDS and LDCs;
- Promoting Best Available Techniques (BAT) and Best Environmental Practices (BEP) to reduce mercury and Unintentional Persistent Organic Pollutants (UPOPs) releases from sectors relevant to the Minamata and Stockholm Conventions in SIDS and LDCs;
- Promoting cleaner health-care waste management based on the lessons learnt from GEF-funded healthcare waste projects to reduce UPOPs and mercury releases
- Strengthening the management system for e-waste, addressing all stages of the life cycle (i.e. acquisition of raw materials, design, production, collection, transportation and recycling) in SIDS and LDCs;
- Phasing out of mercury-containing products;
- Undertaking gender mainstreaming and project monitoring and evaluation; and
- Developing a strategy to ensure that technical assistance and investments are firmly linked to enhance countries' ability to deal with the management of POPs and mercury in a sustainable manner.

This ISLANDS programme covers three (3) geographical regions including the Caribbean, Indian Ocean and Pacific Islands and is being implemented by the United Nations Environment Programme (UNEP), The United Nations Development Programme (UNDP), The United Nations Food and Agricultural Organisation (FAO) and the InterAmerican Development Bank (IDB).

The ISLANDS programmatic framework has been designed to ensure that lessons and knowledge from each of the child projects are captured and shared among SIDS globally. The aim is to facilitate the replication and scale-up of initiatives based on lessons learnt, the demonstration of best practices and fostering increased south-south cooperation. The ISLANDS programme will support 30 SIDS, including 12 Caribbean nations. SIDS not included in the ISLANDS programme will be informed of the results of the programme. The SIDS covered in this child project are: Antigua and Barbuda; Barbados; Belize; Dominican Republic; Guyana; Saint Kitts and Nevis; Saint Lucia; Suriname; and Trinidad and Tobago.

2. Introduction to the SRIF

UNEP officially adopted the Environmental and Social Sustainability Framework (ESSF) on 31 December 2014. The ESSF was revised in February 2020. 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.

Review Notes are generated using a template available through UNEP's Project Information and Management System. The template includes a set of screening questions based on the eight Safeguard Standards presented in the Framework. It is essentially a checklist used to review the potential environmental, social and economic safeguard impacts of projects and to determine whether projects will trigger relevant safeguard policies. The eight Safeguard Standards presented in the Framework are as follows:

SS1: Biodiversity, Ecosystems and Sustainable Natural Resource Management

This safeguard aims to: preserve the integrity of ecosystems; conserve biodiversity; maintain and enhance the benefits of ecosystem services; promote nature-based solutions (NBS) wherever feasible or possible; promote sustainable management and use of living natural resources; ensure the fair and equitable sharing of the benefits from the utilization of genetic resources; and respect, preserve, and maintain knowledge, innovations and practices of indigenous peoples and local communities relevant for the conservation and sustainable use of biodiversity and their customary use of biological resources.

SS2: Climate Change and Disaster Risks

This safeguard aims to: strengthen resilience of communities to address risks of climate change impacts and disasters; ensure programmes and projects integrate climate change adaptation considerations and does not exacerbate vulnerability of communities to climate change impacts or disaster risks; and minimize programme and project-related greenhouse gas (GHG) emissions and intensity and maintain carbon sinks.

SS3: Pollution Prevention and Resource Efficiency

This safeguard aims to: avoid and minimize adverse impacts on human health and the environment from pollution and the unsound management of chemicals and wastes; promote more sustainable and efficient use of resources, including circular approaches and practices of using energy, land and water; avoid or minimize programme or project-related emissions of short and long-lived climate pollutants, unintentionally produced persistent organic pollutants, and ozone-depleting substances; avoid or minimize generation of hazardous and non-hazardous waste, and promote a human rights-based approach to the environmentally sound management and disposal of hazardous substances and wastes; avoid or minimize the generation of plastic waste in view of reducing the prevalence of marine plastic litter and microplastics in the marine environment; and promote safe, effective, and environmentally sound pest management.

SS4: Community Health, Safety and Security

This safeguard aims to: anticipate and avoid adverse impacts on health and safety of affected communities during the programme or project life cycle, from both routine and non-routine circumstances; ensure quality and safety in the design and construction of programme or project-related infrastructure, preventing and minimizing potential safety risks and accidents; avoid or minimize community exposure to disaster risks, diseases and hazardous materials associated with programme or project activities; ensure the safeguarding of personnel and property minimizes risks to communities and is carried out in accordance with international human rights standards and principles; and have in place effective measures to address emergency events, whether human-made or natural hazards.

SS5: Cultural Heritage

This safeguard aims to: protect cultural heritage from damage, inappropriate alteration, disruption, removal or misuse and support its preservation and safeguarding and protection; ensure equitable sharing of benefits generated from integration and utilization of cultural heritage in programme or project; and promote meaningful consultation with stakeholders regarding preservation, protection, utilization and management of cultural heritage.

SS6: Displacement and Involuntary Resettlement

This safeguard aims to: avoid, or where avoidance is not possible, minimize and mitigate adverse impacts from land or resource acquisition or restrictions on land or resource use; prohibit forced evictions; enhance and restore the livelihoods and living standards of all displaced persons and to improve the living conditions and overall socioeconomic status of displaced poor and persons belonging to marginalized or disadvantaged groups; and ensure that resettlement activities are planned and implemented collaboratively with the meaningful and informed participation of those affected.

SS7: Indigenous Peoples

This safeguard aims to: recognize and foster full respect for indigenous peoples and their human rights, dignity, cultural uniqueness, autonomy, identity, and aspirations; promote indigenous peoples' rights to self-determination and development with culture and identity; recognize and respect the rights of indigenous peoples to their lands, territories, and resources that they have traditionally owned, occupied, or otherwise used or acquired; recognize, respect, protect and preserve indigenous peoples' culture, knowledge, and practices; promote interventions designed, managed, and implemented by indigenous peoples; ensure that programmes and projects are designed in partnership with indigenous peoples, with their full effective and meaningful consultation and participation, and respect free, prior and informed consent (FPIC); support countries to respect, protect and fulfill the rights of indigenous peoples; avoid adverse impacts on indigenous peoples from supported activities, and minimize, mitigate and remedy adverse impacts where avoidance is not possible; and ensure indigenous peoples obtain fair and equitable benefits and opportunities from supported activities in a culturally appropriate and inclusive manner.

