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Collaborative Governance: A Case Study on Waste Management in Aruba Prior to the 2021

Aruban General Election

Edmarc S. Kock

edmarc_kock@hotmail.com

Student number: 149667

University of Aruba

Faculty of Arts & Science

Organization, Governance & Management

Bachelor Thesis

Readers:

Thesis supervisor: Edward Erasmus, MSc., MA.

2nd evaluator: Helmut Vink, LL.M., MA.

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Edmarc Kock

Abbreviations

AVP: Arubaans Volkspartij (The Aruban People's Party)

CEO: Chief Executive Officer

DNM: Directie Natuur en Milieu (Department of Nature and Environment)

DOW: Dienst Openbare Werken (Department Public Works)

DVG: Directie Volksgezondheid Aruba (Department of Public Health)

EAP: Emergency Action Plan

KPA: Korps Politie Aruba (Aruba Police Force)

MEP: Movimiento Electoral di Pueblo (People's Electoral Movement)

MSW: Municipal Solid Waste

NGO: Non-governmental organization

OGM: Organization, Governance, and Management

RFI: Request for Information

RFP: Request for Proposals

SDG: Sustainable Development Goals

SIDS: Small Island Developing States

SWANA: Solid Waste Association America

SWM: Solid Waste Management

UA: The University of Aruba

UN: The United Nations

Abstract

Prior to the 2021 Aruban general election, Aruban waste management grappled with numerous challenges. Despite the efforts of various governmental bodies to implement diverse strategies for sustainable waste management, progress remained minimal over the years. This research aims to serve as an inspiration for current and future waste management stakeholders, encouraging the application of collaborative governance to explore its potential benefits in addressing past waste management issues in Aruba. The Main Research Question driving this research is: *“How could collaborative governance have contributed to the sustainable waste management challenges in the island jurisdiction of Aruba prior to the 2021 Aruban General Election?”*. The chosen research methodology is qualitative, involving semi-structured interviews with 12 participants, including stakeholders from governmental organizations, private organizations, semi-public organizations, and non-governmental organizations. Additionally, a thematic analysis approach was employed to examine themes within the theoretical framework established based on the literature review conducted at the outset of this research. The findings of this study suggest that effective implementation of collaborative governance could have facilitated a more comprehensive and sustainable approach towards waste management in Aruba. This approach would have promoted collaboration, transparency, and the utilization of resources and expertise from various stakeholders, ultimately leading to more effective solutions for the waste management challenges faced by the island jurisdiction of Aruba.

Key concepts: Collaborative Governance, Sustainable Waste Management, Small Island Developing State, Aruban General Election, Stakeholders, Collaboration, Vision and Policy.

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1. Introduction

This chapter presents key information regarding the topic, the objectives, the relevance of this research, and the research questions essential for this thesis.

1.1 Research Topic

After the 2021 Aruban general election, there have been many changes in waste management in Aruba (Overheid Aruba, 2023). However, understanding the past is crucial as it allows for examining the factors that led to previous waste management challenges. The small island jurisdiction of Aruba has encountered significant challenges in sustainable waste management (Workgroup Waste Processing Aruba, 2018, p. 4). In 2002, the Government of Aruba attempted to execute an Emergency Action Plan (EAP) for the landfill due to poor waste management (Social Economic Council Sint Maarten, 2017, p. 6). The plan did not function as stipulated; the waste at Parkietenbos landfill reached its maximum capacity. In 2018, Overheid Aruba (2018) stated; “In view of the protection of public health and conservation of the environment (...) the Government of Aruba has established the objective to transition from its current solid waste management system to sustainable and sanitary waste management”. Yet, prior to the 2021 Aruban general election, the challenges have emphasized the necessity of exploring a potential contribution of collaborative governance in addressing the complex issues surrounding waste management (Chamber of Commerce and Industry Aruba, 2023). Collaborative governance is characterized by stakeholders collaborating together in the decision-making process to create and implement policies for the mutual benefit of all involved parties (Ansell & Gash, 2008, p. 544). Moreover, there is a gap in understanding how collaborative governance could have positively impacted sustainable waste management practices before the 2021 Aruban general election. The gap represents a notable challenge that obstructs the creation of effective policies to tackle the

Aruban waste management situation. Therefore, the research is essential to determine the extent to which collaborative governance could have contributed to sustainable waste management prior to the 2021 Aruban general election.

1.2 Research Questions

Considering the aforementioned information, the following main research question was formulated: *How could collaborative governance have contributed to the sustainable waste management challenges in the island jurisdiction of Aruba prior to the 2021 Aruban General Election?*

To answer this main research question, the following sub-questions were formulated:

SQ1: What were the main waste management challenges in Aruba as a small island developing state previous to the 2021 Aruban general election?

SQ2: Who were the main public and private stakeholders, and what were their roles and responsibilities in the process of waste management in Aruba ahead of the 2021 Aruban general election?

SQ3: To what extent did collaborative governance exist in waste management of Aruba in advance of the 2021 Aruban general election?

SQ4: What steps for improved stakeholder collaboration can be taken in order to achieve sustainable waste management in Aruba?

1.3 Research Relevance

In terms of relevance, this research will make a significant contribution to society by focusing on identifying and proposing potential solutions that can lead to environmental,

financial, and social benefits. The research aims to provide guidance and direction for waste minimization efforts by exploring these solutions. The process of waste minimization will have various positive impacts on society, including improvements in health, reduced aerial, aquatic, and terrestrial pollution, cost reduction, enhanced quality of life, and the emergence of new markets. In addition, the research can provide valuable insights to inform future initiatives and improve Aruba's overall waste management framework, thus promoting environmental sustainability and enhancing the well-being of its residents.

1.4 Research Objectives

One of the research objectives is to examine the waste management challenges in the island jurisdiction of Aruba prior to the 2021 Aruban General Election while exploring the framework of collaborative governance and its potential contributions to a sustainable waste management outcome. Additionally, the research aims to evaluate the extent to which collaborative governance practices were implemented to address the sustainable waste management challenges in Aruba prior to the 2021 Aruban general election. Moreover, the research intends to identify the key stakeholders involved in waste management and their roles in the collaborative governance process. Ultimately, the research intends to provide recommendations for enhancing collaborative governance in addressing Aruba's sustainable waste management challenges. These objectives aim to investigate and understand the role of collaborative governance in addressing sustainable waste management challenges in Aruba.

1.5 OGM Core Values

This research topic adheres to the Organization, Governance, and Management (OGM) core values of identity and sustainability. Identity is defined as “A state of belonging and interactive and contextualized self-definition, and self-esteem. It is considered a state of being of the

individual, the group, and local and global societies. Identity manifests itself in social, cultural, physical, mental, and natural areas (OGM Study Guide, 2019, p. 17). This research focuses on stakeholders being a part of the collaborative governance process. Stakeholder participation and engagement entail the inclusion of a diverse array of stakeholders in the decision-making processes, ensuring their active involvement throughout the entire waste management process (Kujala, Sachs, Leinonen, Heikkinen and Laude, 2022, p. 1141).

The second core value is sustainability; “The capacity of a society to regenerate itself responsibly. Sustainability manifests itself in all areas of human society and its natural environment: economic, sociocultural, and natural and ecological sustainability” (OGM Study Guide, 2019, p. 16). By adopting a socio-ecological systems perspective, one can comprehensively understand the complex relationship among human activities, waste generation, environmental impacts, and social dynamics (Acosta, Ortega, Bunsen, Koirala, and Ghorbani, 2018).

1.6 Methodology

This research will employ a qualitative approach, with interviews as the primary data collection instrument. Conducting qualitative research through interviews offers several advantages. As Bryman (2016) suggests, face-to-face interaction provides a rich and comprehensive understanding of the perspectives and experiences of individuals, which is crucial for acquiring social knowledge (p. 393). In line with Bryman's assertion that interviews prioritize understanding over generalization (2016, pp. 466-467), the research will focus on gaining insights into the unique perspectives and experiences of the stakeholders involved. Semi-structured interviews will enable the researcher to gather comprehensive data to inform the design of a feasible and sustainable waste management system. Overall, using qualitative

interviews as the research instrument will facilitate a deeper understanding of the stakeholder perspectives and contribute to the development of effective waste management in Aruba.

1.7 Expected Results

In anticipation of the expected results of this research, readers can expect that each of the four sub-questions will be addressed through data collected from semi-structured interviews. Subsequently, these findings will be compared with the literature review. Once all the sub-questions have been answered, readers can also anticipate a combination of the four answers to form the answer to the main research question, followed by the inclusion of recommendations in the subsequent chapters.

1.8 Context

Leading up to the 2021 Aruban general election, Aruba had dealt with persistent waste management challenges spanning several decades. These issues encompassed illegal waste dumping, uncontrolled landfills, open-air waste burning, littering, a lack of environmental legislation, financial resource constraints and an inefficient waste handling system. The focal point of waste disposal remained the Parkietenbos landfill, managed by Selimar, where a significant portion of the waste stream was directed. A pressing challenge emerged due to the scarcity of available space for new landfill areas or the expansion of the existing landfill, which triggered various forms of nuisance for the residents, the environment, and the workers involved. The nuisances took the shape of toxic odors, smoke from waste fires, litter affecting nearby water and the looming threat of environmental contamination. To address the mounting waste crisis, a new landfill area next to the existing one was established in 2002, initially conceived as a temporary solution. The ultimate goal was to implement a modern and more efficient waste processing method. Progress was made in 2009 when a new waste processing facility was

constructed and commenced operations. However, due to shifts in governmental priorities and leadership changes in 2009, discussions concerning the continued operation of the new facility stalled. As a result, no alternative waste processing method has been employed, and the bulk of the waste stream continues to be directed to the Parkietenbos landfill prior to the 2021 Aruban general election. Consequently, the landfill's capacity has exceeded its limits, posed significant environmental risks and jeopardized the health and well-being of workers and the surrounding community. Addressing these longstanding waste management issues in Aruba remains critical (Workgroup Waste Processing Aruba, 2018, p. 4).

1.9 Structure of the Report

The thesis structure consists of five chapters, each serving a specific purpose. The first chapter serves as an introduction to the research topic. It overviews the research topic, questions, relevance, objectives, OGM core values, methodology, expected result, context and the report's structure. The second chapter presents a comprehensive literature review. It defines and explains the main concepts related to the research topic, drawing upon relevant scholarly sources. The literature review critically examines existing studies, theories, and frameworks to establish a theoretical foundation for the research. The chapter may also identify gaps in the existing literature which the research intends to address. The third chapter explains the selected research methodology and design. It provides a detailed description of the research participants, research instruments, data collection procedures, and data analysis techniques. The chapter also addresses ethical considerations in conducting the research and discusses the validity and reliability of the research methodology. The fourth chapter presents the findings of the research. It comprehensively analyzes and interprets the collected data, addressing the research questions and objectives. The chapter includes a table that indicates the results effectively. The fifth chapter

serves as the conclusion and discussion of the research. It compares and contrasts the research findings with the existing literature, highlighting the contributions and implications of the study. The chapter also discusses the strengths and limitations of the research and offers recommendations for future research or practical applications. Additionally, the researcher reflects on the research process and discusses personal insights gained.

2. Literature Review and Theoretical Framework

In this chapter, the primary objective is to acquire a comprehensive understanding of the existing research pertaining to the key concepts relevant to this study. These concepts, drawn from academic and relevant sources, are a foundation for promoting sustainable waste management practices. The first section introduces and defines the key concepts that will be explored throughout the research. In the second section, the researcher explores the theoretical understanding of these concepts, drawing insights from various literature sources. This exploration aims to establish meaningful connections between the concepts, ensuring their accurate representation, critical evaluation, and alignment with the intended research objective. The third section, referred to as the theoretical framework, provides a structured foundation for the research process and assists in interpreting the collected data.

2.1 Key Concepts

This paragraph will provide a precise explication of the fundamental concepts of this research to acquire a more comprehensive understanding of the scope of this research.

2.1.1 Waste Management

Prior to deliberating about private and public waste management organizations, the definition of waste management should be comprehensible. McDougall et al. (2001) mention: “Definitions of waste in variably refer to lack of use or value, or ‘useless remains’, waste is a byproduct of human activity” (p. 1). Moreover, other authors have a detailed description of waste management. Pongracz et al. (2004) state, “Waste defines waste management as collection, transport, recovery and disposal of waste, including the supervision of such operations and after-care of disposal sites” (p. 477).

2.1.2 Small Island Developing State (SIDS)

According to Boto and Biasca (2012): “Small Island Developing States (SIDS) comprise small islands and low-lying coastal countries that represent a diverse group in a number of respects. The United Nations (UN) currently classifies 52 countries and territories as SIDS” (2012, p. 4). These countries and territories are located in different areas in the Indian, Atlantic, Pacific, Southwest Pacific and the Caribbean. Aruba is also considered a SIDS, which inspires this literature review even more. Furthermore, as stated by Boto and Biasca, “SIDS also face a greater risk of marginalization from the global economy than many other developing countries as a result of their small size, remoteness from large markets and high economic vulnerability to economic and natural shocks beyond domestic control. With their fragile ecosystems, SIDS are also highly vulnerable to domestic pollution factors and globally-induced phenomena” (2012, p. 4).

