

Policy Brief

(Input Paper)

Saint Kitts and Nevis

Prevention of Marine Litter in the Caribbean Sea



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Abbreviations

BoD	Board of Directors of the Solid Waste Management Corporation
CARICOM	Caribbean Community
EEZ	Exclusive Economic Zone
EPR	Extended Producer Responsibility
FAMRA	Fisheries, Aquaculture and Marine Resources Act
GCF	Green Climate Fund
GCFI	Gulf and Caribbean Fisheries Institute
GDP	Gross Domestic Product
GPML-Caribe	Global Partnership for Marine Litter – Caribbean
IUCN	International Union for Conservation of Nature
NCEPA	National Conservation and Environment Protection Act
NEMS	National Environmental Management Strategy
NSWMA	Nevis Solid Waste Management Authority
PWFI	Plastic Waste Free Island Initiative
SIDS	Small Developing Island States
SKN	St. Kitts and Nevis
SWMA	Solid Waste Management Act
SWMC	Solid Waste Management Corporation
SWMCA	Solid Waste Management Corporation Act
SWMRP	Solid Waste Management and Recycling Project
UN	United Nations
UNEP CEP	United Nations Environment Caribbean Program
XCD	East Caribbean Dollar

1 Background

Background to the country

The Federation of St. Kitts and Nevis (SKN) is a small developing twin-island state in the Caribbean Sea. Its unique geographical characteristics influence its development trajectory and resource management capabilities. Situated within the Leeward Island chain of the Lesser Antilles, SKN maritime jurisdiction covers more than 20,400 km². (Green Climate Fund, 2022; Saint Kitts and Nevis Diaspora Digest, 2024d)



Fig. 1 Map of Saint Kitts and Nevis.

The country's maritime domain is notable for its diverse ecosystems, with vibrant marine life, rich biodiversity and extensive marine resources (Diez et al., 2019; Saint Kitts and Nevis Diaspora Digest, 2024a). Coral reefs and seagrass beds, which are supported by the shallow continental shelf, are crucial for maintaining an ecological balance. (Green Climate Fund, 2022) The existing wetlands and mangroves are vital nursery areas for various species. The region is home to more than 450 species, of which more than 100 are classified as endangered or threatened, including corals, marine mammals, sea turtles and various fish species. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023) Nevertheless, these ecosystems are frequently subject to over-exploitation and inadequate protection, thereby posing significant challenges to the efforts to conserve them. (Diez et al., 2019)

The territorial expanse of SKN comprises a modest total land area of approximately 270 square kilometres on both islands (Island Planning Services, 2014), with St. Kitts having 167 kilometres of coastline and Nevis having 94 kilometres of coastline. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023) Its population of 46,758 inhabitants with a growth rate of 0.1% in 2023 (World Health Organization, 2024) settles primarily along coastal areas. Both islands demonstrate similar demographic distributions, with St. Kitts'

population concentrated around its capital Basseterre and suburban regions along coastal roads, and Nevis following a similar pattern around Charlestown and its coastal thoroughfare. (Green Climate Fund, 2022) The cultural affiliations of these communities to coastal resources are indicative of a profound maritime heritage. (Diez et al., 2019)

Even if its continental shelf is relatively small (742km²), SKNs Exclusive Economic Zone (EEZ) extends to over 10,200 km², offering considerable potential for the implementation of marine resource management and conservation initiatives. This disparity between terrestrial and marine territories underscores the nation's significant responsibility as a steward of marine resources, while also highlighting the importance of integrated coastal zone management and sustainable waste management practices (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023) .

The nation's economic landscape has undergone a significant transformation since 2005, pivoting from sugar production to a tourism-centric economy that now contributes 25-30% of the Gross Domestic Product (GDP) and serves as the primary employer (Green Climate Fund, 2022). This transition has precipitated substantial coastal development, encompassing hotels, yachting facilities, cruise ship terminals, and an array of tourist amenities.

While tourism remains the predominant economic activity, the economy is further diversified into agriculture, fisheries, and water health sectors, with considerable untapped potential in marine resources, including aquaculture, marine renewable energy, biotechnology, and oceanic invertebrate harvesting (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023).

It is important to recognize the interconnectedness between terrestrial and marine ecosystems, underscoring the necessity for a holistic approach to waste management that safeguards the health of these delicate environments. The island nation's long coastline, when considered in relation to its total land mass, in conjunction with the presence of sensitive marine habitats, stresses the need for comprehensive waste management solutions that can safeguard these vital ecosystems from the detrimental impacts of land-based sources of pollution.

