



NRPB



Waste Authority Report

Think Green. Keep Sint Maarten Clean

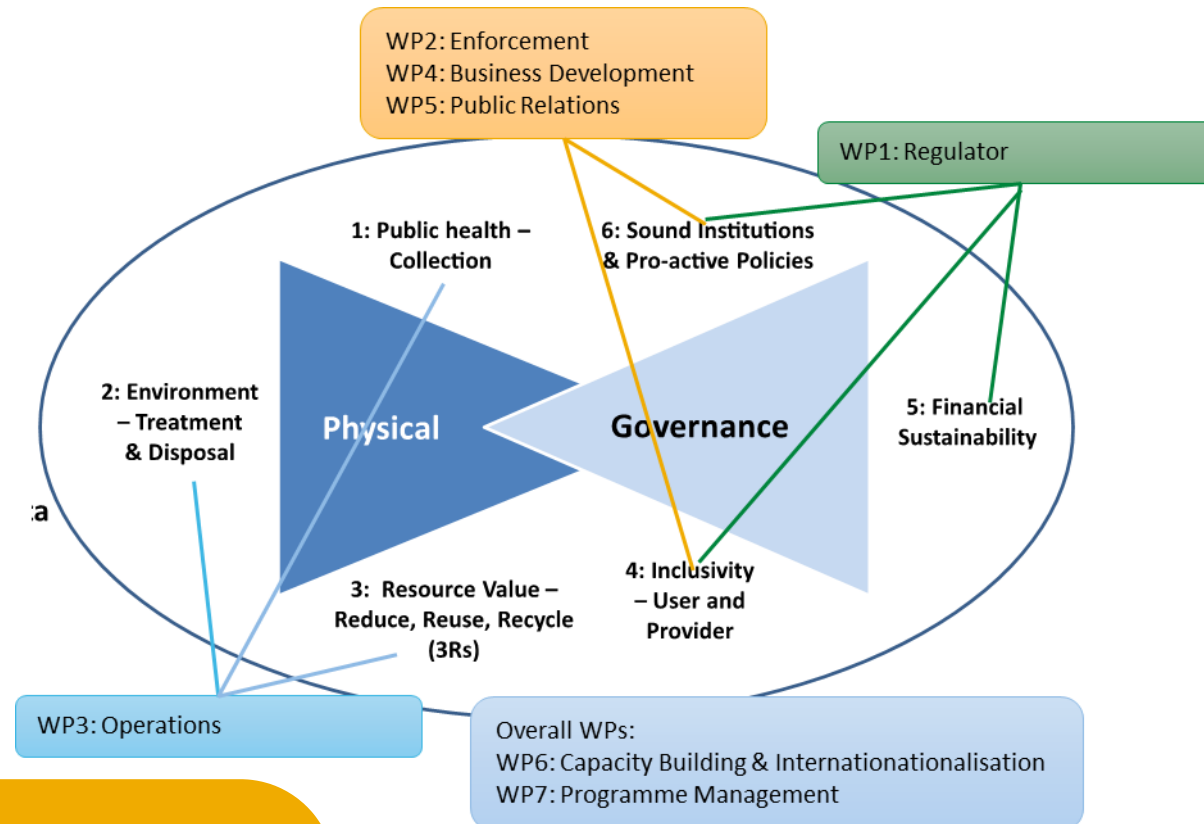
Project “Moving to Integrated Solid Waste Management on Sint Maarten (ISWM-SXM)”

100% Final Version
October 2023

1. The main objective of this report **is to sketch the contours of the Waste Authority in Sint Maarten** within its context. It identifies technical, institutional, financial, and legal high-priority issues. This report was prepared by the Interdepartmental Waste Cooperation Committee (IWCC), established by Ministerial Decree (2022/1373). Its task is to prepare everything needed to install the Waste Authority, excluding the selection of employees. The report is one of the deliverables of the “Moving to Integrated Solid Waste Management on Sint Maarten (ISWM-SXM)” project (2022-2023), which the Government runs with the support of VNG International and the NRPB. The Government of the Netherlands finances the project.
2. Addressing solid waste in Sint Maarten is **highly urgent**: doing nothing now is a risk to the health of the people, the planet, and the economy soon. As the drivers for change become more robust, the need to act increases to keep Sint Maarten an attractive place for inhabitants, businesses, and visitors. Sint Maarten is among the highest solid waste generators in the Caribbean region. However, both disposal sites on Pond Island have limited capacity, are not under control, and pose immediate risks to public health and the environment. Together with stakeholders, a shared SXM Vision for 2050 has been developed. This Vision includes the Ambition 2030 to have an **Integrated Sustainable Waste Management system (ISWM)** in place in Sint Maarten by 2030. ISWM is an integrated approach to both the ‘hard’ physical components (collection, treatment and disposal, resource value) and the ‘soft’ governance aspects (stakeholder inclusivity, financial sustainability, sound institutions, legislation, and policies). The ambition includes six practical goals for 2030: 100% collection, 100% landfill sites, 75% diversion, 90% awareness, 100% financial sound, and a professional and strong waste authority. Realizing this ISWM is one of the objectives in the National Development Vision, to promote sustainable economic recovery (focus area 1).
3. A **private entity, a Naamloze Venootschap (NV), (partly) owned by the government** is most suitable for managing Sint Maarten’s waste. A private entity will likely perform better because it can **run operations** independently, making attracting investments easier. The Waste Authority should be responsible for collecting and processing all waste, including recyclables and medical waste. The size of the Waste Authority will be relatively small as contracted parties provide most services. The goal is not to establish an authority per se, but to build and establish a robust and autonomous Waste Authority. The **shareholder and Board structure** is vital, existing corporate governance laws must be adhered to. A strong structure will require the right people to be appointed, investor participation, and professional management to be guaranteed, functioning independently from Government. Towards the Waste Authority, the Government has three types of direct relationships: as **the owner, the licensor/inspector, and the client**. Via these relations, the government can use control mechanisms like policy-based steering, control, supervision, and accountability.

4. A robust institutional design for integrated solid waste management is based on a cyclical model to improve services, such as the **Plan-Do-Check-Act circle**. In this circle, the strategic, tactical, and operational roles and tasks can be defined. A private Waste Authority calls for a potent **regulator and enforcer**. Strong regulations and enforcement depend on applicable laws, available capacity/staffing, expertise, and financial means. Good enforcement is a governmentwide issue. The current enforcement of environmental matters needs to be improved to become a strong stick towards users and prevent creating a toothless tiger. Specific bottlenecks for enforcement are (1) no urgency at the various ministries, which leads to low priority on substantial penalties, capacity, and training; (2) gaps and no clearly defined roles, especially about waste management.
5. **A robust financial framework** is critical to move toward integrated solid waste management. A framework that supports **continuous earmarked and independent revenues and enables future investments**. Doing the right thing, the move towards environmentally sound waste management will increase costs. The largest performance gaps which need financial support are the Waste Authority, Material Recovery and End-of-life. The Authority needs to control its own revenue streams to reduce the chances of financial distress. Revenues are preferably stable, efficient, fair, and give the right incentives. **All users need to contribute**: households, businesses, and visitors. The implementation process needs **strong communication** explaining why instruments are needed, what users get back in return, and what happens to the reduced costs in the current Government budget. There is a priority to institute a tipping fee, tourism/environmental fees, and a business fee, which will be dedicated to solid waste management. Any revenues collected before the Waste Authority has become operational, need to be dedicated either as seed funding for (the transition towards) the establishment of the Waste Authority.
6. This sector transformation requires more than one simple, straightforward change to legislation. **Policy and legislative development will be needed** throughout the coming years. However, little capacity is available at the Government of Sint Maarten. The current **Waste Ordinance** has been in place since 2013. An update of this legislation is prepared via the **LVVROMI**. Other needs are legislation on how medical waste is handled and a national solid waste management policy for Sint Maarten. Where the law sets the minimum standard, a **National Waste Plan** (or other policies) raises this minimum every five years. The preferred legal basis is a separate **Waste Authority Ordinance** which gives the organization a clean a clear start.

7. Establishing a Waste Authority (WA) is expected to be at least a five-year process. **There is substantial progress made** in the Waste Authority design in phases 1-2. **There is still progress to be made:** The activities in the subsequent three phases include seven working packages. The activities in each Working Package are needed to support an integrated Sustainable Waste Management system (ISWM) in place on Sint Maarten by 2030. **The work in the following phases needs commitment and funding** for which a proposal is being developed. The Interdepartmental Waste Cooperation Committee (IWCC) should be instructed and mandated for the transitioning towards integrated solid waste management until the establishment of an operational Waste Authority, including preparing and implementing detailed plans and tools to institute said fee structures.



- 1. Why should I bother about waste management?** Addressing solid waste in Sint Maarten is highly urgent: doing nothing now is a risk to the health of people, the planet, and the economy soon. Sint Maarten is among the highest solid waste generators in the Caribbean per capita (Aim Texas, 2019). Most of this waste ends up on the waste disposal site on Pond Island. Here, ineffective disposal causes health risks via air pollution and water and soil contamination. The waste disposal site has become an unwanted symbol of uncontrolled waste management, posing risks to residents, visitors, and businesses. The tourism industry, which is the main economic driver of Sint Maarten, will miss opportunities for growth without an integrated solid waste management system.
- 2. What are the revenues of moving towards a circular economy?** Imagine a future where Sint Maarten has transformed itself into a sustainable paradise. By 2050, we are striving to create a country bound by the laws of the circular economy - where waste is minimized, products are reused, and the value of raw materials is retained throughout a product's lifecycle. We want clear coastlines, clear beaches, and ponds thriving with plant and animal life. We want an island that is one of the cleanest and greenest in the Caribbean. Sint Maarten's transition towards a circular economy will create a healthier and greener environment and new job opportunities and business ventures.
- 3. Is a Waste Authority really needed?** The Waste Authority is a well-funded and professional organization with its own authority and budget responsible for solid waste management. The Waste Authority operates within a reliable and up-to-date legal and policy framework in line with international conventions and regulations. Proper enforcement of regulations is in place. The Authority manages, controls, and monitors all waste-related topics with a maximum effect based on minimum contributions from stakeholders. The Waste Authority is an autonomous entity, separate from the government, allowing it to operate in a stable environment and be accountable for its results. The organization is well prepared for natural disasters and implements 'hurricane-proof' policies and procedures. The Waste Authority ensures adequate and beneficial cooperation with the French side and other Caribbean Islands. A level playing field is arranged and maintained with the French side to avoid waste trafficking.
- 4. Why hasn't this problem been solved yet?** The government of Sint Maarten (govSXM) is aware of the challenges of solid waste management. In the past, for example, plans for waste-to-energy have been developed. In 2018, the govSXM outlined a strategy for integrated solid waste management. However, no simple, straightforward solution is available that addresses all issues at once. Integrated Sustainable Waste Management demands an integrated approach to both the 'hard' physical components (collection, waste processing, and resource value) and the 'soft' governance aspects (inclusion of stakeholders, financials, institutions, and policies). Building a solid ISWM system needs the right resources and is not done overnight.

- 5. Will this project bring the needed change and solve all waste problems?** The government of Sint Maarten (govSXM) works with solid international partners to improve the waste situation. The Government of Sint Maarten entered into a Grant Agreement with the World Bank, financed by the Government of the Netherlands, for the Emergency Debris Management Project (EDMP). The main project objectives are to collect and process debris caused by hurricanes and improve the management of solid waste disposal sites. The Integrated Sustainable Waste Management project uses the capacity of VNG International and NRPB. These projects will work with stakeholders to design practical and sustainable solutions for waste management, such as improved management of the landfill disposal site. However, the solutions will not be realized tomorrow.
- 6. What will I need to pay (more)?** Waste management is a service, just like water and energy. Now, the level of waste management is below what is needed and is financed from general taxes in Sint Maarten. The fairest way to distribute costs is the polluter-pays principle, where you know what you pay for. Costs will increase to improve the quality of waste management services and improve health, the environment, and the economy. On the other hand, the costs of environmental and economic damage will decrease. The increased polluter costs should be fairly distributed, where the largest polluters pay the most, all users are actually paying, and affordability for low-income people is recognized and supported. This requires a strong financial framework, payment collection, and proper enforcement. In most Caribbean countries, a type of a polluter pay system is already in place.
- 7. What happens if my neighbor is not paying or when businesses are dumping waste illegally?** The government is struggling with enforcement due to the limited availability of capacity. The current enforcement of environmental matters needs to be improved. Therefore, during the next phases, one of the activities is to set up and implement a proper structure for enforcement to ensure compliance and enforcement.
- 8. Once a Waste Authority has been realized, what has this changed for us as? Users** (citizens, businesses, and visitors) will actively participate and enjoy better services. **Decision makers** (Ministers) can better guide and control, provide improved services, and are less bothered with daily operations. **Employees** (government and authority employees) can focus on their tasks, build their capacity, and increase their impact. **Contractors** (collectors, service providers) can operate professionally and focus on their services.

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Chapter One: Introduction

Here, we introduce why a waste authority on Sint Maarten is needed. Next, we will explain this report's objectives, scope, and approach.

1.1 Background

1.2 Objectives and Scope

1.3 Approach



Pond Island including the landfills from above. Feb. 2022 (source: VROMI)

1.1 Background – Why?

Addressing solid waste in Sint Maarten is highly urgent: doing nothing now is a risk to the health of people, the planet, and the economy soon. As the drivers for change become more robust, the need to act increases to keep Sint Maarten an attractive place for inhabitants, businesses, and visitors.

Drivers for change

Population growth

Tourism growth

Public Opinion: No pollution

International Treaties

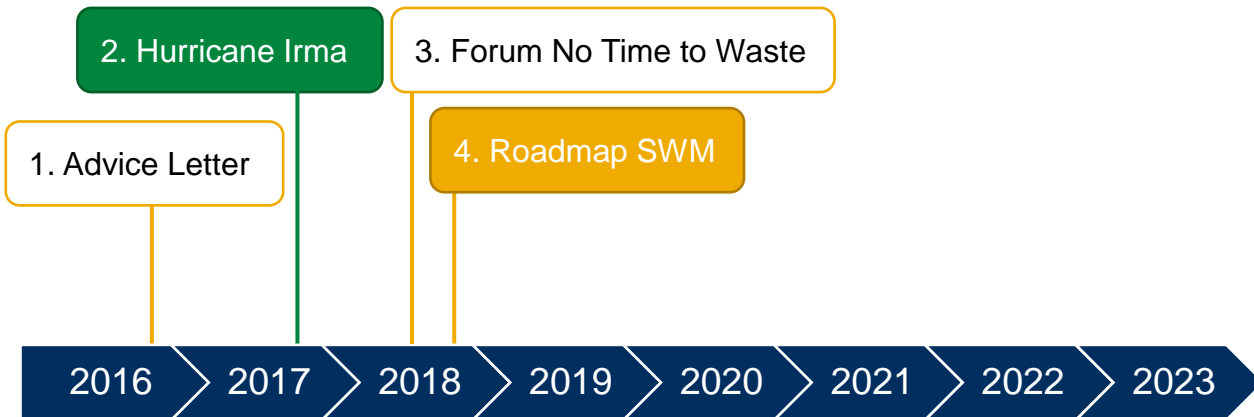
Businesses: CSR, ESG

Need to Act



1.1 Background

The government of Sint Maarten (govSXM) is aware of the challenges of solid waste management. In 2018, the govSXM outlined a strategy for integrated solid waste management. An essential pillar of this strategy is the setup of a Waste Authority.



1. The Sociaal Economische Raad (SER) wrote a **Letter of Advice** to offer solutions concerning the Pond Island Landfill (21-12-2016). The first recommendation is to adopt an **integrated solid waste management system**.
2. **Hurricane Irma** hit the island, destroying over 90% of its main infrastructures (6-9-2017). Irma produced a significant amount of debris in private and public areas to be handled.
3. The Ministry of VROMI organized a **forum called “No Time to Waste”** (31-5-2018). Speakers are VROMI, World Bank, Office of public prosecutor SXM, SPPS consultants, and SOAB. SPPS presents the results of their quick scan; one of the conclusions is that **consistent governance** is essential: establish a waste authority. Also, SOAB argues for establishing a Waste Authority and implementing a Waste Fee to contribute to waste management costs.
4. The **Council of Ministers** approves the **Road Map Waste Management** as a vision and guide for the way forward with waste management in Sint Maarten (14-11-2018). An essential pillar of this strategy is the **setup of a Waste Authority**.

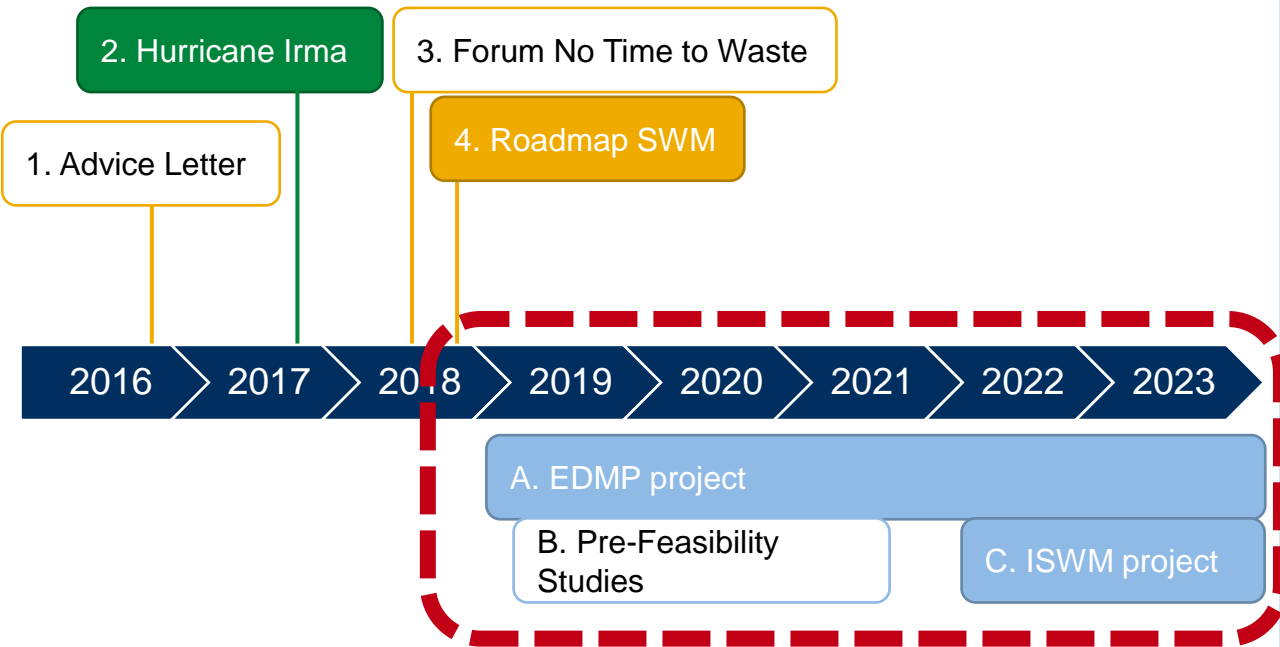
1: [Letter of Advice better waste management for Sint Maarten – Social Economic Council – Sint Maarten \(ser.sx\)](https://www.sintmaartengov.org/Policy%20and%20Reports/Summary%20VROMI%20Waste%20Forum%20No%20time%20to%20Waste.pdf)

2: <https://www.sintmaartengov.org/Policy%20and%20Reports/Summary%20VROMI%20Waste%20Forum%20No%20time%20to%20Waste.pdf>

3: “Approved Advice waste management by minister VROMI”, 14-11-2018

1.1 Background

The GovSXM embarked on a large-scale recovery and reconstruction program in 2018. The EDPM project addresses debris, facility management, and resettlement. The ISWM project, which this report is part of, strengthens the institutional framework.



- A. December 2018, the Government of Sint Maarten entered into a Grant Agreement with the World Bank, financed by the Government of the Netherlands, for the **Emergency Debris Management Project (EDMP)**. The main project objectives are to collect and process **debris caused by hurricanes, improve the management of the solid waste disposal sites**, and search for future waste management solutions for Sint Maarten (2019-present). EDMP includes disposal site improvements, the removal of shipwrecks and metal wrecks (such as vehicles), and the TDSR. In addition, the project plans to relocate the community adjacent to the disposal site by implementing a RAP to mitigate risks to health and safety during disposal site improvements. In March 2021, the Government of Sint Maarten endorsed a roadmap for EDMP. This roadmap focuses on completing critical safeguards instruments for EDMP and proposed timelines for the Government of Sint Maarten to identify and commit to implementing key waste sector reforms. Realizing these reforms is a condition to unlock the Trust Fund’s US\$ 30M improving the waste disposal site and operations.
- B. The World Bank performs **pre-feasibility studies** toward establishing an integrated solid waste management system and landfill upgrade and extension (2019-2020, by AIM Texas Trading).
- C. The “**Moving to Integrated Solid Waste Management on Sint Maarten (ISWM-SXM)**” project aims to strengthen the institutional framework of solid waste management in Sint Maarten (2022-2023). Realizing a waste authority, a solid financial structure, a robust legal basis, and good communications are needed **to begin to address issues in the current situation, continuously evolve to provide an acceptable level of service, and unlock future investments** in Sint Maarten’s waste management infrastructure by the World Bank and other potential investors. The Government of the Netherlands finances the project.

1: <https://nrpbsxm.org/edmp/>

2: AIM Texas Trading. “Short Term Plan, Pre-feasibility Studies for MSW Landfill Upgrading & Extension and Integrated Solid Waste Management Facility (ISWMF), 17-2-2020

3: AIM Texas Trading. “Country Solid Waste Management Sector Assessment (CSWMSA)”, 11-2020

1.1 Background

The reforms that the Government of Sint Maarten wishes to implement in 2022 – 2024 focus on governance: institutional, financial, legal, and communications. Completing these reforms are pre-conditions for proper policy implementation, unlocking subsidies and investments, and project realization.

1. Governance

Institutional

Financial

Legal

Communications

2. Physical

Policy

Investment

Realization

Institutional: The Government of Sint Maarten envisions an autonomous body responsible for waste management, including policy recommendations and contract -, financial - and environmental management.

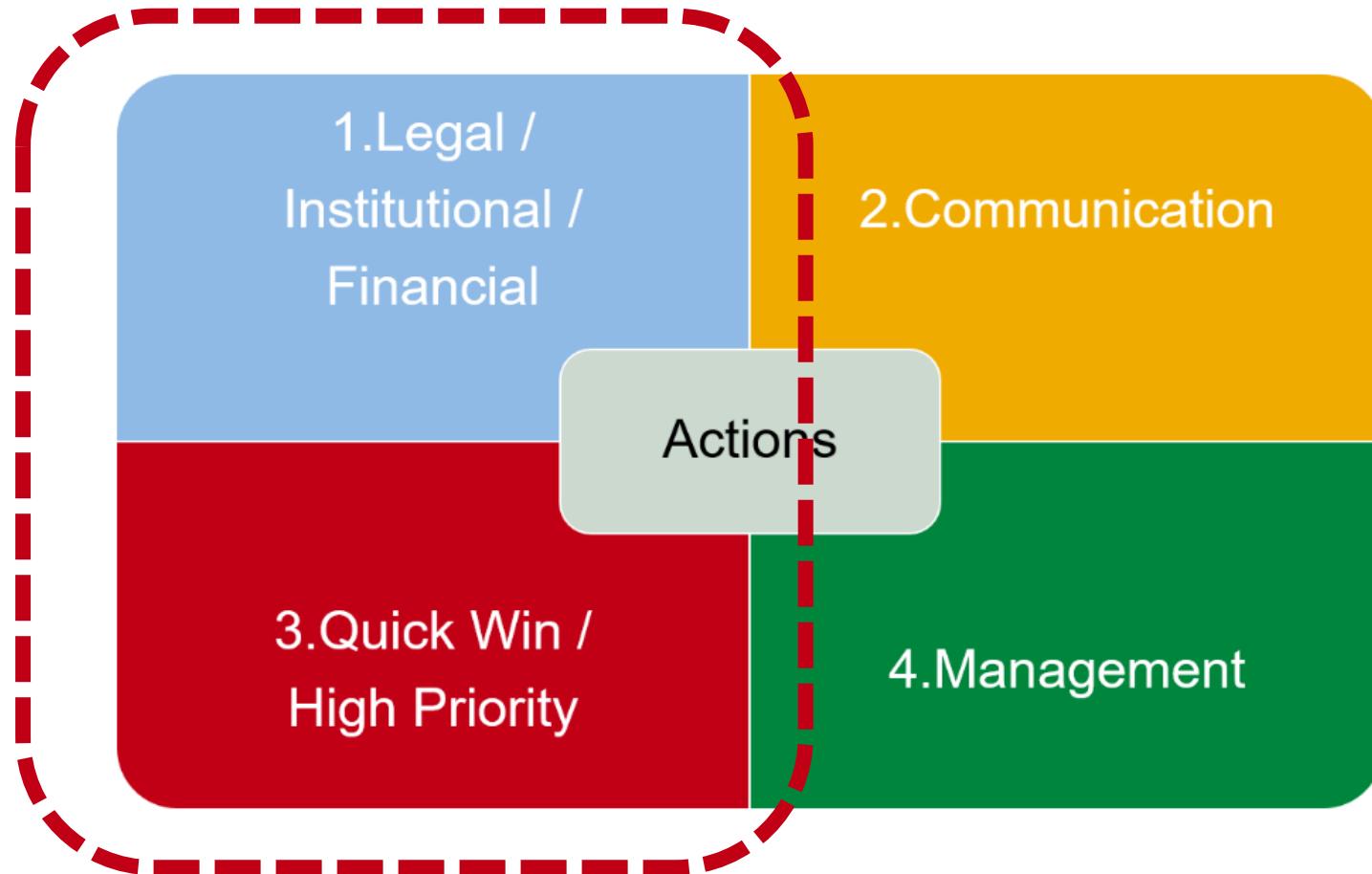
Financial: The introduction of environmentally sound waste management practices will increase the current cost of waste management. Both capital investments and operations require funding supported by a strong financial framework to which everybody contributes.

Legal: The existing waste laws need to be updated. The prepared updated LVVROMI Ordinance will need to progress toward decision-making. Additionally, a new legal framework is necessary for the Authority.

Communications: Moving towards an integrated solid waste system requires everyone in Sint Maarten to contribute: inhabitants, visitors, businesses, CSOs, government, and others. A strategic communications framework will be developed to introduce reforms, involve stakeholders, and raise public awareness.

1.2 Objectives and Scope

The main objective of this report is to sketch the contours of the Waste Authority in Sint Maarten. It includes institutional, financial, and legal issues and recommendations. Also, high-priority issues are identified. Communication and management, which are also activities within the ISWM project, are outside the scope of this report.



1.2 Project Organization

This report was prepared by the Interdepartmental Waste Cooperation Committee (IWCC), established by Ministerial Decree (2022/1373). Its task is to prepare everything needed to install the Waste Authority, excluding the selection of employees and consists of the Project Oversight Committee (POC), Technical Working Group (TWG) and Communication Working Group.

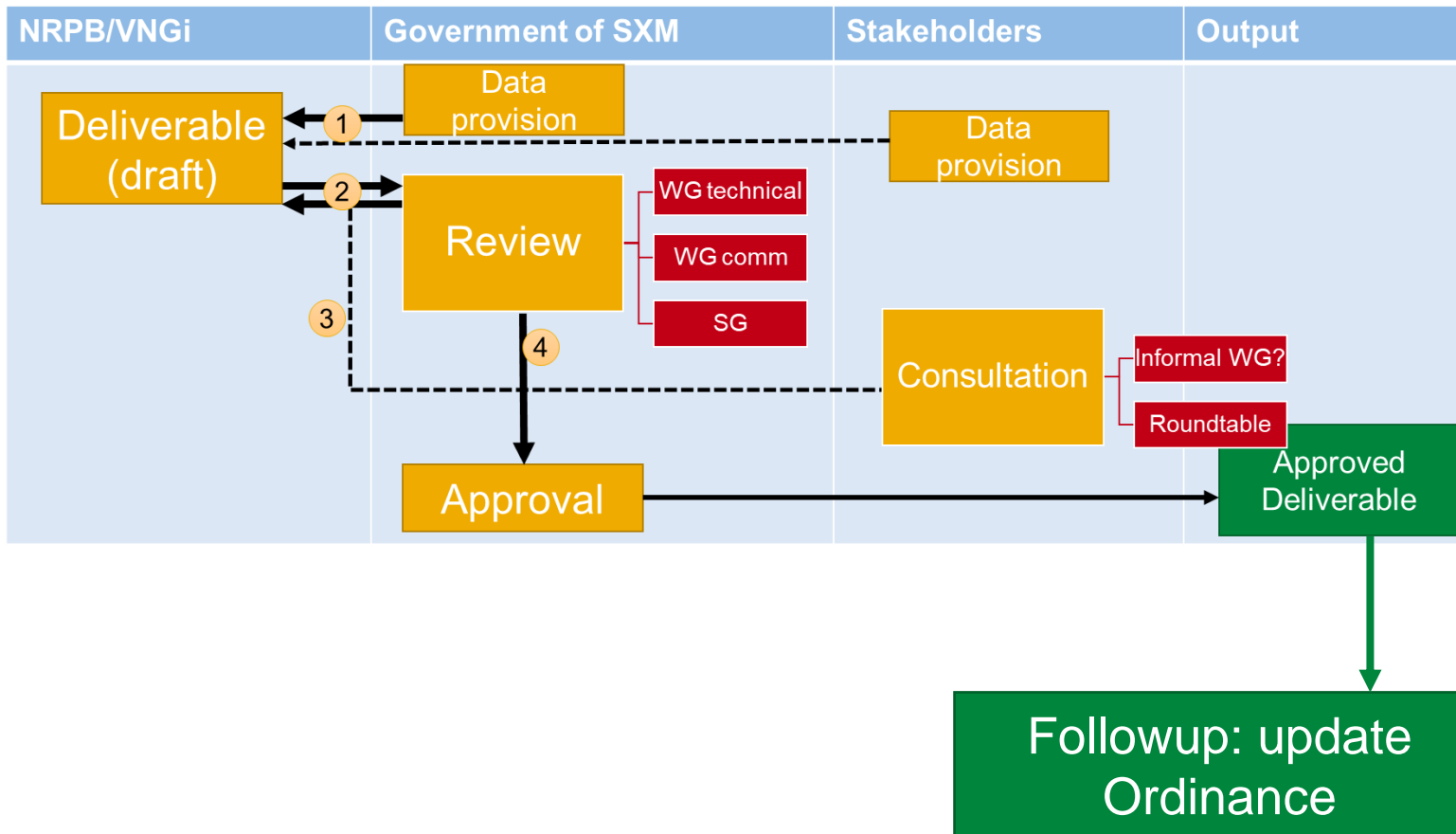


Artikel 3

1. De interdepartementale samenwerkingscommissie afval heeft tot taak:
 - a. alle noodzakelijke voorbereidingshandelingen te treffen voor de feitelijke instelling en oprichting van een Autoriteit voor integraal afvalbeheer, met uitzondering van de werving en selectie van de kandidaat-directeur en kandidaat-medewerkers van de Autoriteit voor integraal afvalbeheer;
 - b. het coördineren van activiteiten van de ministerraad, de betreffende ministeries of daaronder ressorterende organisatieonderdelen die gericht zijn op het ontwikkelen en aanpassen van wet- en regelgeving, alsmede uitvoeringsbeleid voor integraal afvalbeheer op Sint Maarten, alsmede de externe communicatie ten behoeve van integraal afvalbeheer op Sint Maarten;
 - c. het ondersteunen van de ministerraad, de betreffende ministeries of daaronder ressorterende organisatieonderdelen bij activiteiten die gericht zijn op het ontwikkelen en aanpassen van wet- en regelgeving, alsmede uitvoeringsbeleid voor integraal afvalbeheer op Sint Maarten, alsmede de externe communicatie voor integraal afvalbeheer op Sint Maarten.

1.3 Approach

The deliverables in this project are produced according to a structured review process.



