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Regional Project Proposal for Plastics Management in Caribbean SIDS

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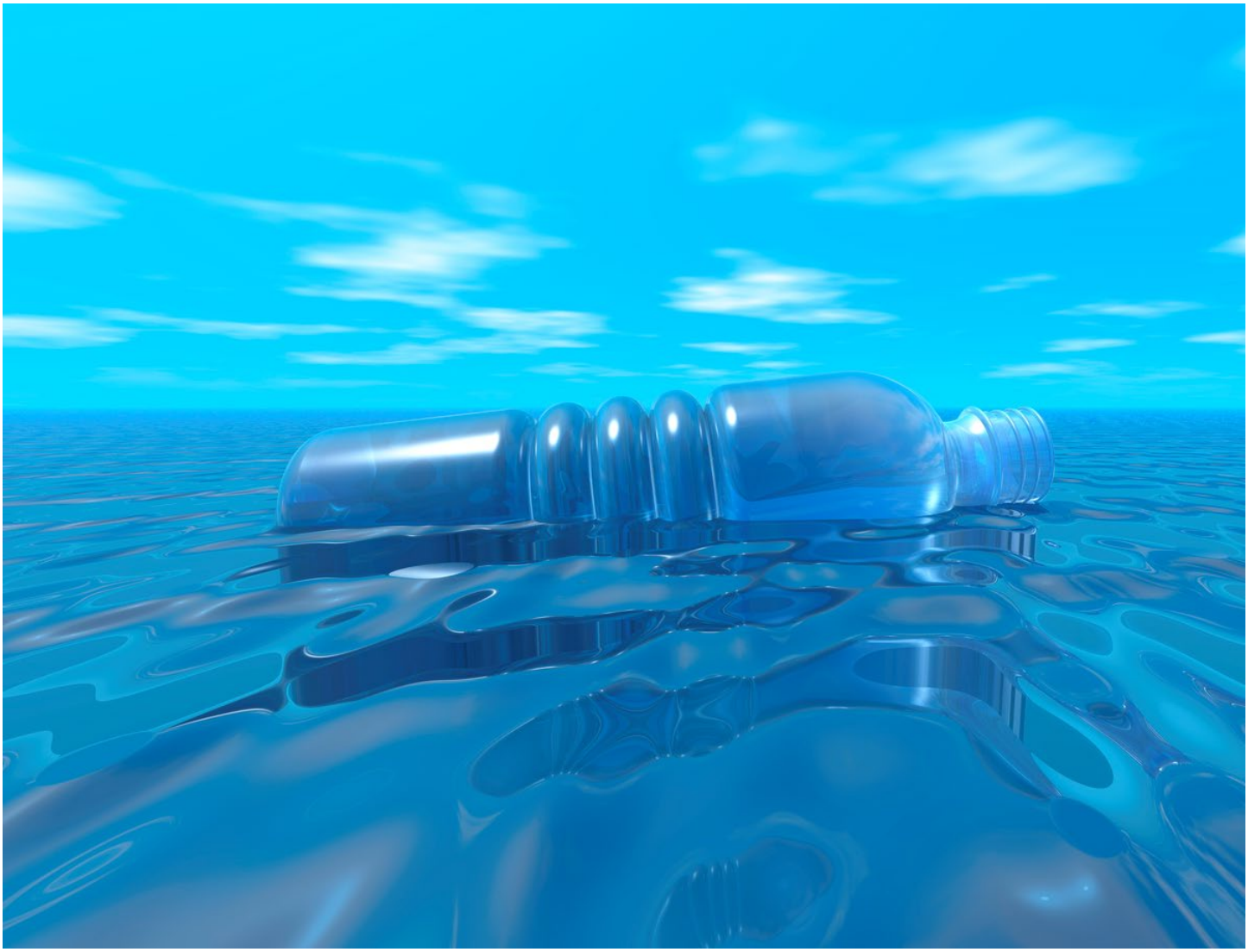