Challenges in regard to Marine litter

St. Kitts and Nevis is confronted with considerable challenges in the management of marine litter, with profound ramifications for the environment, economy, and human health. The nation produces approximately 32,363 metric tons of waste per annum, equivalent to 1.67 kg per person per day, which is considerably higher than the Latin American and Caribbean average of 0.99 kg (St. Kitts & Nevis Information Service, 2022). Despite this high rate of waste generation, residents have limited access to recycling services, and the islands' landfill capacities are already strained. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023; St. Kitts & Nevis Information Service, 2022)

Plastic, despite comprising only 12% of the total solid waste generated, is characterized by its resistance to degradation and its capacity to account for up to 80% of oceanic litter. The issue is further exacerbated by substandard waste management systems, inadequate waste collection, and the discharge of untreated wastewater, which pose a direct threat to food security and tourism (Diez et al., 2019). In response, the region has committed to addressing solid waste, with a particular focus on plastics and single-use plastics. This commitment has led to the adoption of a Regional Solid Waste Action Plan by the CARICOM countries (Clayton et al., 2021). Nevertheless, challenges persist due to limited natural resources and vulnerability to natural disasters.

The islands' existing landfills are being outpaced by waste production, and the improper handling of industrial waste has further degraded ecosystems, including crucial mangrove areas that protect against climate change impacts. Although tourism is a major contributor to

GDP and employment, it exacerbates the waste challenge, highlighting the need for enhanced waste management to maintain the islands as attractive destinations for sustainable tourism.

a.) Economic consequences: Marine litter can impact fisheries and tourism, which are relevant to SKN economy.

The accumulation of waste in coastal and marine environments is exacerbated by the Caribbean's location within the Great Ocean Conveyor current, exposing it to marine debris transported by the North Atlantic sub-tropical gyre. This phenomenon has led to levels of debris that exceed domestic consumption patterns (Clayton et al., 2021).

The region's high reliance on tourism makes it particularly vulnerable to the consequences of marine pollution, because it can directly jeopardize the annual revenue generated by coastal tourism. Tourists are drawn to the Caribbean for its beauty, biodiversity, and rich marine ecosystems, which are now imperilled by marine litter originating both locally and from distant countries (Diez et al., 2019). This litter, comprising plastic bottles, single-use plastics, and abandoned fishing gear, accumulates disproportionately in Small Island Developing States (SIDS), such as St. Kitts and Nevis, where densities are estimated to be two to three times the global average (see Table 1) (Stöfen-O'Brien et al., 2022):

Table 1: Litter items found in coastal cleanups (selected countries) (Source: (Diez et al., 2019), p. 34)

Country	Km of Coasts surveyed	Litter Concentration (items/km)	Common litter items (items/km)					
			Plastic beverage bottles	Plastic bottle caps	Plastic grocery bags	Plastic lids	Straws/Stirrers	Foam food container
St. Kitts and Nevis	6	1050	394	135	5	47	20	30
Trinidad and Tobago	13	1636	351	151	25	25	31	44
Suriname	1	160	31	11	25	0	0	1
Guyana	4	3904	1086	448	50	79	200	84
Average Caribbean		2014	431	148	54	34	61	39
Average Global		573	65	34	22	17	17	15

The impact of coastal development, pollution, unsustainable fishing, storms, and coral bleaching on near-shore waters is a matter of particular concern. The biodiversity of fishing resources is threatened by overexploitation, habitat destruction, and pollution, all of which undermine the fishery sector's role in food security and as a source of employment and income. Land-based sources of pollution, such as untreated sewage, further exacerbate the stress on coral reefs and contribute to the degradation of the marine environment (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023).

b.) Environmental Impact: Marine litter, particularly plastics has devastating effects on marine life. Animals may ingest or become entangled in debris, leading to injury or death. This

disrupts marine ecosystems and can lead to the decline of certain species. Furthermore, plastic can leach harmful chemicals into the water, affecting marine organisms.

The absence of a centralized sewage system or treatment plan poses a significant risk of water contamination, affecting both the water table and downstream coastal waters. A small percentage of the population still uses pit latrines and the package sewage treatment plants in areas (Dransfeld, 2022) such as Frigate Bay are insufficient to curb the increased dumping of solid waste, particularly in St. Kitts. The expansion of human settlements has been identified as a key driver of ecosystem degradation and solid waste generation, with pollution from litter and dumping contaminating water resources (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023).

While 95% of households benefit from public solid waste collection and most businesses employ private collection systems, the improper lining and sealing of waste disposal sites on both islands results in the leaching of toxic materials into groundwater and ecosystems such as mangroves. This plastic pollution has a significant impact on the marine environment and coastal communities, adding to the waste management challenges faced by St. Kitts and Nevis and threatening livelihoods of the local population. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023)

c.) Human Health Risks: Additionally, it is important to mention that plastic pollution poses a risk to human health. After the micro and nano plastics are ingested by marine organisms, they enter the human food chain, where they can have adverse effects on human health. As Sharma and Chatterjee (2017) point out, by acting as vectors for hormone-mimicking chemicals, substances contained in plastics can interfere with hormonal balance, leading to adverse health effects such as reproductive issues and developmental problems in humans.