SS8: Labour and Working Conditions

This safeguard aims to: promote, respect and realize fundamental principles and rights at work; protect and promote the safety and health of workers; ensure projects/programmes comply with national employment and labour laws and international commitments; and leave no one behind by protecting and supporting workers in disadvantaged and vulnerable situations, including a special focus, as appropriate, on women workers, young workers, migrant workers and workers with disabilities.

3. Regional context

Sound chemicals management is a key cross-cutting issue for sustainable development.^[1] Aside from the chemical industry's heavy use of water and energy, chemical waste is a type of hazardous waste that can have adverse impacts on the environment and human health. Chemical waste is a high priority waste stream for Small Island Developing States (SIDS) in particular. Though SIDS generate only small quantities of hazardous waste, including chemical waste, they tend to lack the capacity and capability to effectively manage it and implement waste-stream specific management practices.^[2]

Because of the high presence of chemicals in consumer products, chemical waste is difficult to tackle as a stand-alone waste stream. Instead, chemicals are present in a variety of waste streams, including but not limited to agricultural waste, end-of-life vehicles, e-waste and plastic waste. Therefore, for the sound management of chemicals it is important to have a holistic perspective on waste that includes a variety of products throughout their entire life cycle.

Several recent World Bank studies project that the Latin American and Caribbean region's waste generation per capita will continue to increase over the next few decades, with roughly 30% more waste generation per capita in 2050 as compared to 2016.^[3] This is particularly worrying for the Caribbean region, as SIDS inhabitants already generate 48% more waste than the world average.²

Region-wide economic reliance on tourism exacerbates these numbers. Many of the highest waste generators in the Latin American and Caribbean region are island states with active tourism-based economies. Tourism drives an increase in consumer waste products that are difficult for SIDS to manage.²

Although unsound management of chemicals and waste is an urgent issue that must be tackled, Caribbean countries have specific environmental, social and economic characteristics that may pose challenges for the implementation of waste management programmes. It is important to keep these characteristics in mind when assessing the potential impacts of waste management programmes.

Waste management is one of the least recognized public policy issues in the Caribbean.^[4] Often solid waste management has to compete with other pressing economic and social issues, and many times it does not receive the required priority in the political agenda. For this reason, many countries lack among other things: consistent data about the quantity and type of solid waste being disposed of; regulations on waste discharge, collection, storage, transport, recycling and disposal; partnerships to engage private sector; policies for the environmentally sound management of hazardous waste or enforcement, and; investment opportunities.⁴

As an example, according to regional industry professionals, a lack of policy and regulatory framework regarding the collection and processing of end-of-life vehicles has made it difficult for private waste management companies to implement more sustainable technologies. Furthermore, informal recyclers tend to strip vehicles bare before they are brought to these companies, meaning no or too few valuable parts are left for them to make a profit and make up for the costs of implementing more efficient and expensive technologies.

Another issue identified by industry professionals is the limited amount of land made available to private waste management companies by national governments. Limited land availability for waste management activities is a common feature of SIDS.² Available land has to compete with other land use purposes considered as priorities by governments.

Small islands worldwide face the challenge of choice of optimal location. Caribbean countries, for example, are often forced to establish landfills in the coastal area in order to minimize per capita waste haulage costs from towns or cities which are typically also located along the coasts, as well as to take advantage of more level coastal terrain for disposal. Coastal landfill sites are a particularly acute issue for SIDS because of limited land availability, proximity to oceanic waters and waterways and limited availability for soil cover. Significant health and environmental issues that can result from mismanaged coastal landfill sites include strong odours, pollution from stormwater runoff, lack of leachate control, poor access roads, scavenging and lack of security.² In addition, communities situated closest to landfills tend to have a lower income demographic, which makes community members more vulnerable to health and environmental impacts of the landfill.

Because of the issue of limited available space, shipping waste between islands could be a promising solution. However, it has been mentioned anecdotally by regional industry professionals that the cost of transporting waste just between neighboring Caribbean islands can be more expensive than transporting waste from Caribbean to Asian countries. Though distances between Caribbean islands are relatively short, distance explains only one fifth of the variance of freight rates. The high cost of transporting waste between Caribbean islands could be explained by low connectivity between islands and poor port infrastructure.^[5] In any case, high costs to transport small amounts of wastes to a regional hub may limit the profitability of established material recovery or repurposing initiatives, and there is difficulty engaging shipping companies to find solutions for this issue.

Partly because of the aforementioned difficulties, the adequate final disposal of waste continues to be one of the most difficult solid waste management problems for Latin America and the Caribbean. Estimates for how much of the region's solid waste is disposed in sanitary landfills runs from under 35% to 54%.^{[6] [7]} However, numbers are assumed to be lower for the Caribbean sub-region, as only a few Caribbean nations dispose their solid waste in sanitary landfills, and in many cases open air dumpsites—which generate serious environmental problems—are still the prevailing mechanism. Other inadequate and highly contaminating practices of solid waste final disposal in Latin America and the Caribbean include open-air burning, disposal in bodies of water and disposal as animal feed.