PLASTIC POLLUTION & MARINE LITTER MANAGEMENT IN CARIBBEAN STATES

Project Proposal

DAVID SIMMONS & ASSOCIATES

Contents

1.0 Project information		
1.1	Project Title Country/Countries of implementation Project duration	PLASTIC POLLUTION & MARINE LITTER MANAGEMENT IN CARIBBEAN STATES Guyana, Suriname, Saint Christopher and Nevis, British Virgin Islands, Trinidad and Tobago
1.2	Main implementing organisation	United Nations Environment Programme- Caribbean Environment Programme
1.3	Political Partners	• Government of the Co-operative Republic of Guyana • Government of the Republic of Suriname • Government of the Federation of Saint Christopher and Nevis • Government of the Virgin Islands • Government of the Republic of Trinidad and Tobago
1.4	Implementing Partners and Subcontractors	▪ The Caribbean Water and Wastewater Association (CWWA) https://cwwa.net/. CWWA is in the process of preparing a project to address plastic waste and marine litter. However, from this project's perspective, we should note that they have an extensive network of members throughout the Caribbean and the wider world, especially in North America. One of this project's proposed initiatives will be to fill a training gap (both short and long-term) in solid waste management, including programmes in waste recycling and monitoring and evaluation. ▪ UNITE Caribbean- Regional Waste Recycling and Shipping (develop pilot programmes to attract PPPs) https://unite-caribbean.com/en/project/replast-pilot-recycling-plastic-project-oecs-18. This is a two-year pilot waste recycling initiative the OECS (RePlast OECS) project, a two-year plastic recycling project currently being implemented by UNITE Caribbean Ltd. in Saint Lucia. It aims to set up an OECS-wide plastic waste collection and recycling system, starting with a pilot phase between Saint Lucia and Caribbean recycling plants, following a circular economy model. The project is a joint initiative by the Government, public operators, civil society and the private sector in Saint Lucia. ▪ Green VI - To demonstrate, facilitate and catalyse environmentally friendly systems through practical projects, education and innovation. https://greenvi.org/ ▪ PCI Media- Public Awareness inclusive of adequately funded public awareness programmes, community-level programmes, and educational programmes at schools. https://www.pcimedia.org/ In addition to the above, there is the possibility of liaising/partnering with regional donor agencies with a stated interest in initiating plastic waste management initiative. Preliminary conversations have been held with the Caribbean Development Bank (CDB) and the Inter-American Development Bank (IADB). ▪ CDB- ▪ Not currently involved in any projects other than Grenada. However, given their previous association with the OECS Solid

		and Ship-generated Waste Management project, they will be willing to discuss possible participation in a regional initiative. ▪ IADB ▪ Internally they are discussing recycling with a circular economy focus under the GEF ISLAND programme. ▪ Also working on a TC for Trinidad & Tobago focusing on the recycling of plastics and organic waste. Most likely, the approach will focus on pilot studies and an enabling institutional/ legal framework. ▪ Implementation of initiatives involving Waste characterisations studies. ▪ The Japanese government's "MARINE Initiative" provides support for capacity building related to waste management and infrastructure development in developing countries. ▪ Educational institution TBD. To develop and deliver training programmes (short and long-term) and undertake research on a plastics alternative.
1.5	Project Constellation	
2.0 Project Classification		
2.1	Thematic priority of the project	1) Reducing the production of waste, in particular plastic waste. 2) Creating efficient mechanisms for the collection of waste. 3) Identification of point sources of marine plastic litter. 4) Building capacity and improving systems in the partner countries. 5) Reducing the overall amount plastic or other litter entering the natural environment. 6) Preventing litter discharges that pose a threat to particularly ecologically valuable marine and coastal areas and/or to particularly endangered marine species. 7) Designing and implementing innovative recycling pilot projects in partner countries.
2.2	Project impact on marine litter	This project aims to develop a comprehensive regional marine litter plastic waste project that will contribute to the reduction in the generation of plastic pollution and litter entering the marine environment and promote a shift towards more closed loop management practices including recycling and reuse. This initiative also aims to provide a better understanding of the generation of plastic waste and will make recommendations for the undertaking of viable technical solutions to prevent marine litter and transition to more circular economy structures with improved waste collection and management systems. It will be supported by increased public awareness of the issues that lie at the heart of the plastic pollution problem while fostering changing habits and adopting best practices and lessons learned from previous marine litter and plastic waste projects.
2.3	Sustainable Development Goals	Marine litter and microplastics are directly addressed by SDG 14, but can also be cross-linked with other SDGs. These include: SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture and SDG 3: Ensure healthy lives and promote well-being for all at all ages- The oceans are major food sources for many people around the world, with some persons relying heavily on the fishing industry for sustenance on a daily basis. Marine pollution directly impacts the health of this vital food source. Additionally, microplastic particles are often found in the tissues of many nutritionally important marine species, which when ingested

		by humans can be toxic. Thus, reducing the volume of plastic litter entering the marine environment is a major step towards achieving both SDG 2 and 3. SDG 6: Ensure availability and sustainable management of water and sanitation for all- Plastic pollution also affects freshwater systems, which make up a major portion of the world's water supply. If these freshwater systems become degraded with litter and other pollutants, the quality and availability of fresh water for drinking and sanitation is negatively affected. Thus, by reducing the amount of pollutants including plastic which enter the environment, this vital resource can be protected. SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all- Marine plastics are often associated with high economic costs, since they must often be cleaned up to prevent further damage to activities such as fishing and tourism. Reducing the volume of marine litter therefore reduces the economic cost of these clean up activities. SDG 9: Build resilient infrastructure, promise inclusive and sustainable industrialisation and foster innovation and SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable- fast development in countries that do not have well developed waste management infrastructure can lead to a large amount of waste being mismanaged and degrading the environment. Improving waste management systems on land and promoting sustainable practices such as recycling reduces the volume of waste entering the environment and promotes sustainability. SDG 12: Ensure sustainable consumption and production patterns- SDG target 12.4 requires that the release of chemicals to air, water and soil must be significantly reduced. SDG target 12.5 is clear in stating that by 2030 overall waste generation must be significantly reduced through prevention, reduction, recycling and reuse. SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development- SDG 14.1 requires a significant reduction of marine debris by 2025. Changing consumer and industry attitudes and behaviours towards plastics, including the elimination of single-use plastic, moving towards a more circular economy model as well as adopting proper waste management on land and at sea are all critical for achieving this target.
2.4	Environmental and social safeguards	
3.0 Project description		
3.1	Structured brief description	This project aims to reduce the volume of harmful waste, particularly plastic litter, which enters the marine and terrestrial environment in the target countries by promoting sustainable practices and encouraging a shift toward a circular economy model. The project consists of five components, each with several outcomes which when implemented will contribute to the achievement of the overall project goal as well as achieve the development targets of the target countries.