2 Policies, Important Actors and Initiatives

Policy Framework

In 2022, St. Kitts and Nevis articulated a **transformative vision of becoming a Sustainable Island State**, with the fundamental goal of ensuring the highest quality of life for both present and future generations. Within seven years, the main objectives towards sustainability are ought to be fulfilled by focusing on three target aspects

- Climate resilience
- Digital transformation
- Environmental stewardship



Figure 2 : Seven pillars for the transformation to a sustainable Island State (Source: Saint Kitts and Nevis Diaspora Digest (2024d))

Seven pillars have been defined including the aims to minimize pollution, carrying out education and awareness campaigns to promote sustainable standards, implementing a circular economy to become an “economy that produces zero waste through new recycling and landfill management. systems” (Saint Kitts and Nevis Diaspora Digest, 2024d).

Since then, several new laws and governmental acts have been implemented which will be described in more detail in the following.

The cornerstone of the nation's waste management legislation is the **Solid Waste Management Act (SWMA)** which is based on the Solid Waste Management Corporation Act (1996) (SWMCA) and has been revised in 2017 (SWMA, 2019/Revised Edition).

The SWMCA established two corporations responsible to manage the solid waste in St. Kitts and Nevis – one on each island:

- **The Solid Waste Management Corporation (SWMC) on St. Kitts and**
- **The Nevis Solid Waste Management Authority (NSWMA)**

Both were established and took on action in 1996. They are responsible to lead and monitor the collection and disposal of solid waste. Managed by a board of directors and funded through various sources, these organisations were tasked with conducting a waste inventory on each island. This inventory, which included assessing the volume, tonnage, and classification of collected waste, was to be completed within eight months following the enactment of the SWMA (2009) in 2011, with reviews scheduled every five years. They were further responsible to estimate the proportions of waste from each of the following sources: residual waste, waste generated by the tourism sector, industrial waste, commercial waste and other institutional waste that is not originated in the tourism sector.

With the aim to implement clear standards, procedures and requirements for waste handling including all life cycle stages of the waste (generation, handling, storage, treatment, transport and disposal) SWMC and NSWMA were made to define a comprehensive waste management strategy – to be revised publicly and reviewed after 5 years of its adoption. The National Waste Management Strategy needed to include the following aspects (amongst others):

- A summary of the inventory of national waste resources
- An assessment of past, present and future activities that have an impact on the quantity or type of waste generated.
- An assessment of national policies with an estimated impact on the volume or type of waste
- A disaster preparedness plan
- An implementation program, including standards, requirements and procedures for waste management and monitoring, an outline of the funding and cost recovery mechanism required to finance waste management activities, infrastructure development plans.
- An outline of the standards and measures needed to reduce, recycle, recover, reclaim and reuse waste.
- Identification of enforcement mechanisms, including economic instruments

The SWMA further defines liability and ownership of waste, prohibits the import of waste, establishes waste collection zones and implements licenses and waste haulage permits. License holders are allowed and responsible to collect waste in defined zones and can be held responsible in the case of a threat for safety, human health or the environment caused by negligent misconduct. It further defines requirements for waste handling and storage and defines fines and penalties for misconduct (including littering, unauthorized dumping and import of waste) ranging from 5,000 East Caribbean Dollars (XCD) (around 1.800€) up to 2,000,000 XCD (720.000€) and imprisonments from 6 months up to seven years. An exception is made for the disposal of household waste within the perimeter of the residential property, either by the owner, or by the tenant with the owner's permission, provided that no harm to human health, safety or the environment is caused.

The SWMA was supposed to be complemented by the **National Conservation and Environmental management Act (NCEMA)**, which failed to pass the National Assembly Chamber in June 2024. It was meant to replace the National Conservation and Environment Protection Act (NECPA), which has been in place since 1987. (St. Kitts & Nevis Information Service, 2024). The update is necessary to strengthen the legislative framework. (St. Kitts & Nevis Information Service, 2021) The NCEMA incorporates robust provisions for coast conservation and beach protection, establishes a comprehensive system of protected areas management to protect and strengthen the environment and biological diversity, and outlines amongst others needs for waste management and penalties for pollution offenses. (St. Kitts & Nevis Information Service, 2024) Its adoption is still pending.

The policy framework is supplemented by the **Fisheries, Aquaculture and Marine Resources Act (FAMRA)** (2009), which introduces comprehensive measures for marine protection. This Act explicitly prohibits pollution of fisheries waters and implements strict

regulations on fishing gear to prevent marine litter. It further establishes Marine Managed Areas (MMAs) and introduces detailed provisions for managing aquaculture waste. Notably, the Act promotes transboundary ecosystem protection, recognizing the interconnected nature of marine environments.