2.1.3 Collaborative Governance

The term governance encompasses the act of governing, which can occur in both the private and public sectors. In the context of collective action, governance is often understood as a set of shared rules and regulations designed to guide and regulate the behavior of individuals and organizations (Emerson et al, 2012, p. 1). Many authors assert that governance involves collaborative efforts to determine and implement these rules and regulations collectively. However, Emerson et al. (2012) define governance as: “The means to steer the process that influences decisions and actions within the private, public, and civic sectors. More specifically, governance is a set of coordinating and monitoring activities that enable the survival of the collaborative partnership or institution” (p. 2). An innovative strategy of governing named collaborative governance emerged in the 2000s. Collaborative governance is a method that

brings numerous stakeholders together to participate in consensus-oriented decision-making (Ansell & Gash, 2008, p. 543). According to Emerson et al. (2012): “Collaborative governance has become a common term in the public administration literature, yet its definition remains amorphous and its use inconsistent” (p. 1). However, Ansell and Gash argue that collaborative governance has become a reaction to former projects or policies that governing bodies unsuccessfully executed. Ansell and Gash define collaborative governance as “A governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets” (2008, p. 544).

Collaborative Governance in Aruba Prior to the Aruban General Election. In the past, collaborative governance existed, in waste management in Aruba. The past Minister introduced a task force group consisting of multiple stakeholders; the stakeholders gather in various meetings with a desire to make a difference in waste management in Aruba. The meetings aimed to build a roadmap with direct goals to alleviate and resolve the Parkietenbos landfill situation (Workgroup Waste Processing Aruba, 2018, p. 6).

2.1.4 Aruban General Elections

Aruba typically holds a General Election every four years to select the 21 members of parliament. According to Article 3.3 of the Aruban state regulation (Staatsregeling): “The term of office of Parliament is four years”. However, the political party or coalition that wins the majority of seats in the Parliament forms the government following the election. The winning party's leader assumes the role of Prime Minister and makes proposals for potential ministers to serve in the new government. The Governor receives a list of potential ministers from the Prime Minister. The Governor looks over the list and the ministers' qualifications. The Prime Minister

submits the proposed ministers' list to Parliament for approval after the Governor has examined and given its approval. A proposed minister needs to acquire support from the majority of the Parliament's members to be appointed as a Minister (Overheid Aruba, n.d.).

2.2 Literature Review

This paragraph discusses the essential components of an expanded waste management program that contribute to transforming Aruba's waste management practices by incorporating collaborative governance principles. The aim is to enhance the sustainability and efficiency of waste management in Aruba.

2.2.1 Waste Management Challenges in Aruba and Similar SIDS

The waste management challenges may not be the most critical issue on the governmental agenda of many SIDS. Nonetheless, not resolving any current or past waste management challenges and not having a significant plan can result in different accumulating issues to very low-profiled challenges after a period, which would be very difficult to find a solution. For the SIDS in the Caribbean, waste management faces different challenges on each island. According to the United Nations (n.d.): “SIDS inhabitants generate, on average, 2.3 kg Municipal Solid Waste (MSW) per person, 48% higher than the world average” (p. 2). Aruba and other SIDS have faced several waste management challenges prior to the 2021 Aruban general election. As cited by Workgroup Waste Processing Aruba (2018): “For decades, Aruba has been struggling with waste problems such as illegal dumping, uncontrolled landfill, lack of legislation, lack of financial resources and inefficient waste handling system” (p. 4).

Uncontrolled Landfill. An uncontrolled Landfill is a landfill that lacks an operational structure and poses threats to the environment, particularly to water, air and soil, due to the various types of waste received. To mitigate the adverse consequences of the uncontrolled landfill, strict monitoring must be implemented (Andaloussi et al., 2021, pp. 526-527).

Illegal Waste Dumping. Illegal waste dumping is waste disposal at a location without legal permission. Illegal waste dumping results in environmental pollution and landscape degradation. On an international scale, illegal waste dumping is due to the lack of proper waste management facilities (Mihai et al., 2019, pp. 1-2). The frequency of illegal waste disposal practices is attributed to ineffective local authority enforcement (p. 4).

Lack of Legislation. Without legislation, waste policies may not be effective in achieving sustainable solid waste management. In short, the absence of specific legislation detailing how and what the direction of solid waste has affected the effectiveness of the management in these developing countries (Dusim et al., 2017, pp. 39-40).

Lack of Financial Resources. Lack of financial resources prevents the safe disposal of waste in proper operational structure landfills (Guerrero et al., 2013, p. 221). The absence of financial support, limited resources and the unwillingness of the users to pay for the service (Sujauddin et al., 2008).

Inefficient Waste Handling System. The lack of facilities, recycling, suitable space, handling hazardous waste and public awareness are part of the challenge towards achieving sustainable waste management (Xiao et al., 2010, p. 4807).

2.2.2 A Short Overview of the Role and Responsibility of Stakeholders in Aruba's Waste Management

Stakeholders in Aruba's waste management sector are essential to ensuring the sustainability and cleanliness of the Aruba's environment. These stakeholders include a broad range of organizations, including government organizations, private organizations, non-governmental organizations, and semi-public organizations. Each group takes on responsibility for certain tasks that collaborate to manage waste on the island successfully (Workgroup Waste Processing Aruba, 2018, p. 4)

Aruba's Branches of Government. Aruba's government system operates with three distinct branches, each playing an important role. The legislative role is played by the 21 parliament members who are responsible for crafting laws and collaborating with the government to formulate the laws. The executive role is played by the Governor and Ministers; they are tasked with executing these laws and putting them into practice. Lastly, the judicial role is played by the common court of Justice of Aruba and acts as a check, ensuring that everything is carried out justly and accurately in accordance with the laws (Global Edge, n.d.). The Prime Minister serves as chairman of the Council of Ministers, which is the body that governs the nation. Each Minister is responsible for a particular area of the government and serves as the political leader of that ministry (Overheid Aruba, n.d.)

DNM and BCI (Governmental Organizations). Directie Natuur en Milieu (DNM) is a governmental organization with the role of preparing, shaping, executing, and evaluating policies that lead to a sustainable, healthy living environment for humans and nature in Aruba, with a responsibility of preserving, protecting, and enhancing natural and environmental qualities (Directie Natuur en Milieu, 2022). The Bureau City Inspector (BCI) plays a crucial role in

identifying and reporting unethical practices related to waste management. The primary responsibility of BCI is to contribute to the cleanliness of Aruba by reporting any instances of illegal waste dumping (24ora, n.d.).

Environmental Activist Groups (Non-Governmental Organizations). NGOs

are characterized as non-profit groups that strive to reduce discomfort, advocate the needs of the less fortunate and offer essential services. An NGO, environmental activist groups are responsible for a variety of sectors and activities, including environmental services. Having the role of engaging in community development and environmental management activities, including sanitation and solid waste management, environmental activist groups strive to make a difference in waste management (Tukahirwa et al., 2010, pp. 2-3).

EcoTech Aruba N.V. (Private) and Serlimar (Semi Public). EcoTech and Serlimar are two organizations operating within the waste management industry in Aruba, with one being a private organization and the other a semi-public organization. Both share the critical responsibility of collecting and managing waste, either by transporting it to the Parkietenbos landfill or to the waste plant in Barcadera. Their primary role is to contribute to the cleanliness and sustainability of Aruba. However, it is worth remarking that some citizen favors the services provided by EcoTech Aruba N.V. when compared to Serlimar, primarily because EcoTech's services come at a cost, which some argue ensures a higher level of efficiency and customer satisfaction. In contrast, Serlimar, as a semi-public organization, offers its services free of charge as mandated by law, but this can sometimes lead to variations in service quality as it operates within budget constraints. Young (2018) points out that on certain occasions, it is essential to have a private waste management organization, particularly if the government has an absence in

the level of proficiency in the area of waste management. However, there are other authors who presume waste management operations should be managed by public organizations. Garlet (2011) mentions that the Chief Executive Officer (CEO) of the Solid Waste Association of North America (SWANA) insists that solid waste is a public health issue and therefore, the government should maintain control.

2.2.3 Enhancing Stakeholder Collaboration for Sustainable Waste Management in Aruba

Improving stakeholder collaboration is crucial for achieving sustainable waste management in Aruba. According to Koiwanit & Filimonau (2023): “Stakeholder collaboration for sustainability is defined as the ability of individuals and organizations, representing private and public sectors, and operating in a specific locality, to work together towards a common, pro-sustainable goal”.

Involve all Stakeholders. To initiate the improvement of stakeholder collaboration in order to achieve sustainable waste management in Aruba, the primary step is to strive for comprehensive representation across government organizations, private organizations, semi-public organizations and NGOs. The approach aims to facilitate inclusive participation and ensure that the perspectives and ideas of all stakeholders are considered and heard. (Razali & Anwar, 2011, p. 251).

Establish a Collaborative Platform. Ensuring the presence of a platform or a dedicated working group is essential for stakeholders to convene and engage in discussions regarding waste management issues, share valuable insights, and collectively develop sustainable solutions for Aruba's waste management challenges. The platform can take shape through regular meetings, workshops, or an online interface. Collaborative platforms have the potential to

facilitate value creation among organizations while also remaining closely aligned with the principles and values necessary for achieving sustainable waste management in Aruba (Moreno Romero et al., 2020, p. 1).

Shared Vision and Goals. Stakeholders must collaborate to create a shared vision for achieving sustainable waste management in Aruba, which includes defining clear and common objectives that all stakeholders can actively pursue. The objectives may include waste reduction targets, recycling initiatives, and goals related to diverting waste from landfills. An inspiring shared vision serves as a major element of change for driving change processes, providing direction, and rallying all stakeholders toward the pursuit of excellence in waste management practices (Martin et al., (2014, p. 2)

Data Sharing and Transparency. Encourage transparency by sharing relevant data and information on waste generation, collection, and disposal. This helps stakeholders make informed decisions and track progress toward goals. Data sharing facilitates collaboration among stakeholders, fostering public engagement in problem-solving efforts. (Susha & Gil-Garcia, 2019, p. 2892). In addition, maintaining open communication and ensuring organizational transparency in fulfilling its public mission are integral components of the approach. (Kapucu et al., 2009, p. 43).

Technology and Innovation. To implement innovative ideas such as waste reduction, improved recycling rates, and reduced landfill usage, it is vital for stakeholders to engage in discussions about technology and innovation. Establishing an innovative and technological plan for the involved organizations is essential for the collaboration process (Picavet et al., 2023, p. 518).

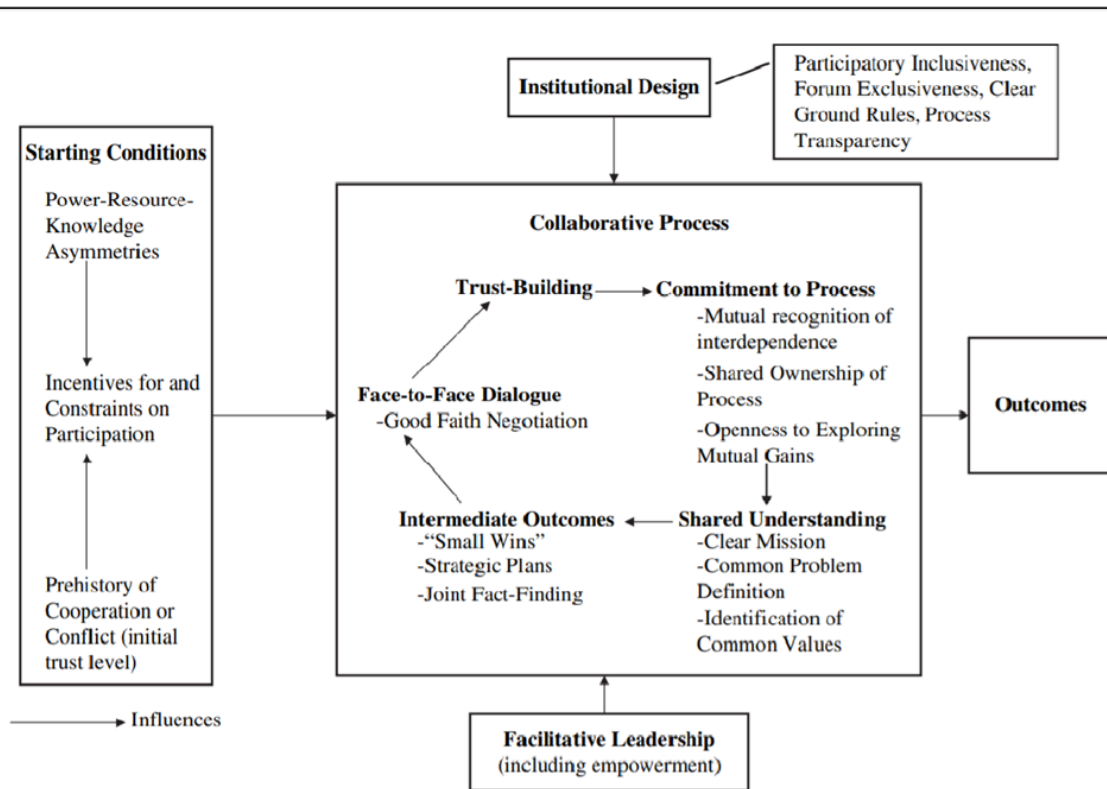
Education and Awareness. Promoting awareness and knowledge through education among citizens regarding waste management is vital for sustainable solutions. It is imperative to continue educating students about the challenges associated with solid waste, as this raises their awareness of the issue. Education and awareness on the topic of waste management serve as a foundation for fostering responsible waste disposal and recycling behaviors (Desa et al., 2012, p. 49).