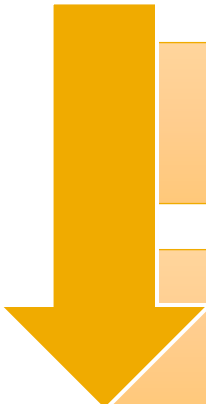
Explaining the Review Process:

- Examples of deliverables are the Ministerial Decree, (chapters of) the Waste Authority Report, the SXM Vision, and Strategic Communication Framework.
- Based on the data provided by the GovSXM and other stakeholders, **NRPB/VNGi produces a first draft of the deliverable** (step 1).
- Deliverables are **reviewed by the relevant structure(s) within the GovSXM** (step 2). Production of the deliverable and its review is an **interactive and fluid process** that can be more than one round.
- Selected deliverables will be reviewed by external stakeholders (step 3). The SXM Vision has been consulted in a stakeholder meeting (January 2023). The Strategic Communication Campaign will be developed with selected communication partners. A draft of this Waste Authority Report has been **reviewed by the SER and SOAB**.
- The **GovSXM is responsible for approving deliverables** (step 4).

1.3 Approach

Our approach is first to understand and then design the solutions. Chapters 1-3 introduce the background, the waste value chain, and the principles. Chapters 4-6 start with understanding the specific issue. Based on the understanding, the solutions are designed.

1. Understanding



Chapter One – Introduction
Chapter Two – Value Chain Analysis
Chapter Three - Principles

Chapter Four – Waste Authority
Chapter Five – Financial Framework Design
Chapter Six - Legal

2. Solution Design

Chapter Two: Value Chain Analysis

In this Chapter, we will describe the current situation of the waste value chain in Sint Maarten. Next, we will identify the technical high-priority issues that must be addressed.

2.1 Current Situation

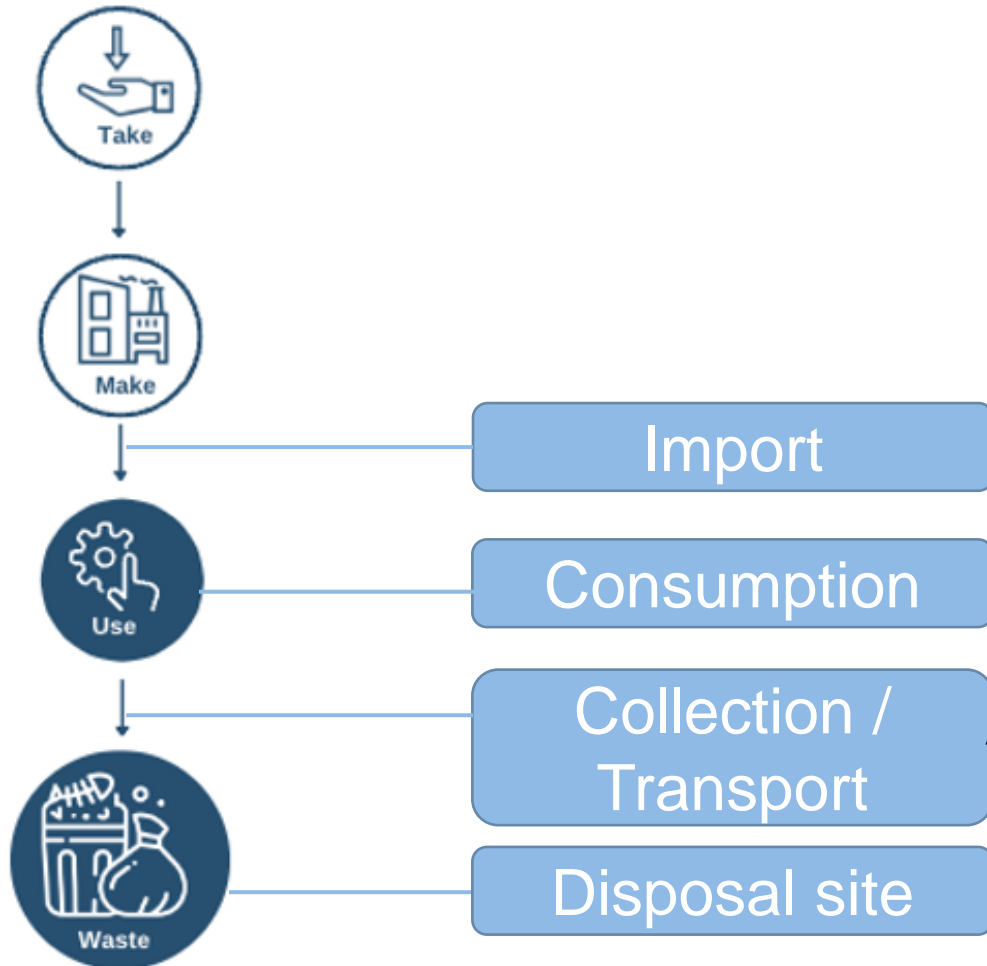
- 2.1.1. Waste Generation Rate
- 2.1.2. Waste Composition
- 2.1.3. Collection
- 2.1.4. End-of-life

2.2 Analysis: Need for Change



2.1.1 Current situation: Waste Generation Rate

The current waste value chain in Sint Maarten is linear: products are imported; after usage, most products end up as waste on the disposal sites. AIM Texas estimates Sint Maarten generates 3,5 kg/capita/day of solid waste and 2,5 kg/capita/day of construction & demolition, based on an average 2009-2015.



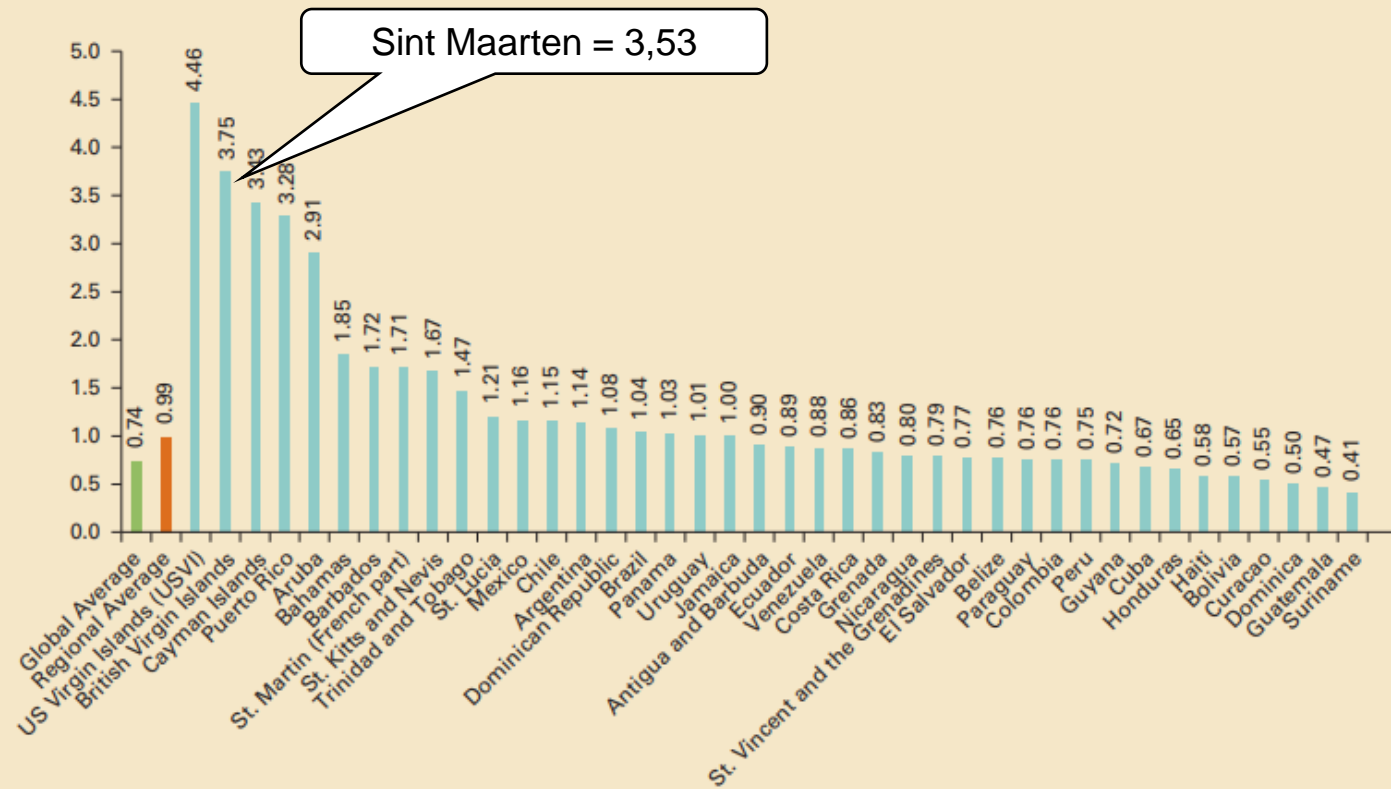
Waste generation rates	Kg/capita/day
Waste excluding C&D	3,5
Waste including C&D	6,0

- SER/PWC estimates a 9,7 kg/capita/day based on VROMI 2014 data, which more than doubles AIM Texas result. PWC did not include a detailed data report. We follow AIM Texas data estimation because this is based on a **period of 6 years** (instead of one) and consists of a **comprehensive data report** (which can be checked).
- From 2016 onwards, there is no reliable data available.** AIM Texas made scenarios with a 1-2% annual waste growth due to population and visitors. The scenarios make sense in the long run. However, due to COVID-19 and its effect on visitors, they do not provide good guidance for today.

2.1.1 Current situation: Waste Generation Rate

Sint Maarten is among the highest solid waste generators in the Caribbean region*. The highest waste-generating countries are active tourist economies. A second contributing factor to why Sint Maarten scores high is the influx of waste, foods, drinks, and prescription drugs shipped from other countries taking advantage of the free waste disposal.

Figure 3.13 Waste Generation Rates: Latin America and the Caribbean Region
kg/capita/day



* Figures are excluding industrial, medical, hazardous, electronic, and construction and demolition waste are reported separately.

2.1.2 Current situation: Waste Composition

The most recent waste characterization study was conducted by R.W. Beck in 2009. This study shows construction waste is the most significant waste stream (41%). The most prominent streams in household waste are yard and organics (27%) and recyclables (metals, glass, plastics, paper/cardboard (29%).

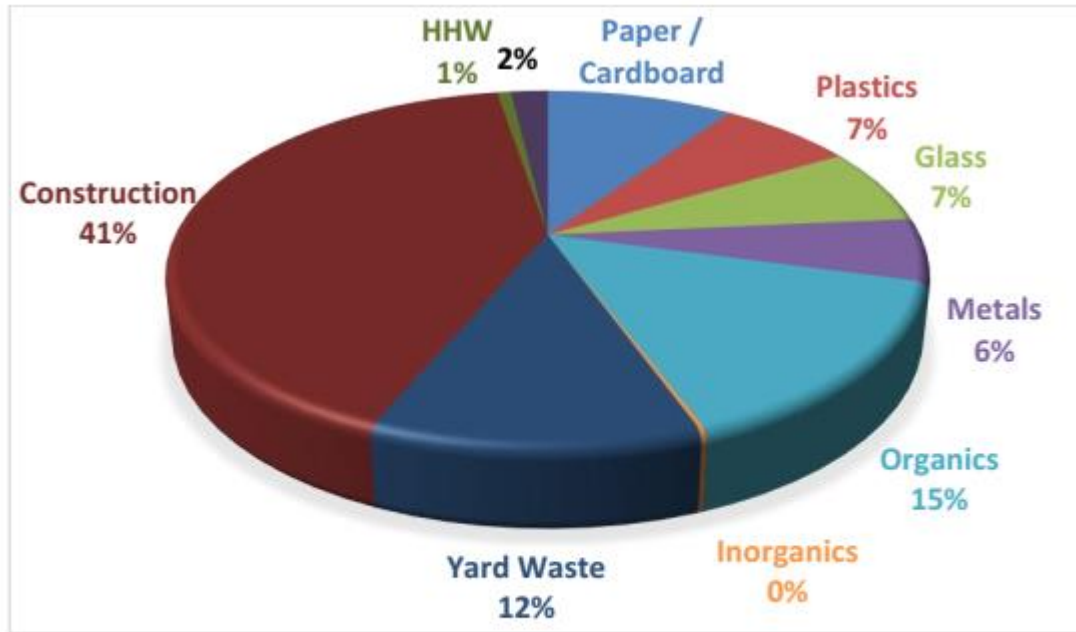


Figure 3.1: Waste Composition in R.W. Beck Study by 2009
 (Source: R. W. Beck Final Report, 2010)

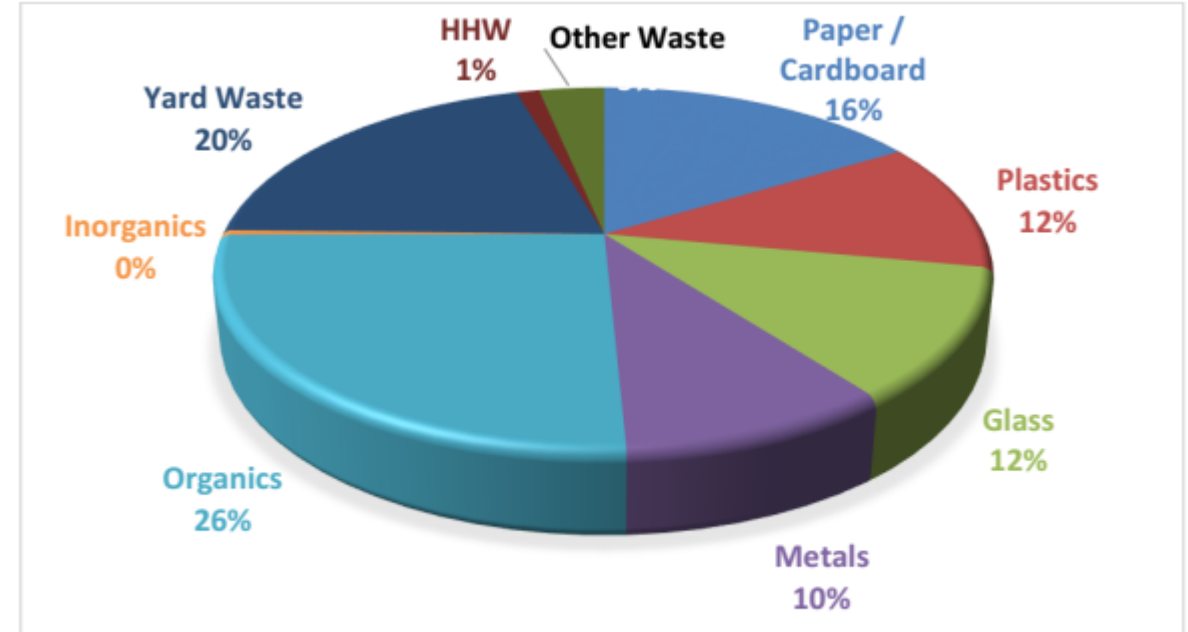
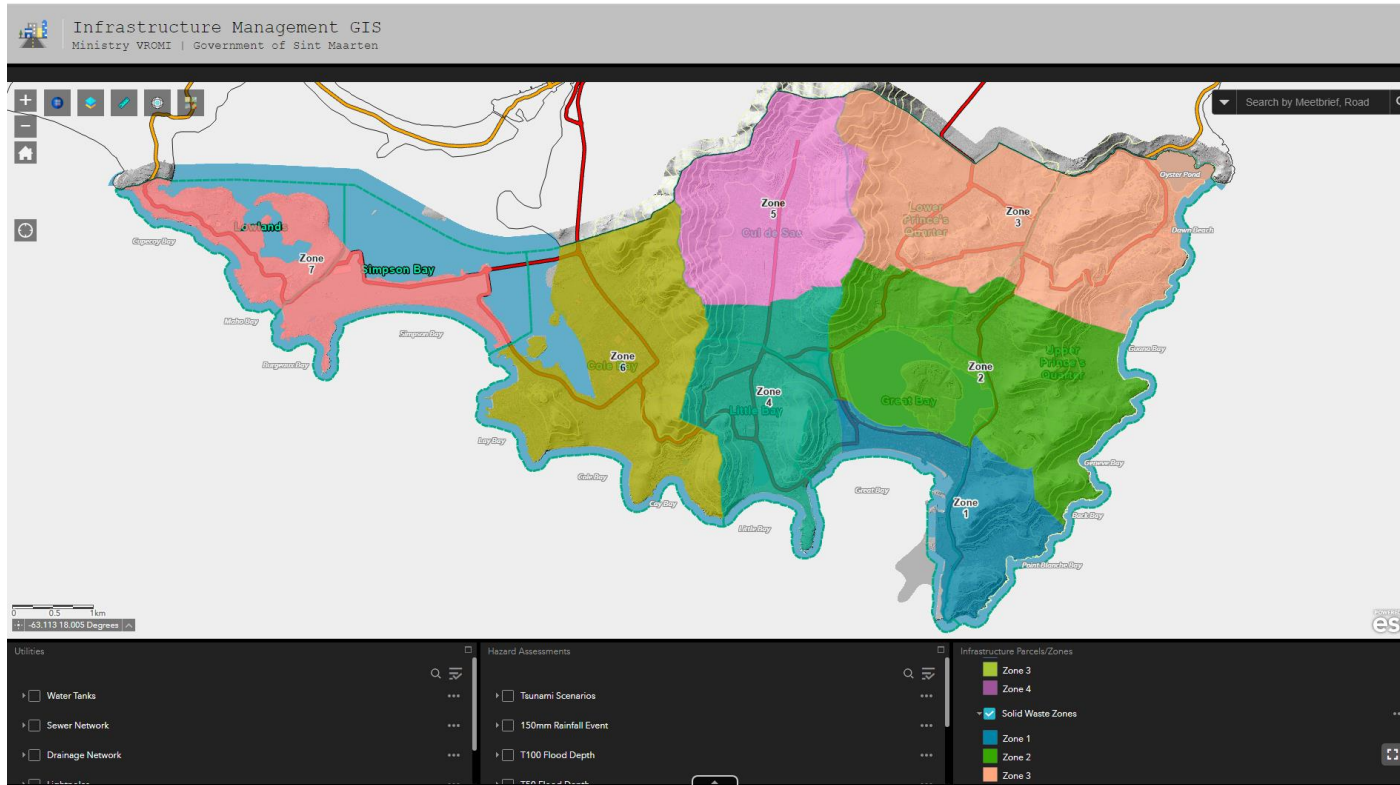


Figure 3.2: Municipal Solid Waste Generation, except the C&D Waste by 2009
 (Source: R. W. Beck Final Report, 2009)

2.1.3 Current situation: Collection

VROMI is responsible for collection services at households, institutions, and public cleaning. The collection system comprises seven areas and covers nearly 100% of Sint Maarten. Current technical challenges for collection are difficulty accessing streets, a lack of dedicated facilities, and no support for home composting.



The current challenges explained:

- Household waste in Sint Maarten is curbside collected. Some streets are difficult to access by collection vehicles. Here, waste is collected in open **big metal communal bins** for deposition of waste for collection. The bins cause litter, attract animals, and become breeding grounds for mosquitos, rodents, and cockroaches.
- There are very few **dedicated facilities for collecting recyclables and special waste types** (hazardous, WEEE, C&D). There is no support for **home-composting facilities** which reduces the need for collection.
- Various **businesses do not have any facilities for waste on their premises**. There is no restriction on their permits. Therefore, waste in Phillipsburg is collected twice a day (paid for by the Government).
- There is **no monitoring or review (“checks”)** available on the performance of the current collection system and the contractors. Example questions are: Is a daily collection needed? How many bins are stolen? How do contractors perform?

2.1.3 Current Situation: Case of Medical Waste

Globally, 15% of healthcare waste is considered hazardous material that may be infectious, chemical or radioactive. On Sint Maarten, the end-of-life of a fraction of medical waste is still mostly options which are not formally approved procedures according to law or policy (landfill or crematorium).



- Now, on a national level, there is no solid legal basis for medical waste regulations. The new LVVROMI ordinance will include the option to include detailed legislation for medical waste via an LBHAM or Ministerial Decree.
- Currently, a large part of the medical industry does **not have an internal Waste Policy** but a casual procedure. Policies are based on researched countries' best practice approaches and not necessarily Sint Maarten's laws. Points of interest are public health, occupational safety (in particular for medical workers and external waste handlers), and preventing environmental hazards (air, water, soil pollution).
- For years, medical waste from the operating room and surgical materials were disposed **by transporting it to the nearby dump to be burned**. Medical waste is still dumped on the landfill. Additionally, a certified French operator collects medical waste, stores it for a formal solution, and brings it to the crematorium to be destroyed or disposed via regular waste collection.

2.1.4 Current situation: End-of-life: Recycling vs Disposal

Today, the end-of-life option for almost all products and materials in Sint Maarten is disposal on one of the disposal sites: we estimate that 93 to 97% of all waste ends here. This is well above the regional average of 85 to 88% for the CARICOM region.

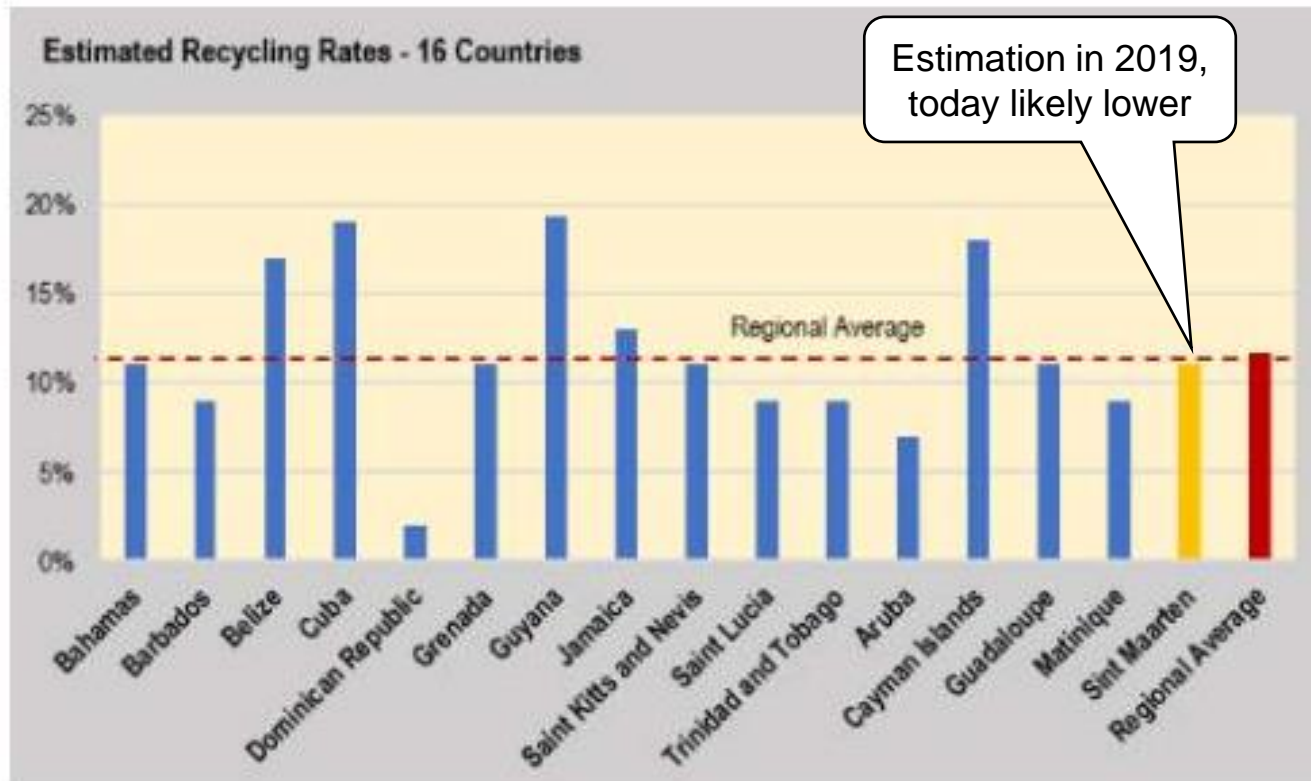


Figure 3.17: Estimated Recycling Rates – 16 Countries

- In the 1970s, when tourism started to burst, Sint Maarten started to use the landfill sites. Before, there was a small incinerator.
- To reduce the need for a landfill (and even to mine the landfill, various plans for waste-to-energy have been developed (and contracted at the time).
- AIM Texas Trading estimates that 89% of waste ends up at disposal sites and 11% was recycled through the informal sector in 2019.
- We expect this recycling rate to be lower today because (1) waste picking on disposal sites is not allowed anymore, and (2) informal recyclers say they have reduced their export of recyclables as shipping has become very expensive.

2.1.4 Current situation: End-of-life

Sint Maarten has two disposal sites on Pond Island. The main MSW landfill has been used for 50 years as an uncontrolled disposal site. The Irma landfill has been used since 2017 for the deposition of Irma debris. Both sites have limited capacity, are not engineered for their purpose, and pose immediate risks to public health and the environment.

The **MSW landfill** handles comingled waste which includes almost anything. It includes municipal solid waste (MSW), commercial waste, tires, medical waste, and recyclable materials. The **Irma landfill** targeted debris from the Irma hurricane and handles bulk and green waste. Both sites are disposal sites and not engineered landfills. They pose the following health, environmental, and operational risks:

- **Burning and fires**, which lead to air pollution.
- **Leachate**, which seeps into the Great Salt Pond.
- **Methane emissions** which cause a high carbon emission footprint.
- **Potential slide of slopes** which affect the immediate surrounding area.
- The capacity of both sites is limited. In 2020, AIM Texas Trading estimated a remaining volume of 550.000m³, allowing the landfill to operate until approximately 2028. Reaching capacity might result in extending **the landfills** into the Great Salt Pond.
- The steep slopes resulting from the landfill's height pose difficulties for some hauling vehicles accessing the landfill.
- The **cover of the landfill** prevents flying waste from the site. In St Barts, work was undertaken, and soil was exported to Sint Maarten for free. With this stopping, cover for the landfill would either be the alternate daily cover (ADC) or the purchase of more soil for cover.

Asbestos is currently stored at a location near the stadium. Better management practices for asbestos and other hazardous waste streams will be required.

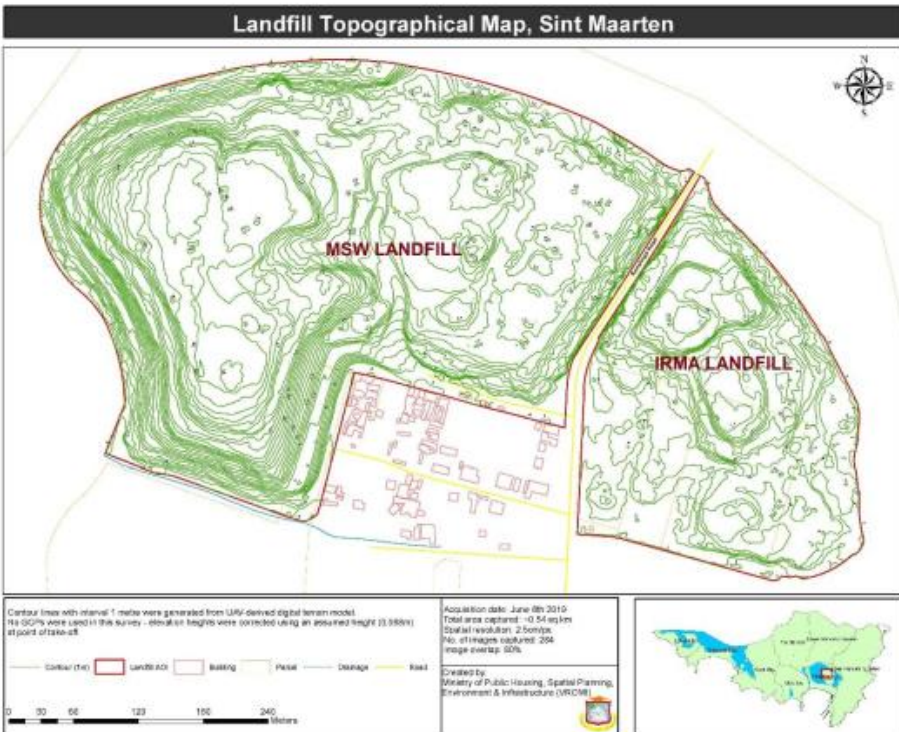
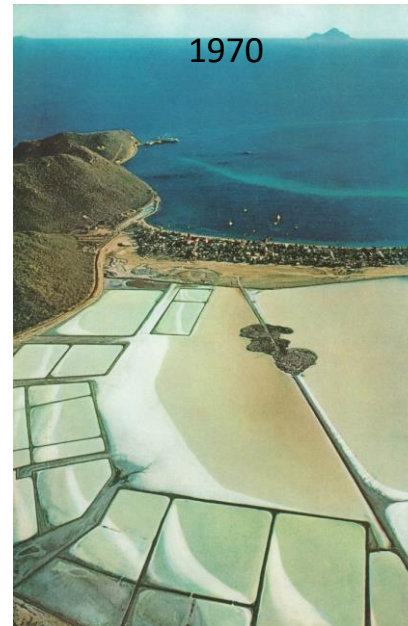
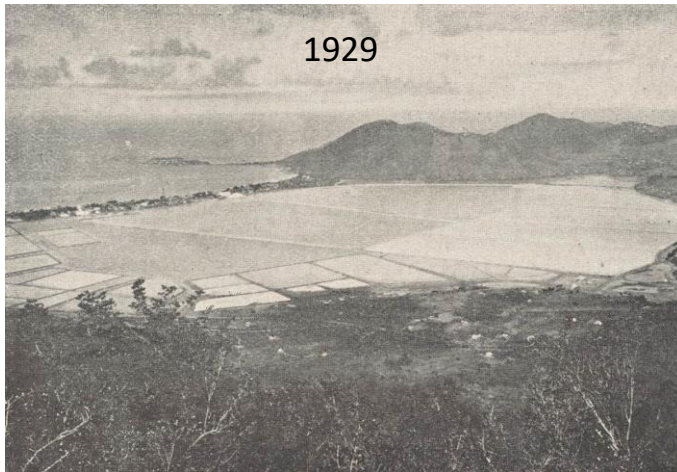


Figure 3.13: Map of Pond Island Landfills (MSW and Irma)
(Source: VROMI)

2.1.4: Current Situation: The Salt Pond

The Salt Pond has played a crucial role in Sint Maarten's history. It is a wetland with ecological and environmental importance. Pond Island has been extended over 50 years and is now more than a quarter of the Salt Pond. The disposal sites pose a threat to these wetlands and, thus, to Sint Maarten's heritage.



In 1631, the Dutch settled on Sint Maarten because of the Great Salt Pond. The salt collected from the pond was the primary income source for over 300 years.

The picture from 1970 shows the recently extended strip at Phillipsburg and the beginning of Pond Island.

In 2009, the Pond was registered as a monument. However, the Island is still growing by filling in for various purposes, including waste management.

1: Onze West in beeld en woord, <http://image.amuseumnaturalis.com/2020/05/salt-pans-2/>

2: Emory Kristof, <http://image.amuseumnaturalis.com/2020/09/salt-pans-5/>

3: Kippy Gilders, <https://caribischnetwerk.ntr.nl/2017/07/31/braslanden-sint-maarten-in-gevaar/>

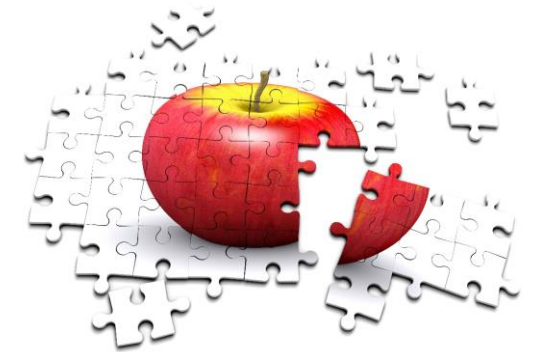
4: JayHaviser, <https://www.youtube.com/watch?v=cKJhrFXtc>

5: <https://ant-nw.com/index.php/letters/1573-objection-to-the-filling-in-of-the-great-salt-pond-including-but-not-limited-to-the-filling-in-of-the-pond-for-the-drag-strip-and-the-cricket-stadium.html>

2.2 Need for Change – high-priority issues

Seven technical **high-priority issues** have been identified: lack of data, collection system improvements, uncontrolled dumping of hazardous waste, non-sanitized waste disposal sites, current demand for waste disposal capacity, lack of sustainable waste management certification, and lack of awareness raising.