Within the domain of environmental sustainability, the Caribbean region faces a compounded issue thanks to the interconnectedness of environmental challenges such as land and coastal degradation, biodiversity loss, and climate change. Poor waste management can increase the vulnerability to other environmental issues and decrease resilience.³ Specifically, poor waste management can lead to environmental degradation which can in turn directly lead to disasters or worsen the effects of natural hazards, such as by causing or exacerbating localised flooding.^[8]

Prior to 2000, very few system models considered social aspects, including health impacts, of solid waste management, focusing solely on the environmental and economic spheres. None considered involving all relevant stakeholders, including local communities and informal recyclers, and none considered the full waste management life cycle.^[9]

The high presence of informal recyclers in particular, is a notable characteristic of chemicals and waste management in the Caribbean region. Because of the informal nature of waste pickers' livelihoods, it is difficult to determine how many there are in any given country. Estimates for the Latin American and Caribbean region as a whole run from just over 400,000 (between 8 and 9 per 10,000 inhabitants) to nearly 4 million. In addition, numbers vary widely on a country-to-country basis. For example, an EVAL 2010 report estimates nearly 12 waste pickers per 10,000 inhabitants in Belize for a country total of just under 200 but 7 waste pickers per 10,000 inhabitants in the Dominican Republic for a country total of nearly 2500.⁶

Waste pickers typically live in very precarious socio-economic conditions and even extreme poverty. Living conditions are characterised by social exclusion, precarious housing, overcrowding, and a lack of public services. Schooling levels are very low and the dropout rate for children and adolescents is high. They are highly dependent on current waste management practices which include high levels of waste generation, limited source segregation and few low-cost options for the environmentally sound management of hazardous waste streams, hence their vulnerability to waste management development.³ Aside from waste pickers, a lack of regulations or lack of enforcement has led to many private chemicals and waste operations that are not formalised. The displacement of informal recyclers when a new disposal site comes in operation or waste management practices are improved or formalised, is a challenge that has to be addressed in all countries.

Despite the high presence of informal recyclers, as in parts of the Arab world and Latin America, opportunities to strengthen waste institutions may be limited by the fact that solid waste management is not seen as an honourable profession.⁶ This has been identified as an issue by some industry professionals in the Caribbean. There is a lack of interest for solid waste management jobs and relatively high salaries need to be paid, thereby increasing the overall cost of solid waste management in the region. A lack of human resources is a common challenge in the region and a lack of funds for remuneration is one factor influencing that. Therefore, the recycling sector has been difficult to formalize in the Caribbean region.

With regards to recycling, absence of a de facto market for recyclables is a main constraint to the development of a formal recycling sector in the Caribbean.³ Disposal activities, including recycling, are also greatly influenced by social attitudes, thus there is a need for awareness-raising activities to support the implementation of new waste disposal practices.⁶

It has been widely recognized that waste management systems that ignore social components and priorities are doomed to failure. The issues of public acceptance, changing value systems, public participation in planning and implementation stages, and consumer behaviour are equally as important as the technical and economic aspects of waste management.⁶

Finally, corruption is a constraint for sustainable development in the Caribbean region. Corruption in the Latin American and Caribbean region has led to a public skepticism about privatization and its association with corruption and lack of transparency. This adds to a lack of municipal capacity to manage contracts with private waste management contractors and ensure service standards, which restricts the possibilities to increase or improve private participation.^[10]

4. Risks of proposed interventions and management plan

SS1: Biodiversity, Ecosystems and Sustainable Natural Resource Management

The quality of water in rivers, ponds, lakes or other wetlands is expected to be improved in the long term by the ISLANDS Programme due to the expected improvements in management of chemicals and waste. However, to ensure there is no risk to biodiversity or ecosystems in the project countries, activities such as 2.1.2, which include active handling of chemicals and/or waste, will be assessed for their impacts on the natural environment. Where specific chemicals and waste management practices are discouraged (such as 2.1.3) the programme will provide alternative, more sustainable practices so that these practices are not replaced by other unsustainable practices.

Finally, activities must be assessed on their location. Activities in regions with more proximity to extensive or vulnerable natural environments (or possibly, biodiversity hotspots) such as activities in rural areas (2.2.3), will be assessed for their possible impact on biodiversity and ecosystems. However, it should be noted that it is a project goal to decrease the environmental impact of chemicals and waste management activities. Therefore, adverse impacts are unlikely and in fact, current chemicals and waste impacts on biodiversity and ecosystems are expected to decrease.

SS2: Climate Change and Disaster Risks

Climate change disturbances and environmental disasters are frequent in the Caribbean region, be it due to climate change, erosion, prolonged droughts, or other. Therefore, it is important that project activities have short-term strategies in mind for disasters during the project execution phase and mid- to long-term strategies for climate change effects felt during and after project execution. To ensure the sustainability of mid- to long-term strategies in the face of climate change specifically, climate risk mitigation plans must be worked into any activities that extend beyond the project execution, such as during the development of waste management strategies, guidelines and roadmaps (2.1.2, 2.2.1, 2.2.2, 2.2.3, 3.1.1, 3.1.2). These include both national and regional level activities.

Climate risk mitigation plans will vary depending on activity and location, but may include, for example, plans to increase resilience to the effects of hurricanes, such as infrastructure destruction and transport disruption, and assessments of locations and transport routes on their climate change vulnerability and/or resilience. Long-term solutions will bear in mind environmental changes up to and including 2050 and will use tools such as the Climate Change Knowledge Platform, Think Hazard, and others, to determine climate sensitivity, vulnerability and resilience.

SS3: Pollution Prevention and Resource Efficiency

One of the ISLANDS Programme's goals is to prevent the release of pollutants to air, water and/or soil. This will be achieved through, for example: preventing the generation of wastes in project countries, especially hazardous waste; development of circular economy and 3R approaches for chemicals and waste management in the region; reinforcement of trade bans; and chemical release prevention. To this end, activities in all outcomes will aim at reducing pollution and increasing resource efficiency and negative environmental impacts are unlikely.

Projects implemented or supported by the ISLANDS Programme in project countries are unlikely to consume or cause significant consumption of water, energy or other resources. The ISLANDS Programme will not encourage the establishment of waste incinerator facilities or similar facilities, but if a project country decides to establish a waste incinerator facility or similar facility, the Programme could assist to ensure best available techniques and best environmental practices are used.

One possible source of pollution would be the increase of transport in the region due to the development of take-back system models and regional hub and spoke models (3.1.3 and 3.2.2). However, the benefits in pollution prevention and resource efficiency are assumed to be greater than the increase in pollution caused by increased transport.