2.3 Theoretical Framework: Collaborative Governance Framework

There are different collaborative governance models and frameworks. Emerson et al. (2012) have the framework: “The Integrative Framework for Collaborative Governance” which includes information from different applied fields; such as public administration, planning, conflict management, and environmental governance among others (p. 4). Many aspects of the integrative framework for collaborative governance were utilized for the main framework; “Collaborative Governance Framework” (Figure 2) of this research. However, the framework by Emerson et al. presented hurdles in serving as the central framework for this research. The framework by Emerson et al. is broad and complex, meaning that the integrative framework covers a lot of ground and it consists of many components to have an in-depth description. As stated by Emerson et al. (2012): “We recognize that this integrative framework covers a lot of ground, it also makes it difficult to adequately describe within the bounds of this article (...) we have limited the space available to cover in depth the elements of each component” (pp. 21-22).

Figure 1 illustrates the model of collaborative governance and it was designed to identify conditions that facilitate collaboration between organizations. The collaborative governance model can be utilized to assist the ongoing waste management issues and identify recommended solutions by showing different tactics for stakeholders to take into consideration when

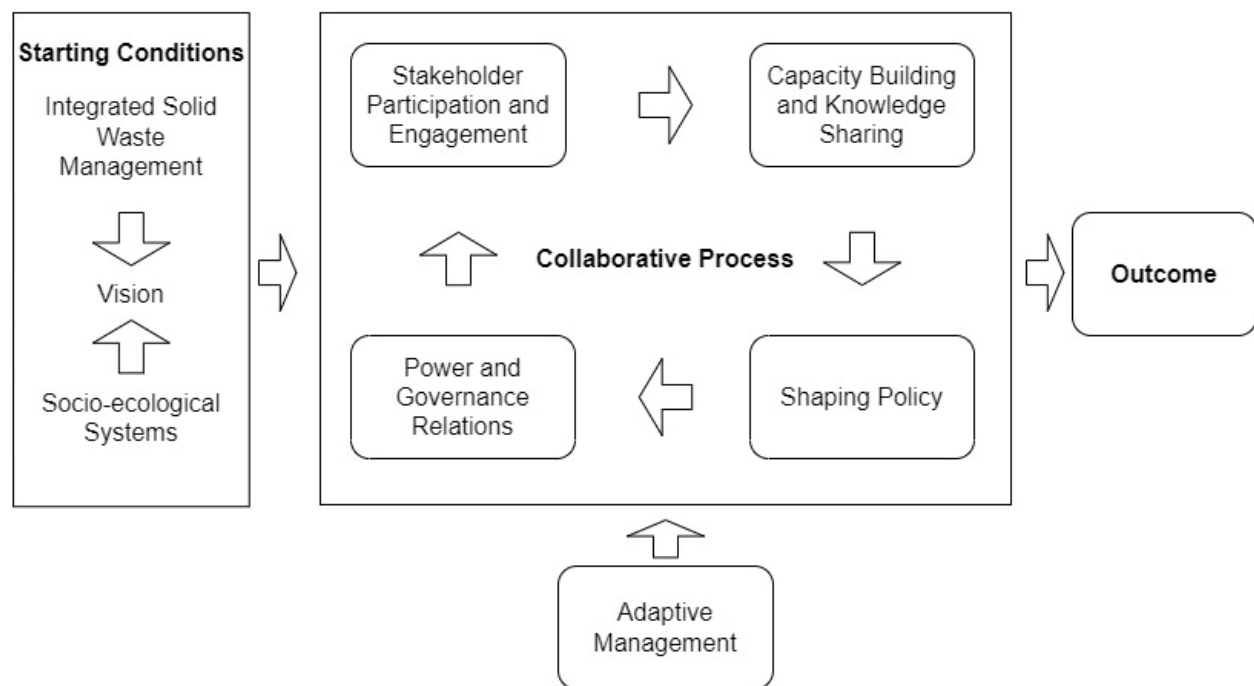
collaborating with each other. Ansell and Gash (2008) explained that the model is able to assist many organizations in combating issues involving different stakeholders which are aiming for a sustainable solution (p. 551).



(Figure 1: Ansell and Gash's Collaborative Governance Model, 2008)

However, for this research, the researcher has developed a customized collaborative governance framework specifically tailored to the context of waste management in Aruba which can be observed in Figure 2. This framework has been adapted from the existing collaborative governance models, incorporating relevant components that align with the unique research questions in order to guide the research. Similar to Ansell and Gash's collaborative governance model, the collaborative governance framework explored in this research consists of several key components such as starting conditions, collaborative process, external influence, and outcomes.

The starting conditions highlight the conjunction of Integrated Solid Waste Management and Socio-ecological Systems, shaping the vision. Once the vision is established, the collaborative process comes into play. This process involves four stages: Stakeholders Participation and Engagement, Capacity Building and Knowledge Sharing, Shaping Policy, and Power and Governance Relations. Furthermore, Adaptive Management is an integral aspect of the collaborative governance framework, serving as an external influence that contributes to the eventual outcomes.



(Figure 2: Collaborative Governance Framework)

2.3.1 Integrated Solid Waste Management:

With an emphasis on making use of resources efficiently, integrated Solid Waste Management (SWM) is a strategic approach to the long-term management of solid wastes that addresses all sources and all aspects of generation, segregation, transfer, sorting, treatment,

recovery, and disposal of waste (Ahemd, n.d.). Integrated SWM assists in the analysis of the role that collaborative governance can play in promoting sustainable waste management in Aruba and facilitating the integration of various waste management methods. The methods of integrated SWM look realistic when the generated and collected wastes are transported efficiently for advanced processing and treatment (Radwan & Khan, p. 2, 2023). In order for integrated SWM to be efficient, the management of solid waste must include a range of tasks, beginning with the collection of waste and culminating in the handling and disposal of the waste materials. Then, the solid waste has to be sorted, separated and allocated for the processing, which involves different procedures associated with the treatment of solid wastes (p. 4). The sources of MSW are primarily residential, commercial, and institutional. Residential waste is generated by households and includes items such as food scraps, paper, and packaging materials. Commercial waste is generated by businesses and includes items such as office paper, packaging materials, and food waste. Institutional waste is generated by schools, hospitals, and other public buildings and includes items such as paper, plastic, and food waste. The most common methods of MSW disposal include landfilling, incineration, and recycling. However, it is important to note that each method has its own advantages and disadvantages, and the choice of disposal method depends on the specific characteristics of the waste, as well as the availability of resources and infrastructure (p. 6). By implementing integrated SWM practices, communities can become cleaner and safer as well as more resource-efficient and productive. Due to lower levels of ultimate waste for disposal, this strategy lowers waste management costs, improves business prospects, and promotes economic growth. Additionally, it promotes local ownership, accountability, and involvement, resulting in a more sustainable and neighborhood-driven trash management system (Ahemd, n.d.).

2.3.2 Socio-ecological Systems:

The socio-ecological systems demonstrate how social and ecological design function together and depend on one another in a particular system. Sustainable waste management is introduced to maintain the balance between the environmental, social, and economic aspects through several ways, such as acts implementation and techniques in managing waste. Therefore, it is essential to identify the current waste management system adopted by the industry in order to make adjustments and improvements in moving towards sustainable waste management. Ecological design aims to lessen the negative effects on the environment through inherent characteristics and is used to embrace green design as well as overcome its limitations. The matter of waste management, encompassing waste collection, transportation, processing, recycling, and disposal, holds paramount significance concerning environmental, cultural, and economic considerations (Nahaei, et al., 2021, pp. 28-29). Understanding the complex relationships between human activities, waste generation, environmental impacts, and social dynamics in Aruba can be rendered through the use of socio-ecological systems. It underlines the importance of integrated and comprehensive waste management strategies that take into account environmental, social, and economic factors (p. 39).

2.3.3 Vision

Organizations must frequently redefine their objectives and course of action to stay ahead in this competitive environment, developing ever-innovative ideas. A shared vision can align members of the organizations around a common direction to pursue. The shared vision acts as a glue that keeps the organization together. While many authors favor an organization-wide shared vision, how this should be developed is less clear. A vision needs to be clear to everyone (Zasa & Buganza, 2022, p. 1). Globally, a diverse array of characteristics is evident in vision statement

development. Challenges may also arise for stakeholders when distinguishing between vision and other interconnected concepts like mission, values, beliefs, principles, and strategy. The vision is the starting point of any organizational transformation process and should underpin business strategy (Kantabutra & Avery, 2010, p. 37). Vision building is intended to create a fundamental, ambitious sense of purpose, one to be pursued over many years (p. 38). The ability to develop a sustainable waste management system that is compatible with Aruba's social, economic and environmental goals is made possible by a well-crafted vision, which also promotes cohesion, motivation, and strategic planning (p. 40).

2.3.4 Stakeholder Participation and Engagement:

A collaborative effort including a wide range of stakeholders from various backgrounds is necessary to achieve a sustainable waste management target by collaborating together towards the plan that includes decision-making and policy-making processes, particularly correlated to environmental and sustainability issues (p. 1141). Kujala et al. (2022) state: “The definition of stakeholder engagement as the practices that the organization undertakes to involve stakeholders in a positive manner in organizational activities” (p.1142). The importance of including stakeholders from all sectors (government, industry, and community) in decision-making, encouraging inclusive conversation, and taking into account various viewpoints is emphasized by stakeholder participation and engagement. Nonetheless, it is crucial to acknowledge that stakeholder engagement and participation depend on good intentions from the organizations and the relationship is reciprocal and voluntary (p.1153).

2.3.5 Capacity Building and Knowledge Sharing:

Enhancing the knowledge, skills, resources, and capabilities of individuals, organizations and communities is what capacity building represents. It is possible to think of capacity building

as including human, technical, and institutional forms at different levels, such as individual, institutional, national, regional, or even global levels. While also covering various fields, including law, policy, and regulation. It involves a variety of actions, including education, training, the development of skills, and the supply of resources with the goal of enabling them to address challenges and achieve objectives effectively (Vierros & Harden-Davies, 2020, p. 6). Similar to capacity building, knowledge sharing is crucial for organizations to achieve objectives due to the fact that it encourages the creation of new knowledge through collaboration, stimulates the development of problem-solving abilities, and raises awareness of stakeholders' decision-making processes. Knowledge Sharing can help organizations innovate more quickly and creatively to solve problems. (Azeem et al., 2021, p. 2) Knowledge sharing and capacity building concentrate on how collaborative governance may facilitate learning, knowledge transfer, and stakeholder capacity development by analyzing how collaborative governance could improve stakeholders' knowledge of sustainable waste management techniques and foster group learning (p. 3).

2.3.6 Shaping Policy

Shaping policy is more than simply getting to a decision and implementing it (Blomquist, 2019, p. 6). The process of influencing, leading and shaping the formation and development of policies of governments, organizations, or institutions is referred to as shaping policy. Shaping policy may involve conducting research, arguing for particular solutions, including stakeholders, offering expert opinions, and utilizing a variety of communication techniques. By utilizing shaping policy in the collaboration process, Collaborative governance can influence the development, implementation, and enforcement of waste management policies (p. 20).

2.3.7 Power and Governance Relations:

The distribution of authority, decision-making, and power is referred to as "power and governance relations" within collaborative governance frameworks. Relations between power and governance provide insight into how the distribution of power affects the effectiveness of collaborative efforts. The organization that possesses power often governs the policy process, which may weaken the legitimacy or efficacy of a policy. The actions of powerful organizations will surely have an impact on how transparent or accountable policymaking is. Being able to make decisions and produce sustainable results are all impacted by how power is used, negotiated, and shared among stakeholders in the waste management system in Aruba (Griffin, 2012, p. 209).

2.3.8 Adaptive Management:

Adaptive management places a strong emphasis on acquiring information, adaptability, and constant adjustment in response to feedback and changing environments. Nickols et al. (2019) state: "*Adaptive management is an approach to (...) monitored and compared to expected responses, then differences between observations and expectations are used to refine management in an iterative process*" (p. 2377). The dynamic character of waste management operations and the requirement for ongoing strategy monitoring, review, and modification are acknowledged by the incorporation of an adaptive management approach. It emphasizes the value of building adaptable capacity, involving stakeholders in continuous feedback, and learning from experiences (p. 2383).

2.3.9 Outcome:

An outcome in collaborative governance refers to the particular outcome or accomplishment that results from the combined efforts and cooperation of several stakeholders as they work

together to address a common issue or problem (Ansell & Gash, 2008, p. 546). These results show how effective cooperation is in attaining shared objectives since they capture the whole influence of collaborative processes and activities. These results can include a wide range of adjustments, enhancements, or achievements, including modifications to policies, better community involvement, higher resource efficiency, and beneficial effects on the social, economic, or environmental elements of a given problem (p. 556). For determining the effectiveness and worth of collaborative efforts as well as for guiding future decision-making and actions, monitoring and assessing these results are crucial (p. 561).