As part of the national transformation towards sustainability, the **Plastic Waste Reduction and Environmental Protection Act (PWREPA)** was announced in March 2024. (Observer News, 2024) It aims to reduce the amount of waste generated through the use of single use plastic items which contribute to a large share to the overall waste management and marine plastic pollution crisis. (Diez et al., 2019)

Applying a three-phase approach, various single use plastic items are about to be banned from import, production, sale and distribution by the end of 2025 (Product Compliance Institute, 2024). Starting from January 2025 the import of a first group of items is banned from importation to St. Kitts and Nevis, followed by a restriction to be sold and distributed from April 2025 on. Two additional sets of specific plastic items will follow in a similar manner (Observer News, 2024; Saint Kitts and Nevis Diaspora Digest, 2024c):

Table 1: Single-use plastic ban phases and timelines. Source: Observer News (2024) (Saint Kitts and Nevis Diaspora Digest, 2024c)

Phases	Banned Item/s	Ban of import of items	Ban on sale and distribution of item
Phase 1	T-Shirt Shopping Bags	December 31 st , 2024	March 31 st , 2025
Phase 2	Styrofoam Food Containers and Plastic Straws	April 30 th , 2025	July 31 st , 2025
Phase 3	Single-use Plastic Utensils, Plastic Cups, and Plastic Plates	August 31 st , 2025	November 30 th , 2025

Public Stakeholders

Department of Environment: central body for environmental oversight

As constituted in the SWMA, several Ministries and Authorities must send representatives to the **Board of Directors (BoD)** of the **Solid Waste Management Corporation (SWMC)**. These are the Ministry of Health, the Ministry of Finance, the Ministry responsible for the Environment, and the Saint Christopher Air and Sea Ports Authorities. The Chamber or Industry and Commerce, a worker's organization and the Solid Waste Management Corporation itself need to send one member, nominated by the Minister, to the Board of Directors.

Its Chairperson and the Vice-Chairperson are to be appointed by the Minister, whereas the role of the Secretary of the Board is to be taken by the General Manager of the Corporation. Within the responsibilities of the Board of Directors lies carrying out all operations defined by the SWMA, but it is allowed to delegate its responsibilities to any member or committee of the Board, if approved by the Minister. The BoD also is responsible to publish an annual report. **The Health Department** is responsible to ensure compliance of the solid waste management

with environmental and health standards, by monitoring the compliance of all permits and licenses granted by the SWMC.

Responsible for the waste management on St. Kitts is the **SWMC** corporation itself, whereas on Nevis, the **Nevis Solid Waste Management Authority** is carrying out the solid waste management activities.

Authorized officers are allowed and responsible to inspect the waste management facilities on both island and all ships and planes regarding their waste aboard. Such authorized officers are, as per definition in the SWMA, all police officers, officers of governmental agencies or public officers announced by the Minister.

Litter wardens are responsible to prevent and fine violations of the SWMA. Litter wardens are: Environmental Health Officers, all members of the St. Kitts and Nevis Police Forces, the general manager and the operations manager of the SWMC, all members of the Board of Directors of the SMWC. Additional litter wardens can be appointed by the Minister. They are responsible to report any observed act of littering or illegal dumping of waste, are granted to issue fines and official litter removal orders and to follow up with legal proceedings if the litter removal order is not obliged by the person or corporation addressed.

Two of the main executive public stakeholders in the operation of the waste management system are the SMWC in St. Kitts and the NSWMA in Nevis.

The Solid Waste Management Corporation of St. Kitts (SWMC) started its operation in 1996 but was formerly established only in July 2009. It is the pivotal institution in the waste management efforts on St. Kitts. Besides its responsibly to collect the household waste on the island (following a collection schedule), it is responsible for the operation of several landfills. In recent years, investments have been made to the waste management infrastructure, partnering with private companies to acquire collection vehicles and implement transfer stations to improve the efficiency of industrial and commercial waste collection. Together with the Government of Taiwan, the SWMC set up recycling collection points on the island to reduce the amount of recyclable waste going to the landfills. Additionally, it launched several awareness raising campaigns to educate and engage citizens and businesses to engage in waste minimizing and avoiding activities.

The main challenges faced by the SWMC, besides its ongoing fight against illegal dumping, are the lack of sufficient resources and the growth of the population paired with the need for investments to the waste management infrastructure. (Saint Kitts and Nevis Diaspora Digest, 2024a)

Operating in parallel to the SWMC on St. Kitts, the **Nevis Solid Waste Management Authority (NSWMA)** is responsible for the waste management on Nevis Island. Besides the management of several landfills on the island, it organizes the weekly scheduled collection of household and commercial waste from curb sides. By additionally offering the collection of bulky items that do not fit into the regular collection, it aims to minimize illegal dumping, which is – just as on St. Kitts – a remaining challenge on Nevis.