4.0 Project Concept

4.1 Starting Situation and Challenges

4.1.1 Starting situation in the target region/ target countries

Guyana

The issue of waste management, particularly plastic waste, is currently engaging the new Guyanese Government's attention as a priority. At present, Guyana has only one engineered landfill, the Haags Bosch Landfill located in Region Four (Demerara-Mahaica), which was opened in 2011 with a designed capacity of 250 tonnes per day and an estimated lifespan of 25-28 years. Currently, the facility receives over 400 tonnes of waste per day, which is well in excess of the amount for which it was initially designed. There are also other smaller dumpsites located across the country, both legal and illegal. (Guyana Chronicle 2020)

Waste collection in Guyana is handled by the local democratic organisations (LDOs), such as the Neighbourhood Democratic Councils (NDCs). However, due to a lack of resources, there are many challenges with waste collection. As a result, the Ministry of Communities, formerly known as the Ministry of Local Government and Rural Development, has stepped in to oversee the project. (Guyana Chronicle 2020) Waste collected is transported via trucks to the Haags Bosch La
ndfill. Weighing of trucks is done to track the amount of waste being received. Still, there is no separation of waste at the landfill, and the last waste characterisation study was conducted in 2016.

A survey on Marine Plastic Litter in the Caribbean was conducted in 2020 by the Japan International Cooperation Agency and EX Research Institute Limited. The survey found that Guyana generates approximately 510 tonnes of waste per day, of which only 40% is collected for disposal. The survey also found that of all the waste generated, 14% are plastics. The rate at which plastic litter enters the marine environment was calculated to be 4.53 tonnes per kilometre of coastline per year. The total amount of plastic litter released in the ocean per year is estimated to be between 2,079 to 12,496 tonnes per year. Additionally, the amount of uncollected plastic litter was the highest of the surveyed countries. The total loss of plastic litter in the marine environment is close to the highest estimated values (JICA 2020).

In 2013, Guyana's Government approved a National Solid Waste Management Strategy (NSWMS) 2013-2024. It was supported by their Draft Solid Waste Management Bill (2014). The NSWMS was developed to provide the strategic direction needed for Guyana to implement best practices in waste collection, transportation and disposal, improving the waste management infrastructure, enforcing existing legislation and promoting waste- to- energy initiatives. As part of this strategy, in 2016, Guyana implemented a ban on importing Styrofoam products and plans to ban the importation and use of some single-use plastic items, such as food containers and utensils. Other measures include reducing the utilisation of plastic material, implementing a container-recycling project, and introducing a robust garden/community composting system. By the year 2024, the Ministry projects 40 per cent of all generated waste will be recycled, composted or otherwise utilised (Ministry of Communities 2020). Currently, recycling of plastics, aluminium and other materials is done by small private organisations collecting recyclable items for export.

Additionally, in 2019 the Ministry of Communities' Sanitation Unit and the Environmental Protection Agency (EPA) undertook a countrywide assessment of

the status of several regional and municipal landfills in nine of the country's ten administrative regions. Following this, a report was prepared, which included the Terms of Reference (TOR) for the procurement of a consultant to carry out a further Environment Impact Assessment (EIA) for the project. The new landfills are expected to be patterned after the Haags Bosch Landfill (Guyana Chronicle 2020).

Suriname

At present, the responsibility for waste management falls under the Chemicals and Waste Department of the Ministry of Spatial Planning and Environment and the Ministry of Public Works. The Chemicals and Waste Department is also responsible for ensuring the successful implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, to which Suriname assented to in 2011. The Ministry of Public Works is responsible for collecting waste from households and businesses in urban areas. This collection occurs twice weekly and is done by private companies contracted by the MPW and paid for by the Government. There is also a private dumpsite where residents can pay to dispose of large waste items such as old appliances and tires. In rural areas, the Ministry of Rural Development oversees waste disposal; however, this is sometimes difficult due to a lack of resources, resulting in a high prevalence of illegal dumping.