3. Research Design and Methodology

This chapter will present the research design and the rationale behind its selection. It will provide an overview of the research participants' selection process, the chosen method of data collection, and the research instruments utilized. Furthermore, it will delve into the data analysis procedures, ethical considerations, and the measures taken to ensure the validity and reliability of this research.

3.1 Methodology

The research methodology employed in this study is qualitative in nature. As outlined by Baarda (2014), qualitative research primarily focuses on gathering and analyzing qualitative data, such as individual experiences and perceptions (p. 22). This approach involves utilizing open-ended research questions to explore new insights and gain a deeper understanding of the research topic rather than solely relying on numerical or proven facts. The utilization of qualitative research offers several advantages. As highlighted by Bryman (2016), one significant benefit is the opportunity for face-to-face interaction, which allows researchers to engage in the rich and comprehensive exploration of participants' perspectives. This direct engagement facilitates a deeper understanding of the participants' thoughts, feelings, and experiences, ultimately contributing to the acquisition of social knowledge (p. 393). By employing a qualitative methodology, this study aims to delve into the complexities and nuances of the waste management challenges in Aruba and the collaborative governance processes related to them. Through open research questions and a focus on individual experiences, the study seeks to uncover valuable insights and generate a more comprehensive understanding of the topic.

3.2 Participant

The purpose of conducting interviews in this research is to elicit rich and detailed answers from the stakeholders, providing insights into their perspectives and viewpoints. There was a total of 12 participants and the interviews were held from April 15, 2021 to May 12, 2021.

Participants:	Positions:	Organization:
EcoTech Aruba NV	Manager	Private
Johnsons Enterprises	Manager	Private
Serlimar	Manager	Semi-Public
Serlimar	Manager	Semi-Public
Aruba Reef Care Foundation	Vice President	Non-Governmental
Tamarijn/Seroe Lopez Community Group	Senior Research Lecturer and Environmental Activist	Non-Governmental
Parkietenbos Community Group	Legislative Lawyer and Environmental Activist	Non-Governmental
BCI	Inspector	Governmental
DNM	Manager	Governmental
Government of Aruba	Former Minister	Governmental
Government of Aruba	Former Minister	Governmental
Government of Aruba	Former Parliament Member	Governmental

(Tabel 1: List of participants, positions and type of organization)

As Table 1 illustrates; the primary participants in this study are stakeholders involved in the waste management process in Aruba, including Non-Governmental Organizations, Governmental Organizations, Semi-Public Organizations, and Private Organizations. The sampling method chosen for this research is purposive sampling, as described by Bryman (2016). Purposive sampling involves selecting units (such as individuals, organizations, documents, or departments) directly related to the research questions being asked (p. 416). Specifically, this research utilizes a method known as 'generic purposive sampling' as proposed by Bryman (2012, p. 422). Generic purposive sampling involves selecting participants based on their relevance to

the research topic rather than seeking a representative sample of the entire population. It allows for targeted sampling of individuals or organizations with specific knowledge, experience, or perspectives related to the research focus. By utilizing purposive sampling, this research aims to gather insights from stakeholders who possess valuable information and expertise in the field of waste management in Aruba. The selection of participants is based on their relevance and ability to contribute to the research questions and objectives, ensuring a focused and comprehensive exploration of the topic

3.3 Research Instruments

Research instruments serve as measurement tools used to gather data on a specific topic of interest from research subjects. In this study, semi-structured interviews were utilized as research instruments. This approach allows for specific topics to be covered while maintaining flexibility in the order and phrasing of questions (Bryman, 2016, p. 471). The objective of using interviews in this study is to gather rich and detailed answers from participants, thereby gaining insights into their perspectives and viewpoints. It is important to note that interviews are primarily aimed at understanding rather than generalizing, as mentioned by Bryman in the book *Social Research Methods* (2016, pp. 466-467). By conducting interviews, the researcher seeks to delve deeply into the experiences, opinions, and knowledge of the participants, gaining a nuanced understanding of the waste management challenges in Aruba within the context of collaborative governance.

3.4 Procedure and Data Collecting

The semi-structured interviews conducted in this research utilized open-ended questions to ensure a comprehensive coverage of various topics. The initial focus of the questions was to

establish a general description of the situation, while subsequent categories of questions were designed to collect data that would address the sub-questions and main research question. The objective of these interview questions was to assist in answering the main research question and four sub-questions, guided by the theoretical framework. Furthermore, the researcher conducted face-to-face interviews with different stakeholders. The preparation for the interview process involved contacting participants via telephone, email, and in-person visits to establishments where they were invited to participate in the research voluntarily. The interviews began with a few general questions to elicit responses and were then followed by a structured list of specific topics to be covered. An open-ended approach was employed to encourage discussions between participants and allow for the diversity of views to be heard (Bryman, 2016, pp. 510-511). To ensure the comprehensive capture of valuable information, the interviews were recorded using digital media. This choice was made to avoid distractions from note-taking and allowed the researcher to focus on active listening and interpretation during the interviews (Bryman, 2016, pp. 479-481). Recording the interviews has advantages, as Bryman explains, including overcoming limitations of memory, reducing potential biases in the analysis process, and enabling public scrutiny of the data and analysis by other researchers (p. 479). In terms of data analysis, this research will employ thematic analysis. This involves identifying patterns and recurring ideas related to the different factors of collaborative governance. Through a careful examination of the data collected from interviews, key themes will be identified, contributing to a deeper understanding of the research topic.

3.5 The Role of the Researcher

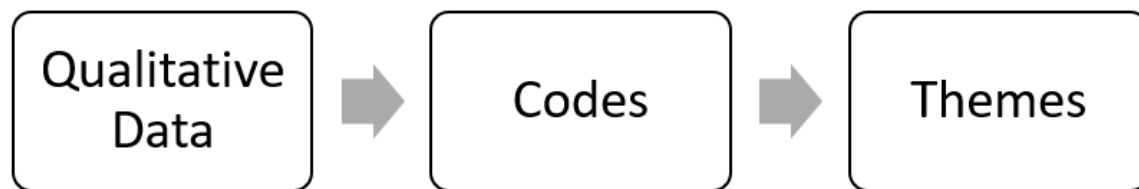
The role of the researcher is multifaceted, encompassing the pursuit of both common and uncommon information. In particular, when exploring personal factors or subjects that provoke

strong emotions from participants, it becomes crucial for the researcher to employ appropriate strategies to ensure unbiased and reliable results. To achieve the goal of gathering common information, the researcher strives to collect data that is widely shared and commonly observed among participants. This may involve obtaining factual details, general opinions, or commonly held perspectives on the research topic. By capturing this shared information, the researcher can develop a comprehensive understanding of the subject matter. In addition to common information, the researcher also aims to delve into the uncommon aspects of participants' thoughts and feelings. This involves exploring individual viewpoints, unique experiences, and personal emotions related to the research topic. It is in these uncommon responses that valuable insights and deeper understandings can emerge. When conducting research that involves questioning participants on personal factors or sensitive subjects, it is essential for the researcher to implement a well-designed plan to ensure unbiased results. This can include establishing a neutral and non-judgmental environment, using appropriate language and questioning techniques, and ensuring confidentiality and anonymity to encourage open and honest responses. Furthermore, the researcher should be aware of their own biases and potential influence on the participants' responses. By maintaining objectivity, being mindful of personal values, and avoiding leading or suggestive questions, the researcher can mitigate potential bias and promote a more unbiased research process.

3.6 Data Analysis (Thematic Analysis)

An inductive data analysis approach has been used in this exploratory research to better understand the historical waste management challenges and identify potential future sustainable solutions through collaborative governance. Themes resulting from the summarized interviews, coded using Microsoft Excel, serve as key data sources in this research. According to Thomas

(2003): “The primary purpose of the inductive approach is to allow research findings to emerge from the frequent, dominant or significant themes inherent in raw data” (p. 2). By analyzing qualitative data and identifying various themes, this research utilizes a thematic analysis driven by grounded theory. Thematic analysis is a technique used to analyze textual data and identify themes. According to Heydarian (2016): “Grounded theory is an approach whereby the researcher refers back to the literature relevant to the research topic and to qualitative observations throughout data collection and analysis”. In order to illustrate the data analysis process, Figure 3 demonstrates the stages of thematic analysis. Thematic analysis has characteristics that demonstrate the process of utilizing qualitative data by coding and then examining the meaning of the coded data which leads to recognizing different themes (Vaismoradi et al., 2016, pp. 100-101).



(Figure 3: Data Analysis Process)

To facilitate the data analysis process, the interview summaries were coded using Microsoft Excel. As emphasized by Bryman (2016), coding is a crucial step in qualitative data analysis. By coding the data, the researcher assigns labels or tags to different segments of the interview summaries, allowing for the identification and organization of key themes, concepts, or patterns. This process helps in structuring and analyzing the qualitative data collected during the interviews. Microsoft Excel provides a convenient platform for coding and organizing the data. Its spreadsheet format allows for the systematic arrangement of the interview summaries, making

it easier to apply codes and track the patterns or themes that emerge from the analysis. Following Bryman's guidance, the researcher recognizes the significance of coding as an essential factor in qualitative data analysis. Through the use of coding techniques in Microsoft Excel, the researcher can effectively analyze and interpret the data, gaining valuable insights and addressing the research objectives.

3.7 Reliability and Validity

There are different aspects of evaluating social research, which are reliability and validity. In comparison to quantitative research, there is an adjustable standpoint of reliability and validity for qualitative research. Guba and Lincoln (as cited by Bryman, 2016) state two criteria for assessing qualitative research: authenticity and trustworthiness. Additionally, trustworthiness consists of several conditions, such as credibility, dependability, and confirmability. In order to practice credibility, the researcher will make sure to have detailed literature that will cover the topic. According to Bryman (2016), is “ensuring that research is carried out according to the principles of good practice and submitting research findings to the members of the social world who were studied in order to obtain confirmation that the investigator has correctly understood that social world” (2016, p. 384). When considering dependability, Lincoln and Guba (as cited by Bryman) mentioned that it is encouraged that researchers adopt an ‘auditing’ approach. This entails that “complete records are kept of all phases of the research process” (2016, p. 384). Furthermore, confirmability is seen as the researcher way of making sure that his or her value will influence the research, as argued by Bryman, is “ensuring that while recognizing that complete objectivity is impossible, the researcher can be shown to have acted in good faith; in other words, it should be apparent that he or she has not overtly allowed personal values or theoretical inclinations to sway the conduct of

the research and the findings deriving from it” (2016, p. 386). The researcher has outlined the research methods, clarifying the procedures for data collection and analysis. The transparency will not only promote similar studies by other researchers but also significantly strengthen the reliability of the research. Moreover, the researcher has underscored the importance of validity through his commitment to reflexivity. By openly recognizing his own biases and preconceptions as a researcher, he has taken deliberate steps to enhance the validity of their interpretations. This level of self-awareness serves as a robust safeguard against personal influences on the research findings, further fortifying the study's validity.

3.8 Ethics

When conducting social research, ethical issues may arise. According to Bryman (2016), “Ethical issues cannot be ignored, as they relate directly to the integrity of a piece of research and of the disciplines that are involved” (p. 120). Crucial questions regarding ethics to ask oneself while conducting social research are: “How should we treat the people on whom we conduct research?” and “Are there activities in which we should or should not engage in our relations with them?” (p. 121). Participants in this research will be treated according to the ethical principles stated in Bryman (2012). The general structure of the interview will contain an introduction of the research to inform the participants of the researchers who are conducting the research and to explain its general purpose. The structure also contains a consent form for participating in the research. The consent form ensures that this research is being conducted in an ethical manner. Bryman mentions that ethical principles of research guarantee that no harm will come to participants, that participants should be informed and that they have given consent prior to participating in the research, that the information given by the participants will be anonymized

and that the participants were not deceived of the purpose of this research (Bryman, 2016, pp. 126-133).

4. Data Collection and Data Analysis

In this chapter, the results of this research will be presented. This chapter is divided into four subchapters. These subchapters are aligned with the four sub-questions of this research. The first chapter begins with the main sustainable waste management challenges in Aruba. This is followed by the second subchapter, which focuses on the stakeholders and their roles and responsibilities. The third subchapter emphasizes the previous collaborative governance between the stakeholders prior to the 2021 Aruban general election.

4.1 Physical and Intangible Waste Management Challenges

All of the participants acknowledged that Aruba has several waste management challenges as a small island developing state. However, the challenges that constantly came up during most of the interview were a mix of physical and intangible challenges.

4.1.1 Landfills

One of the primary physical challenges highlighted by the participants is the issue of landfills. Prior to the 2021 Aruban general election, Aruba had two official landfills, and the participant expressed concerns about their effectiveness and management. Specifically, the Parkietenbos landfill was mentioned as being poorly structured, while the landfill in Ser'i Teishi was seen as processing waste in a more efficient manner: *“The Parkietenbos landfill has been a challenge for 30 years, and not much has change”* (Participant 4, personal communication, April 20, 2021). As a small island development state, Aruba faces unique challenges when it comes to landfills. Unlike larger countries, the island cannot easily hide or avoid the landfill problem. The participant raised questions about the Parkietenbos landfill, particularly regarding its ongoing operation despite expert recommendations to close it down 30 years ago. The existence of active fires at the landfill also raises concerns about safety and proper waste management practices.