Recent key initiatives include separate collection of recyclable waste materials, in order to reduce the amount of waste going to the landfills and contributing to the development of a circular economy, and engagement in awareness raising campaigns. By organizing workshop, visiting schools and reaching out to inform communities, it aims to empower citizens of Nevis to take ownership of their role as protectors of nature, by increasing the recycling rate, reducing the usage of plastic especially for packaging and properly disposing the waste and stop illegal dumping.

Just as the SWMC, the NSWMA is engaging in partnerships and collaboration on the regional as well as international level, to foster knowledge exchange, the sharing of resources and to

get access to international funding to improve the existing infrastructure as SWMCAs main challenges include limited financial and technical resources and a change in consumer behaviour towards a grown usage of single use plastics. (Saint Kitts and Nevis Diaspora Digest, 2024b)

Finance Mechanisms

The operations of the SWMC are funded through a variety of funding mechanisms.

An **Environmental Levy** is implemented to serve as a primary funding source, supporting various waste management initiatives and marine litter prevention programs. It is imposed on each passenger departing St. Kitts and Nevis, collected by the local passenger handling agent or operating carrier and going to be paid to the SWMC.

The Environmental levy is complemented by a **haulage fee**, to be paid for waste transportation services, and a **tipping fee** due for waste disposal services. The revenue of both fees is to be paid to the SWMC, thereby directly supporting its waste management operations.

The system is reinforced by a comprehensive structure of **penalties and fines** for non-compliance with waste management regulations. A fixed penalty of 500 XED is due for any observed violation of the SWMC and will be complemented by an additional fine, which heights is dependent on the observed violation. The fines are defined in the SWMA and range from 5,000 XED up to 2,000,000 XED.

The financial framework is further strengthened by **government provisions** (e.g. inflation offset sum) and **grants**, including direct funding from the government and international assistance programs. Additionally, the SWMC is allowed to borrow funds required to ensure its operations.

Other Stakeholders (national, regional, international) and Initiatives

In Partnership with the Republic of China (Taiwan), the **St. Kitts Waste Management Recycling Project**, launched in June 2022, entered **phase two** in 2024. (Saint Kitts and Nevis Diaspora Digest, 2024c) In line with the Sustainable Island State Agenda, the aim of phase one is to reduce the amount of plastic and aluminum waste (plastic bottles, plastic caps, aluminum cans) ending up in landfills or being dumped illegally, by adding these items to the already existent paper recycling. (Saint Kitts and Nevis Diaspora Digest, 2024c) With the facilitation of recycling drop-off stations, which are regularly scheduled in specific locations in rural as well as urban areas, a total amount of 38,749lbs plastic waste was prevented from ending up in landfills but making its way to the recycling and packaging plant on Nevis island, which has been established and equipped with machinery in the cause of this project, in 2022. (Saint Kitts and Nevis Diaspora Digest, 2024a) In 2023 this amount was almost doubled (73,492lbs) as communities' engagement and commitment grew. (The Department of Environment St. Kitts and Nevis, 2024) The launch of phase 2 now adds paper recycling aiming to decrease the amount of various form of paper waste going to the landfills. Supported by a public awareness campaign, streamlining waste collection, the recycling rates in Saint Kitts and Nevis shall be increased over the next three years. (Green Climate Fund, 2022; Saint Kitts and Nevis Diaspora Digest, 2024c) This partnership until so far has proven to be a successful collaboration enhancing the nation's recycling infrastructure.

In 2024 the **second phase ("Closing the Caribbean Plastic Tap") of the Plastic Waste Free Island Initiative (PWFI)** kicked off in June. (International Union for Conservation of Nature, 2023) This project, implemented by the International Union for Conservation of Nature (IUCN) and funded by the Italian government, uses its findings from phase one and aims to minimize the amount of plastic waste produced and to prevent leakage in several SIDS in the Caribbean (Antigua and Barbuda, Grenada, St. Lucia, Saint Vincent, the Grenadines, and St.

Kitts and Nevis). Within 3 years, by developing and implementing community-based action programmes to establish and upgrade livelihood activities from the plastics recycling activities, by establishing innovation labs and by implementing a minimum of one measure to reduce non-recyclable polymers in each country, solutions for recyclable and nonrecyclable polymers shall be implemented, policies for plastic waste are ought to be advanced and the knowledge on the plastics footprint of each country to be improved. (International Union for Conservation of Nature, 2024)

The Government of SKN is, according to a report by the St. Kitts & Nevis Observer, advancing its plans to develop a state-of-the-art waste-to-energy gasification power generation plant. This initiative is part of the country's broader strategy to stabilize electricity costs and reduce environmental impacts associated with landfill use. By converting waste into energy, the plant aims to mitigate environmental damage and contribute to the nation's renewable energy goals, aligning with global sustainability efforts. (St Kitts & Nevis Observer, 2022)