There is only one major landfill in Suriname with other smaller private and illegal sites used to dispose of waste. The main landfill at Ornamibo,15km south of Paramaribo, receives 80% of its waste. It is an open dumpsite and has been in existence for the past 20 years. The collected waste is brought to the site using trucks and dumped waste is covered with sand to prevent scavengers and vermin infestations. Estimates done in 2017 indicate that the landfill receives approximately 195,220 cubic meters of waste per year (General Bureau of Statistics 2018). A study was done to explore the possibility of converting the site to a sanitary landfill. However, there are not enough resources available for this project to move forward.

It is estimated that every inhabitant of Suriname produces 1kg of waste per day. The majority is household waste, followed by industrial and agricultural waste (General Bureau of Statistics, 2018). There is currently no solid waste management plan or policy that covers Suriname in its entirety. Additionally, the only piece of legislation that targets waste management for the country is the Draft Waste Act of 2007, which has not been passed by parliament. However, as part of a UNIDO project which began in 2017, an integrated solid waste management system (ISWM) for Greater Paramaribo was developed which included systems and procedures to segregate municipal waste streams into recoverable and recyclable materials from non-recyclables (UNIDO 2018).

Plastic waste is a major problem in Suriname. It is estimated that 30,000 tons of waste remain uncollected each year in Suriname, 11% of which are plastics. The total amount of plastic litter released into the ocean is calculated to be between 1,530 to 10,508 tonnes per year (JICA 2020). There is little recycling being done at present, with just a few private recyclers collecting materials for export. One such company is the Amazona Recycling Company (AmReCo), which collects plastic (PET, HDPE), cardboard, glass and paper. Some communities have large collection bins placed by these recycling companies to put their recyclables like plastic, aluminium cans, and other materials. Foundation Support Recycling Suriname (SuReSur), an organisation that works closely with AmReCo, placed 450 bins in strategic locations within all Suriname districts over the period 2015 to 2016 where persons can drop off recyclable materials. These bins are emptied

and the wate transported to recycling companies. In 2016 and 2017, this collected waste was exported to the Netherlands, China, Hong Kong and India (General Bureau of Statistics 2018). While there are awareness campaigns to encourage people to separate their waste at a household level and promote more recycling, the level of public awareness remains low and there are no incentives to promote recycling.

To tackle waste management, the Government of Suriname engaged consultants between 2017 and 2018 to design a Best Available Technologies and Best Environmental Practices (BAT-BEP) Solid Waste Demonstration Pilot Project in Paramaribo. The project, which is part of the Program for Sustainable Management of Persistent Organic Pollutants (POP) in the Caribbean region, aims to assist Suriname in developing and implementing state-of-the-art technologies for waste management, including a new sanitary landfill, and implementing regulatory changes that will support the maintenance of the waste infrastructures. The project also included the preparation of a Baseline Report, an Environmental and Social Impact Assessment, and a Management Plan for the sanitary landfill and related transfer stations (UNIDO 2017).

Unfortunately, due to resource constraints such as a lack of funding, projects such as these are often left unfinished or cannot be sustained in the long term since the necessary resources to implement the recommended actions may not be available or not be seen as an urgent matter.

Saint Kitts and Nevis

The Saint Christopher and Nevis Solid Waste Management Corporation was established under Section 3 of Saint Christopher and Nevis Solid Waste Management Corporation Act, 1996. Commonly referred to as the SWMC, the corporation is guided by the amended Solid Waste Management Act, 2009 (Saint Christopher and Nevis Solid Waste Management Corporation 2020). It has been estimated that the Federation produces 32,363 tons of solid waste per year or 1.67kg/capita/day of waste. This amount is much higher than the global average of 0.74kg/capita/day and an average of 0.99kg/capita/day for Latin America and the Caribbean. There is one main landfill on each island, the Saint Kitts Landfill is located North of Conaree Village and the Long Point Landfill in Nevis is located near Charlestown.

There is a lack of clear government policy on overall solid waste management. Additionally, the Government of St. Kitts and Nevis has limited data, statistics, analysis and reports on waste management, including the amount of waste generated, the nature and composition of the waste, and the flow of follow-up treatment. A comprehensive assessment of the waste management system has not been undertaken, and as such, a full picture of the current situation may not be fully understood.
Both islands have separate waste management corporations. These are statutory bodies with responsibility for solid waste removal on each island. The Saint Christopher and Nevis Solid Waste Management Corporation (SWMC) was established in 1996 and is guided by the amended Solid Waste Management Act, 2009. In 2002, the Nevis Solid Waste Management Authority was created as a statutory body of the Nevis Island Administration under the Ministry of Health. Landfilling is the method of solid waste disposal on both islands.

Waste accepted by SWMC includes residential and non-residential waste, construction site and building demolition waste, hazardous waste, special waste, abandoned vehicles, abandoned electronics, and abandoned lamps. Waste

separation not undertaken on a national level during collection and residential and non-residential waste is mixed in the same garbage bins, which are then disposed of by SWMC at the landfill site. For the most part, only large electronic equipment and vehicle waste are disposed of separately.