Additionally, there seems to be uncertainty regarding the future of the landfill, with discussions focusing on whether to utilize incineration or pursue alternative options such as closure. Moreover, there is a lack of proper structure and organization at the Parkietenbos landfill. This refers to the overall landfill process, highlighting the need for improved waste management practices and better organization of waste disposal methods. Furthermore, the participant noted the absence of a clear mission or vision for the landfill. Despite being a long-standing challenge for over 30 years, there has been limited progress in addressing the issues associated with the landfill. Various plans have been proposed, but implementation and tangible outcomes have been lacking. There is also a general sentiment expressed by the participants that while there are complaints about the landfill, there is often a lack of consideration for individual contributions to the waste problem. It is recognized that a significant portion of waste, approximately 90%, ends up in landfills, indicating the need for improved waste management systems and solutions: *“For a small island; our island is really dirty, 90% of our waste end up on the landfill and we do not have a proper way to manage our waste”* (Participant 4, personal communication, April 20, 2021). Additionally, the participants raised concerns about the long-term sustainability of waste processing in Aruba. The landfill in Ser'i Teishi is seen as the outcome of waste processing, but the question remains about future options once this landfill reaches its capacity: *“What we did is; we move the landfill problem from Parkietenbos to Sero Teishi. If tomorrow Sero Teishi is full, where do we go?”* (Participant 4, personal communication, April 20, 2021).

“By moving and closing the dump will not fix the waste management challenges. In regards to the problem at Seroe Teishi is similar to the problems at Parkietenbos” (Participant 8, personal communication, April 26, 2021), it is acknowledged that finding effective solutions is not straightforward, as simply copying plans from other countries may not be applicable or

viable and closing down a landfill is not an easy task, as waste production in Aruba continues and requires ongoing management.

4.1.2 Illegal Waste Dumping

The large volume of waste generated in Aruba has resulted in a significant issue of illegal waste dumping. This problem is exacerbated by certain small waste management companies that evade landfill fees and engage in illegal disposal practices: *“There is illegal dumping because certain waste collector companies who does not comply with the fee prefer to illegally dump it”* (Participant 2, personal communication, April 16, 2021). Additionally, a lack of education and awareness among the Aruban citizens contributes to the mindset that illegal waste dumping does not hinder the environment and the lack of consequences for the offenders leads to a disregard for the larger implications of illegal waste dumping. To address this issue, there is a clear need for stricter laws and regulations that would deter individuals from illegally dumping waste. Such measures would create a deterrent effect and make potential offenders hesitate before engaging in illegal disposal practices. While policies have been developed to tackle illegal waste dumping, their effectiveness is compromised by a lack of enforcement. Consequently, illegal waste dumping continues to persist at alarming rates. To effectively combat illegal waste dumping, it is essential to not only establish comprehensive policies but also ensure their proper enforcement through vigilant monitoring and the imposition of penalties on violators: *“There are good policies made for illegal dumping, but there is a lack of organizations who are enforcing the policies because there is still a lot illegal dumping”* (Participant 2, personal communication, April 15, 2021).

4.1.3 Physical Resources

Insufficient waste management resources pose significant challenges in effectively addressing waste management issues in Aruba. The limited availability of resources hampers the ability to tackle the accumulating waste and creates difficulties in implementing comprehensive waste management strategies. One notable issue is the inadequate number of trash bins near the beaches, which is a result of resource scarcity. This scarcity leads to overflowing bins that are susceptible to being blown over by the wind, scattering litter that remains unattended. The lack of resources makes it challenging to address this problem effectively, hindering progress in maintaining clean and litter-free beach areas. The scarcity of resources is a recurring theme in waste management, resulting in a sense of frustration and a lack of visible improvements. Insufficient equipment and other necessary resources make it difficult to control and manage waste effectively. The lack of visible changes contributes to a sense of stagnation and hampers the motivation to address waste management challenges comprehensively. Furthermore, resource constraints impact various governmental departments; *“We believe how easy it would be if we had our own equipment like DOW”* (Participant 1, personal communication, April 15, 2021). The limited financial budget often hampers the acquisition of essential equipment for effective waste management practices. For instance, Bureau City Inspectors (BCI) face adversity by not being able to have their own equipment due to financial constraints. In some cases, past political decisions have exacerbated resource limitations. In 2009, the MEP government, together with an international company, introduced an industrial machine that turns solid waste into fluff. However, the “Movimiento Electoral di Pueblo” (MEP) government faced a boycott and subsequent damage under the “Arubaans Volkspartij” (AVP) government which was never

repaired. Such events further strain resources and impede progress in waste management initiatives.

4.1.4 Small Island Developing State

The limited land area and resources make it more difficult to achieve certain waste management goals compared to larger nations with greater financial resources. One of the major challenges in waste management in Aruba is the tendency for the government to be influenced by ideas that may not be feasible or practical for the island's specific circumstances. For instance, waste-to-energy solutions, while economically appealing in some contexts, involve substantial upfront costs for equipment purchase, installation, and ongoing maintenance: *“The biggest problem is that government gets misled by ideas which are unfeasible in Aruba, for example; economically, waste to energy is a governmental solution. However, it costs a considerable amount of money to buy it, install it and to maintain it”* (Participant 2, personal communication, April 16, 2021). Additionally, operating such systems often requires specialized engineering expertise that may need to be outsourced. Given the limitations and unique characteristics of a SIDS as Aruba, waste-to-energy solutions may not be the most realistic or optimal approach. The participants also highlighted the issue of waste generation on the island. Aruba, being a small island that relies heavily on imports, faces the consequence of increased waste production. This emphasizes the importance of considering waste reduction measures, proper waste disposal, and implementing sustainable practices. *“Aruba is a small island that depends on import, every item comes in a package and everything the Aruban citizen buys end up at the landfill”* (Participant 6, personal communication, April 20, 2021). Being a small island developing state and importing almost every product results in an influx of waste, which exacerbates the challenges in waste management and increases the risk of illegal waste dumping.

4.1.5 Small Island Politics

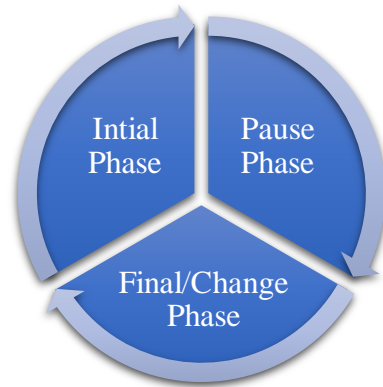
The political landscape in Aruba is characterized by a tendency for inconsistent action plans and policy changes following a shift in political power. With each governmental election, frequently new political parties come into power and often choose to deviate from the plans and policies established by their predecessors. This lack of continuity is evident in the case of the 2020 vision, where strategic plans for addressing waste management challenges were formulated during a 2010 governmental meeting. However, when a new political party assumes power, it often discontinues the existing plans and embarks on its own agenda, leading to a disruption in the implementation of sustainable waste management strategies. The discontinuation of previous plans and the initiation of new ones reflect the influence of political games and the tendency for each new government to assert its own priorities. This dynamic also extends to the appointment of department directors. When a new government takes office, it initiates a review process to determine whether the directors of various departments, including those responsible for waste management, will continue with the plans and initiatives set forth by their predecessors. This evaluation process introduces an additional layer of uncertainty and potential changes in direction, further impacting the consistency and continuity of waste management efforts. As a result, the lack of continuity in policies and the introduction of new agendas with each political power change poses challenges to the long-term effectiveness and sustainability of waste management practices in Aruba: *“When there is political power change in Aruba, political games are being played which leads to different inconsistent action plans by making new policies”* (Participant 5, personal communication, April 21, 2021). It highlights the need for a more cohesive and collaborative approach that transcends political cycles, ensuring that sound

waste management strategies are not subject to abrupt changes and disruptions: “*Aruba is an island with many political games*” (Participant 2, personal communication, April 15, 2021).

Hidden Agenda. Prior to the Aruban general election, a significant factor contributing to the dynamics of small island politics involved hidden agendas that past ministers had concerning waste management in Aruba. Stakeholders noted this phenomenon, with one participant pointing out, “*You can see that there are small island politics and hidden agendas*” (Participant 6, personal communication, April 23, 2021). One of the prime examples that one of the participants mentioned was from a past Minister of Spatial Development, Infrastructure, and Environment and a local trucking company: “*How is it still possible for a minister to give a multimillion-florin waste management project to a company which the main service that they provide is selling motor oil? The owner is the minister's biggest financial sponsor before every election*” (Participant 9, personal communication, April 29, 2021). Moreover, the existence of hidden agendas detrimentally impacts collaborative governance, as ministers may already have predetermined plans to appoint individuals or groups aligned with their political party for plan execution. This scenario can hinder the dismissal of those affiliates or the introduction of potentially more effective and sustainable ideas. As one participant highlighted, “*The government already has their plan, NGOs can give their advice, but they have the plan ready to go*” (Participant 2, personal communication, April 16, 2021).

4.1.6 Workflow Cycle

As shown in Figure 4, the waste management workflow in Aruba lacks coherence as it progresses through various phases, including the initial phase, pause phase, and final/change phase.



(Figure 4: Work Flow Cycle)

The initial phase of the workflow cycle commences when a new waste management project is emerging. However, the primary challenge lies within the pause and final/change phases of the workflow cycle. The pause phase occurs when there is a lack of movement in the workflow cycle, influenced by factors such as slow process speed. One notable disparity is observed between the slow-paced Aruban workflow culture and the international waste management experts' method of handling their workflow. Consequently, when foreign experts are brought in by the government, the collaboration between them and their Aruban counterparts does not always proceed smoothly: *“The foreign expert expects that the operation velocity has to be the same as the way that they operate in their country”* (Participant 12, personal communication, May 12, 2021). Another contributing factor to the pause stage is the lack of motivation to sustain the work process. As a result, the lack of progress in Aruba's waste management efforts has resulted in little to no visible advancements, organizations are hesitant to invest their efforts in pursuing the waste management goals after not seeing quick progress. Moreover, the final/change stage encompasses the situation where a new government chooses to discontinue the project plans of the previous government in favor of implementing its own. This transition in government often leads to a discontinuation of ongoing initiatives and the

introduction of new plans aligned with the priorities and objectives of the incoming administration. After each governmental election, the new government continues with the plans and policies initiated by the previous government. This pattern is exemplified by the 2020 vision: *“During a governmental meeting in 2010, several strategic plans were devised to address the challenges in waste management. However, once the newly elected political party assumed power, they halted the implementation of these plans and introduced their own. It appears that the new government prioritizes branding themselves, which led to the abandonment of the previous government's initiatives”* (Participant 5, personal communication, April 21, 2021).

4.1.7 Inadequate Legislation and Policies

The participant highlighted the challenges associated with the process of creating, introducing, and implementing new legislation related to waste management. It was mentioned that this process is complex, and there may be loopholes in legislation. For example, law enforcement can only issue fines for illegal waste dumping if they catch individuals in the act. One issue identified is the lack of proper laws and regulations in Aruba to effectively fine individuals or organizations engaging in improper waste management practices: *“Waste management in Aruba is not well regulated by the law, there are a few laws that support people or companies”* (Participant 10, personal communication, April 29, 2021). The participants suggest a need for comprehensive legislation that addresses the various aspects of waste management and provides clear guidelines and penalties for non-compliance. Furthermore, the participant expressed concerns about the absence of an organization in Aruba that oversees waste management and has the authority to control and penalize other organizations properly. The participants referred to the lack of organizations such as Directie Natuur en Milieu (DNM), Korps Politie Aruba (KPA), and Dienst Volkgezondheid (DVG) that can enforce regulations,

monitor waste management practices, and ensure that the organizations are qualified to handle and process waste in an appropriate manner. These challenges indicate the need for improved governance and regulatory frameworks in waste management. The development and enforcement of forceful laws, along with the establishment of an organization or agency responsible for monitoring and regulating waste management practices, are essential for promoting proper waste management and holding individuals and organizations accountable for their actions.

4.1.8 Lack of Education

There is a lack of information on how waste can be properly processed: *“One of the factors that causes the improper waste management in Aruba is the aspect of education and awareness”* (Participant 7, personal communication, April 23, 2021). As a consequence, the lack of education and awareness among Aruban citizens and the surrounding challenges posed by waste processing have led to the state of waste management on the island before the Aruban general election. In terms of education, it has become imperative for Aruban citizens to acquire an understanding of waste processing at the individual level, including the essential practice of separating waste into designated bins or containers within their homes, which led to the intricate issue of waste processing that culminated in the establishment of the Parkietenbos landfill. Moreover, the fusion of Aruban culture and customs with a lack of education among the populace regarding proper waste disposal presents a threatening risk of illegal waste dumping. Illegal waste dumping, originating from insufficient education, directly emerges due to the widespread belief among citizens that their responsibility concludes once an irresponsible official or unofficial company disposes of their waste. Furthermore, there is no organization that exists that places emphasis on educating Aruban citizens regarding effective waste management practices. With the exception of citizens who work or volunteer directly in the waste

management sector, children attending school were the only citizens receiving education on waste management in Aruba. Their education occurs intermittently through activities such as show-and-tell sessions or site visits. However, this limited exposure proves inadequate, given that upon returning home, most of the children witness their parents casually disposing of trash without recycling or adopting sustainable practices.