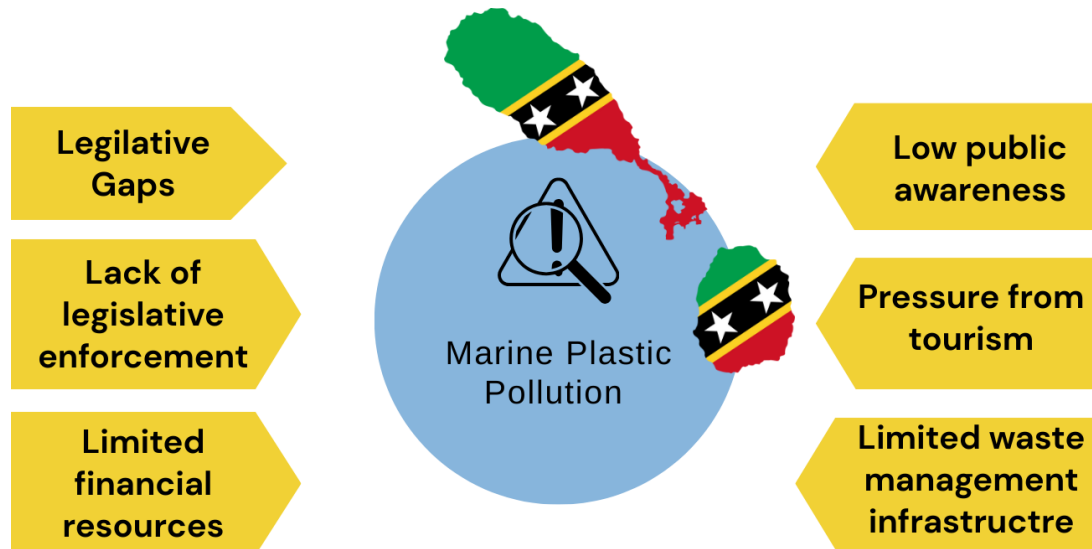
A pilot project in St. Mary's Biosphere Reserve aims to shape the national awareness programme on the national single-use plastic ban. The reserve is known for its cloud forests, mangroves and coral reefs making it a hotspot for biodiversity protection. In the first month of 2025 a survey will gather insights on citizens attitude towards plastics, and the perceived difficulties and gains accompanying the recently implemented ban on single-use plastic items. The results of the survey will be accompanied by national stakeholder workshops to discuss strategies and best practices that will support the transition from single-use plastics towards more sustainable solutions and potential new business opportunities. (St Kitts & Nevis Observer, 2025)

St. Kitts and Nevis actively participated in additional international and regional partnerships strengthening its waste management capacities and capabilities. The twin-island state joined in the **UN Environment Caribbean Program (UNEP CEP)**, the **Global Partnership for Marine Litter-Caribbean (GPML-Caribe)** and is part of the **Plastic Waste Free Island Initiative** of the International Union for Conservation of Nature (IUCN). (International Union for Conservation of Nature, 2024). It maintains relationships with the **Gulf and Caribbean Fisheries Institutes (GCIFI)** and is joined the **Protocol Concerning Pollution from land-based sources and Activities (LBS Protocol) to the Cartagena Convention**. (International Union for Conservation of Nature, 2024). St. Kitts and Nevis ratified various international agreements such as the Convention on Biological Diversity, the Paris Agreement and participates in regional initiatives as a member of the Caribbean Community (CARICOM) (Generis Global, 2024):

- Caribbean Regional Action Plan for Marine Litter (RAPMaLI)
- The Caribbean node of the Global Partnership on Marine Litter (GPML)
- Global Clean Seas Campaign & Caribbean CleanSeas Campaign

St Kitts and Nevis has not played an active role in the first three rounds of the Intergovernmental Negotiating Committee and its negotiations on the forthcoming **International Legally Binding Instrument on Plastic Pollution, including in the Marine Environment (INC)**, established by the United Nations Environment Programme (UNEP). (UN Environment Programme [UNEP], 2022, 2023a, 2023b) Although SKN is ambitious in tackling marine plastic pollution, it has not yet announced a national focal point and has only sent representatives since the fourth round of negotiations. Even if no consensus, specific targets or a timeline has been agreed upon yet, the INC's goal is to develop a legally binding international agreement on plastic pollution by addressing its entire life cycle and combining voluntary and binding measures. As one of the 39 members of the Alliance of Small Island States (AOSIS) SKN was represented by Samoa during the third and fourth rounds of negotiations. (UNEP, 2024a, 2024b)

3 Problem Analysis



In 2022, the GCF Country Programme for St. Kitts and Nevis Report identified several key issues as reasons for the insufficient implementation and enforcement of the waste management practices and marine pollution prevention measures in St. Kitts and Nevis (Green Climate Fund, 2022):