SS4: Community Health, Safety and Security

Community health, safety and security must always be protected and, where possible, improved by the programme. As such, mitigation plans for risks to community health will be included in the assessment and execution of all activities that handle potentially hazardous chemicals and waste, such as 2.1.2. Newly developed roadmaps (2.2.1) and newly established guidelines (2.2.2) will also assess the vulnerability of affected communities and include risk mitigation measures.

SS5: Cultural Heritage

The ISLANDS programme will not be involved in the handling of cultural heritage or include activities in cultural heritage areas.

SS6: Displacement and Involuntary Resettlement

ISLANDS programme activities will not lead to displacement and/or involuntary resettlement. However, the Caribbean region has a high prevalence of informal recyclers and the ISLANDS programme may have a notable effect on informal recyclers' livelihoods due to the improvement and possibly, formalization of certain chemicals and waste management practices. Informal recyclers should be included in any activities that may affect their livelihoods as relevant stakeholders and the programme should provide adequate alternatives if informal recycling activities are halted or otherwise affected by programme activities.

SS7: Indigenous Peoples

Belize, Guyana and Suriname have significant Indigenous populations. However, no waste management projects implemented or supported by the ISLANDS Programme will be located on lands and territories claimed by Indigenous peoples, unless assistance in managing chemicals and/or waste is requested by the relevant Indigenous communities.

In the case that Indigenous peoples and/or communities are present in the area of influence of waste management projects implemented or supported by the ISLANDS Programme (notably 2.2.3), the ISLANDS Programme will ensure that communications are established with representatives and that the relevant Indigenous peoples and communities will benefit from the improved management of chemicals and waste under the programme. Specifically, ISLANDS will reach out to Indigenous communities proactively to ensure that potential requests are addressed at the earliest stage possible.

SS8: Labour and Working Conditions

In all activities, the programme should aim to improve the labour and working conditions of current labourers/workers in the chemicals and waste sector. Notably, the labour and working conditions of informal recyclers should be assessed and improved where possible. Where informal sectors are formalised, this must necessarily lead to better working conditions.

[1] SAICM. (n.d.). Strategic Approach to International Chemicals Management. Retrieved May 26, 2020, from <http://www.saicm.org/About/SAICMOverview/tabid/5522/language/en-US/Default.aspx>

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Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
10279 - Appendix 7 - COVID19 additional questions	CEO Endorsement ESS	
10279 - Appendix 7 - 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).

Component 1: Preventing the Future Build-Up of Chemicals Entering SIDS

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).

Response to GEF Secretariat Review

GEF noted that the co-financing of the PMC is less than the GEF amount. In the majority of projects, the practice is for the co-financing to be equal or greater than the GEF amount.

The co-financing for PMC is now greater than the GEF contribution. Significant co-financing is coming from SPREP towards project management.

Response to STAP Reviews

STAP reviewed the PFD, concurred with the ISLANDS Programme, and made the following comments on the concept of ISLANDS PFD that are relevant to this project (https://www.thegef.org/sites/default/files/web-documents/10185_STAP_Screen.pdf). These comments and the responses are included below:

• The project has the potential to generate Global Environment Benefits (GEBs) beyond the chemicals and waste focal area including: biodiversity benefits (through the prevention of harmful impacts of chemicals and waste on terrestrial and marine ecosystems); international waters benefits (through the prevention of chemical pollution and plastic pollution of international waters); and climate change benefits (through the mitigation of greenhouse emissions from poor waste management). It is recommended that a detailed analysis of these co-benefits should be carried out at the PPG stage and the final interventions designed to maximize these co-benefits. STAP also suggests that detailed information about how the chemicals and waste GEBs were estimated should be provided at the PPG stage.

Agency response: Noted. Section on GEBs addressed co-benefits in the areas of biodiversity, international waters, and climate change benefits. This section also includes details on the basis for GEB calculations.

• Component 2: one of the proposed interventions includes infrastructure, for example, engineered landfills. Given the limited land mass of SIDS and the susceptibility of SIDS to the impacts of climate change, for example, sea-level rise and increased frequency of extreme weather events, it is recommended that other alternatives should be assessed to ascertain that landfill is the best option. If landfill is the best option, it is recommended that the BAT be deployed that includes effective leachate management, methane recovery and waste-to-energy applications.

Agency response: This has been noted and BAT will be deployed.

• Stakeholders: The proposal contains a good representation of stakeholders, but their expected role in the project is not specified. STAP believes that academic and research institutions, especially local ones, are important stakeholders for this type of project that involves the assessment of BAT, knowledge management and dissemination. It is therefore recommended that relevant academic and research institutions should be engaged.

Agency response: This is noted and the project will ensure knowledge assets are shared with a network of SIDS based academic stakeholders. In addition, representatives from SIDS based academic institutions will be targeted to join the communities of practice.

** Risks: The proposal presents a good preliminary analysis of the potential risks to the success of the project. STAP appreciates that the potential impact of climate change and sea-level rise is recognized and included in the preliminary risk analysis. It is important that ways of mitigating these risks be designed at the PPG stage and incorporated during project implementation. Beyond the identified risks, STAP recommends that the project proponents consider other potential risks, including political risk and coordination challenges for a large program.*

Agency response: This is noted. Political risks are now included. During PPG an assessment of climate risks and mitigation measures was undertaken. The result of this are included in the Section on Risk and in the Risk Mitigation Plan.