4.1.9 Deficiency of Collaboration between Stakeholders

Certain stakeholders might not fully grasp the vision or mission of achieving sustainable waste management and could be operating without a clear foundation: *“The Parkietenbos landfill does not have a mission or a vision in regards to the landfill”* (Participant 4, personal communication, April 20, 2021). This directly stems from a deficiency of collaboration among stakeholders. Collaborative efforts among all stakeholders within the waste management sector hold a vital impact. Nevertheless, a notable challenge lies in attaining unified cooperation among these diverse stakeholders, each with their distinct roles and vested interests: *“The biggest waste management challenge is the cooperation of all the stakeholders working towards one goal”* (Participant 1, personal communication, April 15, 2021). There are various reasons that contribute to stakeholders not collaborating with each other efficiently, with one reason being certain stakeholders are not invited to participate and engage in the collaborative process: *“How is it possible that DNM organizes a meeting for every stakeholder regarding waste management policy and do not involve Directie Volksgezondheid Aruba (DVG)”* (Participant 10, personal communication, April 2021). This scenario can occur if a stakeholder has previously clashed with the present governing authority or holds opposition to the potential new ideas being proposed by the current governing body. In 2001, an organization was established by MEP with the aim of collaborating to address waste management challenges.

However, in 2009, when AVP came into power, the organization was halted and did not participate in the collaborative process ever again. Furthermore, certain stakeholders have the impression that their opinions are not valued and that collaborating does not significantly influence the final decisions because of the government's dominant position of authority: *“We get invited as an organization to the meetings just to be part of the picture so that the minister could say that there are many organizations involved in the project”* (Participant 5, personal communication, April 21, 2021).

4.2 Stakeholders' Roles and Responsibilities

In this subsection, the findings pertaining to the stakeholders, along with their respective roles and responsibilities, in the context of waste management leading up to the 2021 Aruba general election will be presented. To enhance the reader's understanding of the main stakeholders, Figure 5 displays the main stakeholders which are categorized into four groups: Governmental, Private, Semi-Public, and NGOs.

Governmental Organizations	Private Organizations	Semi Public Organizations	Non Governmental Organization
<ul style="list-style-type: none"> •The Government •DNM •BCI •KPA 	<ul style="list-style-type: none"> •EcoTech Aruba NV •EcoTech Freezone NV 	<ul style="list-style-type: none"> •Serlimar •ATA 	<ul style="list-style-type: none"> •Enviromental Activist Groups

(Figure 5: Main Waste Management Stakeholders in Aruba)

4.2.1 The Government of Aruba

In attempting to handle the challenges of waste management collaboratively, the government primarily operates as a leader, bringing together a variety of stakeholders from many sectors: *“The ex-minister role was to come to propose solutions in the waste management*

sector” (Participant 3, personal communication, April 19, 2021). 10 out of the 12 participants recognize that the environmental Minister and the prime Minister have a leadership role in regard to the waste management sector. Through the development of strategic planning, the government is charged with establishing the overarching vision and goals for sustainable waste management. It is crucial to develop the framework for collaboration to operate within and make sure the objectives are in alignment with social, economic, and environmental goals: *“The government has their responsibility towards waste management because they accepted the agenda”* (Participant 8, personal communication, April 26, 2021). According to 4 out of the 12 participants, the government is responsible for maintaining an environment that encourages collaboration. This entails establishing platforms for discussion, supplying essential resources, as well as encouraging an open and welcoming mindset. Yet, 7 out of 12 participants believe the government has the authority to decide which stakeholders to involve and what ideas to utilize: *“The government needs to ask the people who deal with the waste the most how it could be better and attend the global conference where they could take examples out of other places that have a better understanding and the proper way to handle waste management problems”* (Participant 2, personal communication, April 16, 2021).

The role of the parliament members was to monitor and verify the proposal of Serlimar by checking the waste management laws to see if they needed to be changed or adjusted. Also, to question what is happening at Serlimar while sitting with other parliament members in different board meetings: *“The role of monitoring and verifying is to make sure that the situation will not hinder the community of Aruba”* Participant 11, personal communication, May 4, 2021).

Parliament is responsible for examining and approving laws involving several aspects of waste management, but parliament is not deeply involved in the policy process of waste management:

“Parliament has less impact on policy unless the minister wants to propose a new law which affects a new policy” (Participant 11, personal communication, May 4, 2021).

4.2.2 Directie Natuur en Milieu (DNM)

DNM is a research and policy-developing organization. The role of DNM is policy making and generating information for policy formulation and evaluation, giving advice, doing research, and monitoring the policy field of nature and the environment while trying to reach a circular chain where waste becomes a resource. Some participants consider DNM also to have a leadership role because, in conjunction with the minister, they make decisions about which additional stakeholders they want to be involved in the collaborative process. Nonetheless, DNM does not believe that the organization has the leadership role due to control of the financial budget: *“DNM does not have the financial power for a 200 thousand project, the minister has that responsibility to control a huge amount of money for a large project”* (Participant 9, personal communication, April 29, 2021). DNM is responsible for developing regulations, standards, and guidelines for waste management. To ensure compliance with environmental laws, this entails defining guidelines for proper waste disposal, recycling, and handling hazardous waste. DNM is responsible for the charge of developing policies but not implementing them into action.

4.2.3 Bureau City Inspector (BCI)

BCI has the role of being the whistleblower, which is a crucial role in waste management in Aruba with the purpose of maintaining Aruba clean and raising awareness (on land). By being the whistle-blower, BCI has the responsibility to ensure compliance with a variety of rules and laws relating to development and environmental protection. BCI is in charge of monitoring and inspecting building projects, land usage, and other urban development activities to make sure

they adhere to predetermined standards. When the organization conducts inspections in areas that are not designated landfills but have waste present on the site, BCI takes action by reporting the situation. BCI then contacted another specialized organization that is responsible for managing waste-related issues: “*BCI is working with many stakeholders because BCI wants to accomplish the goal*” (Participant 1, personal communication, April 15, 2021). The process ensures that the proper authorities are informed about the presence of waste in non-authorized areas and that the appropriate measures are taken to address and manage the waste effectively.

4.2.4 Korps Politie Aruba (KPA)

The Aruban police force (KPA) operates under the jurisdiction of the Minister of Justice and is classified as a component of the public sector. Concerning waste management, KPA assumes the role of enforcing and maintaining the legal framework surrounding proper waste disposal and management practices. KPA has the responsibility of enforcing laws and safeguarding the well-being of citizens. Notably, the KPA exclusively holds the authority to penalize delinquents for illegal waste dumping. KPA is essential in regard to waste management through creating a safer and more sustainable environment by upholding the standards set for waste disposal and preventing activities that could harm the ecosystem or public health. However, all the participants recognize that, as improper waste management is not viewed as a severe offense, KPA refrains from imposing stringent punishments: “*The police force does not work directly in the waste management sector and does not see the risk that can occur from not imposing rapid action to the situation*” (Participant 6, personal communication, April 23, 2022).

4.2.5 EcoTech Aruba N.V. & EcoTech Free Zone N.V. (MetaCorp)

MetaCorp is a privately owned corporation established in 1920 with different branches of companies. Both Ecotech Aruba N.V. and Ecotech Free Zone N.V. are waste management

organizations in the private sector that are a part of MetaCorp. Ecotech Aruba N.V. is responsible for collecting the commercial, industrial, medical, residential, and maritime waste of its clients. There are a few private organizations in Aruba that provide the service of collecting waste. The private organizations have the role of waste collecting and the responsibility of keeping Aruba clean while still following ethical procedures. After EcoTech Aruba N.V. collects the waste, it is transferred to Ecotech Free Zone N.V., the waste management plant at Baradera. EcoTech Free Zone N.V. Aruba's role and responsibilities involve vital aspects of waste management and environmental sustainability. At EcoTech Free Zone N.V., there is a modern waste separation plant built in 2009 in which the waste gets processed, and the recyclables get picked out, some manual and some automatic. The recyclables get exported, and the other waste gets placed in the enviro-bins and gets transferred to the Landfill at Seroe Teishi.

4.2.6 Serlimar

Besides being a Sui-Generis organization, Serlimar has a unique role and responsibilities. Serlimar is a waste management company in Aruba funded by the Aruban government. However, it operates with its own board, which makes financial decisions, making it a semi-public organization. Compared to a private waste management company, the government would not invest a large amount of money to save a private company: “Serlimar could always fall back and rely on the government, the consequence resulted in poor financial management” (Participant 3, personal communication, April 19, 2021). The role of Serlimar is to maintain Aruba hygienically clean by providing waste collection, disposal, and related services on the island. The director does not have a consistent role in shaping and implementing waste management policies., Every department of Serlimar has its own responsibilities. The board monitors the activities within the organization. The waste collection department handles the daily collection of waste across

Aruba's various districts. Serlimar's landfill department focuses on the management of the Parkietenbos landfill, which involves covering waste with sand and controlling fires. While Serlimar occasionally contributes to policy development, the final decision on waste management policy rests with the Environmental Minister.

4.2.7 Aruba Tourism Authority (ATA)

Since environmental wellness and an active tourism industry cannot be separated, the Aruba Tourism Authority (ATA) has taken on the role of assisting with challenges associated with waste management in Aruba. ATA is contributing by advancing ethical tourism practices that put an emphasis on waste reduction, recycling, and sustainable resource management. ATA has carried out educational initiatives to increase awareness among visitors and locals, highlighting the significance of reducing trash and maintaining Aruba's cleanliness. In addition, ATA is responsible for selling Aruba as a vacation destination, which indicates that the cash flow of tourism can assist the financial budget of the waste management projects in Aruba.

4.2.8 Environmental Activist Groups

“Our role is small yet important! Our role and responsibility is to raise awareness while educating children on the importance of waste management” (Participant 4, personal communication, April 20, 2021). The role and responsibility of an environmental activist group can vary among different groups. While some groups may align with the initial quote of this paragraph, others may adopt a more assertive stance by viewing their roles as trying to reach a higher level of sustainability for Aruba while being responsible for advocating to combat improper waste management on the island. Environmental activist groups undertake diverse activities to fulfill their roles and responsibilities, including protesting, forming task groups, seeking media coverage, and initiating legal actions against the government.

4.3 The Existence of Collaborative Governance in Waste Management in Aruba

The subsection places emphasis on the outcomes related to the existence of collaborative governance in waste management in Aruba prior to the 2021 Aruban general election.

4.3.1 Involvement of selected stakeholders

Despite the importance of collaboration and participation from diverse stakeholders, the collaborative process resembles politics; only a few selected stakeholders have been invited by the government and DNM to actively engaged in decision-making and problem-solving strategies: *“Collaboration between stakeholders reflect back to politics; depending who is in the leadership position dictate the power of each stakeholder”* (Participant 2, personal communication, April 16, 2021). The limited and selected involvement may hinder the effectiveness of waste management initiatives in Aruba. It is essential to identify the participation of a wide range of stakeholders, including government organizations, non-governmental organizations, private organizations, and semi-public organizations. Each stakeholder brings unique insights, experiences, and resources to the table, which assist in addressing the waste management challenges.

4.3.2 Private Stakeholders are Business Oriented

The private stakeholders primarily prioritize financial gains. When considering engagement in collaborative initiatives with other stakeholders, their focus lies on assessing potential economic advantages derived from such partnerships. While these private stakeholders share a common objective of maintaining Aruba's cleanliness and sustainability, their motivation is driven by profit, as their business operations are centered around waste management: *“The private organizations try to collaborate with all the stakeholders; however, the private organizations are business oriented with the goal of making profit”* (Participant 2, personal

communication, April 16, 2021). On occasion, private organizations choose not to engage in the collaborative process and not to participate in capacity building and knowledge sharing. This decision often comes from the dissatisfaction with the perceived fairness of the waste management business in regards to the Serlimar state of affairs: *“It is unfair business when a private company has to comply with every rule and regulation in regards to waste management to keep their contracts, while semipublic waste management organizations do not have as strict guideline or the same repercussions because they are government funded”* (Participant 2, personal communication, April 16, 2021).

4.3.3 Few Meetings with Non-Governmental Organizations

When it comes to waste management meetings, NGOs are occasionally considered as organizations that offer constructive criticism and push back against conventional ideas, unlike governmental departments that might prioritize aligning with the government's perspectives. Governmental departments tend to be cautious and sensitive to political influences, hesitating to voice concerns about a minister's plan. The governmental department has the impression that there will be reciprocation if a civil servant stands up against the minister. When an NGO doesn't consistently agree with the government's plan, it can often be branded as a "black sheep" and subsequently excluded from invitations, despite its genuine efforts to contribute towards the common objective of achieving sustainable waste management: *“As an NGO, you can be involved in a helpful or negative way or not involved at all”* (Participant 6, personal communication, April 23, 2024). Moreover, some NGOs hold the belief that during the limited meetings they have with the minister and advisors, the ministers pretend to sit and have a conversation with NGOs. Thus, it is perceived that the minister's underlying interests don't align with the approaches needed for a constructive waste management system.