It is estimated that 23% of waste generated in SKN is plastic waste, which is approximately 20 tons per day. Of this, 3,675 tons is estimated to enter the marine environment each year (JICA 2020). To address the issue of plastic waste, in 2017 the SWMC introduced recycling bins which were placed in primary schools in Basseterre for residents and students to dispose of their waste according to the recycling system. However, due to the lack of education and awareness regarding the need for garbage separation, the separation bins have been degraded to ordinary garbage bins, making the initiative ineffective and highlighting the need for increased public awareness regarding recycling.

Additionally, local processing of recyclables is not undertaken. There is currently only one private recycling yard on the island of St. Kitts (Admiral's Enterprises) which recycles paper, plastic bottles, glass bottles, electronic equipment, motor oil and furniture. These efforts are not replicated on a national level and most of the populace is not covered. The initiative relies on environmentally conscious residents to separate their waste and bring it to be recycled. Recycling yards also work with several supermarkets, hotels, restaurants and schools to collect recyclable waste. In Nevis island, some volunteers have initiated the recycling of plastic bottles. These are regularly transported to Admiral's Enterprise for processing. All collected recyclables are sorted twice at the recycling yard, and the sorted recyclables are sold to overseas intermediaries. Currently, paper and plastic bottles are the major types of recyclables handled at private recycling yards.

British Virgin Islands

The BVI currently has no restrictions or regulations on the importation of plastic. As such, plastic bottles make up a large portion of waste from the islands. Much of the bottles are water bottles given the fact that pipe-borne water is hardly used for drinking. In the past, all the waste generated on the BVI was incinerated. However, the main incinerator was severely damaged by Hurricane Irma. To address the issue of waste management, the BVI government developed a Solid Waste Management Strategy and is also developing a Container Deposit Bill (GreenVI 2019).

To tackle the issue of plastic waste on the islands, the BVI government, in April 2019, signed a memorandum of understanding with a non-profit organisation, Green VI, to implement a territory-wide recycling system. The new initiative, called "We Recycle", plans to keep most of the waste on the island by partnering with local businesses and entrepreneurs that "upcycle" waste as a raw material input. During the COVID-19 pandemic, the 7R's Waste Management Strategy: Reform; Restrict; Reduce; Recycle; Reuse; Return and Rethink was launched by the Department of Waste Management, to reduce the amount of waste which needs to be removed from the island through local recycling and upcycling. To increase public education and awareness to the issue of plastic waste, the Green VI campaign also included the launch of an app which tells persons where they can take items for recycling, which items can be recycled and gives tips on how to Reduce, Reuse and Recycle (GreenVI 2019).

As part of the recycling effort, 51 recycling points were established on Tortola and Virgin Gorda to collect materials which are then diverted to recyclers locally.

These Test Recycling Centres will compile critical data on system vulnerabilities, best practices, and costs which will be shared with the Government to assist with the establishment of Recycling Centres on each main island. This is one of the measures outlined in the new Solid Waste Management Strategy developed by the BVI Government. From the collected waste, products such as plastic-based furniture and plastic bags are made. To date, the program has successfully contributed to the recycling of 4 million plastic bottles (GreenVI 2019).

Trinidad and Tobago

Trinidad and Tobago is a signatory to several international conventions regarding waste management and disposal including the Basel Convention on the Control of Transboundary Movements and Hazardous Wastes and their disposal, the Stockholm Convention on Persistent Organic Pollutants (POPs) and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. The Ministry of Planning and Development oversees the implementation of measures which ensure obligations under these conventions are being met. The Vision 2030 National Development Strategy for Trinidad and Tobago also addresses the need for improved waste management under theme 5, 'Placing the Environment at the centre of social and economic development' (MPD 2018). Additionally, in 2018, there was a Cabinet decision to ban the importation of finished Expanded Polystyrene (EPS) products. However, has not yet been enacted. It should also be noted that this ban still allows the material to manufacture these products to enter into the country.

The Integrated Solid Waste Management Policy (2013) governing waste management in Trinidad and Tobago falls under the purview of the Ministry of Public Utilities (MPU). A National Waste Recycling Policy was also developed in 2015 by the then Ministry of the Environment and Water Resources. The Solid Waste Management Company Limited (SWMCOL), a state enterprise with the MPU as its line Ministry, is responsible for the management of Trinidad and Tobago's main landfills and for the development of an engineered landfill. While national policies are applicable in both islands, in Tobago, the Tobago House of Assembly (THA) has additional policies by which it abides and it is singularly responsible for the management of solid waste in Tobago. The THA collects and transports municipal waste in Tobago to the Studley Park disposal site in Tobago.

It is estimated that 700,000 tonnes of municipal waste are produced in Trinidad and Tobago on an annual basis, or 1.5 kilograms per capita per day, most of which is disposed of in the country's three major landfills at Beetham, Forres Park and Guanapo. Many of these landfills are approaching their maximum capacity. Therefore, actions need to be taken to address the situation and remedy the current inefficient waste collection methods and disposal. In 2018, at a forum on approaches to Sustainable Integrated Waste and Chemicals Management in Trinidad and Tobago hosted by the Basel Convention Regional Centre (BCRC–Caribbean), the Minister of Planning and Development noted that the Government intended to close the main landfill sites and replace them with more efficient methods of waste disposal (MPD 2018).