1. There needs to be more **reliable and up-to-date waste data** such as volumes, mass, origin, characterization, and complaints. Good data collection supports analysis and research. The first step in data collection is a properly working weighing bridge at both landfill entrances. Data is required to prepare business cases that unlock investments to realize waste management solutions, create accountability, and use in communication.
2. The **collection system** faces issues like difficulty accessing streets, lack of dedicated facilities, procurement procedures, and unregulated hauling of commercial and industrial waste.
3. At the disposal sites, **high-risk hazardous waste streams are dumped uncontrolled**. For example, when a large pile of openly stored tires catches fire, it will result in air pollution and a potential airport closure. Hazardous waste, medical waste, vehicles and vehicle parts, and Waste from Electronic Equipment (WEEE) need a solid end-of-life option as soon as possible.
4. **The waste disposal sites need to become sanitized** to reduce risks to health, the environment, and the economy. The waste disposal sites can become an icon for the new vision, for example, a park for visitors or a sustainable energy-producing farm.
5. Sint Maarten is among the highest solid waste generators in the Caribbean region. The expectation is that the number of visitors and population will keep increasing in the near future. However, **the current waste disposal site capacity is limited**. The scarcity of land and potential airport restrictions are significant challenges to finding a new location. Key elements to **reduce the need for disposal capacity** are **gate fees at the landfill, sorting, bioconversion, and (export for) recycling**. Access to (international) recycling capacity is less easy in a small island state.
6. Any business will need sustainable waste management for their license-to-operate. To remain attractive as a tourist and cruise ship destination, **certification of sustainable waste management**, such as Green Marine Certification, becomes a requirement.
7. Today's **awareness-raising** and prevention, reduction, and reuse activities are minimal. Stakeholder participation and technical solutions go hand in hand in reducing waste volumes.



In this Chapter, we introduce four concepts for solid waste management. Based on these concepts, we will develop a set of principles for integrated solid waste management for Sint Maarten.

3.1 Concepts for Solid Waste Management

- 3.1.1. Sustainable development goals (SDG)
- 3.1.2. Waste hierarchy
- 3.1.3. Circular economy
- 3.1.4. Framework integrated sustainable waste management

3.2 Principles for Integrated Solid Waste Management

3.3 SXM Vision and Ambition



3.1.1 Concepts: Sustainable Development Goals

The Sustainable Development Goals (SDGs) are a universal call to action to end poverty, protect the planet, and ensure peace and prosperity by 2030. Solid waste management is one of the keys to delivering SDGs.

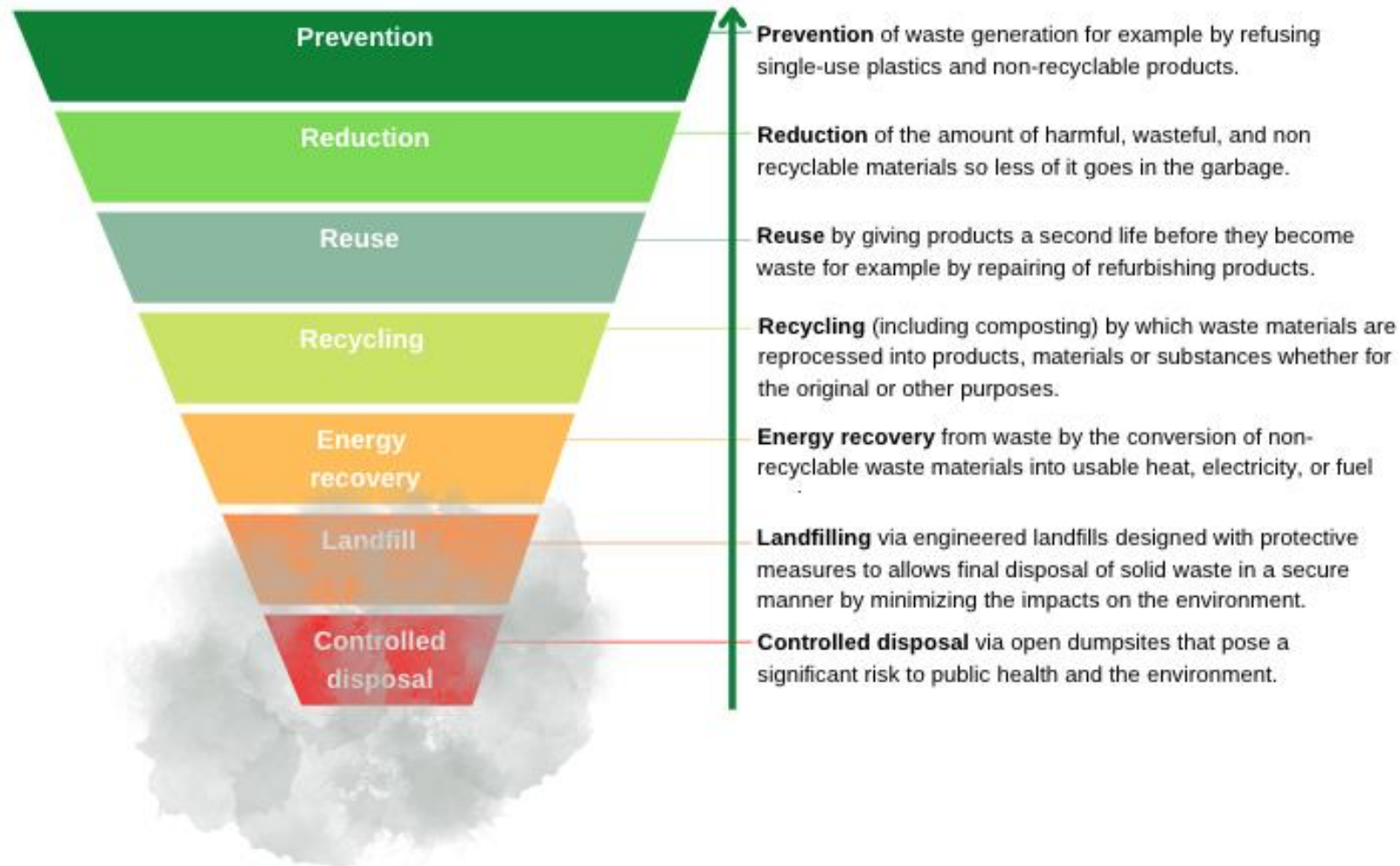


- The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015. **Sint Maarten has committed to the SDG 2030 agenda.**
- SDGs underline that waste management affects many critical aspects of society: **Solid waste management affects all 17 SDGs** (see infographic).
- Solid waste management is an integrated issue and needs **integrated solutions** as it involves many stakeholders.

*“Unsustainable consumption and production patterns are root causes of the triple planetary **crises of climate change, biodiversity loss, and pollution.** These crises, and related environmental degradation, threaten human well-being and the achievement of the SDGs. If we continue on the prevailing development pathway, the Earth’s finite capacity will be unable to **sustain the livelihoods of current and future generations.** Transforming our relationship with nature is key to a sustainable future. As the world develops strategies for sustainable recovery from the pandemic, governments and all citizens should seize the opportunity to **work together** to improve resource efficiency, reduce waste and pollution, and shape a **new circular economy.**”*

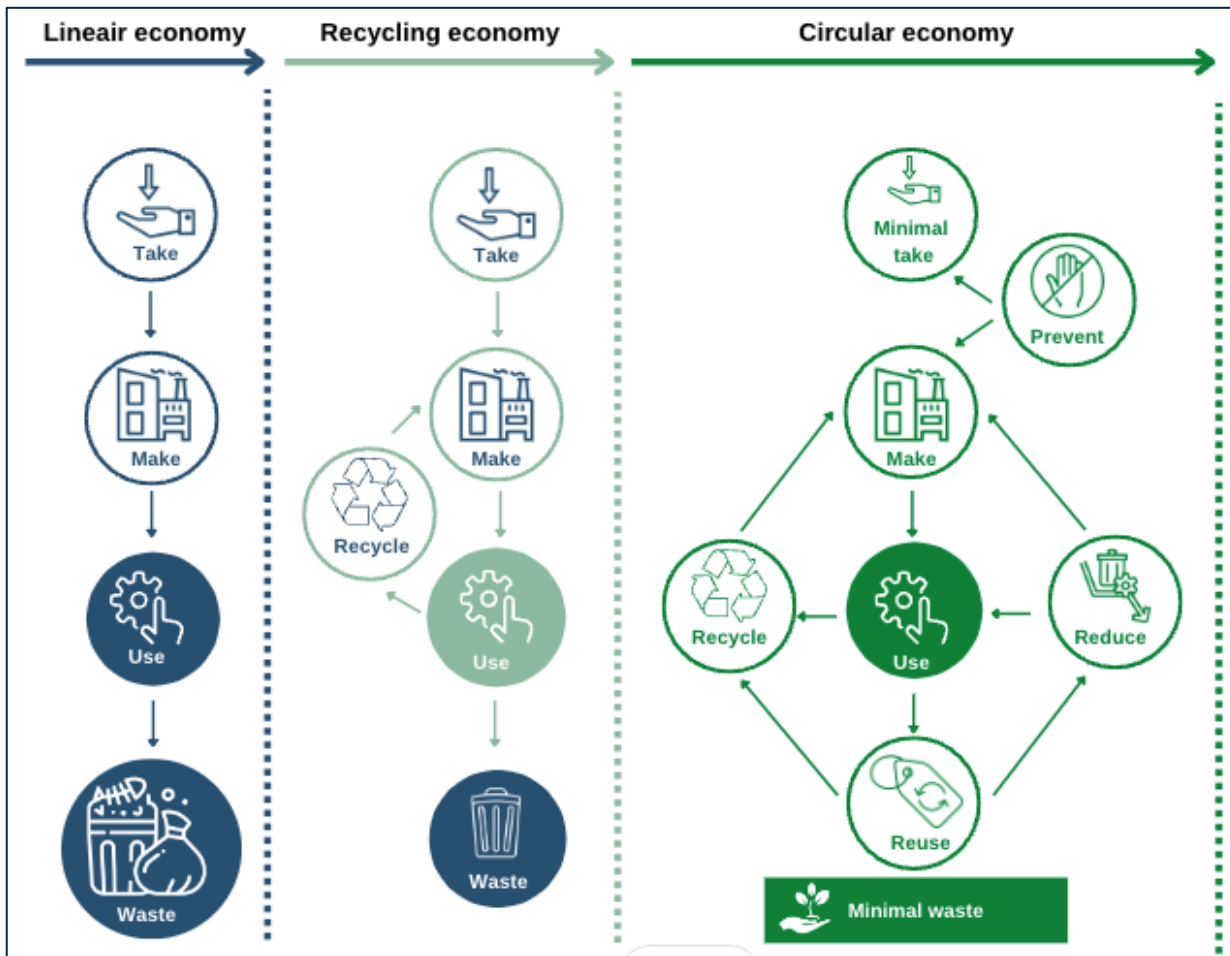
3.1.2 Concepts: Waste Hierarchy

The Waste Hierarchy (or the ladder of circularity) introduces the preferred waste processing options which are best for the environment. It guides waste management decisions both at the organizational level as well as at the individual level.



3.1.3 Concepts: Circular Economy

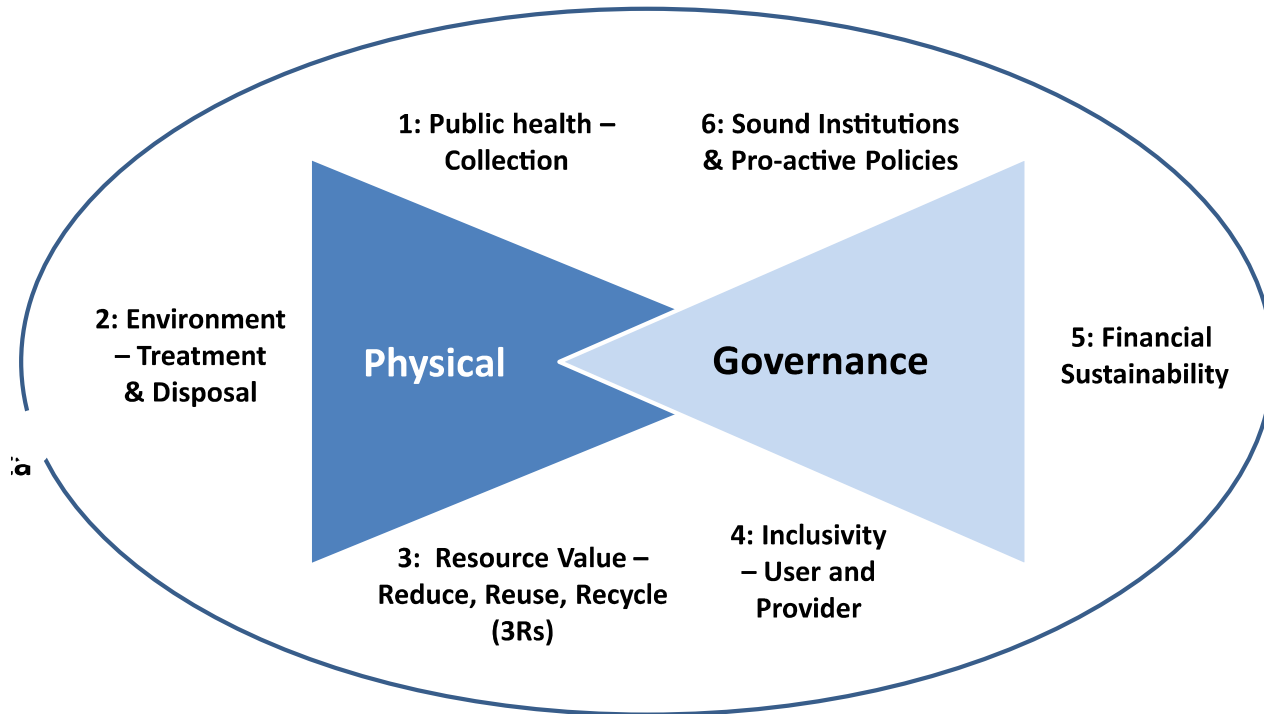
In a circular economy, we reuse, repair, refurbish, remanufacture, repurpose, recycle existing materials and products, and recover these after use. The value of raw materials is retained as much as possible throughout a product's lifecycle.



- In a **linear economy**, a product follows the “take-make-use-waste” steps. Each step focuses on (eco) efficiency. The challenge for waste management is to minimize the potential impacts on health and the environment and to retain as much economic value as possible.
- In a **recycling economy**, materials of used products are reused again. The lifespan of materials is extended.
- In a **circular economy**, the economic value of goods and services are intentionally designed to be eco-effective and retain their value as long as possible. Waste and its impact are no longer the inevitable results at the end of a supply chain. Goods, components, and materials can, by their design and use, be effectively re-used repeatedly. Producers are incentivized (for instance, by Extended Producer Responsibility) to value the discarded products and materials as inputs in their business models and value creation processes. Consequently, waste management will be part of product cycles that require cooperation beyond the end-of-life phase and on a more regional (international) level. Waste management transforms to logistically facilitating the end-of-use products and materials towards new product cycles and regenerating natural systems.

3.1.4 Concepts: Integrated sustainable waste management

The Integrated Sustainable Waste Management framework shows that waste management demands an integrated approach on both the ‘hard’ physical components and the ‘soft’ governance aspects.



- The framework has been developed and improved since the 1990s and is relevant for any country. Waste is seen as an issue embedded in the political, economic, socio-cultural, and environmental context.
- The vital physical components are:
 1. The protection of **public health** by having a good collection and transportation system.
 2. **Environmental** protection, particularly during waste treatment and disposal.
 3. Maintaining **resource value**.
- The governance strategies to deliver a well-functioning system are:
 4. **Inclusivity** allows stakeholders to contribute and benefit.
 5. **Financial sustainability** in terms of costs and fees.
 6. A base of **sound institutions, legislation, and proactive policies**.
- Without a **sense of ownership of proper governance**, attempts to modernize the solid waste management system through technological and physical improvements will likely fail.

3.1.4 Concepts: Integrated sustainable waste management

The governance components of the framework (inclusivity, financial and institutions & policies) guide what to include for institutional, financial, legal, and communications.

1. Governance

Institutional

Financial

Legal

Communications

4. User inclusivity

- **Equity of service provision** irrespective of income level.
- Legal obligation to **consult with and involve citizens** in decisions that directly affect them.
- **Public involvement** at appropriate stages of the solid waste management decision-making, planning, and implementation process.

- Existence and use **stakeholder involvement and feedback systems** on solid waste management services.
- **Education and awareness programs** to influence habits and behaviors of public, businesses and visitors about their waste management/handling practices.

Provider Inclusivity

- A **legal framework** that enables both the public and private sectors to deliver solid waste management services on a stable basis.
- Waste services are delivered by either the **public or private sector** in a manner that is mutually beneficial and does not substantially disadvantage either party.
- Openness, transparency, and accountability of **bid processes**.
- Organizations or structures in place which **represent the private waste sector** and actively participate within solid waste management planning forums, task forces, committees, and/or steering-groups.
- Acknowledgment and recognition of the role of the organized **'informal' and community sectors** within the formal solid waste management system.

5. Financial Sustainability

- The annual **budget is adequate** to cover the total costs of providing the service.
- Solid waste management accounts **reflect the total costs** of providing the service and the relative costs of the different activities within solid waste management accurately, and the accounts are open to public scrutiny.
- **Users paying** for primary waste collection services.
- Practices or procedures in place to **support charges for those who can least afford to pay**.
- Wastes coming to the final (treatment or) disposal site(s) are charged at a **rate that covers** (at least) **the operating costs** of (treatment or) disposal.
- An adequate provision made for necessary **capital investments**, to upgrade waste disposal standards, and to replace existing vehicles, equipment, and sites at the end of their life.

6. Sound institutions and proactive policies

- **National law(s)** in place to address solid waste management requirements.
- **Guidelines for implementation** of laws and plans.
- Approved **national strategy and waste management plan**.
- A single **institution** responsible for implementing or coordinating the implementation of a solid waste strategy/plan, **that can be held accountable for performance**.
- A well-organized and resourced **environment regulatory agency** that enforces legislation to ensure a 'level playing field'.
- Regularly measured, collected and monitored **data** in a management information system.
- **Management control and supervision** of service delivery.
- **International** and regional cooperation.

3.2 Principles for Integrated Solid Waste Management

The concepts define the guiding principles for integrated solid waste management.



1. Good solid waste management is an essential key to **delivering on the SDGs**: ensuring a good life for everybody (people) within the natural boundaries (planet) and good sustainable economic growth (wealth).
2. Solid waste management is an **integrated issue**. It needs an approach toward the physical and governance components.
3. Key physical components are:
 1. **A sound collection system;**
 2. **Environmental protection** by moving up the **waste hierarchy**;
 3. **Maintaining resource value** by transitioning towards a **circular economy**. This implies **value chain integration** and **international cooperation**.
4. Key governance aspects are:
 1. The **support of all relevant stakeholders**, such as various ministries, users, and providers;
 2. **A sustainable financial system;**
 3. **Sound institutions, legislation, and pro-active policies.**

3.3.1 SXM Vision

Together with stakeholders, a shared SXM Vision for 2050 for solid waste management in Sint Maarten has been developed. This Vision includes the Ambition 2030 to have an Integrated Sustainable Waste Management system (ISWM) in place by 2030. Realizing this ISWM is one of the objectives in the National Development Vision, to promote sustainable economic recovery (focus area 1).

SXM VISION 2050

A good life for everyone on Sint Maarten (people) within Sint Maarten's natural boundaries (planet) and good sustainable economic prosperity (wealth).

In 2050, Sint Maarten has moved toward a green and clean sustainable island with a circular economy, preventing waste generation and reusing products and materials as much as possible.

SXM AMBITION 2030

Proper solid waste management is a key step in successfully transitioning to a circular economy. Therefore, our ambition is for an integrated solid waste management system (ISWM) to be in place on Sint Maarten by 2030. In this system, Sint Maarten's waste is disposed, reused, or recycled in line with international best practices and with minimal impact on the environment.

3.3.2 Practical Goals 2030

The Ambition includes six practical goals for 2030: 100% collection, 100% landfill sites, 75% diversion, 90% awareness, 100% financial sound, and a professional and strong waste authority.



100% Professional Collection Of Waste

Solid waste from residents, visitors and companies is collected in a professional manner. Recycling is made easy. Services include cleaning of public spaces and removal of debris and wrecks. There is (almost) no litter on the streets, parks, ponds, beaches and other public areas. There is effective enforcement on waste disposal rules, as well as on littering, illegal dumping, and for businesses that do not maintain the cleanliness of their operational areas area (according to their permits).

100% Landfill Site Reforms

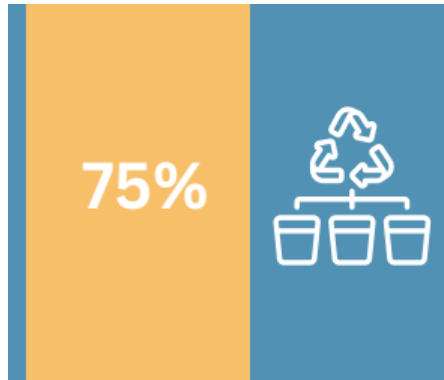
The waste disposal site(s) are fit for the purpose of waste disposal, that is, they have been sanitized and designed according to international standards, such as being outfitted with a liner, as well as mechanisms for leachate collection and treatment. At the entrance of, there is a working weighbridge at the entrance of waste disposal sites to monitor incoming waste volumes.

This will enable better data collection to continuously improve waste disposal operations. It also supports the collection of a gate fee.



3.3.2 Practical Goals 2030

The Ambition includes six practical goals for 2030: 100% collection, 100% landfill sites, 75% diversion, 90% awareness, 100% financial sound, and a professional and strong waste authority.

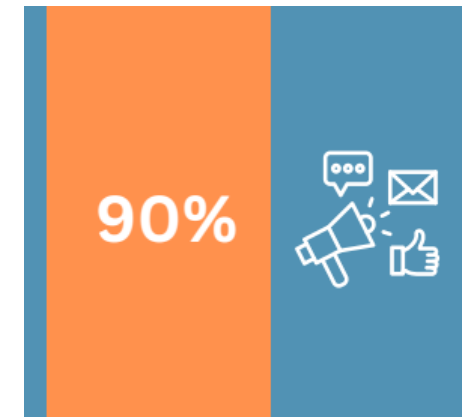


75% Solid Waste Diversion of Waste Disposal Site

The volume of waste going into the landfill has decreased. All waste is processed according to more preferable processing options (see the Waste Hierarchy). Where needed, waste is sorted at the source, or at least after collection. There are recovery and/or recycling facilities for waste streams, such as organic waste, recyclables, building and construction waste, etc. Recyclables can also be exported.

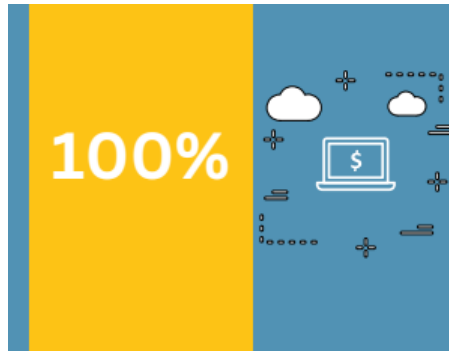
90% Aware Residents, Businesses and Visitors

Residents, businesses, and visitors are proud of Sint Maarten and its cleanliness. Attitudes toward waste disposal has changed and residents are motivated to prevent waste. Residents have the capacity, and opportunity for proper waste behavior. Good waste management is an integral part of the tourist experience and supported by all partners in the tourist industry. A multi-year public campaign, with regular feedback, has been implemented in a joint effort with relevant stakeholders, aimed at influencing behavior regarding prevention, reduction, reuse, and recycling of solid waste. Integrated solid waste management practices are included in community councils and school training programs. NGOs and government supports local initiatives to produce compost or other usable products from waste. The waste treatment system creates new business opportunities and jobs, and supports a resilient tourism industry.



3.3.2 Practical Goals 2030

The Ambition includes six practical goals for 2030: 100% collection, 100% landfill sites, 75% diversion, 90% awareness, **100% financial sound, and a professional and strong waste authority.**



100% Financially Sound System

Solid waste management services and activities are cost-effective and affordable. Investing in facilities will support proper waste management and job creation. A system of earmarked revenues covers the needed investments and operational costs. These predictable and continuous revenue streams, which the Waste Authority guides, ensure good operations and access to investment loans. Revenues can include waste levies for residents and companies based on the polluter pays principle, environmental impact fees for visitors and cruise ships, tipping fees, a tax on imported goods, and revenues from sales.

Robust Waste Authority

The Waste Authority is a well-funded and professional organization, with its own authority and budget and is responsible for solid waste management. The Waste Authority operates within a solid and up-to-date legal and policy framework, in line with international conventions and regulations. Proper enforcement of regulations is in place. The Authority manages, controls and monitors all waste-related topics with a maximum effect based on minimum contributions from taxpayers. The Waste Authority is an autonomous entity, separate from the government, allowing it to operate in a stable environment and be accountable for its results. The organization is well prepared for natural disasters and implements ‘hurricane-proof’ policies and procedures. The Waste Authority ensures adequate and beneficial cooperation with the French side and other Caribbean Islands. A level playing field is arranged and maintained with the French side to avoid waste trafficking. Also, possibilities for shared facilities and educational programs are explored. Once the longterm solution for Sint Maarten is clear, it might be possible to set up arrangements with the Dutch Caribbean islands of Sint Eustatius and Saba. Sint Maarten will also actively participate in regional activities to broaden and share local knowledge about waste management solutions, based on the best practices of countries with similar problems in the Caribbean region.

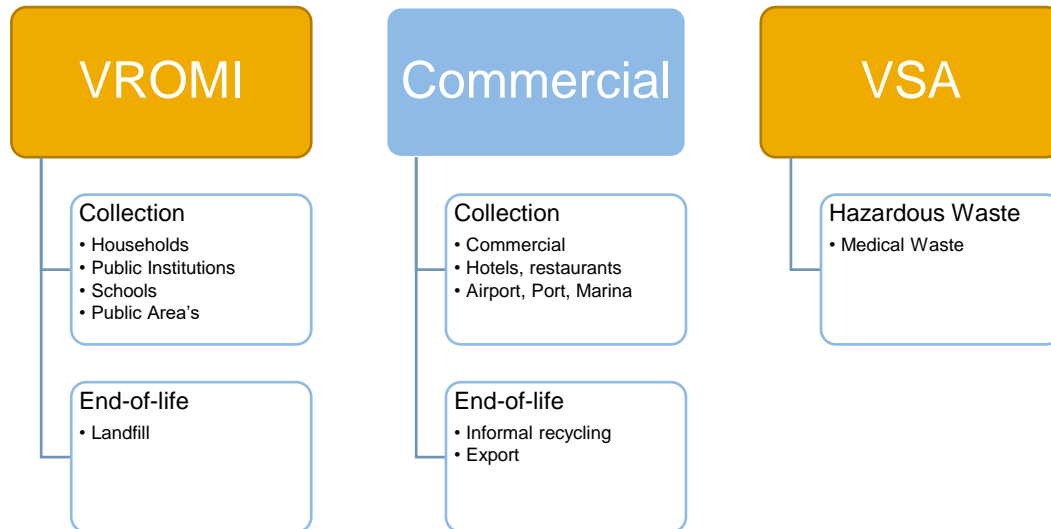


- 4.1 Current situation Sint Maarten
- 4.2 Analysis: Need for Change
- 4.3 Design for a Waste Authority
- 4.4 Phased approach



4.1.1 Current situation: Waste Management

Within the Government of Sint Maarten, VROMI manages the regulated part of the solid waste value chain: collection at households, public institutions, and public areas; disposal at the landfill and enforcement. Commercial waste activities are outside the scope of VROMI and are unregulated and uncontrolled.



VROMI is responsible for the collection and end-of-life of household waste. Services like collection and equipment are outsourced via public procurement. Currently, operations on the landfill are contracted out under the direct guidance of VROMI's own staff.

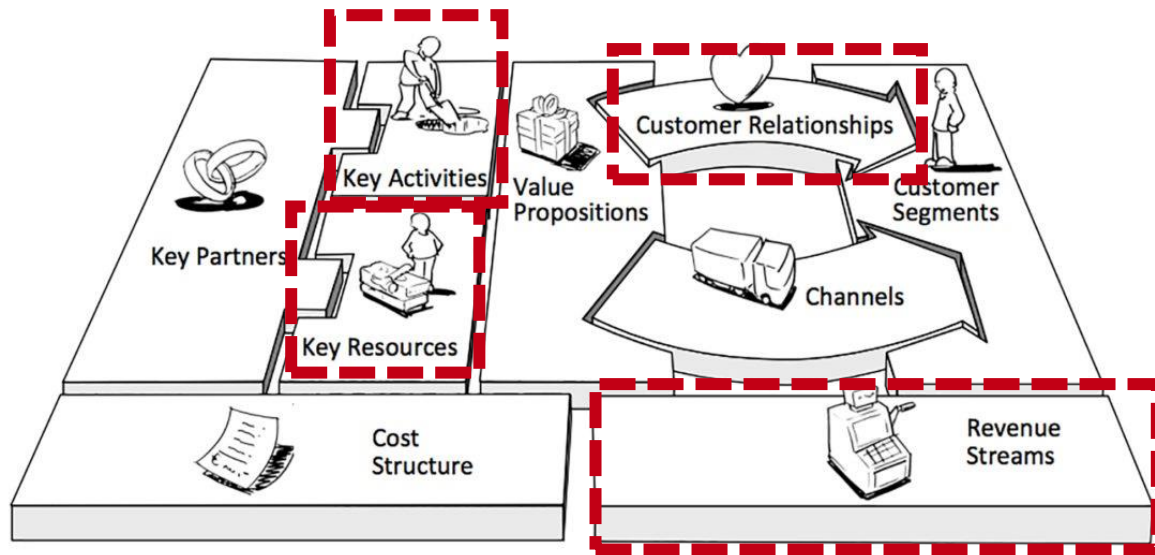
VSA is responsible for regulating medical waste.

Waste collection at **commercial and industrial premises**, including airport and (cruise) ship waste, is regulated via Politiekeur, Afvalverordening, and business – and hindrance permits. However, business waste remains uncontrolled as a specific Ministry does not oversee it.

Other types of solid waste are **medical, hazardous, industrial, and disaster (from events)**. Additionally, **gaseous and liquid waste (such as sewage)** are types of waste to be managed.

4.1.1 Current situation: Waste Management

VROMI lacks resources such as a dedicated budget, people, and knowledge to provide high-quality services to the public as a utility. For example, the tendering and awarding process for the collection contracts of household waste 2021-2026 was considered neither fair nor sufficiently transparent.



Using the Business Model Canvas, VROMI's current model is limited or non-existing at various building blocks, such as:

- **Key resources:** For the Government, finding and keeping the right **employees** and training them is challenging.
- The **revenue streams** for waste management are insufficient for all services that should be provided.
- Currently, no straightforward communication strategy exists to build **customer relationships** (facilities users).

Example Key Activity

The Ombudsman concludes that the **tendering and awarding process** for the collection contracts of household waste 2021-2026 needed to be fairer and sufficiently transparent. Identified bottlenecks are:

- Lack of comprehensive tender procurement policy;
- Terms of Reference poorly prepared/late start of preparations for tendering;
- Terms of Reference not being followed /enforced;
- Lack of a comprehensive waste management plan;
- Transparency of the post-awarding process.

4.1.2 Current situation: Ministerial Departments

All Ministerial Departments are responsible for individual subjects directly related to solid waste. Currently, there is a lack of coordination on activities for solid waste management, and there is a common perception that waste management is only VROMI's responsibility.