Response to Country comments on the PFD

GEF Council members made the following comments on the project. Where these comments pertain to this child project, a response is provided in the righthand column

Country	Comment	Agency Response
Canada	<ul style="list-style-type: none"> - The project appears to address some of the systemic issues facing SIDS that prevent them from fully implementing the Minamata Convention. While not highlighted in the project proposal, greater control of imports and waste could also assist countries in fulfilling their reporting requirements under the Convention. - This project is in line with previously adopted Stockholm COP decisions and proposed actions to the GEF in the 2018-2022 priority areas. 	<p>Noted. UNEP concurs and under Component 1 work is planned to reduce imports and waste. This will assist Caribbean countries in fulfilling requirements under the Convention.</p>
Germany	<p>Germany welcomes this proposal, which addresses the major chemicals and waste issues in the SIDS through an interregional and intersectoral approach. At the same time, Germany has the following comments that it suggests be addressed in the next phase of finalizing the project proposal: Suggestions for improvements to be made during the drafting of the final project proposal:</p> <ul style="list-style-type: none"> - The risks associated to the complex management structure should be addressed in the risk section of the PIF, as well as associated risk mitigation measures. As UNEP-Chemicals has already limited management capacities, Germany recommends to ensure that sufficient resources are provided in an early stage of project preparation. - In Component 1, the activity on "promotion and introduction of alternatives to identified priority chemicals and products (e.g. alternatives to POPs and Hg containing products, alternatives to HHPs, alternatives to certain plastics)(...)" does not clarify how identification is processed. Germany would welcome additional information on this component - In many sectors recording on chemical components contained in products i 	<p>The global CCKM project will gather, synthesize and disseminate information on recording chemicals components contained in products.</p> <p>The Caribbean project will use and disseminate this information to inform stakeholders and change behaviours in the Caribbean region.</p>

	<p>s insufficient and incomplete. Germany therefore recommends to include the recording of chemicals and products as thematic building blocks in the component on strengthening regulatory/policy frameworks in the final proposal.</p>	
<p>Norway/Denmark</p>	<p>- We are pleased that such a program is suggested for SIDS as they are especially vulnerable to these issues and have limited resources.</p> <p>- Please note (1) that the programme document itself states that there have been many initiatives on chemicals and waste across SIDS in the past. A common feature of many of these has been the failure to learn from experience (both positive and negative) and, to build on results and successes. The programme intends to address this issue which is very positive.</p> <p>- Several of the components refer to strengthening the national governments capacity to implement the BRS and Minamata Conventions, plus SAICM. One should be aware that there may be an overlap with UN Environment Special programme. How will this be addressed?</p> <p>- Indicator 5.3 concerns the amount of Marine Litter Avoided. The target is set at 185,400.00 Metric Tons (expected at PIF) which is higher than the total target set for GEF-7. Will GEF-7's target be increased? It is also noted that marine litter estimates are based on available country baseline data in term of marine litter generated. It is noted that some of these studies are dated and the data will be confirmed, and hopefully increased during PPG.</p> <p>- It is difficult to get a full overview of the elements of the program and these should be more detailed. It is positive that import control, substitution and collaboration with sectors generating waste are elements of the program. It is also positive that work is planned to promote regional management solutions as these are essential to ensure environmentally and economically sustainable waste solutions.</p>	<p>The potential overlap with countries with Special Programme activities is noted. During project preparation UNEP consulted both the Special Programme Secretariat and countries with Special Programme projects, to ensure national activities were complementary, as opposed to duplicative of Special Programme activities.</p>
<p>US</p>	<p>- We believe that the overall goals of the ISLANDS program are positive and address important chemical and waste priorities, including those related to reducing plastic pollution. However, in the United States' view, the inclusion of project activities directed at advancing...</p>	<p>The project does not propose single use plastic bans, however project countries that independently of the project introduce plastic bans...</p>

	<p>ject activities directed at advancing new national efforts to ban single-use plastic products or develop extended producer responsibility (EPR) mechanisms is not consistent with the GEF mandate, which is to achieve global environmental benefits. Single-use plastic bans do not yet have a demonstrated net environmental benefit, as analyses of the full economic and environmental impacts, including life-cycle analysis of the impact of plastic alternatives, are lacking. GEF interventions should focus on waste management to combat plastic pollution. Unless activities related to the ban of single-use plastics and EPR are removed during further project development, the United States will not be in a position to support the Pacific Regional, Caribbean Regional, Indian Regional and Caribbean Incubator Child Projects at the CEO endorsement stage.</p> <ul style="list-style-type: none"> - The United States would appreciate additional information on whether the Basel Convention Regional Centre for Training and Technology Transfer (BCRC Caribbean) has the demonstrated competency and experience in the promotion and implementation single-use plastic bans. <p>The below comments from the United States were provided prior to the Council meeting. An initial agency response was provided and can be found in the list of documents specific to the project in the GEF Portal.</p> <ul style="list-style-type: none"> - Can the GEF please provide a breakdown of the relative funding directed to each country 	<p>duce plastic bans during project execution, will contribute to the reduction of marine litter in core indicator 5.3. The project is focused on waste management to combat plastic pollution. A tentative breakdown per country has been provided.</p>
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ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

UNEP – implemented PPG (\$220,000)

<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>
BCRC Contract	195,000	150,033	44,767
Lead Consultant	25,000	25,000	
Total	220,000	169,233	50,767

FAO – implemented PPG (\$80,000)

Project Preparation Activities Implemented	GETF/LDCF/SCCF Amount (\$)		
	Budgeted Amount	Amount Spent To date	Amount Committed
BCRC Contract	20,000	6,000	14,000
Consultants	42,000	29,775	12,225
Technical services	12,423	8,835	3,588
Travel	5,577	5,577	0
Total	80,000	50,187	29,813