In 2010, a Waste Characterization and CENTROID Study was conducted. The results showed that household waste comprised of organic material (27.15%), plastics (19.17%), paper (18.77%) and glass (10.15%). There is no separation of waste at the household level, leading to recyclable materials being co-mingled with other waste and dumped together in landfills (MPD 2018). Industrial, special and hazardous waste including waste oils, contaminated materials,

		chemicals, fluorescent light bulbs, used batteries and spent catalysts from the industrial sector are collected and disposed of by several private companies and by SWMCOL. These private companies all have different methods and standards for collecting, treatment and disposal of the waste they collect at a cost from various companies. SWMCOL also charges disposal rates for special waste, usually buried in a controlled environment (Jones 2016). As part of the drive to move away from landfill disposal of waste, a recycling project called iCARE was initiated by the Environmental Management Authority (EMA). This project collects recyclable materials such as glass, plastics, aluminium cans and Tetra-Pak containers which are sorted and bagged by individuals and dropped at various collection points throughout Trinidad to be shipped overseas for recycling. This initiative is ongoing. There are also several private recyclers which collect and export a variety of recyclable materials. SWMCOL also offers recycling services for plastic beverage containers as well as tires (MPD 2018). Tobago also has its own similar recycling programme which it initiated in early 2020; full operations commenced in October 2020. The EMA subsequently proposed a partnership which has been accepted. Accordingly, the programme is now being implemented with EMA as a full partner.
4.1.2	Project integration into strategies of the target country	<u>Guyana:</u> While Guyana has taken some steps toward improving their outdated and insufficient waste management systems, there is still much work to be done in the country regarding waste management, recycling and marine litter. This project will help achieve some of the objectives outlined in the NSWMS by providing technical and financial assistance to the government to undertake a waste characterisation study using a regionally approved methodology, developing monitoring guidelines, and a pilot recycling initiative in one of the regions. The undertaking of this exercise will also contribute to the successful implementation of the NSWMS. <u>Suriname:</u> Suriname lacks proper waste management practices as well as the resources to develop and implement them. There is little recycling being done at present, with just a few private recyclers collecting materials for export. One such company is the Amazona Recycling Company (AmReCo), which collects plastic (PET, HDPE), cardboard, glass and paper. Suriname is seeking financial assistance to undertake several projects, including a management plan for the sanitary landfill and a waste separation pilot project (UNIDO 2017). Their participation in this project will provide needed guidance, technical advice and financial support to enable improvements of the current waste management systems and lead to reductions of waste, including plastic litter entering the marine environment, as well as assist in implementing some of the specific recommendations which may have arisen out of previous studies. <u>Saint Kitts and Nevis:</u> It is over five years since Saint Kitts and Nevis has reviewed and updated its NSWMP. Like many other SIDS, the increase in use and uncontrolled plastic waste disposal has resulted in increased littering. The solid waste management sector and particularly the plastic recycling sector are examples of this since little action has been taken to recycle waste. There is also an urgent need for increased public education and greater awareness among decision-makers regarding why it is so important to recycle. Through involvement in this project, information, technical and financial resources will be provided to policymakers

		to improve the waste management situation, generate useful data and encourage greater environmental protection. Saint Kitts and Nevis has also submitted a cabinet paper to facilitate the ratification of the Protocol concerning Pollution from Land-Based Sources and Activities (LBS Protocol), which will assist in meeting their national obligations under the Protocol. <u>British Virgin Islands:</u> The BVI is in urgent need of assistance to address the issue of waste disposal on the islands, particularly the issue of the large volume of plastic waste, which is generated as a result of the widespread use of plastic water bottles. Participation in this project will lead to the development of solutions that will improve the waste management situation and reduce plastic waste. This will reduce the amount that enters the marine environment. Additionally, the plastic recycling initiative being carried out by Green VI can potentially be used as a model for other countries which they can implement to provide further economic contributions by upcycling plastics into products which can be re-sold, thus offsetting the cost of recycling. <u>Trinidad and Tobago:</u> Trinidad and Tobago is a unique country compared to the others selected. It already has a well-developed waste management sector on both the public and private levels. However, Trinidad and Tobago can still benefit from participation in this project since there is still a need for improvements, particularly in the public sector management of waste. The current system is inefficient, and despite several programmes designed at the collection of plastic bottles, it is still quite common to see drains and waterways littered with plastic bottles. Additionally, at this time, there are no provisions for programmes that embrace the circular economy concept even though the country manufactures a significant amount of the plastic bottles used locally.