Housing, Spatial Planning, Environment & Infrastructure (VROMI)

- Quality of Living Environment and Nature
- Spatial Development & Land Use
- Policies, Legislation, Regulation & Implementation
- Territorial Waters
- Climate Mitigation
- International Treaties

General Affairs (GA)

- Foreign Affairs
- Legal Affairs
- Domestic Governance, Administrative Development, Efficiency Government Services
- Information Provision, Communication Policy

Health, Social Development & Labour (VSA)

- Public Health, Health Care, Social Affairs, and Labour
- Inspectorate Business Owners
- Medical Waste Policy
- Community Outreach



Education, Culture, Youth and Sport (MECYS)

- Education
- Culture, Recreation and Sports

Tourism, Economic Affairs, Traffic & Telecommunications (TEATT)

- Tourism, Economic Affairs
- Aviation, Shipping & Maritime
- Price & Tariffs, Concessions, Data
- Control & Inspection on TEAT services

Justice

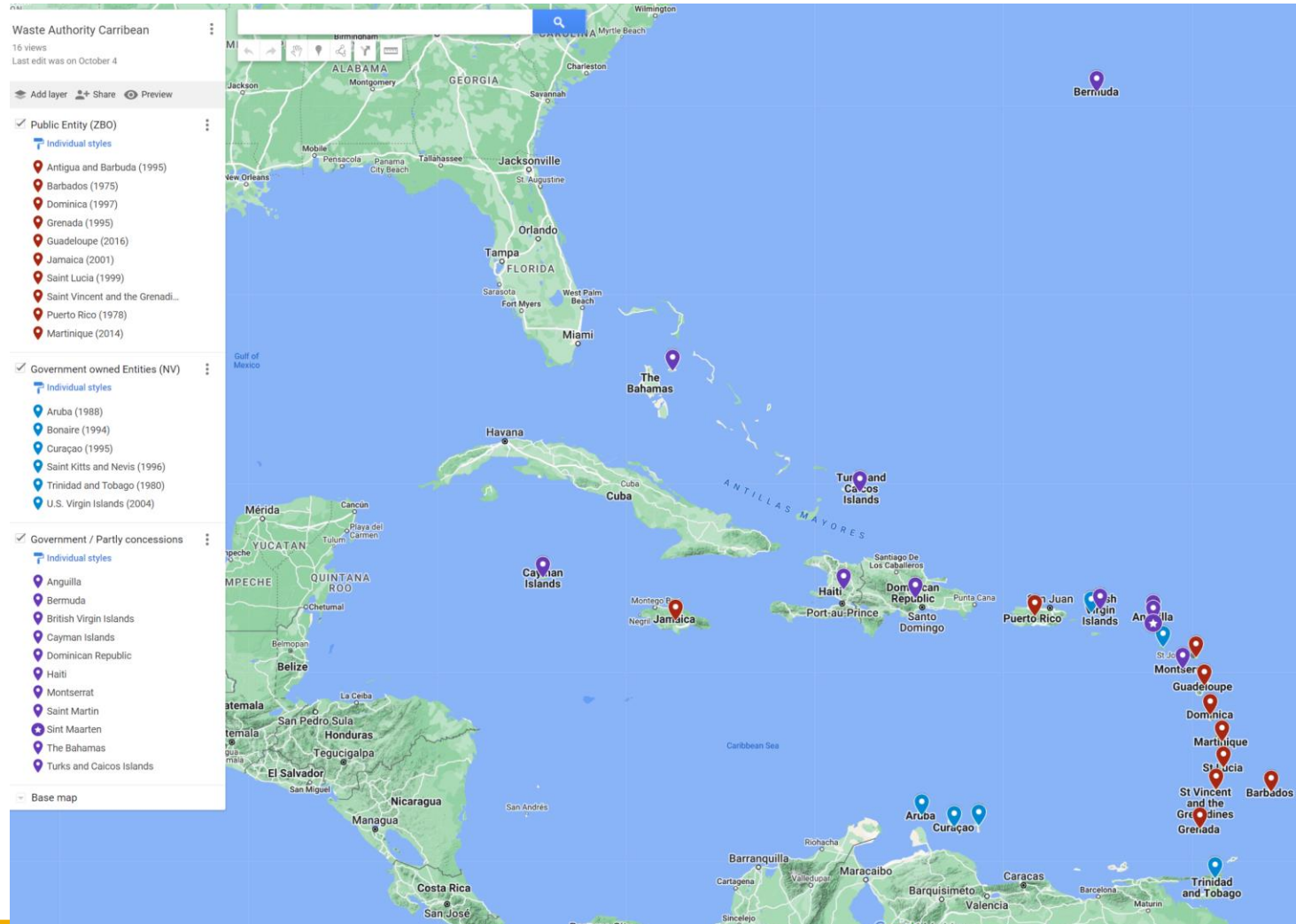
- Coast Guard, Police, Customs
- Prosecution
- Monitoring and evaluation of policies

Finance

- Financials, Fiscal and Monetary
- Financial Operations
- Tax Affairs








4.1.3 Current situation: Type of Organisation

In the Caribbean, in almost half of the countries, including Sint Maarten, the government manages waste directly. There is a separate waste management Entity in 16 of the 27 identified countries; 13 have existed for over 20 years.



4.1.4 Current situation: Institutional Integrity

Sint Maarten became an autonomous country on October 10, 2010 (“10/10/10”). One of the challenges is developing independent and capable institutions. Sint Maarten is still progressing towards a mature overall integrity architecture.

GoSM Integrity Architecture Element	Current Maturity Based on Global Standards		
	Low	Medium	High
 Leadership, Commitment and Devotion of Resources	●		
 Regulatory Framework		●	
 Investigations and Enforcement	●		
 Procurement	●		
 Transparency and Strategic Communications	●		
 Personnel Management		●	
 Systems and Information Sharing	●		

In 2014, PwC conducted an independent assessment of the integrity challenges facing Sint Maarten and developed recommendations for strengthening the country’s integrity architecture.

“The governance challenges facing Sint Maarten are real and substantial. The Inquiry team noted significant gaps in the integrity architecture of the GoSM related to each of the seven integrity elements underlying the assessment. Two major observations noted by the Inquiry team are as follows:

- Low accountability due to **inadequate enforcement of integrity-related laws, regulations, and policies;**
- **Lack of preventative measures** to avoid integrity breaches.”

Since 2014, some recommendations have been implemented, such as establishing the **Integrity Chamber**. However, progress is still needed to move towards a mature integrity architecture.

Recent experiences with GEBE, the Airport and Kadaster, show the importance of a strong organizational structure.

4.1.4 Current Situation: Enforcement

Good enforcement is a governmentwide issue. The current enforcement of environmental matters needs to be improved to become a strong stick towards users and prevent creating a toothless tiger.



1. Legal & Policy Framework

- Legislation to enforce is in place. A scan is needed to identify what can be enforced based on current law and what needs to be updated.
- Fines are registered in separate ordinances on waste topics referring to the Wetboek van Strafrecht. Current fines are meager for environmental issues. As this is a government-wide law, updating the level of penalties needs quite some resources.
- The National Ordinance Administrative Enforcement/ Landsverordening Bestuurlijke Handhaving (LBH) is the primary route for public enforcement, which enters into effect for Ministries by specific National Decree. A LBH ordinance amendment has been submitted. This is because VSA inspectors could not apply the LBH in practice. Furthermore, a national decree must still be drafted for the LBH to take effect. This will require reviewing all legislation from VROMI/Justice to see whether it needs to be amended in this LBH.

- The Police (KPSM) has insufficient staff and other priorities. Civil enforcement via BOAs is the second-best route. VROMI had a verbal agreement with the Prosecutor to enforce 100% on environmental offenses.
- Maximum fines should be easily updated and not require a National law to be changed. For example, via an LBHAM or yearly legeverordening.

2. Permits

- According to the law, businesses need a hindrance permit before applying for a business permit, when outside their hindrance. A Hindrance Permit is required for specific activities that can cause danger, damage, and nuisance to the environment or the surroundings. However, as the capacity of the permits department is restricted, businesses in practice receive their business permit from TEATT and subsequently only apply for their hindrance permit at VROMI. Also, solid waste has never been explicitly included in the hindrance permit.
- Business – and hindrance permits do not include the responsibility of companies to store, separate and collect their waste.

1: <http://www.slntraaifengov.org/government/VROMI/Ministry%20Brochures/Hindrance%20Permits%20Brochure.pdf>

4.1.4 Current Situation: Enforcement

Specific bottlenecks for enforcement are (1) no urgency at the various ministries, which leads to low priority on substantial penalties, capacity, and training; (2) gaps and no clearly defined roles, especially about waste management.



3. Controlling

- Each ministry has its own inspectors (VSA, TEATT, VROMI, Justice: Customs, Police). Not all inspectorates work effectively and according to a best practice work process based on existing laws. The level of function for inspectors varies as each Ministry uses its own function books.
- The Police (KPSM) has insufficient staff and other priorities. Employees of the government can become qualified enforcers via a training course. When trained, these 'bijzondere opsporingsbevoegde ambtenaren (BOA)' can enforce certain activities. Within VROMI, people have been trained as BOA. However, no updated training has been provided, and their licenses have expired. To date, VROMI has not sent any written process verbal to Justice.
- At customs, they do not have the authority to return goods where they came from. As a result, confiscated imported goods, such as expired products, become the issue of the government (instead of the owner).
- Currently, the Minister decides on enforcement. However, Ministers are not obliged to explain when deciding differently from the inspectors' advice. Options to reduce politics are to give inspectors the authority to advise the Minister (so the public can challenge the advice) or allow them to go directly to court.

4. Prosecution

- Within VROMI, there is a lack of legal capacity (a lawyer) to support prosecution.
- According to the Prosecutor's Annual Yearbook, violence, smuggling, and prison capacity are high priorities; environmental matters is not mentioned as a priority, even though it can affect the revenue-generating product, tourism, of the country. Well-prepared administrative processes could better support cases to the prosecutor.

5. Execution

- Currently, VROMI fulfills the enforcer and operator role: it controls itself. The inspectors can thus not operate independently in cases considering solid waste operations of the government. In practice, issuing and executing penalties can be hindered by other motivations. (Enforcement should be a separate department/ministry).

4.2 Analysis: Need for Change – high-priority issues

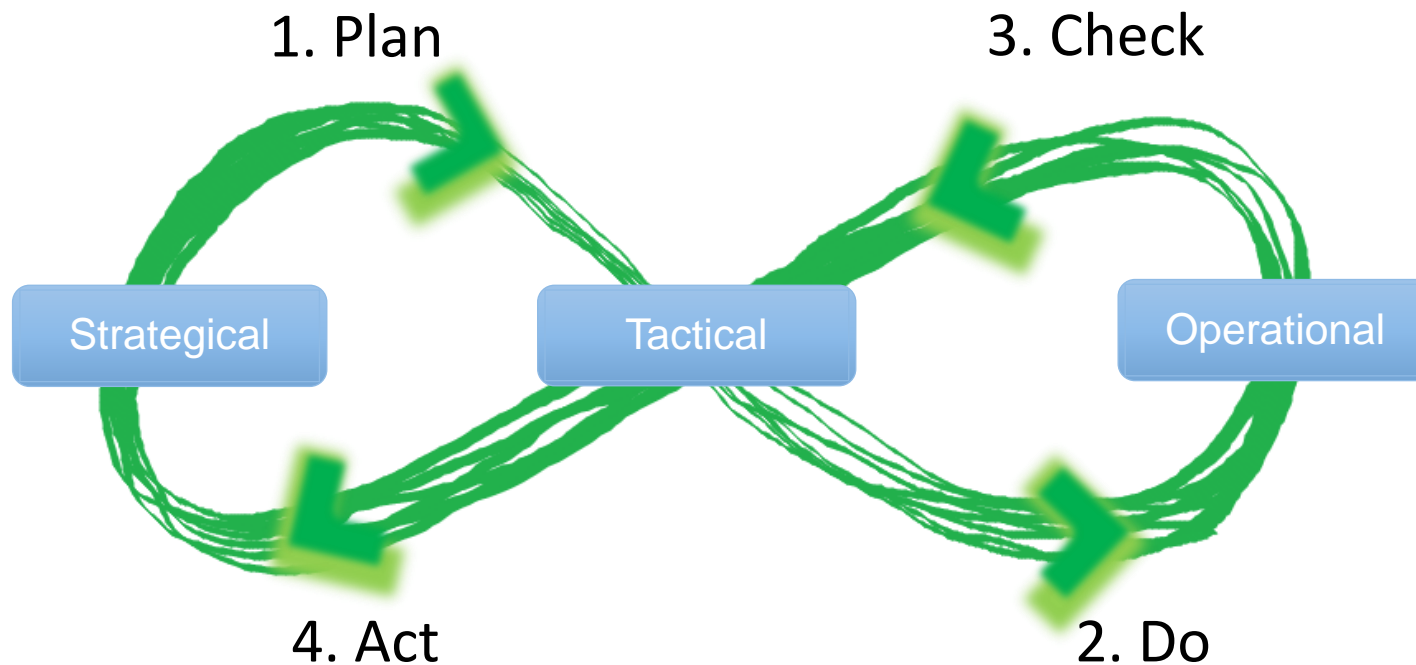
To move towards integrated solid waste management in Sint Maarten, ownership of governance aspects is key: clearly defined roles, a professional waste authority, good access to resources (human, capital, budget, knowledge), and international collaboration.

1. There is a need for a **clear definition of roles**. The roles are currently bundled in one hand, which creates potential conflicts of interest and reduced performance of services. Clearly defined and distinct organized roles will increase professionalism and improve service delivery, policy effectiveness, and cost efficiency.
2. The current waste management governance needs to provide a complete package of high-quality services to the public as a utility. There is a need for a professional, well-funded, and integer government-owned **authority with a certain independence and autonomy from government**, with its own mandate and budget **to improve waste services**.
3. The organizational capacity for regulation, operation, and enforcement is limited due to a **lack of resources (human capital, budget, knowledge)**. There is a need for capacity building to build a competent workforce for managing and running waste operations. As a result, not all activities are realized as they should.
4. Departments and individuals are not held **accountable** for their responsibilities and operations. Creating a system with more checks and balances to procure large service contracts is needed to minimize integrity risks.
5. Solid waste management is an integrated issue. Ministries and value chain stakeholders **need more coordination** on Sint Maarten. A shift in mindset will require time, including the realization that waste management is an integrated issue and not only VROMI's responsibility.
6. Additionally, increasing collaboration in the Caribbean and internationally will benefit Sint Maarten. As Sint Maarten is an island state, solutions that need economies of scale can only be implemented at a broader level. Sint Maarten would benefit from fostering a collective vision/approach to waste management for the Caribbean, where islands work together instead of each one creating its solutions.
7. Waste management needs to be addressed through an integrated approach. The current regulation, operation, and enforcement focus on the collection and disposal of household waste and thus misses (parts of) **commercial, industrial, hazardous, or disaster waste**. Additionally, gaseous and liquid waste are types of waste to be managed. Sint Maarten should ensure addressing each waste type.



4.3.1 Design: Plan-Do-Check-Act

A robust institutional design for integrated solid waste management is based on a cyclical model to improve services, such as the Plan-Do-Check-Act circle. In this circle, the strategic, tactical, and operational roles and tasks can be defined.



1. Plan

- Legislation
- Policy
- Supervision

2. Do

- Execution
- Management

3. Check

- Data collection
- Customer Feedback
- Enforcement

4. Act

- Evaluation
- Advise

4.3.1 Design: Roles, levels, and tasks

The headline-defined roles are the regulator, the operator, and the enforcer. The regulator sets the scene, the operator realizes the defined tasks, and the enforcer checks if the tasks are realized within the specified conditions. An ISWM system will need all three roles to function well.

Level/Role	Regulator	Operator	Enforcer
Strategic (long-term)	<ul style="list-style-type: none"> • Legislation: National laws addressing solid waste management (organizational- and financial framework of the Operator and Enforcer, definitions) • Policy: National Waste Plan (a strategic policy plan), which sets targets for waste management • Guidelines for implementation of laws and policies • International coordination and regulations to comply with. 		
Tactical (medium-term)	<ul style="list-style-type: none"> • Supervision the implementation plans and laws • Supporting enforcement of legislation and rules • Issue and refuse hindrance permits for third parties regarding waste management 	<ul style="list-style-type: none"> • Implementation (and advice) of policy, legislation, and international conventions • Controlling planning, budget, and service level • Procurement of operational services • Public awareness and communications • Reporting and data collection 	<ul style="list-style-type: none"> • Advise about laws
Operational (short-term)		<ul style="list-style-type: none"> • Operational services (collection, treatment, and disposal) • <i>Collection of fees</i> 	<ul style="list-style-type: none"> • Actual enforcement of laws. Impose fines and other sanctions (if applicable).

Example Organizations:

- Ministry of Environment / VROMI
- Agency of Ministry of Environmental
- *Local government/municipality (for the permits)*

Example Organizations:

- Local government/ municipality
- Waste Authority
- Commercial service providers (for operational tasks)
- *Municipal Service Fee Collection, Energy Company, etc.*

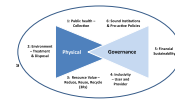
Example Organizations:

- Ministry of Justice, Police, Customs
- Agency of Ministry of Environment
- Local government/municipality enforcement department
- *Omgevingsdienst*

4.3.1 Design: Robust Waste Authority

The Waste Authority is a well-funded and professional organization with its own authority and budget.

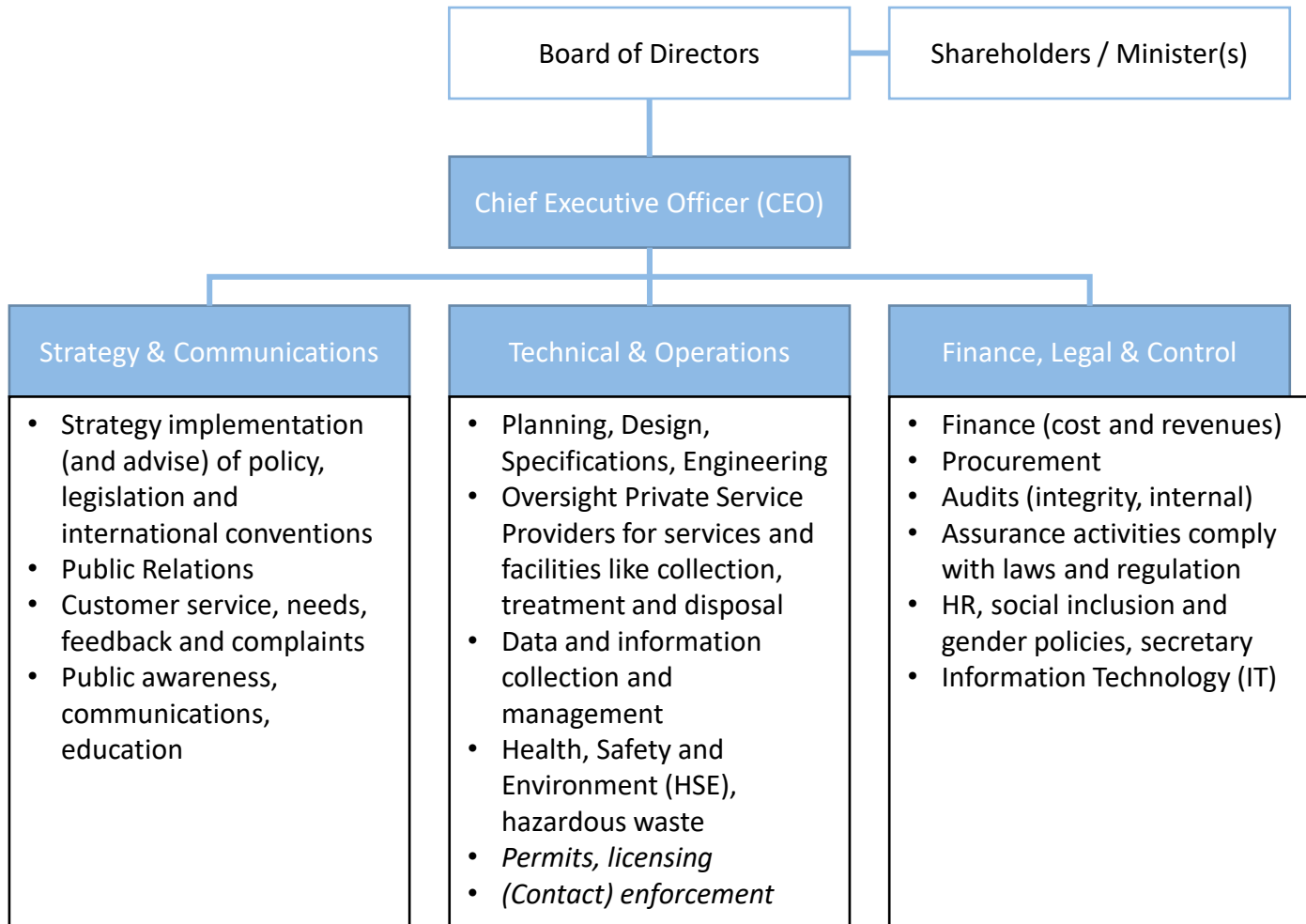
Robust Waste Authority



Criteria	Definition
Organization & Governance	Autonomy, interests, inclusivity stakeholders, expertise, other roles, sound institutions, and policies.
Financial	Costs, revenues, predictability, accountable

4.3.2 Design: Organizational Capacities

The size of the Waste Authority will be relatively small due to the span of control, volume, procurements, and investments. The CEO leads the organization and includes strategy & communication; technical & operations; and finance, legal & control.



The **size of the organization** will be limited due to the following:

The span of control. The Authority is dependent on strong regulation and enforcement.

The span of volume. The volume of tasks in a small island state will be relatively small.

- The number of tasks is now divided amongst ministries that are not regulated. It makes sense to bundle tasks on waste management and other environmental subjects.
- This calls for intelligent design of activity execution, for example, by combining roles or collaborating with partners.

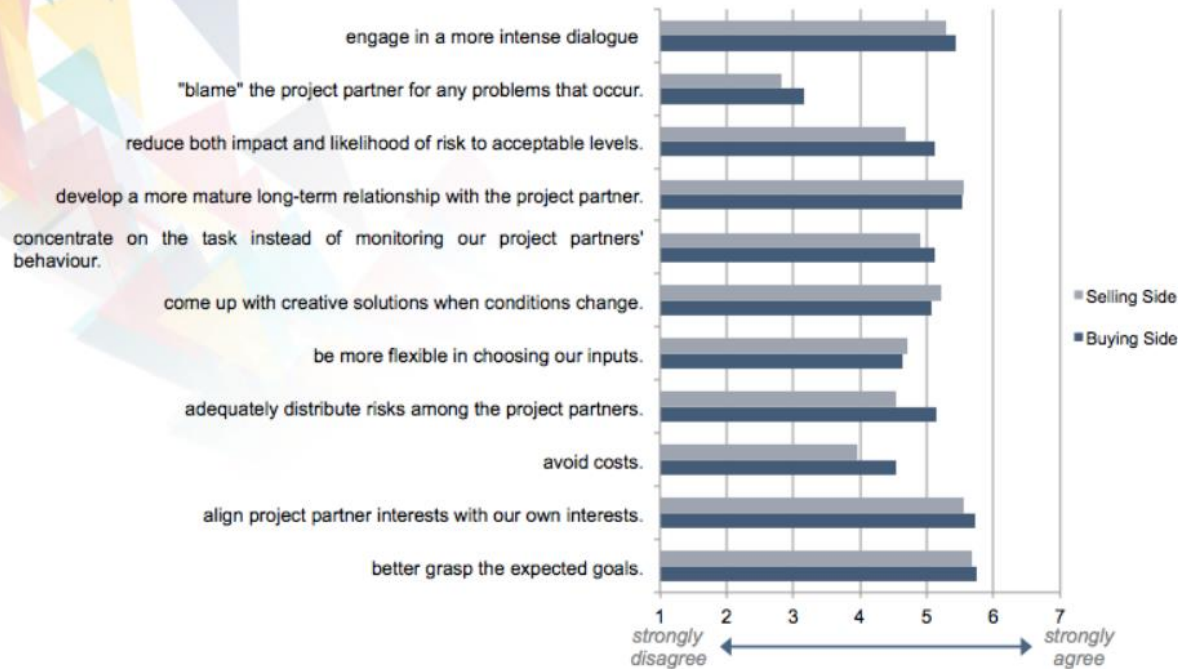
The span of operations, procurement, and investments.

- The operations are either performed by the Authority or by partners. Per activity, the authority should be able to choose to rent, lease, or purchase equipment. For example, it makes sense to buy collection bins as they are difficult to sell after usage. For vehicles, it makes sense that the contractor will own them as they are easily sellable.

4.3.2 Design: Procurement

Procurement will be a vital business function of the Waste Authority. Preferably, performance-based contracts are used to procure services. When done right, the primary advantage is creating the incentive for the supplier to perform well.

Typically, performance-based contracts allow us to...

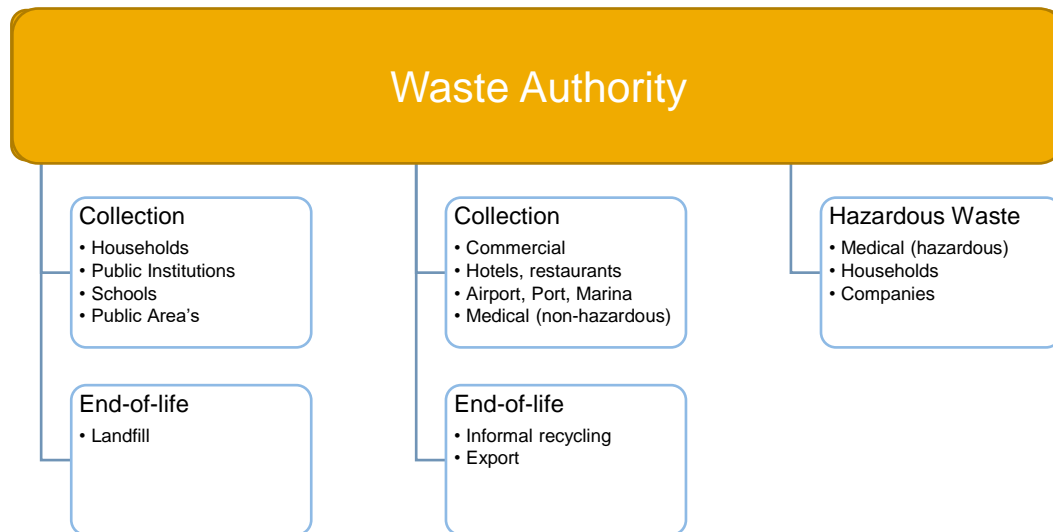


Do's with performance-based contracts:

- Define outcomes and output-based performance measurement metrics/results (instead of specifying how the work will be accomplished).
- Establish baseline information about previous contracts, where possible/applicable.
- Ask contractors to provide proof of their quality levels, which come from an independent source.
- Define clear goals, priorities, and KPIs. Consider a more extended contract period to adopt a partnership arrangement for more significant investments.
- Establish a realistic likely cost and a clear monitoring plan (which is being monitored and evaluated). Ensure good oversight of contact managers.
- Choose the appropriate contract type and size and include positive and negative incentives.

4.3.2 Design: Scope of waste streams

The Waste Authority should be responsible for collecting and processing all waste, recyclables, and others: both household waste and commercial waste; waste from cruise ships; and hazardous waste, including medical waste.



- There should be no separation between **household and commercial as it is intertwined** (commercial entities do not comply with specific regulations): it is unclear if waste is private or commercial when picked up. Fees should be in place for each user.
- Additional regulations should be implemented **for sources that generate more than average waste** (e.g., supermarkets should have compactors).
- It is essential to include businesses' responsibility **for waste storage, collection, and separation in their business/hindrance permit**. There is no restriction in business permits as to waste at the moment. As permits do not include specifics for waste management, small businesses on Front Street do not have the space keep waste on their premises, and therefore waste in Philipsburg is collected 2x a day (paid for by the government). Also, bins are stolen, and it is unclear where they are brought.
- The authority should be responsible for the waste services, including overseeing specific waste streams like medical waste. It can execute the services itself or procure services from a provider.

4.3.3 Design: Organizational Models

From a helicopter view, three organizational models are available for the Regulator and Operator Roles: Government, public entity, or private entity*. Sint Maarten is now operating in the Governmental model for waste management.

Level\Model	A. Government	B. Public Entity	C. Private Entity
Strategic (long-term)	Waste Authority		
Tactical (medium-term)	Waste Authority	Waste Authority	Waste Authority
Operational (short-term)			



- Government
- Public entity
- Private sector

A. Government model

All solid waste management roles and responsibilities are organized in a government department, possibly strengthened to improve the waste management capacities. Some execution activities are outsourced to the private sector.

B. Public entity model

An external agency (ZBO) that is autonomous in management and decision-making is established by law. The agency functions within applicable legal frameworks with specific tasks mandated to them. Such an agency will be responsible for solid waste management, including financial management.

C. Private entity model

A company (NV) that has been established by an exclusive management agreement or concession for a substantial period (> 10 years). The entity is (partly) owned by the government.

*For reasons of simplicity, the three most suitable organization models have been compared.

4.3.3 Design: The Governmental Model - Strengths and Weaknesses

Sint Maarten now uses the governmental model. From an integrated solid waste management perspective, the strengths of this model are only partly unlocked; the present weaknesses are cause to evaluate the current state.

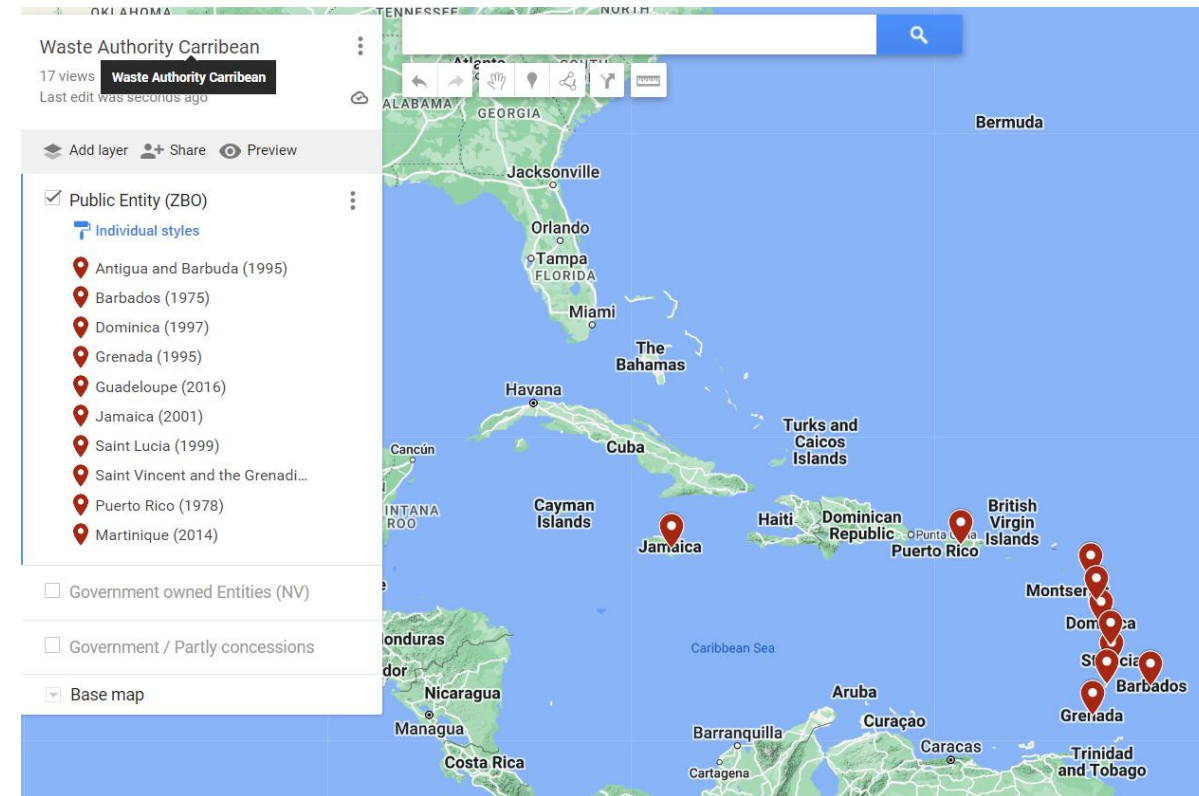
	Strengths	Weaknesses
Organization & Governance	<ul style="list-style-type: none"> In a strong institutional environment, the public interest is predominant on each level (strategy, tactical, operations). With robust internal coordination mechanisms, all Ministries can easily be involved. Regular general governmental feedback mechanisms can easily be used. When organized well, the government has all the needed expertise in-house. This could lead to easier coordination between roles and tasks, and capacity building will lead to more in-house expertise. However, even in countries with strong institutions, there remain expertise gaps in the government. 	<ul style="list-style-type: none"> Political stakeholders and personal interests can directly influence tactical and operational tasks. Vested interests in current end-of-life destinations can slow down the needed moving up the waste hierarchy. In case of a resource capacity shortage, below-standard oversight of private service parties is easily caused. Public education and awareness are subject to government supervision and considerations, reducing effectiveness. Short-term policy horizon is a barrier to making decisions on and implementing needed policy changes. The roles of regulator, operator, and enforcer are easily intertwined. The accountability of each role is less clear Fully working within the Government system might cause increased bureaucracy
Financial	<ul style="list-style-type: none"> When organized effectively, there might be less overhead (and thus lower costs). Audit and controlling are done automatically by the governmental financial system. 	<ul style="list-style-type: none"> In many cases, there are no dedicated revenues for waste management that (fully) cover the costs. The budget can change each year as part of general considerations, which causes difficulty for medium and long-term planning. As investors know these ‘flexible’ budgets, they are less likely to invest in government projects. As the government is bound to general rules of salaries, it is less flexible in adapting to market conditions to attract and keep good personnel.