Legislative gaps: In terms of strategic planning, the nation grapples with a fundamental absence of a comprehensive waste management strategy aiming at minimization, reuse, recycling and recovery of waste. (Green Climate Fund, 2022) The absence of sector-specific waste management policies, especially for crucial economic sectors such as tourism and manufacturing, further compounds these challenges. This strategic void hampers the country's ability to implement effective, long-term solutions for waste management and marine litter prevention. (Green Climate Fund, 2022)

Lack of political will and legislative enforcement is one of the common challenges for an effective implementation and of waste management practices and plastic pollution prevention measures. (Diez et al., 2019) The existing rules and guidelines, while well-intentioned, suffer from insufficient enforcement mechanisms. The current system's heavy reliance on voluntary standards, particularly in the tourism and construction sectors, has proven inadequate for ensuring compliance. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023)

Moreover, substantial knowledge gaps persist regarding the sources and pathways of marine litter, making it difficult to implement targeted interventions. (Stöfen-O'Brien et al., 2022) This situation is exacerbated by the fragmented nature of enforcement efforts and the lack of coordinated action across different jurisdictions.

Limited resources: A lack of financial and human resources, limited technical and institutional capacities paired with insufficient knowledge on marine pollution issues and waste management strategies has proven to be major obstacles for the implementation and enforcement of effective policies. (Saint Kitts and Nevis Diaspora Digest, 2024a) A high staff turnover, lack of trained professionals on the national level and formal training procedures accelerating this problem even more. (Green Climate Fund, 2022)

Infrastructure limitations pose a severe constraint on effective waste management. The

country faces significant challenges due to inadequate waste disposal facilities and the conspicuous absence of a central sewage system. The limited availability of recycling services and facilities further restricts the nation's ability to process and manage waste effectively. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023) These infrastructure gaps not only impact the efficiency of waste management but also contribute to environmental degradation through improper waste disposal.

And even though **public private partnerships and cooperations** as well as the **participation in international projects and initiatives** could have helped to solve some of these points by providing funds and trained staff, the report identified the lack of those in 2022. (Diez et al., 2019; Green Climate Fund, 2022) Limited institutional coordination with the private sector has resulted in missed opportunities for collaborative solutions. (Green Climate Fund, 2022)

Limited community engagement and support: The limited engagement of civil society in waste management initiatives further reduces the effectiveness of existing programs. (Green Climate Fund, 2022) Environmental education and awareness represent another critical area requiring attention. (Dransfeld, 2022) The current system suffers from limited environmental awareness among the general population and insufficient public engagement and community support in waste reduction initiatives. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023) The lack of formal training procedures and comprehensive environmental education programs has resulted in a knowledge gap that affects both public participation and professional capacity in the waste management sector. A general lack of awareness on the harmful consequences of illegal dumping and community support exacerbates the problem even further. (Green Climate Fund, 2022)

Tourism: While being a crucial economic driver, **tourism** presents unique challenges to the waste management system. The industry generates significant amounts of waste, and the country's position as a net off-taker of waste from cruise ships places additional pressure on existing waste management infrastructure with the exhausted capacities in waste disposal sites and the limited spacial resources to expand these. (Saint Kitts and Nevis Diaspora Digest, 2024b) This situation creates a delicate balance between maintaining tourism growth and ensuring environmental sustainability, particularly in coastal areas where most tourist activities are concentrated. (Green Climate Fund, 2022)

The magnitude of these challenges is particularly concerning given St. Kitts and Nevis's position as a small island developing state with limited resources. (Saint Kitts and Nevis Diaspora Digest, 2024d) The country's efforts to address these issues are often fragmented and short-lived, failing to bring results with the urgency and intensity required. While global and regional policy frameworks offer comprehensive blueprints for addressing marine pollution, the translation of these frameworks into effective local action remains a significant challenge with the resources available. (Diez et al., 2019)

These challenges are interconnected and mutually reinforcing. For instance, the lack of comprehensive strategy affects infrastructure development, while limited institutional capacity hampers effective enforcement of existing regulations. The tourism sector's waste generation puts additional pressure on already strained infrastructure, and insufficient environmental education makes it difficult to implement new initiatives effectively.

With the launch of the country's ambition to become a sustainable island state by 2030, some of the challenges and gaps identified above are being addressed through new regulations, collaborations and initiatives. St Kitts and Nevis has started to take steps in the right direction, but the impact of their implementation will need to be seen and closely monitored in the coming years.

4 Recommendation

Since 2022, the country of St Kitts and Nevis has been actively working towards becoming a sustainable island nation and has begun to address some of the gaps and challenges identified above. The implementation of new regulations, such as the ban on single-use plastics, more active involvement in international partnerships and projects, participation in global development programmes and initiatives, and the implementation of awareness and education campaigns to build community support across the islands are all important steps in addressing the marine pollution crisis.

As these first steps in the right direction have just begun and their outcome remains to be seen, the following chapter summarizes complementary recommendations to be considered for future development in St Kitts and Nevis' fight against plastic pollution and for a strong and effective waste management system.