5.0 Project Goals and Results		
5.1	Target group	Policymakers, private-sector businesses, manufacturing sector, members of the public
5.2	Impacts (long-term results)	• Institutional strengthening of national Waste Management Agencies • Move toward a circular economy concept with both public and private sector input for waste management • Reduction in the total amount of waste generated in each target country • Reduction of plastic waste entering the environment from each target country • Enhanced reporting and monitoring of waste streams at the national and regional levels • Increased public education and awareness on the issue of marine and terrestrial plastic pollution • Fostering greater environmental stewardship among all sectors
5.3	Outline of the results chain underlying the project proposal	

5.4 Outcome (overarching project goal) including indicators and **Outputs** (specific project goals) including indicators and work packages (activities)				
Project Component	Financing Type	Project Outcomes	Project Outputs	Indicators
Component 1: Integrated Solid Waste Management Policy, Strategy and Action Plans (National)	Technical Assistance	Outcome 1.1: Enhanced policy, legislative and institutional frameworks targeting marine litter/plastics reduction Outcome 1.2: Improved compliance with relevant regional and global pollution reduction and monitoring targets and commitments	Output 1.1.1: Review national solid waste management plans and policies and make changes as needed to promote improved waste management practices Output 1.1.2: Undertake initiatives to ensure that new policies and plans adequately address problems associated with plastic waste generation and management. Output 1.1.3: Review and updating of Legislative Framework inclusive of measures to address plastic waste and pollution (National level). Output 1.2.1: Development of a Regional Solid Waste Information Management System to promote better information sharing throughout the region. Output 1.2.2: Regularly collect and update data on waste and plastic material flows (including production, consumption, collection, and recycling/reuse). Output 1.2.3: Develop national databases and information systems for marine litter plastics management. Output 1.2.4: Improve national monitoring and assessment of marine litter and plastics sources and impacts,	Updated or new Solid Waste Management legislation in each target country which includes provisions for monitoring, verification and reporting.

			review and testing the Harmonized Marine Litter Monitoring Methodology developed with the OSPAR Commission's support.	
Component 2: Assessment of waste generation and reduction and establishing the basis of circular economy solutions.	Technical assistance	Outcome 2.1: Waste Characterization studies Outcome 2.2: Plastic waste audit Outcome 2.3: Identify alternatives for reducing the generation, collection and disposal of plastics (EPR) Outcome 2.4: Identify new forms of Waste to Energy methods appropriate for SIDS Outcome 2.5: Identify the economic and environmental effectiveness of alternatives to single-use plastics and Styrofoam	Output 2.1.1: Undertake waste characterization studies Output 2.2.1: Carry out hotspot analysis in each country Output 2.2.2: Brand audit Output 2.2.3: Beach and river audit Output 2.3.1: Research and identify alternative materials to reduce the amount of plastic waste generated Output 2.3.2: Explore alternative methods for the disposal of plastic waste Output 2.4.1: Conduct research on alternative uses for plastics e.g., Biofuels.	Three completed waste characterization studies over a three-year period. Beach and river plastic litter audit, brand audit and hotspot analysis.

Component 3: Waste Recycling and Management (Pilot Projects). Implementing circular economy solutions at selected demonstration sites	Technical Assistance	Outcome 3.1: Facilitate Plastics Reduction Measures at a local community and/or municipal scale in each participating country. Outcome 3.2: Facilitate Household separation, collection and recycling of plastic waste Outcome 3.3: Plan and implement recycling and compost initiatives Outcome 3.4: Encourage partnerships between the private sector, NGOs, Governments etc. with a strong focus on generating new livelihood opportunities from, upcycling etc. Outcome 3.5: Establish PPP Outcome 3.5: Stimulate entrepreneurial and small business enterprises in reuse, recycling and repurposing	Output 3.1.1: Market feasibility study Output 3.2.1 Pilot waste recycling projects designed	Design and launch of waste recycling and management pilot projects in each target country.
Component 4: Waste Management and Recycling Training initiatives		Outcome 4.1: Establish an Online Course in integrated Waste Management, including marine litter. Outcome 4.2: Establish targeted in-country training in integrated Waste Management, including marine litter.	Output 4.1.1: Come to an agreement with regional academic institutions to encourage research projects on waste recycling. Output 4.2.1: Develop and deliver targeted waste recycling courses.	Waste recycling and management courses integrated into regional tertiary programmes.