4.3.3 Design: The Public Entity Model - Examples

On Sint Maarten, various organizations use the Public Entity Model. A Public Entity has been established for waste management in ten Caribbean countries.

Examples of Public Entities on SXM

- Algemeen Pensioenfonds Sint Maarten (APS)
- Bureau for Intellectual Property Sint Maarten (BIP)
- Bureau Telecommunicatie & Post (BTP)
- Central Bank of Curacao and Sint Maarten (CBCS)
- Integrity Chamber
- National Recovery Program Bureau (NRPB)
- Sociale Ziektekosten Verzekering (SZV)
- Tourism Board



4.3.3 Design: Case Study Saint Lucia

SLSWMA is a 27-year-old Caribbean example of how to organize waste management via a Public Entity. More than 1/3 of their revenues is an arrival fee for visitors.



- The Governments of six (6) Organization of Eastern Caribbean States (OECS), including Saint Lucia, recognized the need for improved solid waste management systems. The **Saint Lucia Solid Waste Management Authority (SLSWMA)** was established in **1996** under Act No.20 of 1996 (repealed by Waste Management Act No.8 of 2004). SLSWMA is a statutory body that deals with solid waste management.
- A **Board of Directors** with 11 members administers SLSWMA:
 - 3X PS (equivalent to an SG in SXM);
 - 2X Legal and Finance (Attorney General, Director of Finance);
 - 3X representatives (Chamber of Commerce, Industry and Agriculture; the Saint Lucia Hospitality and Tourism Association (SLHTA); the Association of Professional Engineers of Saint Lucia);
 - 3X representatives appointed by the Minister with responsibility for solid waste.

Potential weaknesses of this Board structure is not having the right person for the job: people have not gone through a screening process for the position, persons also too busy with their regular [especially public sector] jobs to perform adequately and there is no ownership of/for the post.
- SLWMA has always utilized a **private-public partnership (PPP)** to provide solid waste and medical waste collection. SLWMA owned an excavator, bulldozer, and landfill compactor, which fell into disrepair primarily due to inadequate resources and know-how. The SLSWMA has also transitioned to a PPP to provide heavy equipment for landfill operations. SLWMA utilizes a PPP to operate and maintain an autoclave to treat medical waste.
- SLWMA is also responsible for **licensing waste haulers** and waste management facilities like recycling.
- SLWMA receives a subvention from the Government of Saint Lucia, which barely covers the cost of waste collection. The financial framework has not been set by design: an allocation was derived by the Department of finance with no basis. Now, SLWMA receives a portion of the head tax, USD 4.08 **per visitor to Saint Lucia**, collected by the Saint Lucia Air and Sea Ports of Authority (SLASPA). The revenue from the head tax is responsible for 35-40% of the operating budget. SLSWMA is paid for particular disposals at an established rate per item.

1: <https://www.worldometers.info/maps/saint-lucia-map/>

2: <https://www.govt.lc/news/saint-lucia-to-develop-solid-waste-management-strategy>

4.3.3 Design: The Public Entity Model - Strengths and Weaknesses

The Public Entity Model in Sint Maarten has strengths and weaknesses.

	Strengths	Weaknesses
Organization & Governance	<ul style="list-style-type: none"> The operator's role, including full responsibility for the collection, treatment, and disposal of waste, is in the hands of an autonomous public entity. With an autonomous entity, better customer service and external provider involvement are expected. A public entity will be considered part of the general public institutional framework. The explicit separation of responsibilities within the integrated solid waste management framework stimulates professionalism and perseverance. Processes and decision-making become much easier. An autonomous body supports the development of capabilities and competencies needed for advice, implementation, and execution of waste policies 	<ul style="list-style-type: none"> When not managed correctly, there is a risk that specific stakeholders are at a greater distance from a new unknown public entity. To be a strong operator requires effective regulators and enforcers. A public entity directly falls under a (group) Ministerial responsibility. For the government, there is a risk that unforeseen implementation or execution measures become general public issues. On the other hand, there is still a risk of political decisions that directly influence financials or operations.
Financial	<ul style="list-style-type: none"> The entity will have (some) financial autonomy. A service level agreement will include which services should be delivered at which rates. A clear and explicit accountability. 	<ul style="list-style-type: none"> To ensure financial autonomy, the new organization will need structural revenues and solid capital reserves. Various ZBOs on SXM struggle with low capacity due to budget constraints. As it is an autonomous body, there might be an extra delay in financial reporting. In the service level agreement, services need to be explicitly formulated. As it is a public entity, investors might be less likely to invest in projects. There might be some extra overhead in an independent organization.

4.3.3 Design: The Private Entity Model - Examples

On Sint Maarten, various organizations use the Private Entity Model. In six Caribbean countries, a Private Entity has been established for waste management: Aruba, Bonaire, Curaçao, St Kitts and Nevis, Trinidad, and Tobago, and the US Virgin Islands.

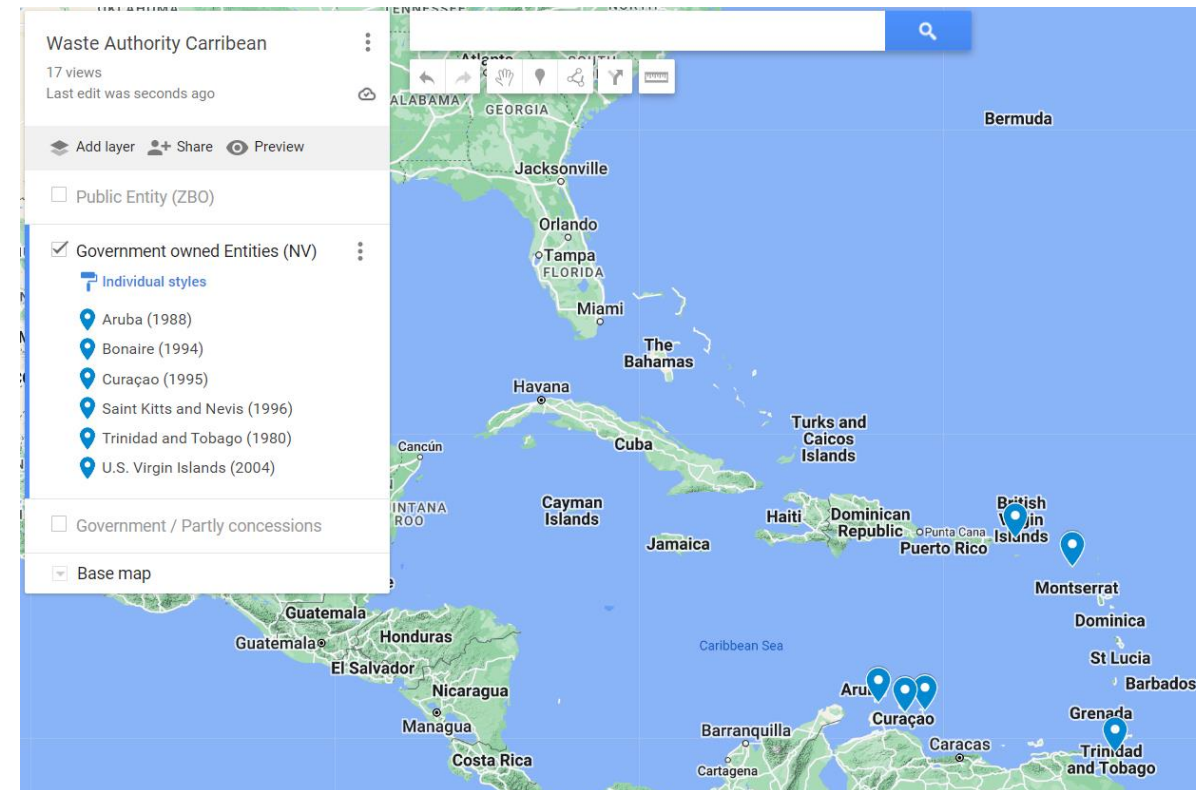
Examples of Private Entities on SXM

Fully owned by the SXM government:

- NV Gebe
- Princess Juliana International Operating Company N.V.
- St Maarten Harbour Holding Co NV
- St. Maarten Laboratory Services (SLS) N.V.
- St. Maarten Telecommunication Holding Company N.V. (TelEm Group)
- Postal Services St. Maarten N.V. (PSS NV)
- Luchthaven Veiligheid Financiering Maatschappij N.V.

Partly owned by the SXM government:

- Dutch Caribbean Air Navigation Service Provider (DC-ANSP)
- Ontwikkelingsbank van de Nederlandse Antillen N.V.
- Saba Bank Resources N.V.
- Windward Islands Airways International N.V. (Winair)



4.3.3 Design: Case Study Selikor N.V. Curacao

Selikor is a 37-year-old Caribbean example of how to organize waste management via a Private Entity. In 2022, Selikor was in financial distress due to the government's sizeable unpaid debt, which needed to transfer the collected waste levies to Selikor.



SELIKOR IN HET NAUW

Van een onzer verslaggevers

Willemstad - De Curaçaose overheid staat voor 60 miljoen gulden in het krijt bij Selikor. Daar moet dringend wat aan gedaan worden. Anders bezwijkt het vuilverwerkingsbedrijf onder de enorme schuldenlast.

- Selikor NV is a spinout from a sanitation department within the government of Curacao (1973) to an independent organization (1995).
- Selikor N.V. is a publicly owned company that deals with solid waste management. The goal is the **integrated management of solid waste management**. Selikor is a limited liability company **100% owned by the government**. It is also 100% owner of subsidiary waste management companies (i.e., recycling and sorting).
- Selikor N.V. has a **management agreement** with the government for services performed. In the management agreement, the government pays Selikor N.V. an agreed-upon fee for services performed. These funds are paid in advance and reconciled based on actual services performed at the end of the period.
- Selikor N.V. is not involved in levying and collecting the waste tax. The Ministry envisions a set-up where the waste tax/fee is paid directly to Selikor N.V. to run its operations instead of going through the government coffers.
- Selikor provides a **combination of services for the Government and commercial services** (including environmental management consultants).
- Selikor focuses on **quality, performance, clients, and employees**. Selikor is **financially self-sufficient**; target five years, achieved in 3 years. Selkor is **ISO certified**: 9001-2000 for quality and 14001 for environmental issues.

4.3.3 Design: The Private Entity Model - Strengths and Weaknesses

The Private Entity Model in Sint Maarten has strengths and weaknesses.

	Strengths	Weaknesses
Organization & Governance	<ul style="list-style-type: none"> The operator's role, including full responsibility for the collection, treatment, and disposal of waste, is in the hands of an autonomous private entity. A private entity is well-market-oriented in solving waste management tasks and will quickly adjust to situations and market changes. This leads to efficiency gains in operations. With an autonomous entity, better customer service and external provider involvement are expected. The explicit separation of responsibilities within the integrated solid waste management framework stimulates professionalism and perseverance. Processes and decision-making become much more accessible. An autonomous body supports the development of capabilities and competencies needed for advice, implementation, and execution of waste policies. The risk of political decisions directly influencing financials or operations is reduced. 	<ul style="list-style-type: none"> When not managed correctly, there is a risk that specific stakeholders are at a greater distance from a new unknown public entity. To be a strong operator requires effective regulators and enforcers. For the government, there is a risk that unforeseen implementation or execution measures become general public issues.
Financial	<ul style="list-style-type: none"> The entity will have (some) financial autonomy. A service level agreement will include which services should be delivered at which rates. A clear and explicit accountability. As a private entity, investors might be more likely to invest in projects. 	<ul style="list-style-type: none"> To ensure financial autonomy, the new organization will need structural revenues and solid capital reserves. As it is an autonomous body, there might be an extra delay in financial reporting and limited access to information. In the service level agreement, services need to be explicitly formulated. There might be some extra overhead in an independent organization.

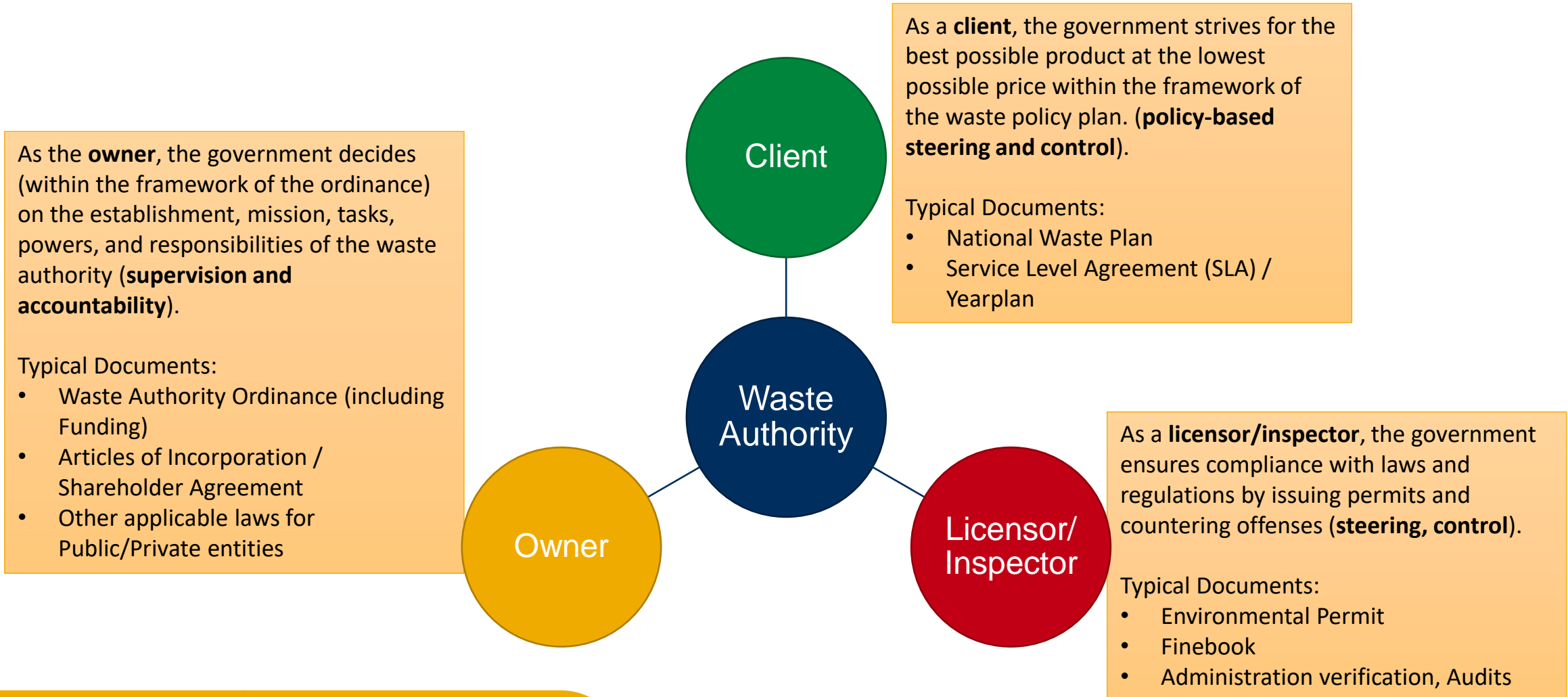
4.3.3 Design: Public vs. Private Entity - The Differences

A Private Entity's operation has more distance from the government, it can have more than one shareholder, and it will be better capable of attracting finance. A Private Entity calls for a potent regulator and enforcer from the government.

	Public Entity (ZBO)	Private Entity (NV) owned by the government
Organization & Governance	<ul style="list-style-type: none"> Organization wholly owned by the government. Public interest is automatically predominant. The Board advises. The Minister is responsible for operational tasks. A public entity reports directly to the government and needs a strong relationship with the Minister to operate effectively. A public entity can easily include regulator and enforcement tasks. 	<ul style="list-style-type: none"> The government owns at least 50% of the shares. There is an option to include additional shareholders, such as NGOs or private partners. The Board of Directors makes decisions and the Board of Commissioners controls. The Minister is responsible as a shareholder but not for operational tasks. A Private Entity has more distance from the government, less political interference, more accessible and quicker decision-making, and a clear-cut internal structure. The Entity is, therefore, more flexible, while the responsible Ministry has a clear regulator role towards the Entity. A private entity calls for a potent regulator and enforcer from the government.
Financial	<ul style="list-style-type: none"> The Minister approves the budget and fees. Some staff, properties, and offices might be shared with other governmental agencies, which could lead to cost savings. The Public Entity should be able to build up its reserves, separated from the government funds. However, it might prove harder to realize. The organization is less capable of attracting loans or investments for operational activities. A Public Entity will provide all intelligence as the government requests, and all information is publicly available (transparency). Therefore, stakeholders might not share information with the Entity. Easier to exclude turnover tax. 	<ul style="list-style-type: none"> The organization is more capable of attracting loans and investments and setting-up joint ventures for operational activities. The private entity can choose not to share certain information, but via articles in the concession, the government can ensure they will receive the needed information. A private entity has to pay profit tax. A tax exemption can be requested.

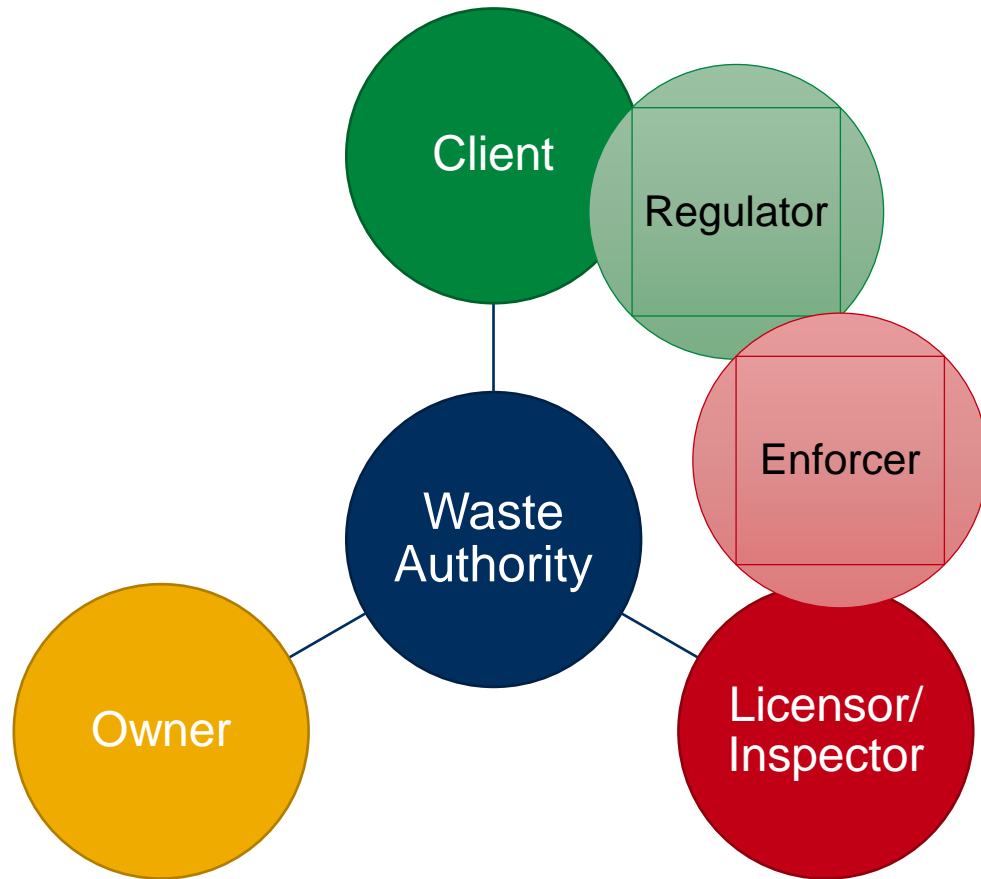
4.3.4 Design: Roles Government

Towards the Waste Authority, the Government has three types of direct relationships: as the owner, the licensor/inspector, and the client. Via these relations, the government can use control mechanisms like policy-based steering, control, supervision, and accountability.



4.3.4 Design: Roles Government

A private Waste Authority calls for a potent regulator and enforcer. Strong regulations and enforcement depend on applicable laws, available capacity/staffing, expertise, and financial means.



The **regulator** sets the scene and has oversight of the Waste Authority. The **enforcer** checks if the government, people, and businesses behave accordingly.

Typical Documents:

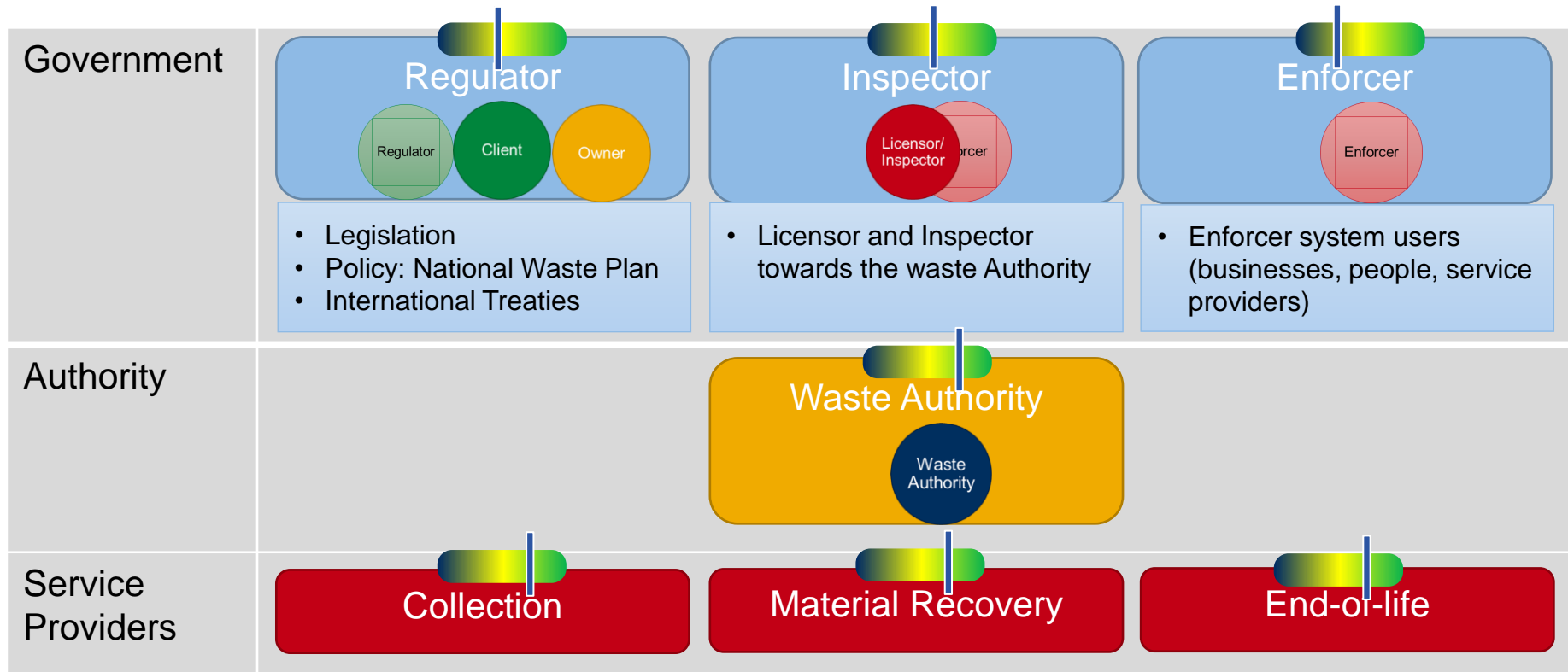
- International Treaties and Protocols;
- National Legislation;
- National Waste Plan;
- Enforcement Plan and Procedures
- Finebook

Organization:

- When the Waste Authority is organized as a Private Entity (NV), the regulator and enforcer roles are with the government.
- Employees of VROMI (and other Ministeries) and/or ZBO can become qualified enforcers “bijzondere ambtenaren”. Police, prosecutor, inspectors, and customs have an essential role in enforcement: environmental issues must be one of their priorities to have capacity.
- The waste authority, contractors, and the public can report events to the enforcer.
- The government can execute both roles directly or create a Public Entity (ZBO) to regulate and enforce (environmental matters). Trinidad & Tobago has an Environmental Management Authority operating since 1995.

4.3.3 Design: Public vs. Private Entity

For a public entity, it will be easier to take up parts of the enforcement role. A private entity will likely perform better because it can run operations independently, making attracting investments easier.

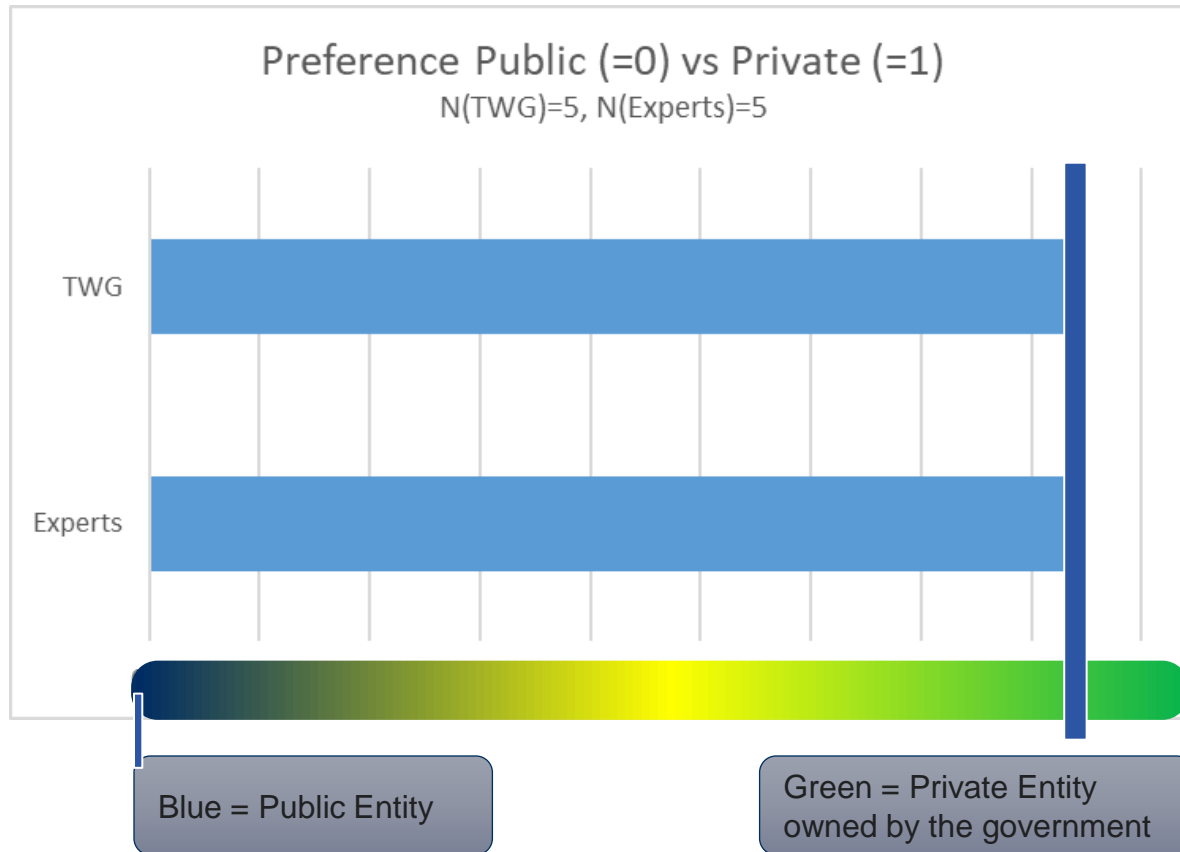


Blue = Public Entity

Green = Private Entity owned by the government

4.3.3 Design: Public vs. Private Entity

After explaining the differences between a Public and a Private Entity, most Technical Working Group (TWG) members and experts recommend a Private Entity as most suitable for managing Sint Maarten's waste.



The main arguments for choosing a Private Entity are related to the improvement of current performance:

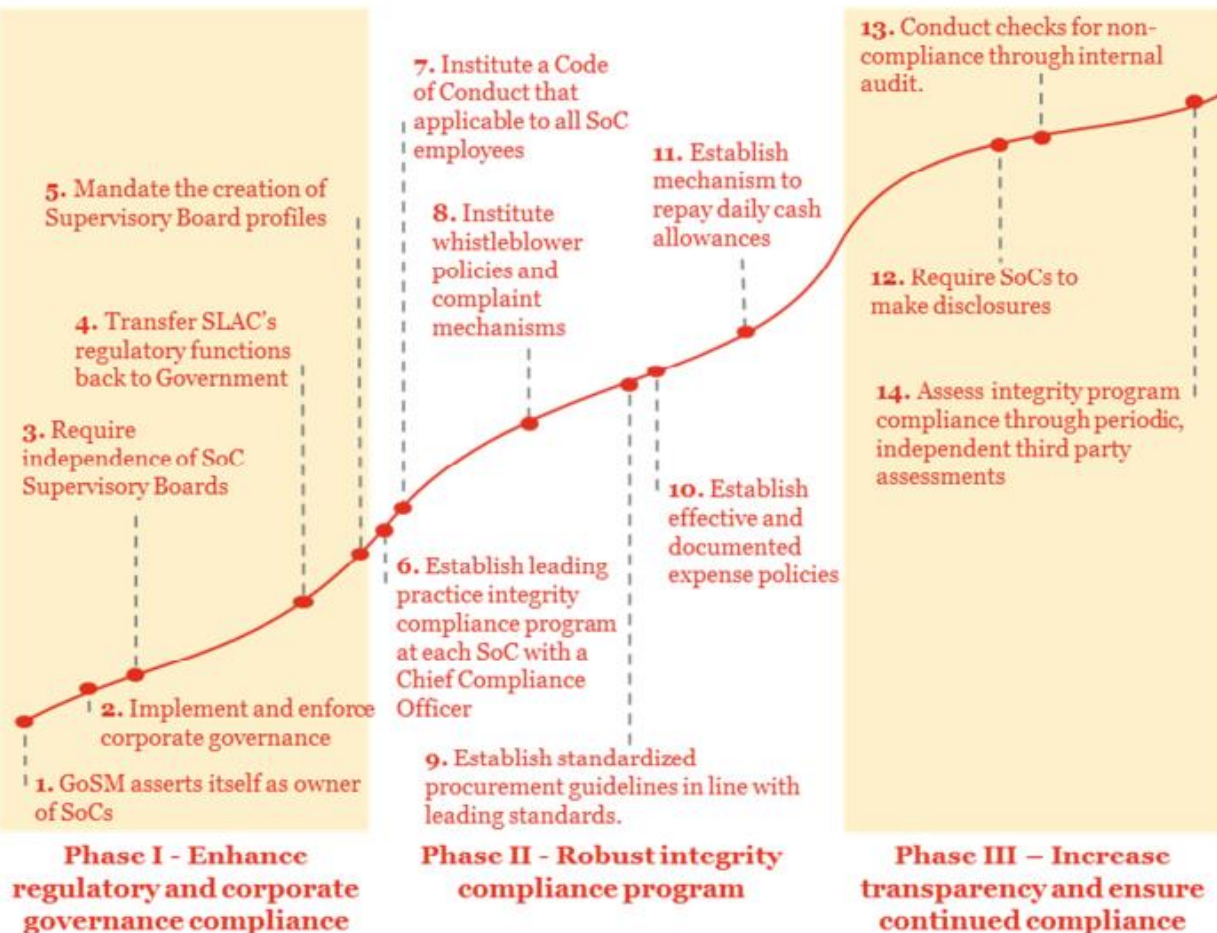
- Decision-making is easier and quicker by a Management Board. There is less political interference in daily operations;
- More financial autonomy (less prone to budget cuts, increased chance of buildings its financial reserves, more accessible to arrange loans).