Infrastructure development must be prioritized as a foundational element of improvement. The establishment of an **integrated waste management system with modern treatment plants** is crucial for addressing current capacity limitations. This system should be complemented by a systematic rehabilitation of existing dumpsites to prevent further environmental degradation. Particular attention should be paid to developing proper sealing and lining for waste disposal sites to prevent leachate contamination of groundwater and marine environments. These infrastructure improvements should be planned and implemented in phases to ensure sustainable development and optimal resource utilization.

The policy framework requires significant enhancement to support these infrastructure developments. Strengthening monitoring and enforcement mechanisms is essential for ensuring compliance with environmental regulations. The implementation of an Extended Producer Responsibility (EPR) scheme would create a more sustainable approach to waste management by involving manufacturers in the entire lifecycle of their products. (Clayton et al., 2021) Additionally, the development of sector-specific waste management policies for tourism and manufacturing would address the unique challenges posed by these crucial economic sectors. (Green Climate Fund, 2022; Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023) These policy enhancements should be designed to complement existing legislation while addressing current gaps in enforcement and coverage.

Financial mechanisms need to be strengthened and diversified to support these initiatives. Increased funding for marine litter prevention initiatives should be secured through various sources, including government allocations, international grants, and further private sector partnerships. (Diez et al., 2019) The creation of viable business models for improved collection systems would ensure the sustainability of waste management operations. Implementation of financial incentives for recycling and innovation would encourage private sector participation and technological advancement in waste management. These financial mechanisms should be designed to be self-sustaining while providing adequate resources for ongoing operations and future improvements.

Stakeholder engagement must be enhanced at all levels to ensure successful implementation of these recommendations. Strengthening cooperation with the private sector would bring additional resources and expertise to waste management efforts. Enhanced international partnerships would provide access to best practices and additional funding sources. Improving coordination between central and local agencies would ensure more efficient implementation of waste management initiatives. This collaborative approach should be formalized through regular stakeholder meetings and clear communication channels. (Dransfeld, 2022; Green Climate Fund, 2022; Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023)

Capacity building represents a crucial component of long-term success. Strengthening human capacities of central and local authorities through comprehensive training programs would improve the effectiveness of waste management operations. The implementation of comprehensive environmental education programs would create a more informed and engaged public. Development of specialized training programs for waste management professionals would ensure the availability of qualified personnel for current and future needs. These capacity-building efforts should be ongoing and regularly updated to reflect new technologies and best practices. (Diez et al., 2019)

Community engagement and commitment: Public awareness and education must be prioritized to ensure community support and participation. As the St. Kitts Solid Waste Management Recycling Project shows, awareness raising campaigns prove to be an important corner stone to tackle the plastics pollution problem and foster environmental conservation by encouraging communities and citizens to become active participants in the necessary change. Addressing the whole society –visiting communities and schools, using educational aids, and in-depth engagement of all relevant stakeholders – and pairing those actions with social media campaigns, can help creating a culture of environmental responsibility. By integrating environmental education in school curricula, long-term awareness could be ensured for future generations and promoting community participation can foster a sense of ownership and responsibility for environmental protection, creating a culture of environmental responsibility in the Twin-island state. These educational efforts should be culturally sensitive and tailored to different audience segments. (The Department of Environment St. Kitts and Nevis, 2024; Dransfeld, 2022; Green Climate Fund, 2022; Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023)

The effectiveness of single-use plastic bans needs to be closely monitored. As studies have shown, the results can vary considerably depending on the circumstances of its implementation. (Diez et al., 2019) Despite the need for effective communication, alternatives to the banned plastic products need to be provided. Relevant stakeholders need to be actively consulted during the planning and implementation phases, and they need to be given sufficient lead time to cope with the regulation and its consequences. (Clayton et al., 2021) However, if implemented effectively, this new regulation can minimize the amount of single-use plastic items that end up as waste.

As seen above, addressing the issue of solid waste and plastic pollution requires a collaborative effort between government, civil society organizations, the public sector and the communities and citizens of St. Kitts and Nevis. (Ministry of Sustainable Development, Government of St. Kitts and Nevis, 2023) The implementation of these recommendations should follow a phased approach with clear milestones and performance indicators. Short-term actions should focus on addressing immediate infrastructure needs and strengthening existing programmes. Medium-term initiatives should emphasize policy improvement and capacity building. Long-term efforts should focus on sustaining improvements and adapting to emerging challenges.

Success will require sustained commitment from all stakeholders, adequate resource allocation, and regular monitoring and evaluation of progress. Regular assessment and adjustment of implementation strategies will ensure that efforts remain effective and responsive to changing conditions. By taking a comprehensive approach, St. Kitts and Nevis can build a more sustainable and effective waste management system while protecting its valuable marine resources for future generations.

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