ANNEX D: Project Map(s) and Coordinates

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





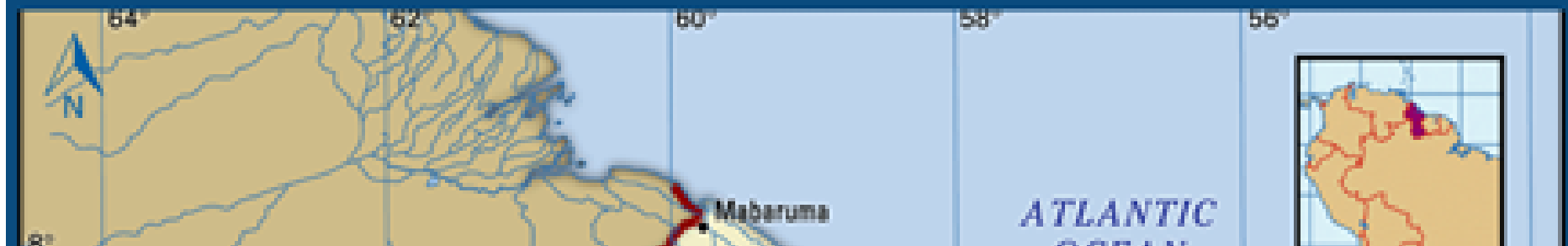
Potentially Contaminated Sites in

SURINAME





Potentially Contaminated Sites in
SAINT LUCIA





Potentially Contaminated Sites in

GUYANA

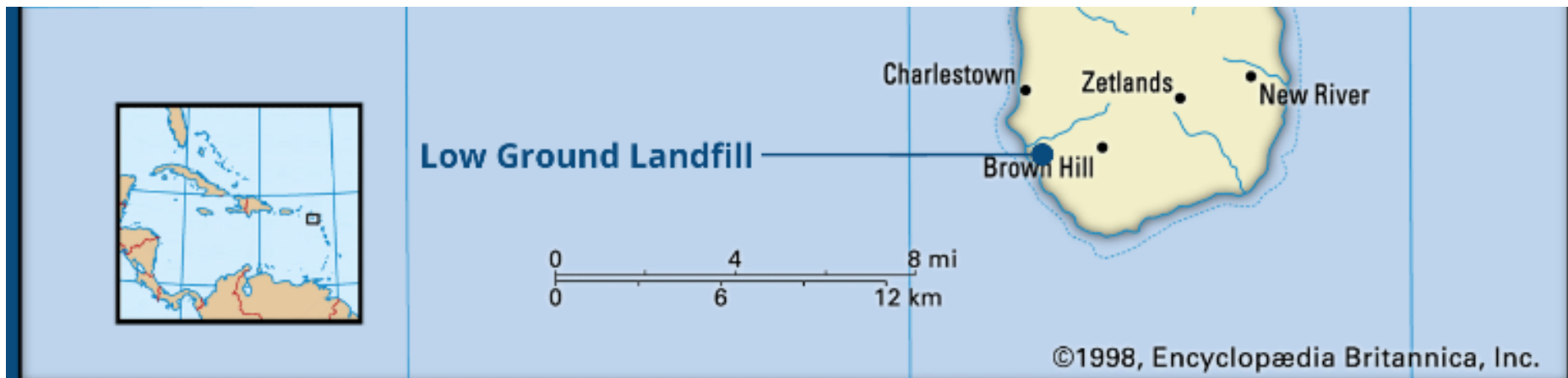






THE DOMINICAN REPUBLIC

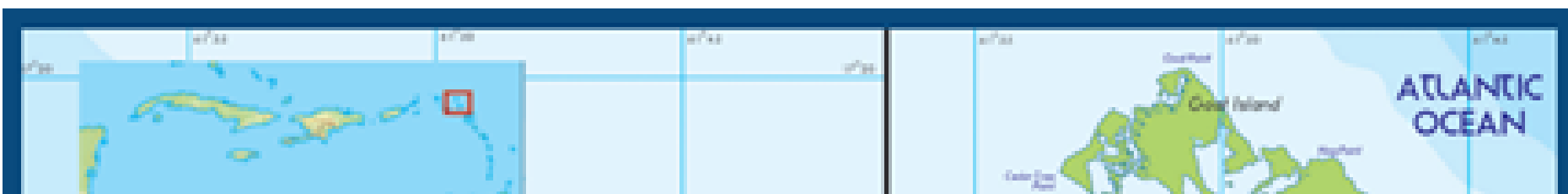




Potentially Contaminated Sites in

SAINT KITTS AND NEVIS







Potentially Contaminated Sites in

ANTIGUA AND BARBUDA





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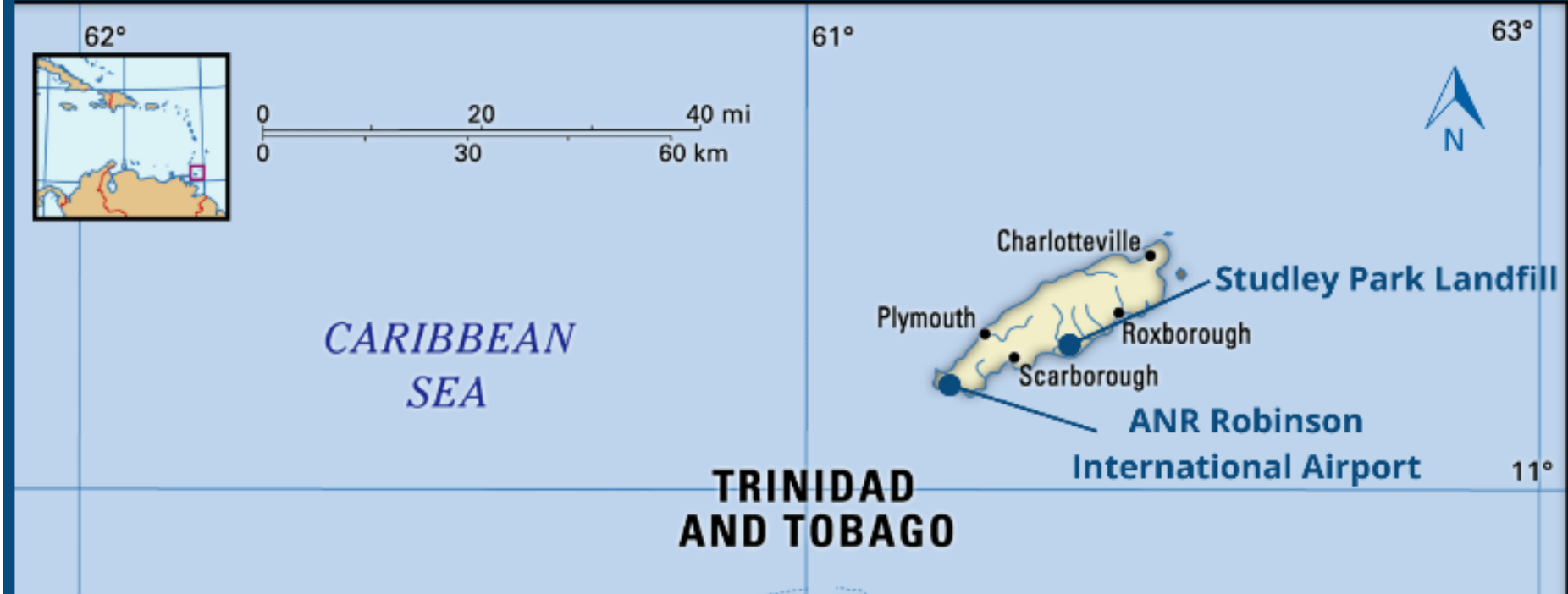
Potentially Contaminated Sites in BELIZE