Component 5: Knowledge Management, Communication and Awareness	Technical Assistance	Outcome 5.1: To develop a regional public awareness campaign, with application and adaptation on the national level, which increases knowledge, shifts attitudes, and promotes positive behaviours that help reduce plastic consumption and increases public motivation to be more proactive about waste reduction.	Output 5.1.1: **Research and analysis:** Conduct situation analysis, media analysis, target audience analysis and research on knowledge, attitudes, and practices related to plastic waste, as well as the local context and social norms which the target audiences observe. This is critical to developing media products and identifying distribution channels that accommodate the distinctive preferences and access available to different audiences based on geography, income, culture and language. Outcome 5.1.2: Development of a communication guide/toolkit that can be used in the region (aligned messaging, themes, tone and approach) • **Design workshop**: Design and plan activities through a collaborative process involving key partners, businesses, and local representation. • **Digital media:** ○ Social media campaign: create and manage a social media campaign, with a designated hashtag and memorable tagline and visual identity, to reach target audiences through popular social platforms and planned activations. We will strategically disseminate all products created for this	Production and broadcast of public communications products over the course of the project lifespan.

			campaign on social platforms and use targeted paid ads to reach various audiences in the program countries. All partner organizations and beneficiaries would be made aware of the social media outputs and would be encouraged to widely share them to reach as many potential beneficiaries as possible.	
		<u>Outcome 5.2:</u> To engage with businesses through training and partnerships to promote sustainable business practices related to plastic consumption	<u>Output 5.2.1:</u> • **Coalition building:** Conduct outreach to relevant groups whose objectives align with this project, e.g. youth-led organizations, education organizations, business associations, advocacy groups, etc, and can support and participate in the campaign, thus increasing our reach. • **Private sector engagement:** o Engage businesses and tourism associations, encourage their participation in the campaign co-creation process o Host training programs (or co-host with a business association) for businesses on plastic waste reduction measures	

			○ Produce videos to highlight private sector success stories, targeting other businesses to step up their plastic reduction measures. This would be like a 'friendly competition' in which the best performers would get public recognition as their reward. • **Traditional media**: ○ Partner with popular radio shows to host entertaining, interactive shows that generate discussions about plastic waste and encourage less use and alternatives. ○ Produce and broadcast radio spots and PSAs: High volume of broadcasts of short spots creates a much higher chance of message recall, an important first step towards awareness and change in attitudes and behaviors. ○ Produce and broadcast television PSAs and feature programs • **Weekly "no plastic" day campaign:** Borrowing from the "no meat Mondays" idea, we would ask businesses and individuals to commit to "Plastic-free days" where no plastics are used. From that, we can develop PSAs that highlight how much plastic is used in a day and	

			what impact it makes to cut plastic consumption.
			
			• **Youth engagement and education:**
			  ○ Host a competition between schools for pounds of plastic waste collected, with special category of “best repurposing of plastic project”. Winning school gets a prize and public/media recognition.
			  ○ Produce and distribute comic books that capture key messages and invites students aged 7-11 to become invested in the issue. The comics will be accompanied by a facilitator’s guide that will support educators in utilizing the comics in a classroom setting. Additionally, we can develop a central character that appears in all the comic books and create a mascot from the character that visits schools and leads interactive activities with students.
			  ○ Develop plastic waste reduction lesson plans for teachers to include in curriculums for students ages 12-17 and distribute to schools.	

		Output 5.3: To inspire and scale up innovation in alternatives to plastics and re-purposing plastic waste for other uses.	• **Regional campaign:** The above activities can be part of a unified regional campaign. In addition to national activities, there can be a multi-country competition, with each country driving participation from its citizens, with national pride as a source of motivation. For example, the competition between schools for collection of plastic can become a competition between countries. Output 5.3.1: **Promote grassroots innovation:** Similar to UNEP's "Champions of the Earth" designation, the program can find the champions of the participating countries who have developed innovative or creative ways to replace plastic products or re-purpose plastic waste and raise awareness about these solutions and innovators through videos, radio programs, social and news media. Output 5.3.2: Build on the Clean Scene Campaign, ICC activities, engaging youth like CYEN and promoting citizen science.	

5.5 Description of work packages and activities

Activity	No of years	BVI	Guyana	Suriname	SKN	T&T	UN Env	Total
Policy and Legislative Review	1	25,000	45,000	45,000	25,000	50,000	75,000	265,000
Waste Characterisation	2	75,000	100,000	100,000	75,000	100,000	0	450,000
Waste Audits (Brand, Hspots, Beach & River) Research	3	60,000	75,000	75,000	60,000	100,000	75,000	445,000
Recycling Initiatives National Inititives, Small Grants (10)	2	100,000	175,000	150,000	125,000	200,000	265,000	1,015,000
Training (Regional)	3						300,000	300,000
Education Awareness & Knowledge Mgt (Regional)	3						225,000	225,000
Administration (UNEP)							216,000	216,000
Overheads							54,000	54,000
Sub-total		260,000	395,000	370,000	285,000	450,000	1,210,000	
Total								**2,970,000**

5.6 Technical, political and economic Risks				

6.0 Other Characteristics of the Project		
4.3.1	Visibility of the project	The project will include a public awareness and education component to ensure high visibility in the public domain and create better engagement with persons, highlighting how individual actions can be beneficial to achieving a reduction in waste produced and entering the environment.
4.3.2	Exit Strategy	
4.3.3	Gender Mainstreaming	The project will be conducted in a manner that takes gender considerations into account and efforts will be made to narrow gender inequalities, particularly in relation to climate sensitive activities and industries.
4.3.4	Co-benefits	

7.0 Interaction with international cooperation projects and other relevant aspects		
5.1		