A private Authority implies that the roles of the regulator and enforcer are within the government. These roles need support to improve.

4.3.4 Design: Integrity Architecture

The three phases to move towards an established integrity architecture of State Owned Companies (SOC) are: 1. Enhance governance compliance; 2. robust integrity compliance program; 3. increase transparency and ensure continued compliance. These phases include 14 milestones.

SoC Integrity Architecture Priority Milestones



Phase I – Enhance regulatory and corporate **governance compliance**

1. The **GovSXM** asserts itself as **the owner** of SoCs;
2. Implement and enforce **corporate governance**;
3. Require **independence** of SoC **Supervisory Boards**;
4. Transfer SLAC's **regulatory functions** back to the Government;
5. Mandate the creation of **Supervisory Board profiles**;

Phase II – Robust integrity **compliance program**

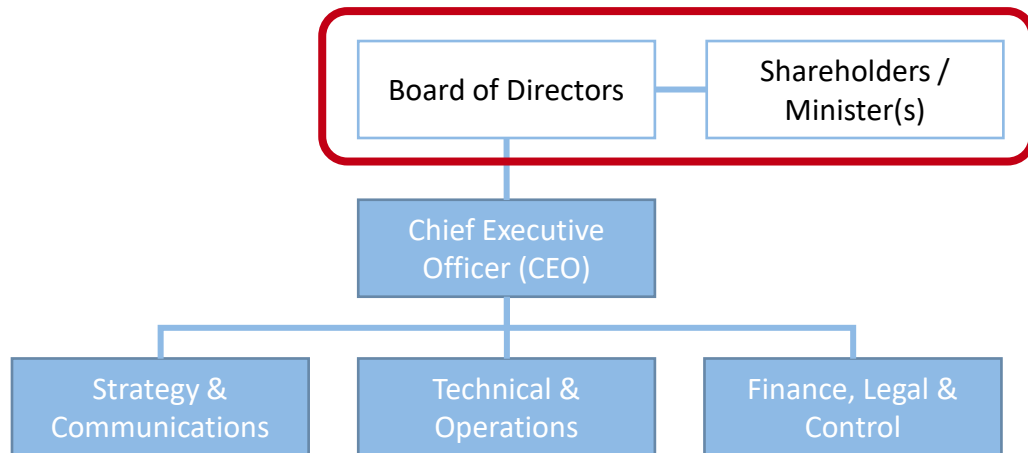
6. Establish a leading practice **integrity compliance program** at each SoC with a Chief Compliance Officer;
7. Institute a **Code of Conduct** that applies to all SoC employees;
8. Establish standardized **procurement guidelines** in line with leading standards;
9. Establish effective and documented **expense policies**;
10. Establish a mechanism to repay daily **cash allowances**;

Phase III – Increase **transparency** and ensure continued compliance

12. Requires SoCs to make **disclosures**;
13. Conduct checks for non-compliance through **internal audit**;
14. Assess integrity program compliance through periodic independent **third-party assessments**.

4.3.5 Design: Board and Shareholders

The shareholder and Board structure is vital in building a robust and autonomous Waste Authority. Existing corporate governance laws must be adhered to. A strong structure will require the right people to be appointed, investor participation, and professional management to be guaranteed, functioning independently from the Government.



Elements of a vital structure that protects the organization are:

- The concession period for the Waste Authority is substantial (25 years) to increase willingness for investments.
- Next to the government, **investors and other shareholders** can be invited to own part of the shares of the Holding;
- Existing corporate governance laws must be adhered to.
- Candidates for any function have **strong profiles** and are selected based on their qualifications. Positions are based on pre-set criteria to ensure solid professional backgrounds and good behavior (code of conduct). When unavailable in Sint Maarten, consider people not currently living on the island. This is valid for all levels in the organization, including Board members.
- **Board members are (partly) appointed** an Oversight Committee/ Supervisory Board which includes representatives of independent entities. Examples: SER, Central Bank, General Audit Chamber.
- A **double Board structure** can be considered with 1. A Holding Board, owning the assets and the concession and 2. An Operational Board responsible for daily management. If there is an operational issue, assets can't be touched.
- A **robust Integrity Architecture / check-and-balances / well-documented procedures** are designed and implemented on the Board level and in operations. Especially ensuring a fair and transparent procurement process is critical.

The World Bank, European Investment Bank, Dutch Growth Fund, Pension Fund (SVZ), and private companies/investors are potential investors. Working with an international shareholder can enhance trust in the Waste Authority.

4.3.5 Design: Supporting Regulator

The Waste Authority can support the regulator in fulfilling some of its activities, such as preparing policies, international coordination, or issuing permits. An example case is where BPT helps TEATT as Energy Regulator.

Regulator

- Legislation: national laws addressing solid waste management (organizational- and financial framework of the Operator and Enforcer, definitions)
 - Policy: National Waste Plan (a strategic policy plan), which sets targets for waste management
 - Guidelines for implementation of laws and policies
 - International coordination and regulations to comply with.
- Supervising the implementation plans and laws
 - Supporting enforcement of legislation and rules
 - Issue and refuse hindrance permits for third parties regarding waste management

Example: Ministerial Decree TEATT “Mandate Energy Regulator”

Highlights:

- The Minister of TEATT decides to place the utility regulation under an existing **regulatory body**, Bureau Telecommunications and Post Sint Maarten (BTP);
- The preparations to be undertaken are to prepare and present the **format of the regulatory approach** for the utility sectors, to assess **regulatory entities** in this field to determine the most suitable regulatory approach for Sint Maarten, and to commence **training of staff** for the execution of such tasks.
- **The Minister remains authorized** to exercise the delegated power and may revoke the mandate at any time. The mandate will stay in effect until such time is altered or revoked in writing by the Minister.



Waste Authority

4.4.1 Phased Approach

Establishing a Waste Authority (WA) involves five phases: initiation, design, formalization, transition, and transfer. **It is expected to be at least a five-year process. This duration aligns with international experiences** in St Lucia, Grenada, and the Netherlands, where installing a fully functioning Waste Authority took, on average, five years or more.

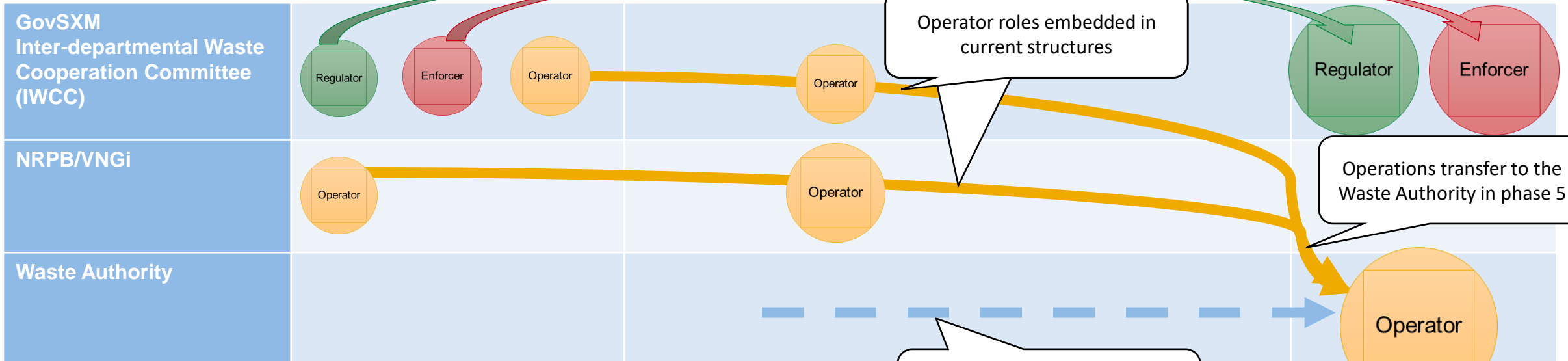
Today



- | Objectives | 1. Initiation | 2. Design | 3. Formalization | 4. Transition | 5. Transfer |
|------------|--|--|--|--|---|
| | <ul style="list-style-type: none"> • Commitment Government • Project Governance • Workplan phases 1 and 2 | <ul style="list-style-type: none"> • Commitment Design WA • Adoption Vision • Initiation Stakeholder Engagement • Workplan phases 3 ,4 and 5 | <ul style="list-style-type: none"> • Legal and financial pre-conditions for transition in place | <ul style="list-style-type: none"> • The WA is ready for operations with revenue streams and a competent workforce. | <ul style="list-style-type: none"> • Transfer and start operations • Ceremonial Opening |

Objectives

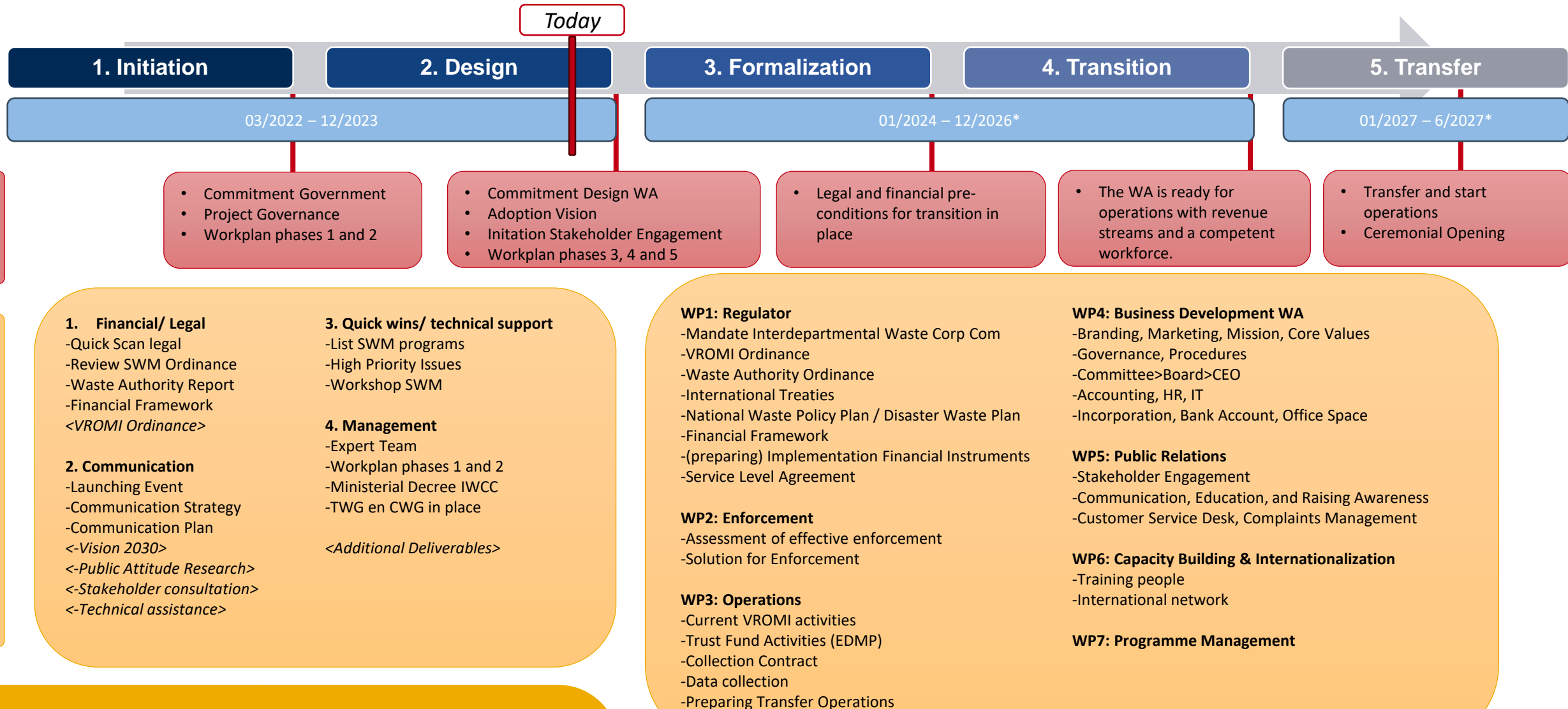
Responsible



*The timeline is indicative.

4.4.2 Transition Programme

There is **substantial progress made** in the Waste Authority design in phases 1-2. There is **still progress to be made**: The activities in the subsequent three phases include seven working packages. **The work in the following phases 3-5, needs commitment and funding.**



*The timeline is indicative.

4.4.3 Theory of Change

The activities in each Working Package are needed to support the six objectives to have an integrated Sustainable Waste Management system (ISWM) in place on Sint Maarten by 2030.

Vision / Mission 2050

A good life for everyone on Sint Maarten (people) within Sint Maarten's natural boundaries (planet) and good sustainable economic prosperity (wealth).

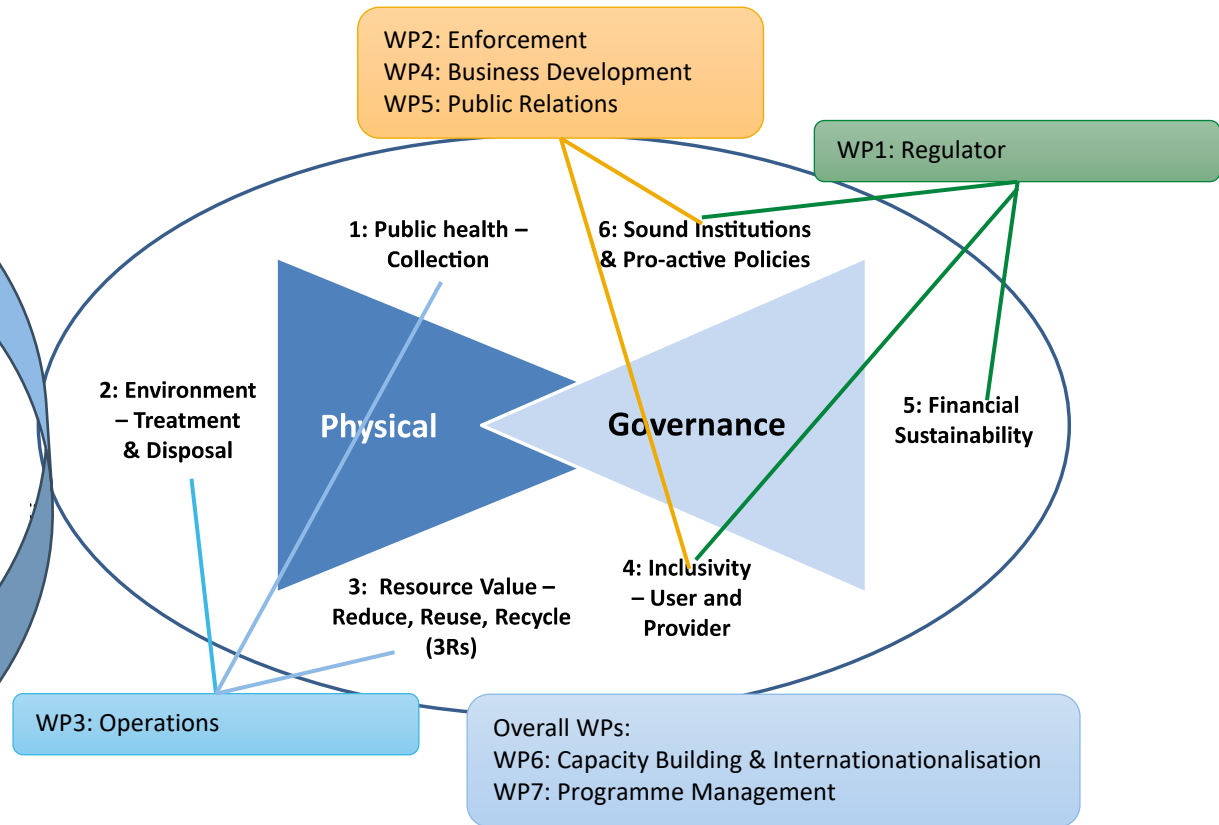
Ambition 2030: An integrated solid waste management system (ISWM) to be in place on Sint Maarten by 2030.

Objectives:

1. Public Health: 100% Professional collection of waste
2. Environment: 100% Landfill site reform
3. Resource Value: 75% waste diversion of the waste disposal site
4. Inclusivity: 90% aware residents, businesses and visitors
5. Financial: 100% financial sound system
6. Institutions & Policy: 1X robust waste authority

Activities / Working Packages

- WP1: Regulator
- WP2: Enforcement
- WP3: Operations
- WP4: Business Development WA
- WP5: Public Relations
- WP6: Capacity Building & Internationalization
- WP7: Programme Management

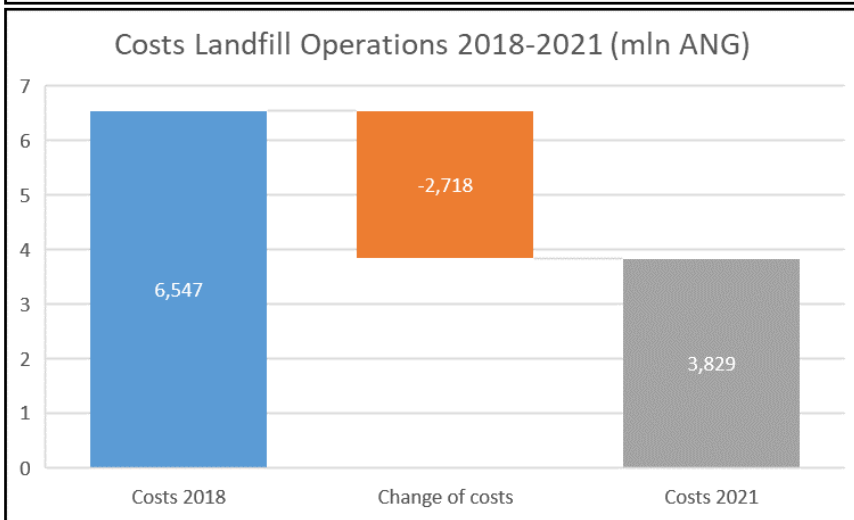
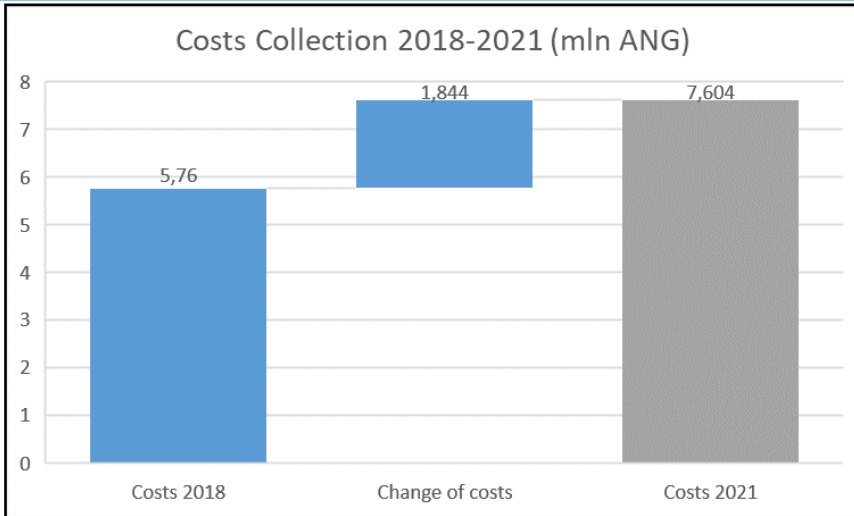


- 5.1 Current situation Sint Maarten
- 5.2 Analysis: Need for Change
- 5.3 Financial Framework



5.1 Current Situation: Costs

Currently, only part of the actual waste costs is traceable. The collection and landfill operation costs are estimated at 6,9 mln US\$. Between 2018 and 2021 the costs for collection have increased by 32% and the costs for landfill operations have decreased by 42%.



Comments:

- The **costs for collection** have increased between 2018 and 2021 with 1,8 mln ANG (32%). The increase is mainly due to higher prices provided by the contractors in the tender procedure. The costs for **landfill operations** have been reduced between 2018 and 2021 with 2,7 mln ANG (42%). Reduction is mainly due to a tender (which resulted in a contract based on maximum hours and tariffs), improved control measures by VROMI and equipment provided by the Trust Fund.
- The **current costs do not include** any fees for VROMI staff, land usage, power and fuels, project management, depreciation of facilities, communication, overhead and support services, maintenance, or enforcement.
- At VROMI, solid waste management is, **in most staff functions, just one of the many subjects to be covered**. The exception is the contract managers: currently, three out of five **contract managers** are managing trench and district cleaning, solid waste collection, and landfill operations.
- **Forecasts should include costs for the roles of regulator, operator, and enforcer**. By including all costs, the overall budget will increase.

Costs per year (2021)	ANG	US\$
Landfill Heavy Equipment	3.829.000,-	2.259.000,-
Collection Contracts	7.604.000,-	4.486.000,-
Total	11.772.000,-	6.945.000,-

1: Figures 2021: VROMI

2: Figures 2018: AIM Texas Trading. "Country Solid Waste Management Sector Assessment (CSWMSA)", 11-2020

3: The costs are for 2021 and used on an exchange rate of 1Ang=0,56US\$. Equipment prices for both landfills have been estimated based on actual renting costs for equipment at the Irma landfill.

5.1 Current Situation: Costs

Compared with other high-income countries, the costs of waste services are relatively low, likely due to a lower level of some of the services.

Table 5.2 Typical Waste Management Costs by Disposal Type
US\$/tonne

	Low-income countries	Lower-middle-income countries	Upper-middle-income countries	High-income countries
Collection and transfer	20–50	30–75	50–100	90–200
Controlled landfill to sanitary landfill	10–20	15–40	20–65	40–100
Open dumping	2–8	3–10	–	–
Recycling	0–25	5–30	5–50	30–80
Composting	5–30	10–40	20–75	35–90

Source: World Bank Solid Waste Community of Practice and Climate and Clean Air Coalition.

Note: – = not available.

Sint Maarten = 81 US\$

Sint Maarten = 41 US\$

5.1 Current Situation: Tax Revenues

Sint Maarten struggles with tax revenues not covering the costs, low tax compliance, enforcement issues with the tax administration, and unequal income distribution. Sint Maarten aims for a structural tax reform that guarantees sustainable revenues and supports economic growth.

Table 1. Sint Maarten Tax Revenues 2016–2020
(in million ANG)

Tax Instrument	2016	2017	2018	2019	2020
Wage and Personal Income Tax	141.72	136.34	132.80	142.43	135.26
Profit Tax	42.33	33.92	20.83	25.51	38.63
Turnover Tax	132.58	117.59	117.49	141.02	102.20
Bank License Fee	24.12	21.58	25.79	17.06	17.08
Real Property Transfer Tax	12.74	11.23	10.22	15.45	7.47
Motor Vehicle Tax	9.60	9.98	9.42	10.37	7.65
Stamp Duties	1.33	0.89	1.47	0.82	0.96
Other	0.20	0.09	0.13	0.09	0.11
Total	364.62	331.62	318.15	352.75	309.36

Source: Sint Maarten Tax Administration.

- During 2016-2020, Sint Maarten lost about 15 percent of its tax Revenues. About **2/5 of tax revenues are from wage and personal income tax**. Roughly **2/5 is generated via business profit and turnover tax**. 1/5 comes from bank license fees, property transfers, motor vehicle tax, etc. Sint Maarten effectively does not have a recurrent property tax, nor does it have a value-added tax (VAT).
- Since 2010, Sint Maarten’s tax system has not changed. At the end of 2020, the Sint Maarten authorities and the Netherlands signed a “landspakket” (country package) in which the Dutch Government provides financial support to the Dutch Caribbean islands in exchange for structural and other reforms in the tax system.
- IMF sees two main tax instruments that could help the Sint Maarten authorities to increase revenue in the short to medium term: **enforcement of the existing recurrent property tax and introduction of taxation on gambling**. Because two national jurisdictions share the island and there is no border control, Sint Maarten’s options for taxation, such as tariffs and value-added tax (VAT), are more constrained than is valid for other Caribbean islands.

5.1 Current Situation: Tax Revenues

There are currently no direct taxes for waste management for any user group (households, businesses, visitors). Some companies are charged for waste services by private haulers on Sint Maarten.

- The Government's "**Algemene Middelen**" (**general budget**) covers the operational costs of **household** waste collection and landfill management. The current costs do not include any fees for VROMI staff, land usage, fuels, project management, depreciation of facilities, communication, overhead and support services, maintenance, or enforcement. There is no waste management levy for households.
- **Businesses** pay for waste collection when done by a private hauler. Commercial waste, collected with household waste, is not charged to businesses. A rough estimation would be that 25% of the companies pay private collectors.
- For **visitors**, there are two types of taxes: a **departure fee** at the airport and an **occupancy fee** charged to hotels. Both prices are not directly related to environmental matters. In the fiscal year 2022, 8,4 mln ANG occupancy fee was collected.
- Frequently, hotels charge customers for utilities and environmental matters. However, these are charges by the hotel itself, not from the government or an entitled institution.
- In general, **tax compliance is low**: it is not transparent what is expected, easy checks-and-balances are not in place, no information sharing between departments, focus on minor breaches (instead of large).



Artikel 6

De logeergastenbelasting bedraagt:

- ingeval van verblijf als bedoeld in artikel 1, onderdeel a: een twintigste deel van de logeerprijs;
- ingeval van verblijf als bedoeld in artikel 1, onderdeel b: NAf 90,00 per week.

5.2 Analysis: Need for Change – high-priority issues

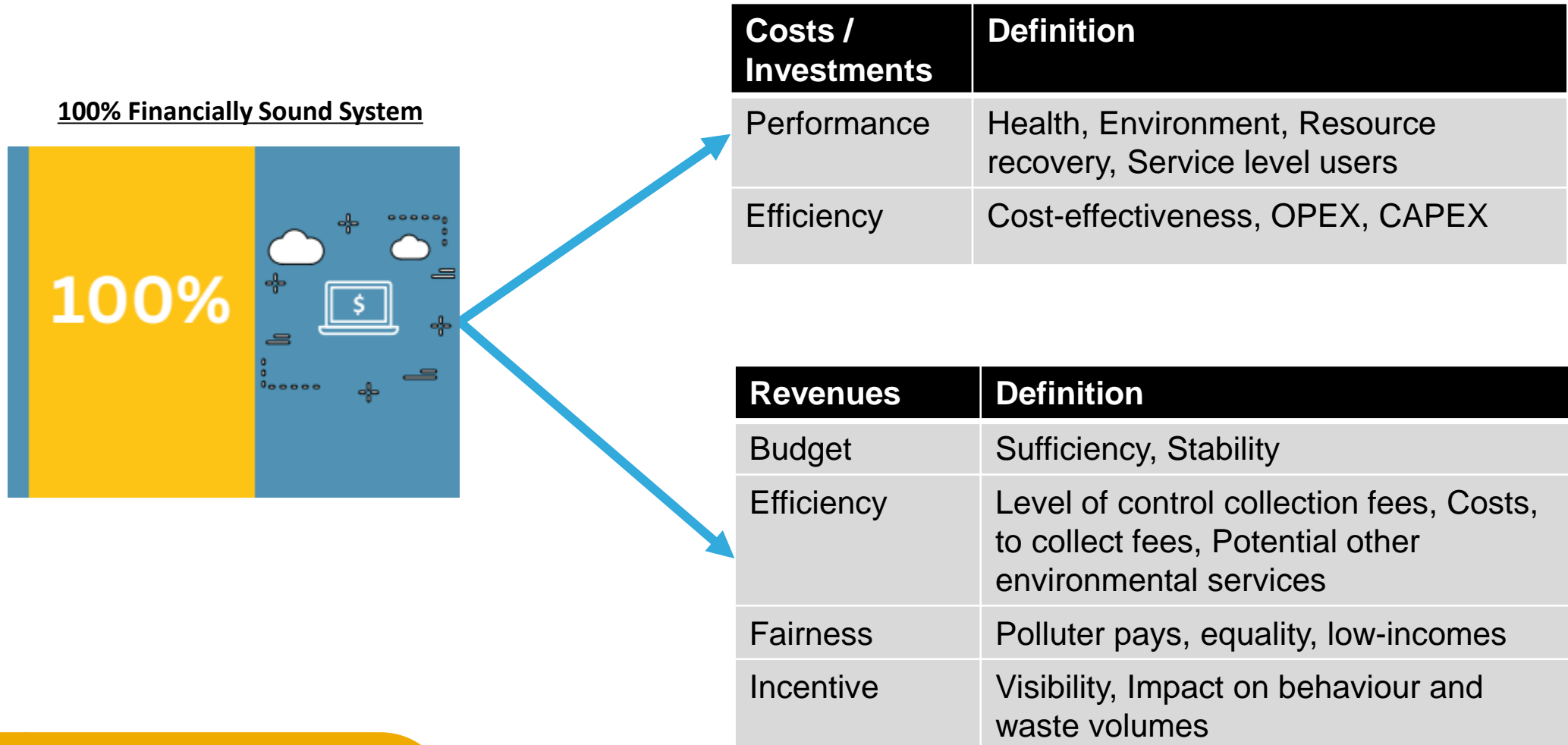
A robust financial framework is critical to move toward integrated solid waste management. A framework that supports continuous earmarked and independent revenues and enables future investments. Doing the right thing, the move towards environmentally sound waste management will increase costs.



1. Solid waste management in Sint Maarten faces various high-priority issues. No comprehensive plan guides **performance**, such as a National Waste Plan. From a financial perspective, the explanation for why the high-priority issues still need to be solved is **no dedicated continuous revenue streams**. Revenue streams are required to **recover costs and support business cases for investments**. Over the last decades, no substantial investments in facilities needed have been made.
2. Other effects of paid services from the general government budget are a **constant pressure to reduce costs (not realizing performance)**, **no polluter pays principle**, a **lack of visibility to users**, and thus **creating no incentive for good behavior**.
3. Sint Maarten needs a **robust financial framework** that supports continuous revenues and enables future investments.

5.3.1 Design: Financial Framework

A 100% financially sound system or a solid Financial Framework is cost-effective and affordable. Earmarked revenues cover investments and operational costs and are predictable and continuous.



5.3.1 Design: Financial Framework

Developing the Financial Framework is a three-step approach. The first step, setting the basics, is included in this report. The next steps, scenario analysis, and the decision-making model are scheduled for 2023-2024.

1. Framework Design

2023

- Identify potential costs, investments, and revenues;
- Multicriteria analysis;
- Draft phasing of activities;

2. Data Analysis

2023-2024

- Quantify costs, investments, and revenues (impact on tourism, involvement of private sector, etc.);
- Identify data gaps and estimating these;
- Develop scenarios that calculate various options for covering costs and investments.
- Include a scenario for doing nothing: what will it cost when don't do anything.
- Design how to collect fees.