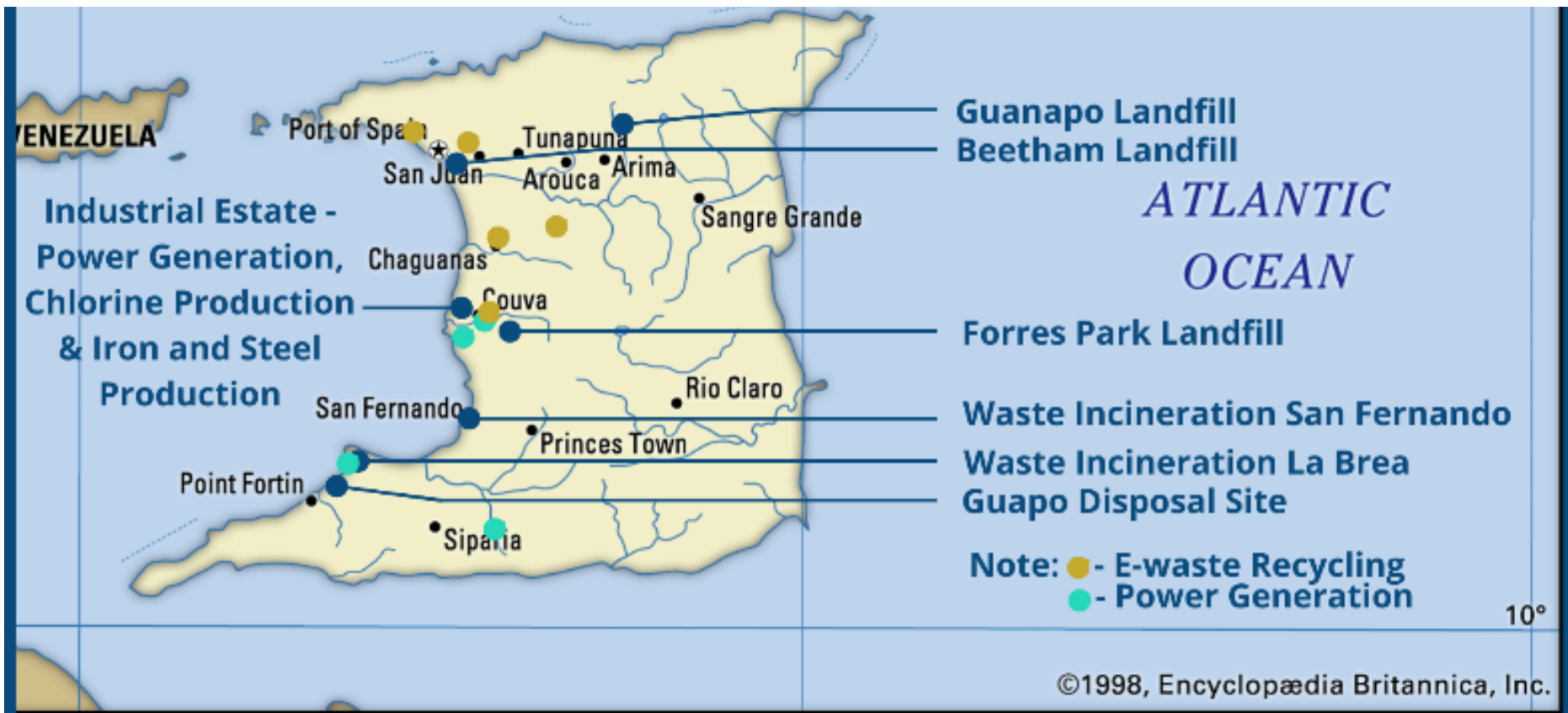





Potentially Contaminated Sites in

ISLANDS Caribbean BARBADOS






Potentially Contaminated Sites in



TRINIDAD AND TOBAGO



ANNEX E: Project Budget Table

Please attach a project budget table.

UNEP BUDGET LINE/OBJECT OF EXPENDITURE		ALLOCATION PER COMPONENT						ALLOCATION BY CALENDAR YEAR					
		Total	Component 1	Component 2	Component 3	Component 4	M&E	PM	Y1	Y2	Y3	Y4	Y
10	UOJA CODE	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$	U
1015	PROJECT PERSONNEL COMPONENT												
	1100												
	Project Personnel /Project Management 5% of overall total												