4.3.4 Moderate Level of Communication

Before the 2021 Aruban general election, stakeholders pointed out that communication among them varies, sometimes being effective while at other times deteriorating. A moderate level of communication exists within the structured process of collaboration among waste management stakeholders in Aruba. Follow-ups and assessments are not consistently applied after each collaborative step, resulting in communication breakdowns. For instance, one participant mentioned discovering their organization's involvement in a new policy through a newspaper report. Stakeholders have noticed that communication experiences interruptions after each progress in the collaborative journey, leading to feelings of frustration. Some stakeholders perceive the communication between stakeholders as positive due to long-standing interactions with the same stakeholders that have led to an informal communication style. A casual text message sent through platforms like WhatsApp conveys messages between stakeholders. However, it is worth mentioning that new stakeholders are not accustomed to informal communication, which could be an obstacle to the collaborative process. As effective waste management revolves around stakeholder communication, improving communication would enhance waste management overall.

4.3.5 Policy Development Process

The policy developing process regarding waste management has two obstacles, according to the participants that acknowledge the existence of the collaborative government, yet it is very limited. The initial hurdle arises from the infrequent occurrence of the policy formulation process; it is carried out every 4 to 5 years in Aruba. This process involves the environmental Minister, their advisor, and DNM issuing Requests for Information (RFIs) and Requests for Proposals (RFPs) to local and international companies capable of providing sustainable waste

management solutions for Aruba. The process of analyzing each proposal takes time. The environmental Minister chooses who may judge and score the offer of the request for proposal in regards to reaching the vision of achieving sustainable waste management solution in Aruba:

“Each Minister has their own way of organizing, he or she is the leading agent, under his or her leadership and political responsibility he or she makes it happen” (Participant 10, personal communication, April 29, 2021). Secondly, selected stakeholders are invited to participate in the policy development process. The policy development process was undertaken by the minister's advisor and DNM, which selected the stakeholders to engage in the process: *“It has always been like that, advisers sit with DNM and the selected stakeholders. Afterwards a policy will be developed which lead to a presentation at the Council of Ministers”* (Participant 8, personal communication, April 26, 2021). The challenge arises when chosen stakeholder participants are not directly involved in addressing the waste management challenges: *“The problem is office regulators making regulations and policies without knowing what is happening in the field”* (Participant 2, personal communication, April 16, 2021).

4.4 Steps to Improve Stakeholder’s Collaboration to Achieve Sustainable Waste Management in Aruba

This section will provide a detailed explanation of the measures to enhance collaboration among stakeholders, aiming to attain sustainable waste management in Aruba

4.4.1 Reviving the Task Force with Maximum Stakeholder Inclusion

To enhance stakeholders' collaboration for achieving sustainable waste management in Aruba, the initial step involves re-establishing and re-innovating the task force. Introduced by MEP in 2001, the task force was designed to unite organizations in collaborating to enhance waste management. Unfortunately, the project ceased in 2009. By reviving the task force, a fresh

chance emerges to learn from past errors and distinguish the right course of action. The new task force should consist of diverse stakeholders, which could provide collaborative actions by bringing together diverse perspectives, expertise, and resources, allowing for a comprehensive approach to problem-solving. Each stakeholder brings unique insights and knowledge, contributing to a well-rounded understanding of the issues. By having open dialogue and collaboration among different stakeholders, a task force can devise innovative and practical solutions that consider all stakeholders' various interests and concerns. Moreover, involving all stakeholders in a task force promotes transparency and inclusivity in problem-solving. It helps build trust among stakeholders and encourages a sense of shared responsibility for the outcomes. When stakeholders directly shape the solutions, they are more likely to be committed to their implementation and success.

Project Think Tank. Besides re-establishing and re-innovating the task force, another proposal to reach sustainable waste management is to start with a think tank platform or a knowledge center where stakeholders representing the state, the economy, society are present and the organizers are neutral and lead the dialog on different waste management challenges and coming up with a possible solution which benefits all the stakeholders such as the Haile x model. Moreover, the project think tank would also organize a focus group with the same concept and show preliminary results based on analysis during the focus group session. The knowledge centers would connect all the stakeholders; however, it would require the willingness of each stakeholder. “In theory, it is a nice plan, yet in practice, it becomes difficult considering every stakeholder has urgent matters to handle” (Participant 7, personal communication, April 23, 2021).

4.4.2 Require Assistance from International Organizations and Local Experts

The second step requires support from international organizations and local experts. International organizations provide a variety of knowledge and experience from various settings, offering new insights and creative solutions that might not be easily accessible locally. At the same time, local experts have insight into the unique opportunities and problems associated with waste management because they are proficient in the socio-cultural, economic, and environmental dynamics of Aruba. International organizations can play a vital role by offering financial support and valuable guidance on the effective allocation of funds to address waste management challenges in Aruba: *“The government should accept the financial PAHO offer and allow PAHO to bring their expert who could examine the air and check the seawater next to the next to the landfill”* (Participant 9, personal communication, April 29, 2021). However, it is crucial to ensure that local and international experts do not clash due to cultural differences: *“When the government brings experts from abroad, the workflow between the expert and the Aruban does not go smoothly every time”* (Participant 5, personal communication, April 21, 2021).

4.4.3 Action Plan in Small Phases

After forming the task force and establishing the vision by including international organizations and local experts, the third step is to break down an action plan into smaller and more realistic phases. This approach allows for a more organized and manageable progression towards sustainable waste management. Stakeholders can retain focus and clarity on the distinct purpose of each phase by breaking the plan down into smaller parts. Each phase acts as a building block, offering the chance for full assessment, modification, and improvement before moving on to the following phase. The process ensures that possible challenges are spotted and

dealt with at the start of each phase and enables stakeholders to maintain a sense of accomplishment and motivation throughout the whole process.

4.4.4 Innovate the Policy Process

Once the task force is established, including international organizations and local experts, the following phase involves innovating the policy process. Prior to the 2021 Aruban general election, the policy process for waste management was initiated every 4 to 5 years. The approach taken depended on the organization's understanding of the policy: the Minister and DNM would contact international companies for an RFI and an RFP, or they would contact selected local stakeholders to participate in the policy process. The majority of the participants took a stance against the three factors that hinder the policy process: selected stakeholders, short-term policy, and the Minister making the final decision. That is why the majority of the participants suggest reviving the task force, making policies long term, and involving more stakeholders in the final policy decision. The value of long-term policies rests in their ability to guide sustainable development and realize long-term social goals by offering stability, consistency, and foresight. Long-term plans provide a road map beyond quick, short-term profits and enable thorough planning and deliberate action. A long-term policy also makes it possible to manage resources effectively, maximizing the use of people, money, and resources.

The integrity, legitimacy, and effectiveness of the policy-making process are all improved by including a wide range of stakeholders in the final decisions. Involving various stakeholders in the final policy decision raises a sense of ownership, leading to increased compliance and successful policy implementation. By facilitating transparent and collaborative discussions, the participation of more stakeholders also strengthens democratic principles and responsibility, as decisions are made together and reflect the interests and concerns of the wider population.

5. Conclusion and Discussion

This chapter will address the four sub-questions and the main research question in a sequential manner while describing the similarities and differences between the literature review and research results will be discussed. Additionally, it will provide recommendations, discuss the strengths and limitations of this research, and offer a reflective perspective.

5.1 The Main Waste Management Challenges in Aruba Previous to the 2021 Aruban General Election

To conclude, this sub-question aimed to investigate the main challenges in achieving sustainable waste management in Aruba prior to the 2021 Aruban general election. The sub-question that was formulated to answer the objective was: “What were the main waste management challenges in Aruba as a small island developing state previous to the 2021 Aruban general election?” From both the result and the literature, it can be concluded that the main waste management challenges consist of physical and intangible challenges, and to summarize the comparison between both research results and literature, Table 2 will illustrate all the main challenges, including the key findings:

Challenge	Category	Results (Summary)	Literature (Summary)
Landfills	Physical Challenge	The results displayed concerns regarding landfills in Aruba, particularly the Parkietenbos landfill. Participants expressed dissatisfaction with its structure and the absence of clear plans.	The literature resonates with the results, emphasizing issues related to uncontrolled landfills and the necessity for strict monitoring to mitigate environmental threats.
Illegal Waste Dumping	Physical Challenge	The results indicated that illegal waste dumping was a significant issue in Aruba. Challenges in enforcing	The literature aligns with the results, which mentioned illegal waste dumping as a problem

		regulations to deter this practice were discussed.	resulting from ineffective local authority enforcement.
Legislation	Tangible Challenge	The results underlined the need for comprehensive legislation and regulations to address waste management effectively in Aruba.	The literature has the same viewpoint of the result, which highlighted how the absence of specific legislation detailing solid waste management affects the effectiveness of waste management in developing countries. While the literature discussed the importance of legislation, it didn't delve into the specific challenges in Aruba.
Financial Resources:	Tangible and Physical Challenge	Financial constraints affecting waste management in Aruba were noted in the form of <i>Physical Resources</i> .	The literature also discussed how a lack of financial resources can hinder the safe disposal of waste in proper landfills.
Waste Handling System	Tangible and Physical Challenge	The results emphasized the lack of efficient waste handling systems and the need for better waste management practices.	This parallels the result, which mentioned the lack of facilities, recycling, suitable space, and public awareness as challenges to achieving sustainable waste management.
Education and Awareness	Tangible Challenge	The results emphasized the importance of education and awareness among Aruban citizens for proper waste management.	Similar to the results, the literature discussed the lack of education and awareness among citizens contributing to waste problems.
Collaboration between Stakeholders	Tangible Challenge	The results mentioned several deficiencies in stakeholder collaboration and the need for unified cooperation.	The literature discussed issues related to collaboration among stakeholders in waste management but did not precisely compare the results.
Small Island Developing State	Tangible Challenge	The results highlighted the unique challenges faced by Aruba as a small island developing state in waste management.	While not explicitly addressed in the literature, the challenges discussed in developing countries may apply to Aruba's context, such as waste generation.
Small Island Politics	Tangible Challenge	The results indicated that political changes influenced	The literature didn't specifically address political changes but

		waste management plans and policies in Aruba. Hidden agendas among past Ministers affecting waste management decisions were mentioned.	discussed the impact of policy changes, policy implementation and political decisions on waste management (Emergent theme).
Workflow Cycle	Tangible Challenge	The results highlighted challenges related to workflow cycles and the influence of foreign experts.	The literature didn't specifically address workflow cycles (Emergent theme).

(Tabel 2: Overview of Challenges and the Comparison of Result and Literature)

The discussion of this sub-question explains any new understanding or insights that have emerged as a result of the data analysis in relation to the literature review. In essence, of the 2021 Aruban general election, Aruba faced several significant waste management challenges as a small island developing state. These challenges included poorly managed landfills, especially the issues of the Parkietenbos landfill. There was a lack of clear vision and collaboration among stakeholders in the waste management sector, which hindered any progress. Government decisions were sometimes influenced by ideas that were economically attractive but not practical for the island's specific circumstances, such as expensive waste-to-energy solutions. Aruba's heavy reliance on imports increased waste generation, exacerbating the waste problem. Achieving collaboration among diverse stakeholders with distinct roles and interests was difficult, and certain stakeholders felt excluded. Questions about the long-term sustainability of waste processing and government decision-making processes also arose. These challenges underscored the need for improved waste management practices, stakeholder collaboration, and sustainable solutions tailored to Aruba's unique situation.

5.2 Roles and Responsibility of the Main Stakeholders

To conclude, this sub-question aimed to investigate the main stakeholders and their role and responsibility in the waste management process in Aruba prior to the 2021 Aruba general election. The sub-question that was formulated to answer the objective was: “Who were the main public and private stakeholders, and what were their roles and responsibilities in the process of waste management in Aruba ahead of the 2021 Aruban general election?”. From both the result and the literature, it can be concluded that the main stakeholders were The Government of Aruba, DNM, BCI, KPA, EcoTech Aruba NV, EcoTech Free Zone NV, Serlimar ATA and Environmental Activist Groups. They had different roles such as Leadership, Authoritarian, Final Decision Maker, Policy Maker, Law Enforcer, Whistle Blower, Waste Collector, Waste Processor, Educator and Protester with different responsibilities for managing waste in Aruba, but with the same goal of trying to have sustainable waste management.

The discussion of this sub-question explains any new understanding or insights that have emerged as a result of the data analysis in relation to the literature review. The results offer a more in-depth understanding of each stakeholder's contribution and mention other primary stakeholders in the waste management process. According to the results, all stakeholders played crucial roles and had essential responsibility in addressing the waste management challenges in Aruba before the 2021 Aruban general election, contributing to efforts to achieve sustainable waste management practices in Aruba. Both the literature and results acknowledge that the Government of Aruba plays a leadership role by proposing solutions, establishing a vision, and developing strategic planning for sustainable waste management. They ensure that waste management objectives align with social, economic, and environmental goals. However, it is essential to note that the results indicate that the government also applies the role of authority to

decide which stakeholders to involve in the collaboration process and has the final say in selecting which ideas to implement.