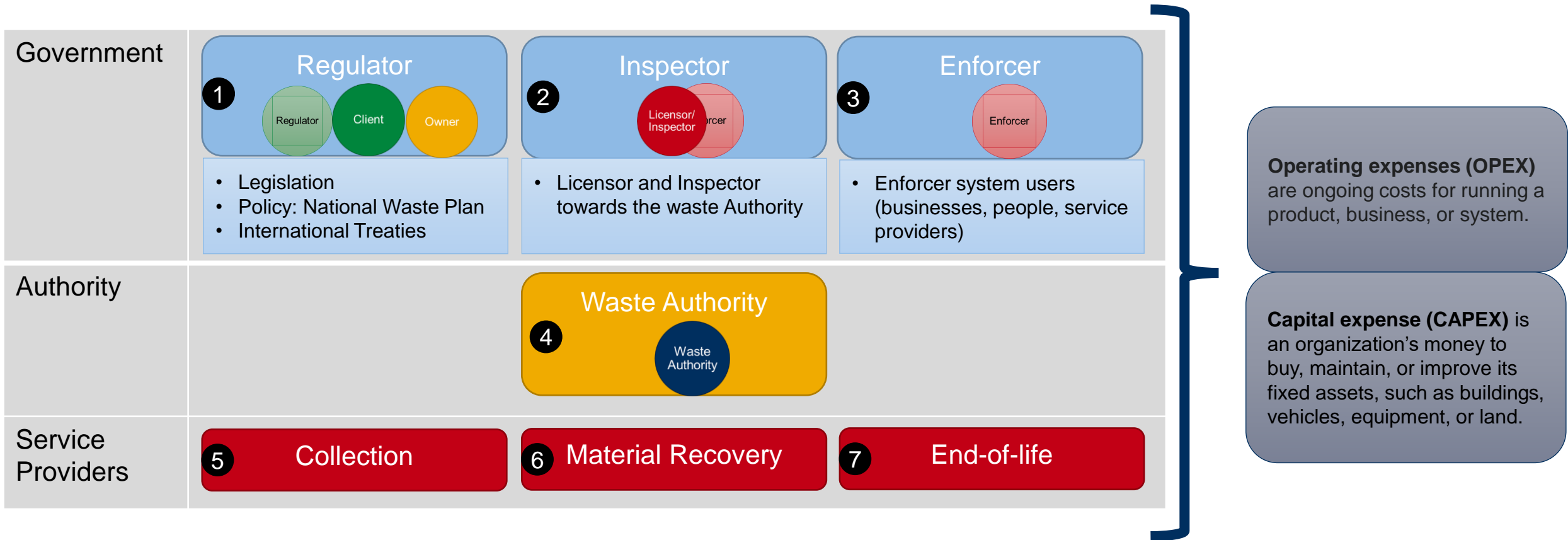
3. Decision Making Model

2023-2024

- Modelling scenario's towards which decisions to make.

5.3.2 Costs and Investments - Categories

We have identified seven categories of costs (OPEX) and investments (CAPEX) for this Financial Framework.



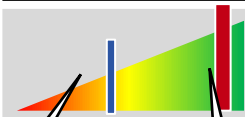


1: https://en.wikipedia.org/wiki/Operating_expense

2: https://en.wikipedia.org/wiki/Capital_expenditure

5.3.2 Costs and Investments - RIE

The major increase in OPEX and CAPEX is caused by additional enforcement needed. The CAPEX will be relatively small compared to other investments. The performance of the regulator and inspector can be improved with a small increase in OPEX.



Criterion	Score	Insights
Performance		Due to a lack of resources, the roles of the regulator, inspector and enforcer are not prioritized and thus understaffed and under-equipped.
OPEX		Currently, OPEX is low. To deliver the needed performance, operational costs will increase: regulator with 1-2 fte, inspector 1-2 fte, enforcer 5-10 fte.
CAPEX		The role of regulator does not require any CAPEX. The inspector and/or enforcer roles need investments in vehicles, measurement instruments and other equipment.

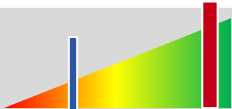


Current Situation

Needed Situation

5.3.2 Costs and Investments – Waste Authority

To improve performance of managing operations, OPEX will increase substantially. CAPEX will increase substantially but relatively modest compared to service providers investments.

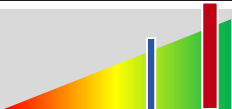




Criterion	Score	Insights
Performance		See Chapter 2.
OPEX		Currently, OPEX is 3-4 fte. To deliver the needed performance, operational costs will increase to a double digit number of fte.
CAPEX		The Waste Authority will need some CAPEX for the installment of the office, ict, vehicles, etc.

5.3.2 Costs and Investments – Collection

To improve performance of collection, OPEX will increase slightly. CAPEX will increase substantially but relatively small compared to service providers investments.

5 Collection

Criterion	Score	Insights
Performance		Overall performance of collection above the minimum level.. There is some room for improvement.
OPEX		OPEX will remain substantial (high single digit mln ANG)
CAPEX		CAPEX is mainly in collection vehicles. These will not likely change very much. CAPEX is outsourced to service providers. Additional CAPEX needed for the installment of recycling support centers to return recyclables.

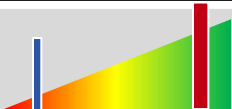
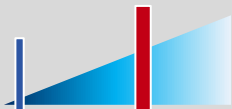
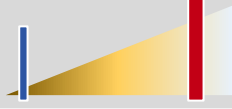
5.3.2 Costs and Investments – Material Recovery

To improve performance of material recovery, OPEX and CAPEX will increase substantially.

6 Material Recovery

Example Facilities

- Temporary Debris Storage and Reduction (TDSR) either/ or Material Recovery Facility (MRF)
- Integrated Solid Waste Management Facility (ISWMMF)
- C&D waste processing facility

Criterion	Score	Insights
Performance		See Chapter 2.
OPEX		When material recovery facilities are installed, OPEX of service providers will increase.
CAPEX		CAPEX consists of location, equipment and others. CAPEX can partly be outsourced to service providers.

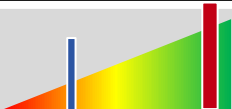
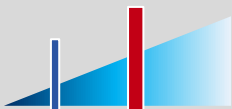

5.3.2 Costs and Investments – End-of-life

To improve performance of collection, OPEX will increase slightly. CAPEX will increase substantially, the increase is largely dependent on the chosen solution (landfill versus waste-to-energy).

7 End-of-life

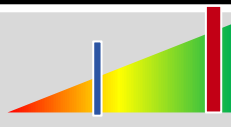


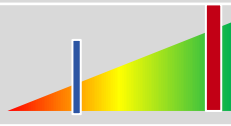
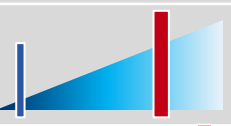
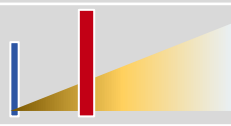
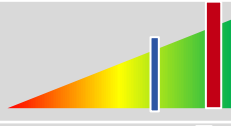
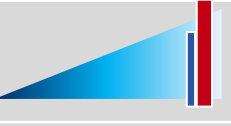
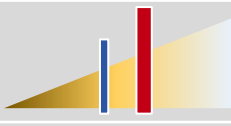
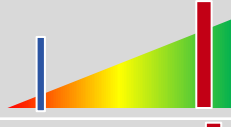
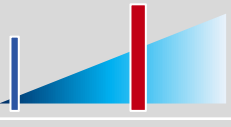
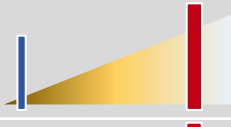
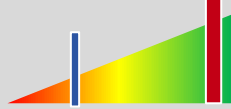


Example Facilities

- Sanitary Landfill
- Waste-to-energy plant
- Export facility (towards waste-to-energy plant)

Criterion	Score	Insights
Performance		See Chapter 2. In a next step the preferred solution for end-of-life needs to be designed
OPEX		OPEX will increase when environmentally sound management [operations] and effective maintenance practices are employed (high single digit mln ANG).
CAPEX		CAPEX is land, buildings, machinery and rehabilitation of the landfill sites. Additional CAPEX is needed when decided a waste-to-energy solution should be implemented. CAPEX can partly be outsourced to service providers.

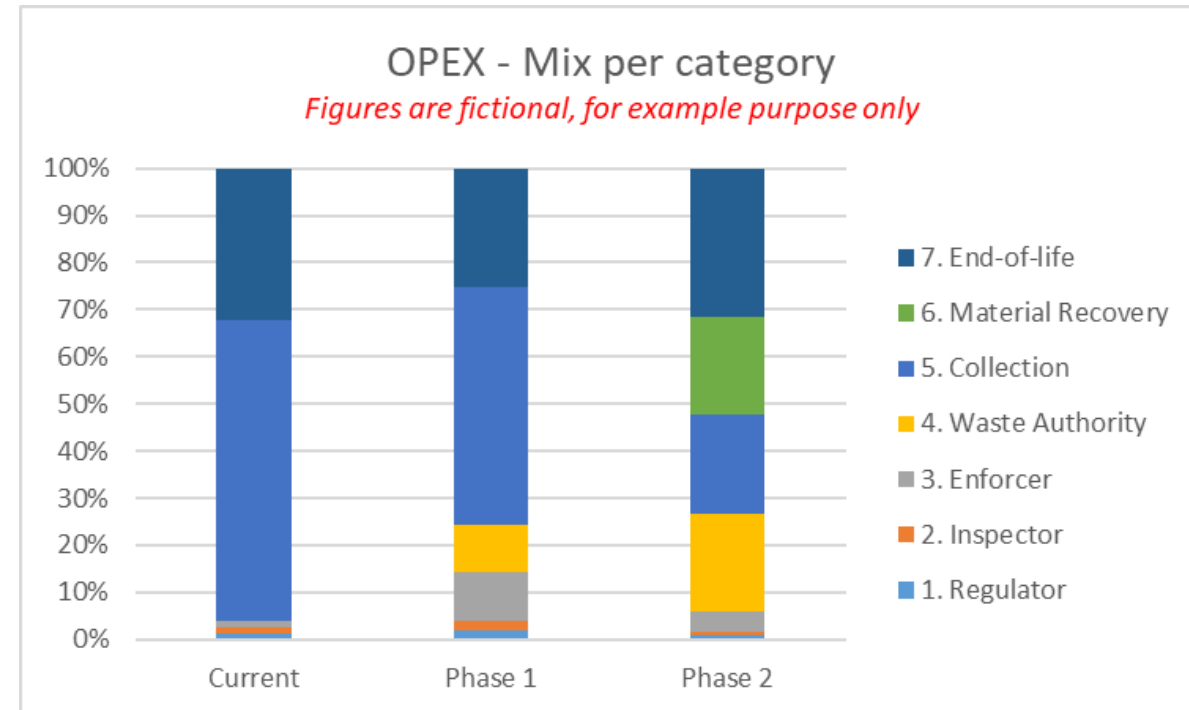
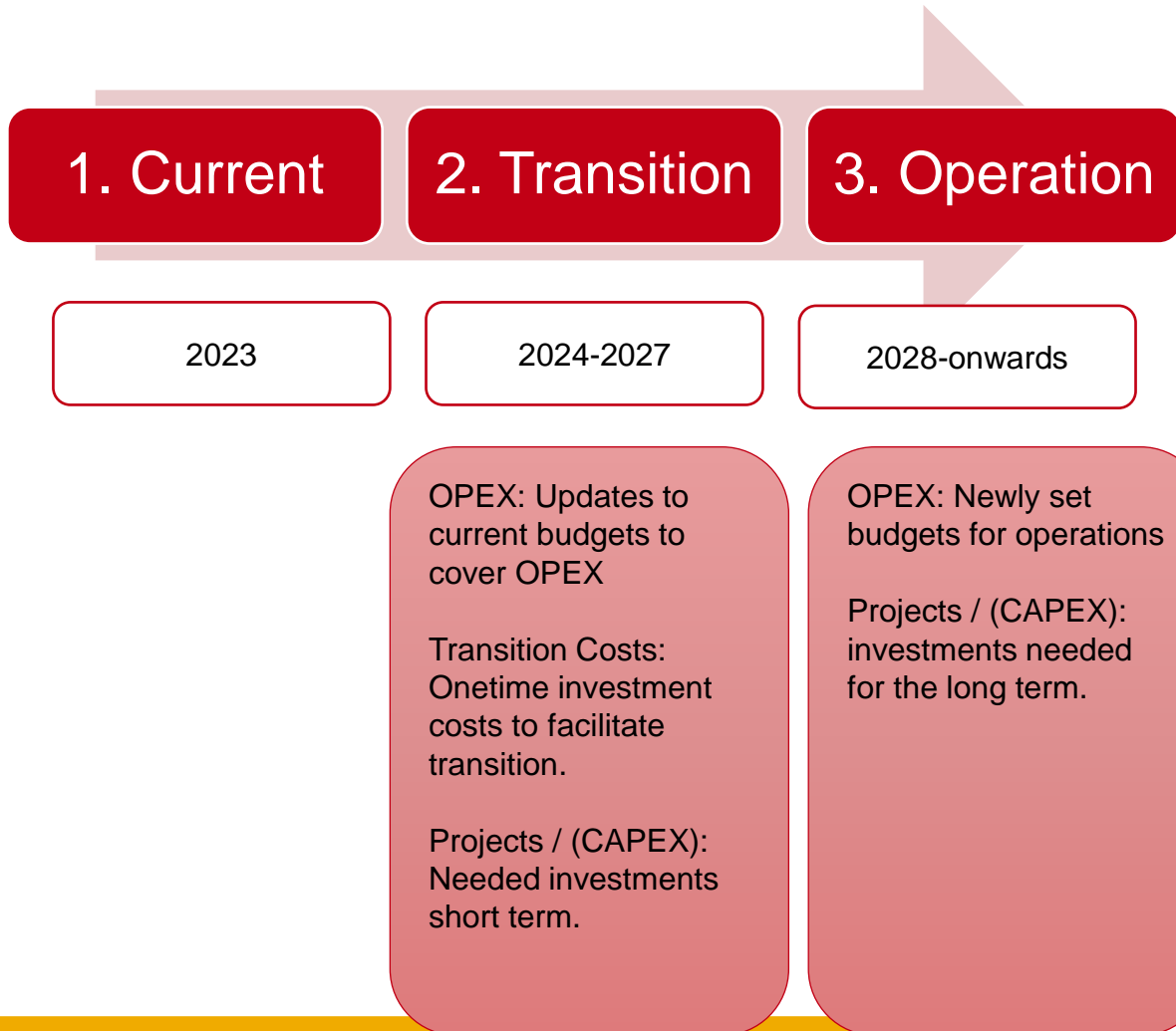
5.3.2 Costs and Investments - Overview

All categories have a significant performance gap (need vs current situation). When performance is in line with what is needed, both OPEX and CAPEX will increase. The largest gaps are the Waste Authority, Material Recovery and End-of-life.

Category	Performance	OPEX	CAPEX
<ol style="list-style-type: none"> 1 2 3 Regulator, Inspector, Enforcement (RIE)			
<ol style="list-style-type: none"> 4 Waste Authority			
<ol style="list-style-type: none"> 5 Collection			
<ol style="list-style-type: none"> 6 Material Recovery			
<ol style="list-style-type: none"> 7 End-of-life			

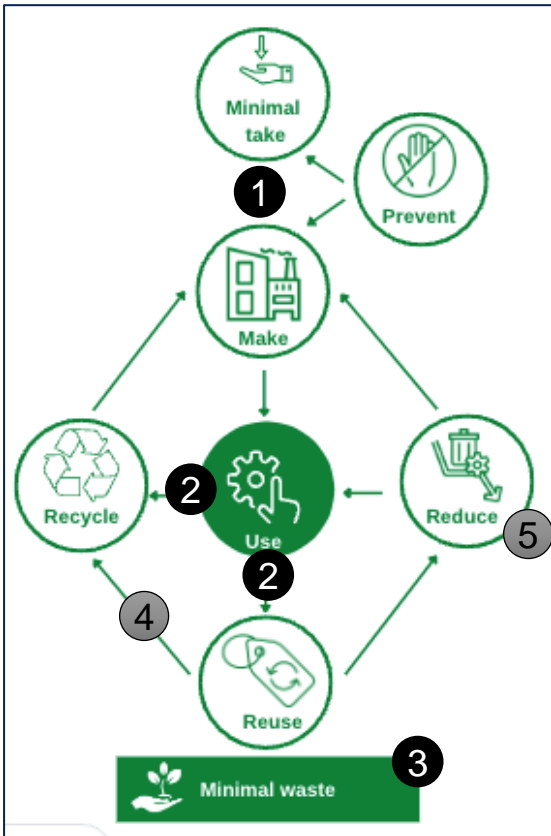
5.3.2 Costs and Investments - Steps

First, minor additional costs will be needed to prepare for the transition. During steps 2 and 3, substantial extra OPEX and CAPEX are expected. The process will need strong communication explaining the why.



5.3.3 Revenues - Instruments

There is a set of economic instruments along the value chain available. This financial framework will focus on revenue-providing instruments (1, 2 and 3). Revenue-raising and non-revenue instruments are outside the scope.



Revenue Providing	1 Taxes on (raw) materials and products	<ul style="list-style-type: none"> a) Environmental tax on imported goods b) Product levies, e.g.: plastic bags, tires, electronic devices 	2 Waste Collection Charges	<ul style="list-style-type: none"> a) Indirect charges / general taxes b) Direct user charges for: <ul style="list-style-type: none"> • Households • Businesses • Travellers / Visitors 	3 Waste Disposal Taxes	<ul style="list-style-type: none"> a) End-of-life tax / gate fee landfill b) Waste service charge for medical/hazardous waste
	4 Revenue Raising	<ul style="list-style-type: none"> • Recycling subsidies • Tax rebates • Favourable energy tariffs • Tax/ VAT exemptions 	5 Non - Revenue Instruments	<ul style="list-style-type: none"> • EPR schemes • Green procurement • Deposit-refund systems • Positive incentives, e.g. eco-labeling 		

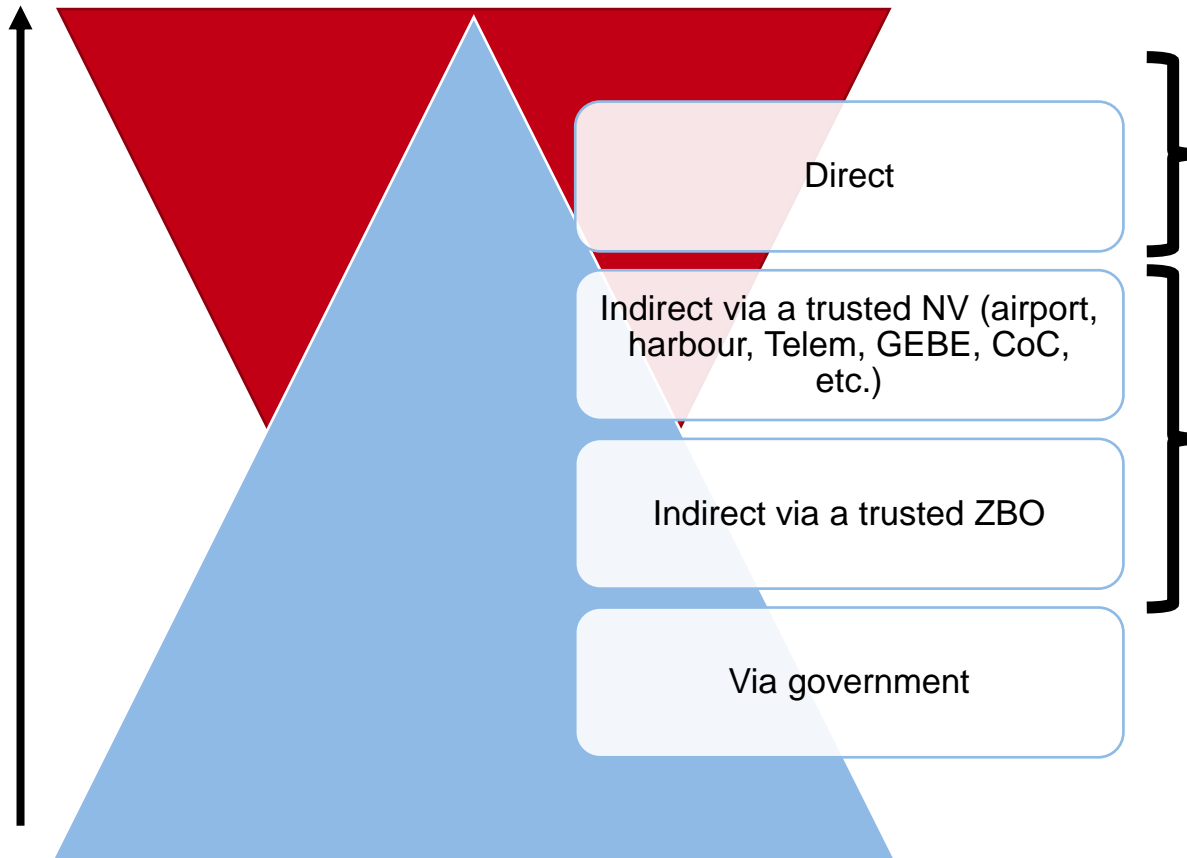
1: Oosterhuis et al. (2009). Economic Instruments and waste policies in the Netherlands. <https://research.vu.nl/ws/files/2615950/R09-01.pdf>

2: GIZ (2020). Economic Instruments to improve waste management in Greece. <https://www.giz.de/en/downloads/Final%20Report%20Economic%20Instruments%20DRS%20EN.pdf>

5.3.3 Revenues - Collection

The Authority needs to control its own revenue streams to reduce the chances of financial distress. Revenues are to be collected and managed by the Waste Authority as much as possible. An alternative is to collect through a trusted NV or ZBO. The Authority sets the fees, which the regulator periodically reviews.

High Control / High Effort



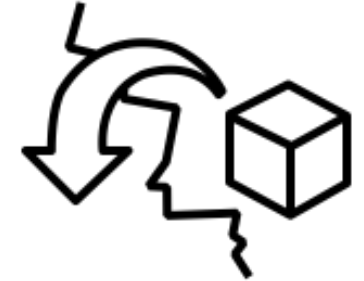
Strengths	Weaknesses
<ul style="list-style-type: none"> • Collection of revenues independently • Direct collection via a payment gateway which accepts all major credit, payment vending machines and digital 'EHAS' systems. • Government, chamber of commerce, airport and harbour scan online payment before providing services (such as obtaining license plate stickers) 	<ul style="list-style-type: none"> • Building a reliable own administration will need resources.





Strengths	Weaknesses
<ul style="list-style-type: none"> • Already existing administration of households and businesses. • Payment incentive due to link with a good-for-consumption like transport, energy or water. • Specific charges to visitors via airport and harbour. 	<ul style="list-style-type: none"> • Dependence on facilities and reputation of a third party. • GEBE in its current state is not a desirable option. There are more than one telephone company. • Lack of own administration (as a potential communication mean). • Extra checks-and-balances needed.

5.3.3 Revenues – Instruments

Taxes on **raw materials and products** can generate

Instruments	How does it work?
Import Tax	<ul style="list-style-type: none"> For a selection of imported goods, an environmental tax applies.
Product Levies	<ul style="list-style-type: none"> An environmental levy applies when consumers buy goods like plastic bags, tires, electronic devices, luxury goods, bulky items, and C&D.

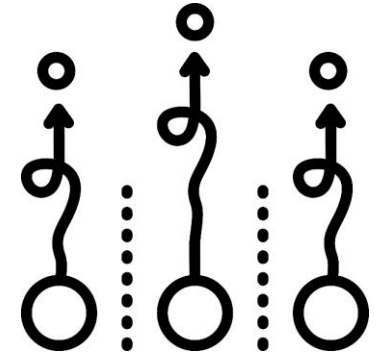






Criterion	Score	Insights
Budget		The sufficiency will be positive when consumers pay a single-digit US\$ per good. The stability of the revenues will be medium to high in normal circumstances. However, events such as a strong recession, hurricane, or COVID-19 will significantly hurt revenues.
Efficiency		The collection of fees can be firmly controlled as they will be collected directly at the point of entry or goods sold. The cost of the collection will be dependent on the number of points of goods sold. The potential is mainly within waste management: additional goods can be charged.
Fairness		Charging for specific goods with high end-of-life impact aligns with the polluter pays principle. The measure has an equal impact in terms of charge per user, but might hit purchase power of low-incomes harder (depending on which products the levy is charged for). The actual impact depends on which products are included—medium effects on low-income residents in Sint Maarten as they likely consume selected goods.
Incentive		The instruments have high visibility . Any consumer will be notified of these instruments. The impact on behavior will likely be low to medium, as the tax will likely be a small part of the product price.

5.3.3 Revenues - Instruments

Currently, revenues are covered by **indirect charges** through the Government’s general budget. This instrument has disadvantages, efficiency, and fairness.

Instruments	How does it work?
General Budget	<ul style="list-style-type: none"> The government collects taxes, mainly based on wage and personal income tax and business profit and turnover tax. The costs are covered within the total yearly budget system of the government.







Criterium	Score	Insights
Budget		The sufficiency is following the government’s revenues, and below 100% cost recovery. The stability of the payments will be quite high in normal circumstances. However, there remains a high likelihood of budget cuts when the government needs to cut costs.
Efficiency		The collection of fees is controlled according to general tax payment collection, which can be controlled by the government but not by the Authority and is thus considered low. The cost of collection is low as it is part of a general system. The potential for other environmental services is low to neutral because raising general taxes is challenging.
Fairness		All users pay according to the general tax system. There is no polluter pays principle . Low impact on low-income residents in Sint Maarten as taxes do not change.
Incentive		The instruments have low visibility . Users do not see who pays for services, so the impact on behavior is low.

5.3.3 Revenues - Instruments

From a polluter pays principle, direct collection is the fairest way of charging. **Household user charges** will generate dedicated revenue streams and score high on efficiency and fairness.

Instruments	How does it work?
Households	<ul style="list-style-type: none"> Each household pays for waste services.







Criterion	Score	Insights
Budget		The sufficiency will be medium to high, dependent on the charges applied. The stability of the revenues will be high.
Efficiency		When the charges are controlled by the collecting entity, the control on a collection of fees might prove challenging to collect at households due to poor household registration. When tied to a service with value, like water, energy, or telcom, the control on a collection of fees might be high as it depends on the organization collecting and the overall willingness to pay to that organization. The potential to add other environmental services is high.
Fairness		All users pay according to the type of user they are. The level of the polluter pays principle will be high when using direct rates based on sizes, such as household size, size of the bin, and amount of waste produced. The impact on low-income residents of Sint Maarten will be low when a simple waiver or rebate (for part of the fee) for low-income and disabled is needed to ensure their participation.
Incentive		The instrument has high visibility and, therefore, will have a high impact on behavioral change (assuming a direct fee structure). However, a complete waiver for low-income residents might result in a low willingness to change abusing the gesture. Knowledge of them not paying for waste collection could encourage persons to deposit using their receptacles, warranting extra monitoring/policing.

5.3.3 Revenues - Instruments

From a polluter pays principle, direct collection is the fairest way of charging. **Business user charges** will generate dedicated revenue streams and score high on efficiency and fairness.

Instruments	How does it work?
Businesses	<ul style="list-style-type: none"> Each business pays for waste services to the waste collector.

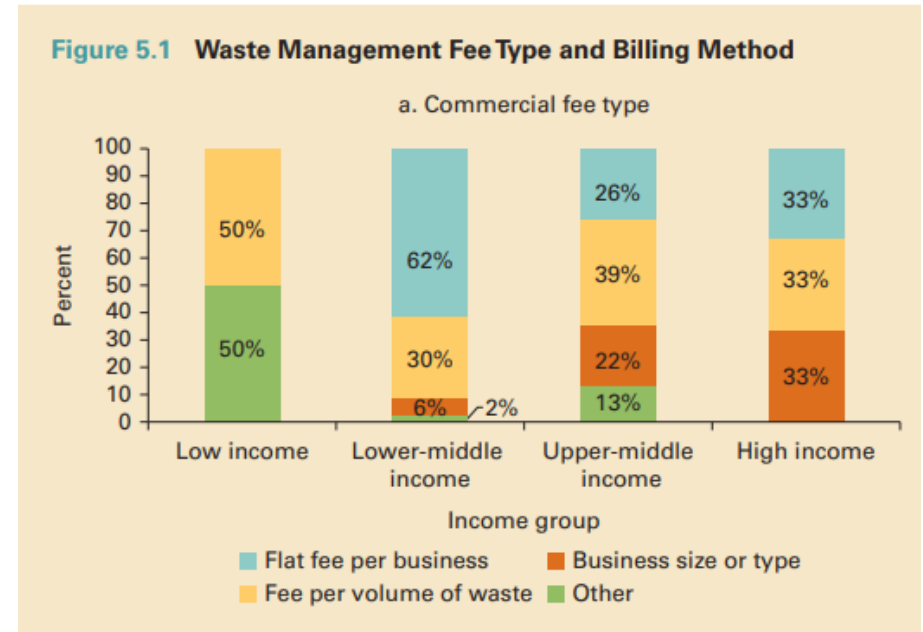
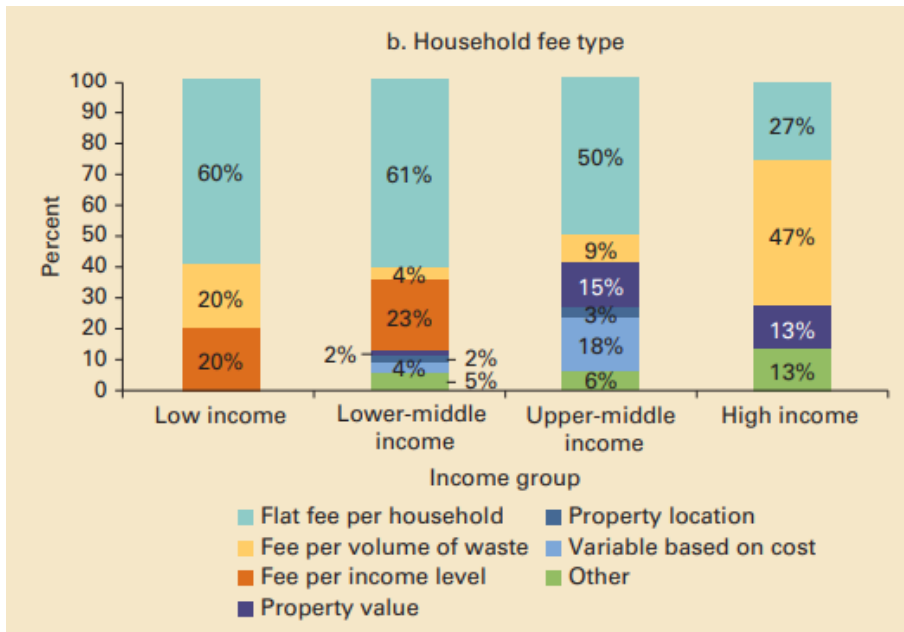
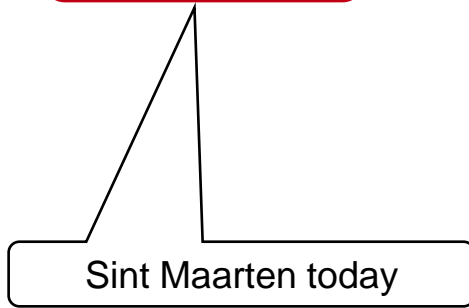


Criterion	Score	Insights
Budget		The sufficiency will be medium to high, dependent on the charges applied. The stability of the revenues will be high.
Efficiency		The control of the collection of fees will be medium to high, as there is a register of companies. A bottleneck might be current tax relief for companies. The potential to add other environmental services is high.
Fairness		All businesses pay according to the type of user they are. The level of the polluter pays principle will be high when using direct rates based on sizes, such as business size, size of the bin, and amount of waste produced. Also, businesses generating large volumes of waste, such as supermarkets, must pay accordingly. The impact on low-income residents will be medium as (part of) the tax will be included in the price.
Incentive		The instrument has a medium to high visibility toward businesses and therefore changes their behavior. Towards their consumers, the visibility will depend on how businesses address the issue.

5.3.3 Revenues - Instruments

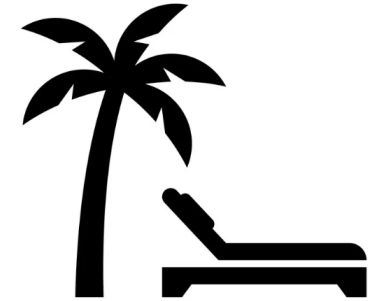
Higher-income countries have implemented more fees for households and businesses, which are direct and variable: a visible payment for services based on actual usage. Because of higher efficiency and fairness, Sint Maarten should also move towards these rates.

Coll\Rate	Fixed	Variable
Direct	B. ~ Use of waste services	D. ~ Amount of waste produced
Indirect	A. General budget	C. ~ Utility, Income







5.3.3 Revenues - Instruments

At best, visitors now pay an indirect fee for waste management. Direct **user charges for visitors** (and other international travelers) can generate significant revenue streams and score high on efficiency and fairness.