	1699	Sub-Total	279,950.00	57,650.00	63,450.00	38,000.00	0.00	0.00	120,850.00	24,750.00	71,150.00	60,750.00	30,200.00	25,200.00
	1999	Component Total	5,827,435.00	2,439,704.00	1,725,000.00	607,500.00	568,431.00	0.00	486,800.00	735,675.60	1,703,813.60	1,727,170.10	739,470.10	853,000.00
20		SUB CONTRACT COMPONENT												
	2100	Sub contracts (UN Organizations) (*not relevant)												
2261	2101		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2199	Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2200	Sub contracts (SSFA, PCAs, non UN) (*not relevant)												
	2201	University of West Indies on sustainable procurement and taring (farmers, distributors)	72,500.00	72,500.00	0.00	0.00	0.00	0.00	0.00	0.00	72,500.00	0.00	0.00	0.00
	2299	Sub-Total	72,500.00	72,500.00	0.00	0.00	0.00	0.00	0.00	0.00	72,500.00	0.00	0.00	0.00
	2999	Component Total	72,500.00	72,500.00	0.00	0.00	0.00	0.00	0.00	0.00	72,500.00	0.00	0.00	0.00
30		TRAINING COMPONENT												
	3200	Group training (field trips, WS, etc.)												
3302 and 3303	3201	Training materials	316,192.00	244,192.00	50,000.00	22,000.00	0.00	0.00	0.00	59,064.00	118,064.00	110,064.00	29,000.00	0.00
	3299	Sub-Total	316,192.00	244,192.00	50,000.00	22,000.00	0.00	0.00	0.00	59,064.00	118,064.00	110,064.00	29,000.00	0.00
	3300	Meetings/conferences												
	3301	Inception workshop	15,000.00	0.00	0.00	0.00	0.00	0.00	15,000.00	0.00	0.00	0.00	0.00	0.00
	3302	National technical workshops	648,000.00	201,000.00	260,000.00	115,000.00	72,000.00	0.00	0.00	45,000.00	355,000.00	167,000.00	36,000.00	45,000.00
	3303	National training workshops	116,000.00	46,000.00	0.00	70,000.00	0.00	0.00	0.00	0.00	76,000.00	30,000.00	10,000.00	0.00
	3304	Regional technical workshop	495,500.00	340,500.00	155,000.00	0.00	0.00	0.00	0.00	50,000.00	180,500.00	170,000.00	55,000.00	40,000.00
	3305	Regional training workshop	180,000.00	120,000.00	60,000.00	0.00	0.00	0.00	0.00	0.00	150,000.00	30,000.00	0.00	0.00
3302 and 3303	3306	Steering committee meetings	302,665.00	0.00	0.00	0.00	0.00	0.00	302,665.00	21,333.00	70,333.00	70,333.00	70,333.00	70,333.00
	3399	Sub-Total	1,757,165.00	707,500.00	475,000.00	185,000.00	72,000.00	0.00	317,665.00	131,333.00	831,833.00	467,333.00	171,333.00	155,333.00
	3999	Component Total	2,073,357.00	951,692.00	525,000.00	207,000.00	72,000.00	0.00	317,665.00	190,397.00	949,897.00	577,397.00	200,333.00	155,333.00
40		EQUIPMENT and PREMISES COMPONENT												
	4100	Expendable equipment (under 1,500 \$)												
4261	4101	Operational costs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4199	Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4200	Non expendable equipment												
4261	4201	Computer, fax, photocopier, projector	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4202	Software	222,306.00	128,806.00	73,500.00	0.00	20,000.00	0.00	0.00	43,666.00	78,476.00	72,582.00	27,582.00	0.00
	4203	XRF Equipment	55,000.00	55,000.00	0.00	0.00	0.00	0.00	0.00	0.00	55,000.00	0.00	0.00	0.00
	4204	Alternatives	100,000.00	100,000.00	0.00	0.00	0.00	0.00	0.00	0.00	30,000.00	70,000.00	0.00	0.00
	4205	Consolidation, Packaging and Disposal/Stabilisation of Hazardous Waste	1,385,000.00	0.00	1,385,000.00	0.00	0.00	0.00	0.00	0.00	0.00	75,000.00	655,000.00	655,000.00
	4206	Equipment support for EPR pilot projects	391,450.00	0.00	0.00	391,450.00	0.00	0.00	0.00	0.00	0.00	187,500.00	203,950.00	0.00
	4207	Equipment support for Regional Hub upgrade	150,000.00	0.00	0.00	150,000.00	0.00	0.00	0.00	0.00	0.00	0.00	150,000.00	0.00
	4208	Equipment to support pilot plastic projects	200,000.00	0.00	0.00	200,000.00	0.00	0.00	0.00	0.00	0.00	100,000.00	100,000.00	0.00
	4299	Sub-Total	2,503,756.00	283,806.00	1,458,500.00	741,450.00	20,000.00	0.00	0.00	43,666.00	163,476.00	505,082.00	1,136,532.00	655,000.00
	4999	Component Total	2,503,756.00	283,806.00	1,458,500.00	741,450.00	20,000.00	0.00	0.00	43,666.00	163,476.00	505,082.00	1,136,532.00	655,000.00
40		MISCELLANEOUS COMPONENT												

PIF	MISCELLANEOUS COMPONENT													
	5200	Reporting costs (publications, maps, NL)												
5161	5201	Translation	344,500.00	101,000.00	93,500.00	33,000.00	117,000.00	0.00	0.00	41,400.00	102,400.00	100,400.00	56,900.00	43,4
	5299	Sub-Total	344,500.00	101,000.00	93,500.00	33,000.00	117,000.00	0.00	0.00	41,400.00	102,400.00	100,400.00	56,900.00	43,4
	5300	Sundry (communications, postages)												
5161	5301	Communications (postage, bank transfers, etc)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5399	Sub-total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	5500	Monitoring and evaluation												
	5501	Financial audit	37,000.00	0.00	0.00	0.00	0.00	0.00	0.00	37,000.00	7,000.00	7,000.00	7,000.00	8,000.00
	5502	Mid term Review	56,600.00	0.00	0.00	0.00	0.00	0.00	0.00	56,600.00	0.00	0.00	56,600.00	0.00
	5503	Final Evaluation	84,852.00	0.00	0.00	0.00	0.00	0.00	84,852.00	0.00	0.00	0.00	0.00	84,8
	5599	Sub-total	178,452.00	0.00	0.00	0.00	0.00	0.00	141,370.00	452,000.00	7,000.00	7,000.00	63,600.00	8,000.00
		5999 Component Total	522,952.00	101,000.00	93,500.00	33,000.00	117,000.00	0.00	141,370.00	452,000.00	48,400.00	109,400.00	164,000.00	64,900.00
	TOTAL		11,000,000.00	3,848,702.00	3,802,000.00	1,588,950.00	777,431.00	459,523.00	1,018,138.60	2,999,086.60	2,973,649.10	2,141,235.10	1,800.00	1,800.00

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).