Instruments	How does it work?
Arrival Fee	<ul style="list-style-type: none"> Each traveler pays an environmental fee for the arrival and departure at the airport, yards, and ports.
Overnight Stay Charge	<ul style="list-style-type: none"> Each visitor pays an environmental fee per night of staying on the island at an accommodation at or on the island.





Criterion	Score	Insights
Budget		The sufficiency will be positive when each visitor pays a single-digit US\$ per arrival or stay. The stability of the revenues will be quite high in normal circumstances. However, events such as a strong recession, hurricane, or COVID-19 will significantly hurt revenues and imply a need for a reserve.
Efficiency		The charges can be firmly controlled as they will be collected directly (via a digital EHAS form), via trusted NVs, or directly at accommodations. The cost of operations is relatively low because of the restricted number of arrival points and accommodations. The potential for other environmental services is high: other environmental services, such as wastewater, noise, and reefs, can be added to the fee. Also other dedicated fees can be applied, such as health facilities (VSA).
Fairness		Currently, visitors only partly pay for their environmental impact on Sint Maarten. Charging visitors an environmental fee will resolve this lack of polluter pays . Focus on health and the environment will support high-income tourism growth . Environmental fees are no issue for this group <u>as long as they see</u> why the fee is needed, which actually changes the situation. The measure has an equal impact on any traveler . However, arrival fees at the airport might also apply to visitors to St Martin (FR) and residents. There is a risk that the French see this instrument as unfair, and their authorities will complain. Low impact on low-income residents as they likely don't frequently travel internationally.
Incentive		The instruments have medium to high visibility . Recurrent travelers will notify. However, when the fee is included in the flight ticket, visibility for one-time visitors is lower. The impact on visitors' behavior will be low to medium and depend on the awareness raising campaign.

5.3.3 Revenues - Instruments

Currently, there are no taxes for end-of-life. Waste disposal taxes support the reduction of waste going towards unwanted end-of-life destinations, for example, recyclables going into a landfill.

Instruments	How does it work?
Gate Fee Landfill	<ul style="list-style-type: none"> Collectors pay an entry fee to drop off their waste in the landfill.



Criterion	Score	Insights
Budget		The sufficiency is medium. Some waste streams and households will not be charged directly. The fees should ideally align with the French side. The stability of the revenues is high as it moves together with the volume of waste offered.
Efficiency		The control of the collection of fees is high, as collectors pay at the entrance. The idea is to curb entry to several authorized companies and keep others from entering. Other users can dispose of their waste in a bin at the landfill entrance. In a subsequent phase, the gate fee must differentiate between volume and waste type. This requires a weighting bridge. The payment is preferably made digitally to reduce the admin burden and increase accountability. The potential is mainly within waste management: the fee structure for waste streams can be adapted, and additional waste streams can be charged; there is no potential for other environmental services.
Fairness		The current waste disposal site capacity is limited. Charging collectors for end-of-life will improve the polluter pays. The measure has an equal impact on any collector . Low to medium impact on low-income residents as household waste is likely not part of the gate fee, but businesses might pass on the charge in their product prices.
Incentive		The instruments have medium visibility . Any collector will be subject to the fee. However, end users might need to be made aware. The impact on behavior will be very high: dumping waste in the landfill will no longer be for free, which will reduce waste trafficking from the French side, free dumping of expired products by supermarkets, free dumping of waste from cruise ships, and uncontrolled dumping of hazardous waste. Introducing a gate fee is essential to reduce the amount of garbage. A reliable threat of enforcement is needed to reduce incentives to dump waste illegally.

5.3.3 Revenues: Case Study St Martin

St Martin has a solid fee structure for waste destined for the waste disposal site. The fee structure drives a sustainable financial model and increased recycling rates.

ECOSITE de recyclage-valorisation des Grandes Cayes

Tarifs de traitement des Déchets industriels Non Dangereux (DND)

Mis à jour au 1er janvier 2017

TGCA au taux de 4% (Prix révisables si évolution)

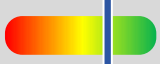



Désignation	€/Tonne HT	€/Tonne TTC
Déchets industriels ou assimilables <i>Recyclables, triés par le producteur</i>	48,08 €	50,00 €
Déchets industriels ou assimilables en mélange <i>En mélange, non triés</i>	91,35 €	95,00 €
Déchets d'espaces verts triés Sans indésirables tels que sacs plastiques, ferrailles,... Sinon "en mélange non triés"	27,88 €	29,00 €
Palettes Sans indésirables tels que plastiques, ferrailles,... Sinon "en mélange non triés"	27,88 €	29,00 €
Sciure	GRATUIT	GRATUIT

5.3.3 Revenues - Instruments

Hazardous / medical waste

Instruments	How does it work?
Service Charge	Businesses producing hazardous and medical waste pay for collection and end-of-life, which are according to guidelines based on national legislation and international conventions.



Criterion	Score	Insights
Budget		The sufficiency is high, although the volume of the waste streams will be relatively low. The stability of the revenues is high as it moves together with the volume of waste offered.
Efficiency		The control of the collection of fees is high as businesses must prove how they comply with the law (which needs to be aligned for this purpose). The potential is limited to hazardous waste.
Fairness		Currently, the end-of-life of some hazardous is uncontrolled dumping in the landfill. Charging producers for the end-of-life will improve the polluter pays . The measure has an equal impact on any producer —a low impact on low-income residents .
Incentive		The instruments have high visibility to produce hazardous waste (except households). Any collector will be subject to the fee. The impact on behavior will be very high: dumping hazardous waste in landfill will no longer be allowed. A reliable threat of enforcement is needed to reduce incentives to dump hazardous waste illegally.

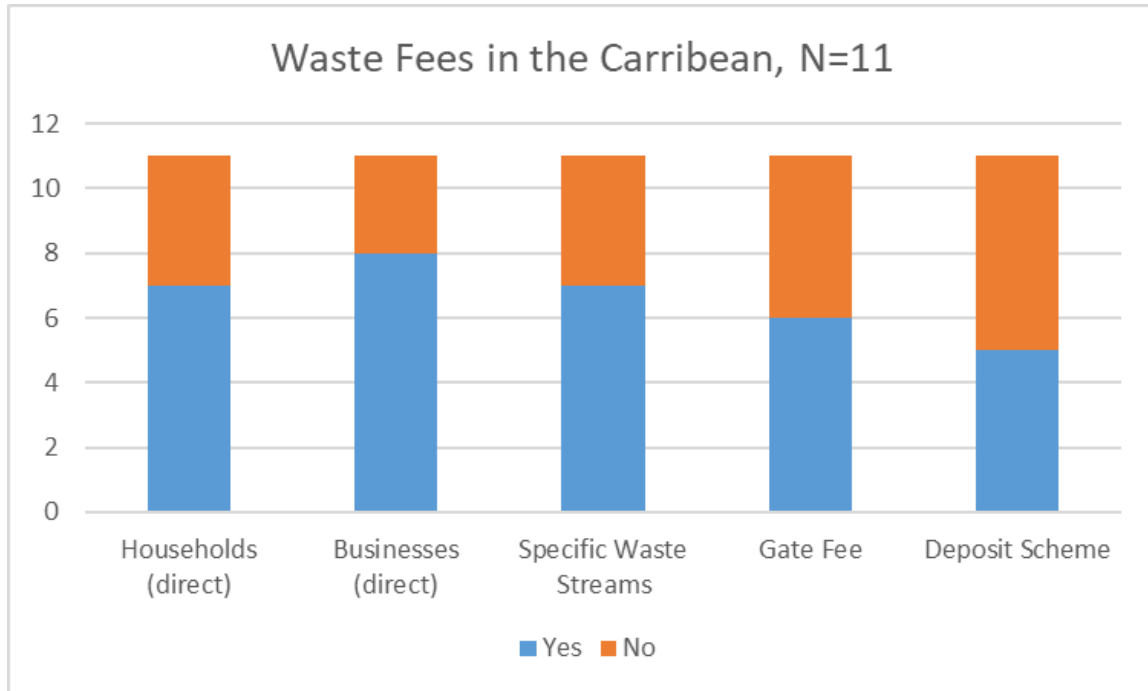
5.3.3 Revenues - Overview

The category indirect charges scores significantly lower for all variables. Except for small differences, the other revenue streams are comparable in their impact on budget, efficiency, fairness and incentive.

Category	Budget	Efficiency	Fairness	Incentive
1 Taxes on raw materials and products				
2 Indirect Charges				
2 Household user charges				
2 Business user charges				
2 Visitors user charges				
3 End-of-life tax				
3 Hazardous / medical waste				

5.3.3 Revenues - Examples

Sint Maarten can learn from neighboring experiences. Waste fees for households, businesses, specific waste streams, gate fees, and deposit schemes are common in Caribbean countries. Sint Maarten is an exception to the rule, not having direct charges for waste management.



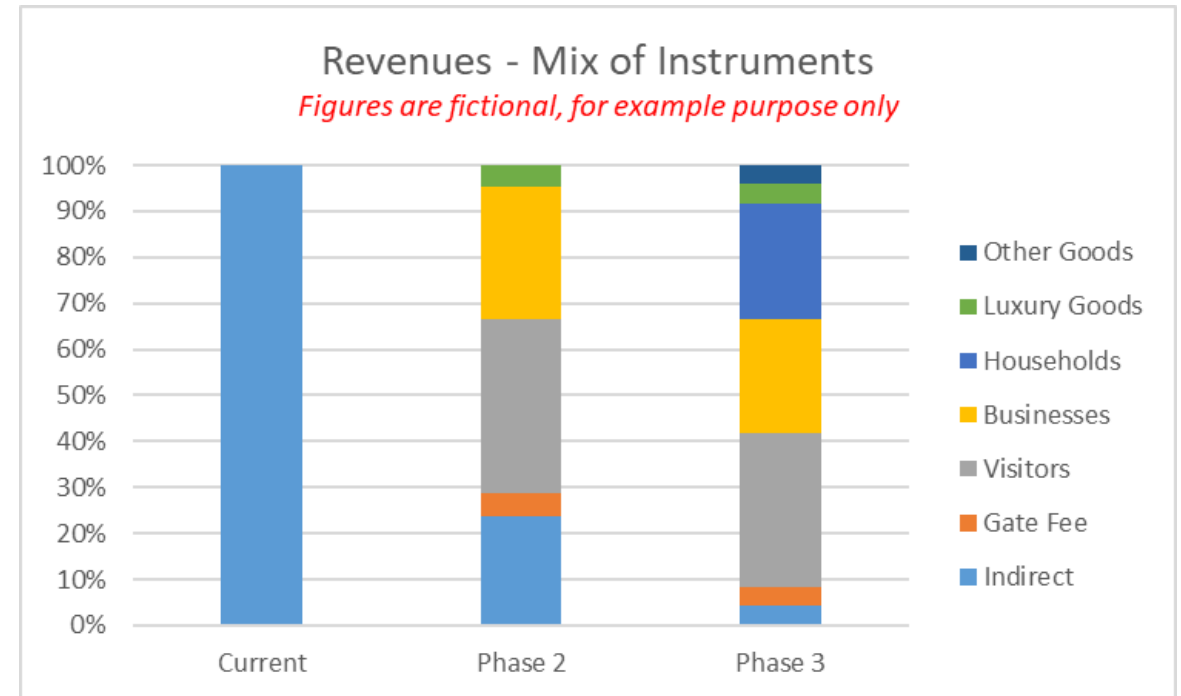
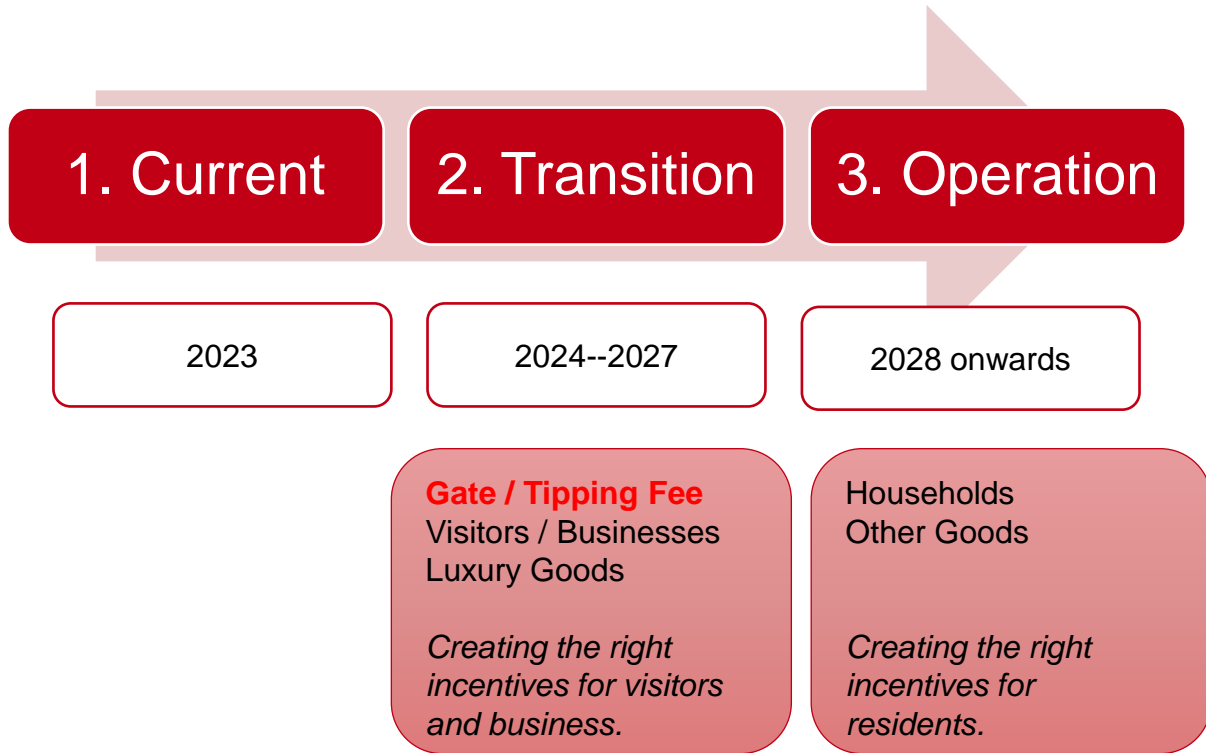
Examples per country:

- In **Antigua & Barbuda**, environmental taxes on sold goods apply (white goods, tires, beverage containers). Tipping fees apply for commercial, industrial, and institutional waste of \$ 20,-/tonne, Construction & Demolition of \$ 5,-/tonne, and Ship waste of \$ 40,-/tonne.
- In **Belize**, there is an environmental tax on imported goods.
- In **Nevis**, a waste levy is attached to all water meters. There is a domestic fee and a business levy. Tipping fees apply for white goods, cars, bulky items, green waste, and commercial waste.
- In **Saint Lucia**, there is a fee for all visitors to the island and for imported items like tires. A percentage of visitor fees is collected by the "Ports of Authority" is remitted directly to the Solid Waste Authority. Businesses must contract the services of a licensed waste hauler or arrange transport themselves. Tipping fees apply for items like ship waste, condemned food, confidential documents.

Sample: Representatives of 11 Caribbean countries: Antigua & Barbuda, Barbados, Belize, Dominica, Grenada, Jamaica, Nevis, Saba, Saint Lucia, St Eustatius, St Vincent & Grenadines

5.3.3 Revenues - Steps

There is a priority to institute a tipping fee, tourism/environmental fees, along with a business fee, which will be dedicated to solid waste management. The implementation process needs strong communication explaining why instruments are required, what users get back in return, and what happens to the reduced costs in the current Government budget. Any revenues collected before the Waste Authority has become operational, need to be dedicated either as seed funding for (the transition towards) the establishment of the Waste Authority.



- 6.1 Current situation Sint Maarten
- 6.2 Analysis: Need for Change
- 6.3 Design Legal Framework



6.1 Current Situation: Legislation VROMI

The current Waste Ordinance has been in place since 2013. Other relevant laws are about medical waste, education, and maritime areas.

Housing, Spatial Planning, Environment & Infrastructure (VROMI)

- The **National Waste Ordinance** (2013) states the responsibilities of the Ministry of VROMI on waste management: (1) Ensuring policies, legislation, and regulations and supervising their implementation; (2) Managing waste collection and processing; (3) Issuing environmental permits and enforcement/inspection.
- The **National Ordinance for Nature Protection** (2015) includes the protection of flora and fauna.
- According to **The National Ordinance Wastewater** (2016), everybody is responsible for preventing pollution of soil and water.
- According to the **National Hindrance Ordinance** (2010), permits can be refused when uncontrolled waste is caused (article 11).

General Affairs (GA):

- The **National Ordinance Plastic Bags** (2022) prohibits single-use plastic bags (via an amendment of the Algemene Politiekeur). *Still to be published to go into effect.*

Health, Social Development & Labour (VSA)

- Medical waste is, to a certain extent, part of National Waste Ordinance the National Hindrance Ordinance.

Education, Culture, Youth and Sport (MECYS)

- In the **National Ordinances for Education** (2010), learning objectives include prevention, reuse, recycling (primary education). In addition, they describe methods of waste management treatment and their advantages and disadvantages (higher education).

Tourism, Economic Affairs, Traffic & Telecom-munications (TEATT)

- The **National Ordinance for Maritime Areas** (2015) prohibits waste dumping in sea areas.
- The **National Ordinance for Establishing a Company** (2015) prohibits organizations to act against public order (article 7).

Justice

- The **National Ordinance for Enforcement** (2018) describes the available enforcement instruments. Additional legislation is available for fines and government fees.
- The **Algemene Politiekeur** (2015) prohibits dumping of waste in public areas (articles 8,11,19,26).

1: VROMI: <https://lokaleregelgeving.overheid.nl/CVDR208510/2> and <https://lokaleregelgeving.overheid.nl/CVDR142263/2> and <https://lokaleregelgeving.overheid.nl/CVDR208544/3> and <https://lokaleregelgeving.overheid.nl/208542/1#d255751373e137>

2: GA: <http://www.sxmparliament.org/wp-content/uploads/2019/09/IS900D1.pdf>

3: MECYS: <https://lokaleregelgeving.overheid.nl/CVDR143498/1> and <https://lokaleregelgeving.overheid.nl/CVDR143499/1>

4: TEATT: <https://lokaleregelgeving.overheid.nl/CVDR142339/2> and <https://lokaleregelgeving.overheid.nl/CVDR142548/2>

5: Justice: <https://lokaleregelgeving.overheid.nl/CVDR490260/1> and <https://lokaleregelgeving.overheid.nl/CVDR207087/2>

6.1 Current Situation: Legislation VROMI

A new Ordinance LVVROMI is under development, which includes updated legislation on solid waste management.

1. A new National Ordinance is in development: The draft **VROMI Ordinance (LVVROMI)** combines various VROMI subjects legally, aiming to improve and integrate the current VROMI ordinances as much as possible. Waste Management is one of the subjects. LVVROMI is a framework ordinance where specific regulations, such as medical waste, on individual waste can be added via an LBHAM.
2. The motives for a new LVVROMI are:
 1. An up-to-date **law for permits**, which enables transparent assessment of permits-requests and adequate enforcement.
 2. **Combine 8 different ordinances** into one umbrella ordinance with detailing in an LBHAM or Ministerial Regulation, which **are easier to update**.
 3. **Improve per topic**. On solid waste management, LVVROMI will include a change of penalties, specifying the Minister's tasks more explicitly, and enabling a penalty on solid waste management (to dump garbage). Also, it reestablishes allowing for different types of entities to act as Waste Authority (which is also possible under current legislation).

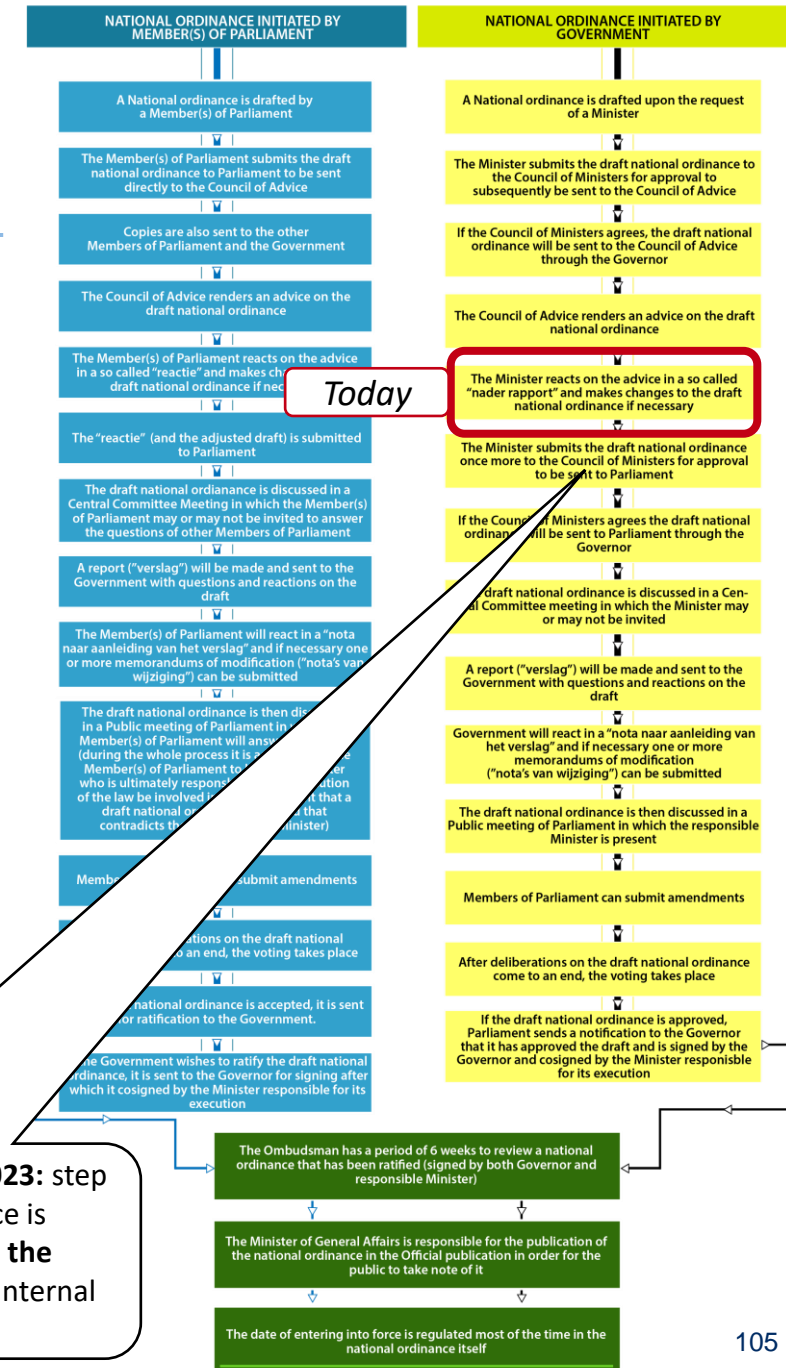


6.1 Current Situation: Legislation VROMI

The govSXM is now working on progressing the VROMI Ordinance and addressing relevant issues and comments, with support of this project.

1. The drafting of this Ordinance started in 2014. The Council of Advice (CoA) has conducted its review in 2022. Next to address the comments of CoA, the issues to be addressed are:
 1. Following the development of the national law, **a comprehensive set of national regulations** is needed (LBHAMs). The law lays the foundation of policy and provides overarching guidance. The regulations would set out the precise standards, specifications, systems, tariffs, and other requirements to be met.). In total, 20 additional products (LBHAM or Ministerial Regulations) are needed at once: the LVVROMI can only enter into force with one of these.
 2. Various **international applicable laws/treaties** apply to the Netherlands but need consideration also to be approved and implemented for Sint Maarten. Most urgent international law is applicable has already been included. However, some aspects of The Basel Convention and the LBS protocol must be included or still need implementation.
2. *During 2023, NRPB/VNGi will provide further support and resources to the GovSXM to develop LVVROMI and attached national regulations.*

LEGISLATIVE PROCESS



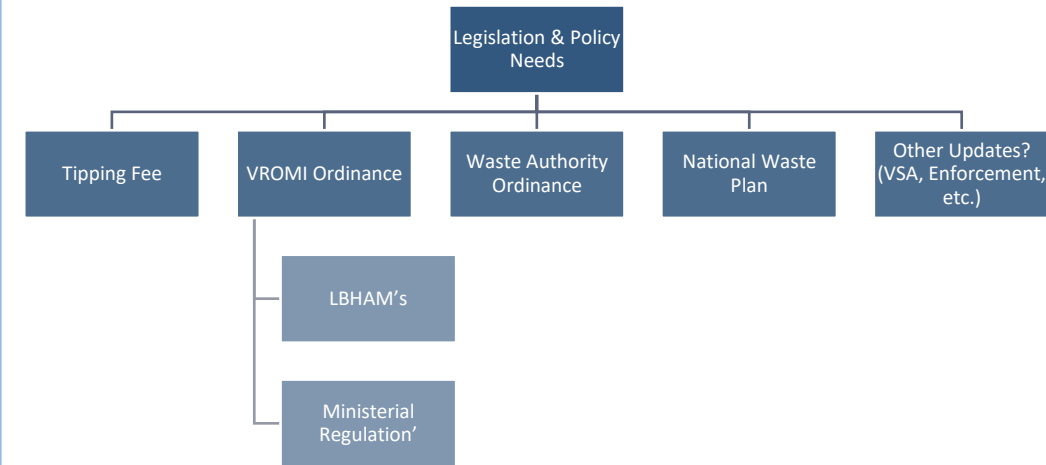
Foreseen progress of VROMI Ordinance in 2023: step 6 > step 7 (out of 15 steps). The Ordinance is internally reviewed and ready to send to the Minister. The LBHAMs are ready to send for internal advice.

1: <http://www.sxmparliament.org/legislative-process/>

6.2 Analysis: Need for Change – high-priority issues

This sector transformation requires more than one simple, straightforward change to legislation. Policy and legislative development will be needed throughout the coming years. However, little capacity is available at the Government of Sint Maarten.

1. There is a priority to introduce a **tipping fee** (within the EDMP programme). The fee structure needs to be introduced in legislation, either via an LBHAM or a legesordinance. The current National Waste Ordinance (2013) does not provide an option to attach such an LBHAM. The option will be included in LVVROMI. In the meantime, there is the option to introduce a tipping fee via a civil law approach (instead of public law). Most important is that it needs to be addressed and Government will endorse this.
2. The **current legislation update via LVVROMI is needed** as soon as possible. The update will create an updated basis for integrated solid waste management and other VROMI subjects. The LVVROMI law is not necessarily the legal basis for the Waste Authority, but it should include a link that **a Waste Authority is created**. The legal basis for the Authority is to be set in a separate ordinance.
3. There is currently no national solid waste management policy for Sint Maarten. Where the law sets the minimum standard, **a National Waste Plan (or other policies which are legally based on a Ordinance) raises this minimum every three-five years**. Also, a **National Disaster Waste Plan** (what happens when a hurricane hits) needs to be drawn.
4. According to the gap analysis, other issues to be addressed are **implementing international treaties, hazardous and medical waste, strong Tender Regulations, Financial Levies (for waste services), and Enforcement**. Regarding enforcement, the fundamental laws are in place; but execution, inspection, and enforcement are challenging. One of the other challenges might become **structurally increasing fees/ fines**, as some need a higher price level.



6.3 Design - Ordinance

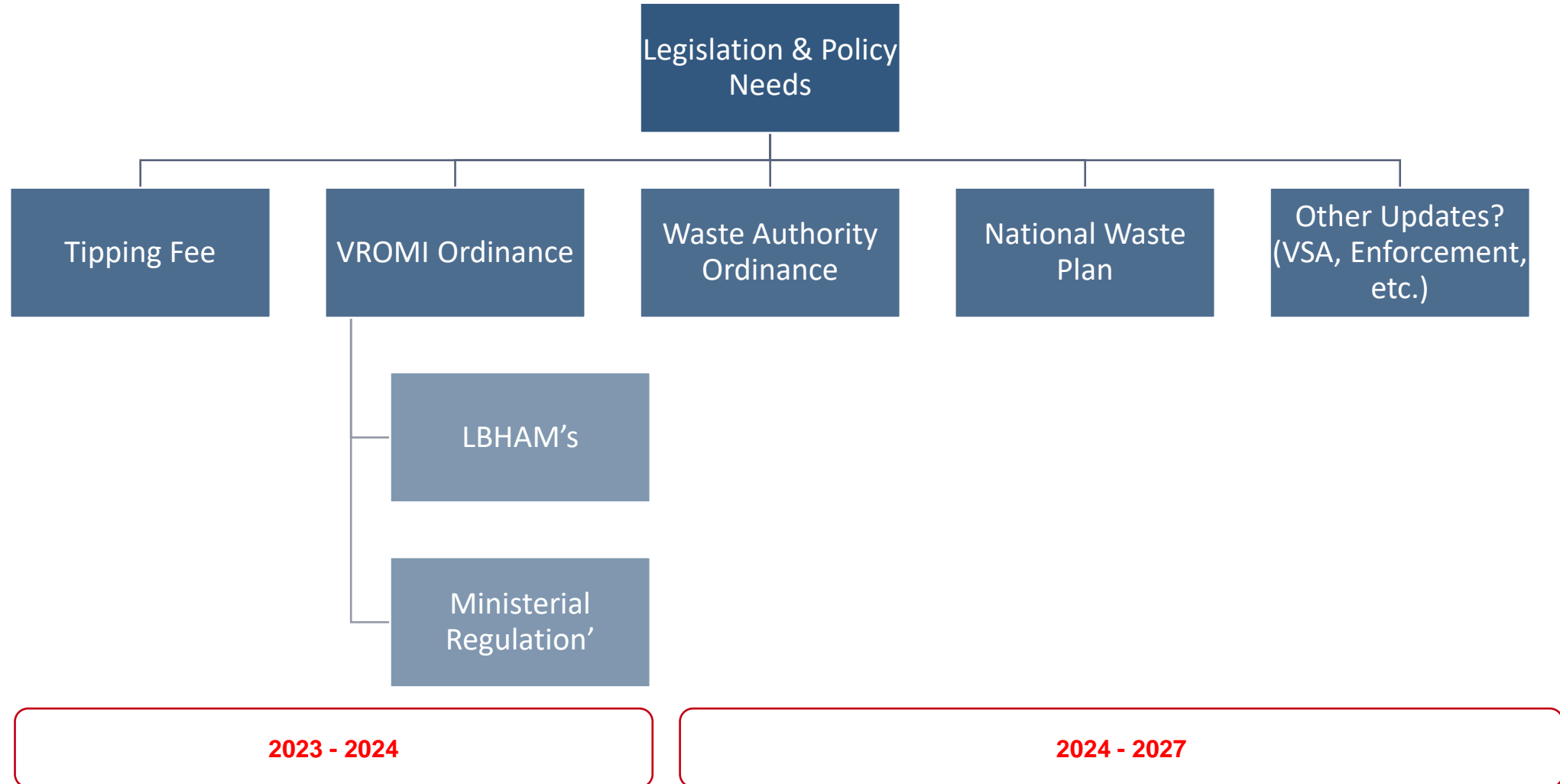
The legal basis is a separate Waste Authority Ordinance which gives the organization a clean and clear start. An ordinance is preferred over an LBHAM because it's a fundamental change, has an interministerial scope, can include a robust financial framework, and can consist of wastewater.

Waste Authority Ordinance	LBHAM (attachment to LVVROMI)
<ul style="list-style-type: none"> • Creating a Waste Authority is a fundamental change to governmental services. Therefore, it makes sense to include Parliament in decision-making. • The scope is interministerial: it covers the responsibilities of more than one ministry. • It is easier to include a strong financial framework that guarantees the autonomy of the Waste Authority. • It is easier to include possibilities for the future inclusion of wastewater or similar responsibilities 	<ul style="list-style-type: none"> • The LBHAM can be implemented faster, as there is no need to go through the whole legislative process (including Parliament).



6.3 Design - Steps

Now, the tipping fee and LVVROMI are highly urgent. In the next project phase, also the work on the Waste Authority Ordinance and National Waste Plan need to start soon as tight timelines for these deliverables are expected.





NRPB



October 2023

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Review: GovSXM (IWCC: POC, TWG), VNG-international, NRPB, SOAB, Social Economic Council – Sint Maarten