5.3 The Existence of Collaborative Governance Preparatory to the Aruban General Election

To conclude, this sub-question aimed to investigate the existence of collaborative governance in waste management of Aruba before the 2021 Aruban general election. The sub-question formulated to answer the objective was: “To what extent did collaborative governance exist in waste management of Aruba in advance of the 2021 Aruban general election?”. After examining the literature and the result, it can be concluded that collaborative governance existed in Aruba’s waste management. However, it did not operate optimally due to limited stakeholder involvement, profit-oriented private stakeholders, challenges faced by NGOs, communication dynamics and obstacles in the policy development process. In the literature, collaborative governance models were designed to facilitate collaboration between organizations, providing tactics for stakeholders to consider when collaborating. Nevertheless, the result brought forward that collaborative governance primarily involved a selected group of stakeholders, with the Government and DNM, in decision-making and problem-solving processes. Although in the literature, the private organizations have the same objective of keeping Aruba clean, the results indicate that the private organizations primarily prioritize financial gains. Their decision to engage or reject participation in the collaborative process often involves evaluating potential economic advantages. Additionally, the results revealed an emerging theme related to the duration of the policy process. Infrequent policy changes led to a delayed response to evolving challenges. Remarkably, the literature did not provide a specific timeframe for the policy process.

The discussion of this sub-question explains any new understanding or insights that have emerged as a result of the data analysis in relation to the literature review. Collaborative governance has the potential to contribute to sustainable waste management, but addressing these limitations and promoting inclusive decision-making processes will be crucial for its effectiveness. Notably, results indicate that collaborative governance existed in the past. Past government assembled stakeholders to make a task force to take part in meetings to address specific challenges related to waste management, such as the situation at the Parkietenbos landfill. The historic engagement demonstrates the possibility of collaborative governance to handle complex challenges related to waste management.

5.4 Methods to Improve Stakeholder's Collaboration

To conclude, this sub-question aimed to investigate the steps to improve collaboration to achieve sustainable waste management in Aruba. The sub-question formulated to answer the objective was: “What steps for improved stakeholder collaboration can be taken in order to achieve sustainable waste management in Aruba?”. After reviewing the literature and the research results, it can be concluded that both the literature and research results underscore the significance of comprehensive stakeholder involvement in waste management activities. They emphasize the inclusion of a diverse range of stakeholders, encompassing governmental organizations, private organizations, semi-public organizations, and non-governmental organizations, as essential for developing collaboration. Additionally, the result and literature support the idea of having collaborative platforms and specialized working groups as crucial instruments for stakeholders’ meeting, exchanging ideas, and collaboratively formulating solutions to waste management challenges. These platforms serve as arenas for constructive dialogue and cooperative efforts. Moreover, the literature and results correspond on the

importance of creating a shared vision and defining common objectives among stakeholders to achieve sustainable waste management goals. Clear and joint objectives, such as targets for waste reduction and recycling initiatives, are viewed as essential for steering collaborative activities effectively.

The discussion of this sub-question explains any new understanding or insights that have emerged as a result of the data analysis in relation to the literature review. Both the literature and research results align on common themes surrounding stakeholder collaboration in waste management. However, the results provided distinct and tailored recommendations and strategies that came from the data collected during the research. These recommendations, such as the renewal of the task force, seeking support from international organizations with the help of local experts, implementing phase action plans, and innovating the policy development process, are directly research data obtained from interviews and data analysis conducted by an Aruban researcher. While the literature provided general principles and concepts related to stakeholder collaboration in waste management that are applicable in other countries, the research results are tailored to the unique circumstances of Aruba. This ideal approach ensures that the recommendations are compatible with addressing the particular challenges faced by stakeholders in Aruba. In contrast, the literature provides a broader overview of collaborative governance concepts and practices but lacks specific data from the Aruban context.

5.5 Main Research Question

To finalize this research, the main research question has to be answered, which has been segmented in alignment with the previous sub-questions to offer a comprehensive outcome. In that case, the main research question is formulated as follows. *How could collaborative governance have contributed to the sustainable waste management challenges in the island*

jurisdiction of Aruba prior to the 2021 Aruban General Election?

Collaborative governance could have made an enormous impact in combating Aruba's challenges regarding sustainable waste management prior to the 2021 Aruban general election by integrating a variety of stakeholders, including government organizations, private organizations, semi-public organizations, and NGOs; the strategy would have placed emphasis on inclusivity. Such inclusivity would have provided a comprehensive understanding of the waste management challenges, considering various perspectives and expertise. Collaborative governance also encourages resource sharing, which could have alleviated the financial constraints faced by the local government, with international organizations providing financial support and technical expertise. Furthermore, it promotes knowledge exchange, allowing for the exchange of best practices and innovative solutions among local experts and international organizations. Transparency in decision-making processes would have built trust among stakeholders and the public, ensuring that waste management policies align with the best interests of the community. Additionally, collaborative governance prioritizes long-term sustainability, encouraging policies and strategies that focus on the long-term well-being of Aruba's environment and society. It would have facilitated a more inclusive and participatory policy development process, allowing a more comprehensive range of stakeholders to have a say in policies. Effective communication among stakeholders, promoted by collaborative governance, would have addressed the communication breakdowns mentioned in the research results, leading to better coordination and understanding among stakeholders.

5.6 Discussion

The alignment between the findings of this research and the ongoing collaborative efforts among stakeholders for sustainable waste management in Aruba is remarkable. This discussion

explores the significance of these results in light of recent developments and initiatives in the realm of waste management and collaborative governance. The results of this research resonate deeply with the principles of collaborative governance. As indicated in the findings, effective waste management in Aruba requires the active involvement of various stakeholders. The interviews conducted as part of this research took place before the 2021 Aruban general elections. It is noteworthy that subsequent to this research, there have been significant steps taken by the new Minister of Transport, Integrity, Nature, and Elderly Affairs with regard to collaborative governance in waste management. These actions signify a commitment to fostering cooperation among stakeholders in addressing waste management challenges. In 2022, the initiation of the "Trash to Cash" project marked a noteworthy development. This project allowed any individual or organization to contribute their ideas, marking the initial phase of inventorying processing options of diverting waste flow from the Parkietenbos landfills. This participatory approach aligns closely with the research findings, emphasizing the importance of involving diverse stakeholders in waste management decision-making processes. Furthermore, Minister Arends is dedicated to enhancing public education and awareness regarding the significance of various advertisements and campaigns, aimed at accomplishing short-term objectives within long-term plans. A prime example is the prohibition of specific materials at the Parkietenbos landfill, which resulted in the landfill's closure. Additionally, the government has appointed three inspectors from BCI with the authority to enforce laws and impose fines on individuals engaging in illegal dumping.

Nevertheless, the researcher encountered some unexpected situations in regard to the challenge of illegal dumping after this research was conducted. Surprisingly, following the closure of the Parkietenbos landfill, there was a notable rise in illegal dumping. This development

is somewhat confusing, considering the availability of various alternatives for waste recycling since the landfill's closure and that there were more organizations that could enforce the laws by handing out fines.

5.7 Recommendations

Based on the collected results and the information obtained during the data collection period, the following recommendations are proposed for the future of waste management in Aruba:

1. **Conduct Further Research:** Building upon the findings of this study, it is recommended to continue conducting research on the topic of collaborative governance in regard to waste management in Aruba. This will help to deepen the understanding of the specific challenges and opportunities in the local context and facilitate the development of more targeted and effective strategies. Continuous research on collaborative governance in Aruba's waste management is crucial. It provides a deep understanding, adapts to changing dynamics, strategies effectively, informs evidence-based decisions, and enables year-round monitoring. Having ongoing research is vital for effective and sustainable waste management.
2. **Establish a Clear Mission and Vision:** It is essential to establish a clear mission and vision for the future of waste management in Aruba. This will provide a guiding framework for decision-making and enable stakeholders to align their efforts towards common goals.
3. **Develop a Long-Term Action Plan with Short-Term Goals:** To address the complex and multifaceted nature of waste management, it is recommended to develop a comprehensive long-term action plan. This plan should include specific short-term goals that can be regularly monitored and evaluated to track progress and ensure accountability.

4. **Involve/Invite as Many Stakeholders as Possible:** Engaging a wide range of stakeholders throughout the policy process is crucial for collaborative governance and successful waste management initiatives. To ensure inclusivity and diverse perspectives, it is recommended to involve and invite representatives from various sectors, including government agencies, non-governmental organizations, private businesses, community groups, and the public.
5. **Establish a Waste Management Taskforce and Project Think Tank:** Creating a dedicated task force and think tank focused on waste management can help drive innovative solutions and foster stakeholder collaboration. This specialized group can serve as a platform for exchanging ideas, coordinating efforts, and developing practical strategies for waste management in Aruba.
6. **Hold Stakeholders Accountable for Their Actions:** Accountability is essential for effective waste management. Establishing mechanisms to hold stakeholders accountable for their actions and commitments is recommended, ensuring that agreed-upon initiatives are implemented, and progress is monitored and reported.
7. **Educate the General Public about the Importance of Waste Management:** Public education and awareness play a vital role in waste management. Developing and implementing educational campaigns that highlight the importance of waste management practices, including recycling, reducing waste, and responsible disposal, is crucial. This can empower the general public to participate and support sustainable waste management efforts actively.

8. **Continuity in Government Efforts:** Building upon the work of previous governments is essential for maintaining momentum and ensuring continuity in waste management initiatives. Establishing a framework that facilitates the smooth transition of policies, programs, and projects between administrations is recommended, confirming that progress is sustained over time.

5.8 Strengths and Limitations

Strength: Familiar with the topic of waste management due to internship at Serlimar

During my internship at Serlimar in 2019, I gained valuable insights and knowledge in the field of waste management. This experience gave me a head start in understanding the practical aspects of waste management processes, complementing the theoretical knowledge I had acquired. The opportunity to work closely with professionals in the industry allowed me to witness the challenges and complexities of waste management firsthand. During this internship, my interest in the topic was sparked, motivating me to delve deeper into the subject and contribute to addressing the waste management challenges faced by Aruba.

Strength: The eagerness, enthusiasm, and willingness of most participants

Without the active involvement of participants, there would be no valuable data to be collected. Most participants displayed eagerness, enthusiasm, and a strong willingness to assist me during the interviews. They readily offered their data to help me gain a deeper understanding of the waste management challenges in Aruba, specifically in relation to collaborative governance.

Limitation: One participant was hesitant to answer questions

One of the twelve participants was reluctant to share sensitive information during the

interview. A lack of openness in sharing sensitive information impacted the development of practical solutions to waste management challenges regarding collaborative governance.

Limitation: The interviews were conducted before the 2021 Aruban general election

Since the interviews took place shortly before the 2021 Aruban general election, it was observed that some respondents framed their answers in a politically oriented manner, possibly influenced by the election context rather than purely for research purposes.

5.9 Reflection

When selecting a thesis topic, I had a clear objective: to develop a deeper comprehension of Aruba's waste management challenges. My motivation came from a desire to contribute to addressing the waste management challenges instead of merely expressing my frustration about the topic. The inspiration emerged during my internship at Serlimar, where I consistently encountered people voicing their grievances on this issue. My internship experience at Serlimar provided me with invaluable insights into the waste management challenges in Aruba and a firsthand understanding of the details involved in waste management processes. The writing process of this thesis was undoubtedly challenging. As an individual who appreciates structure and careful planning, deviating from my schedule or not meeting my desired pace often disrupted my motivation and posed difficulties. However, throughout the writing process, I improved my writing and critical thinking skills by analyzing complex data, producing information, and drawing meaningful conclusions, which required particular attention to detail. Conducting fieldwork was a mind-opening experience. It allowed me to view different perspectives and interact with key stakeholders, including government officials, waste management experts, and community leaders. These interactions enriched my research by providing diverse perspectives and real-world insights into the challenges and opportunities of

waste management in Aruba. It was humbling to witness the passion and commitment of individuals working towards sustainable solutions despite the complexities involved.

Another challenge I encountered was the constant balancing act between maintaining objectivity as a researcher and acknowledging the urgency and emotional nature of the waste management issue. It was essential for me to remain unbiased and ensure that my analysis was grounded in empirical evidence while still empathizing with the concerns and frustrations of the stakeholders involved. Despite the challenges, completing this thesis has been a rewarding journey. It has deepened my understanding of collaborative governance and waste management, allowing me to contribute to the ongoing discourse on sustainable development. Through this process, I gained valuable research, analysis, and practical communication skills.

To finalize, throughout this entire process, I sought motivation from various sources, including listening to motivational speeches by Eric Thomas. His ability to connect success with sports examples resonated with me, giving me the inspiration and determination to persevere over the years. One particular quote from Eric Thomas has held significant meaning for me and served as the foundation for my thesis journey. This quote has been a guiding light during moments of difficulty and frustration. It reminded me that challenges are not impossible obstacles but opportunities for growth and learning. It gave me the strength to push through setbacks, stay focused on my goals, and remain faithful to the process. Therefore, I will end this reflection with my favorite quote of him; "God has a purpose for your pain, a reason for your struggles, and a reward for your faithfulness. Don't give up!" -Eric Thomas-

References

24ora (n.d.). Bureau City Inspector Tin Varios Tarea Pa Haci Pa Tene aruba limpi.

Acosta, C., Ortega, M., Bunsen, T., Koirala, B., & Ghorbani, A. (2018). Facilitating Energy Transition Through Energy Commons: An application of socio-ecological systems framework for Integrated Community Energy Systems. *Sustainability*, *10*(2), 366. <https://doi.org/10.3390/su10020366>

Ahemd, M. (n.d.). Integrated Solid Waste Management. Osaka; International Environmental Technology Centre (IETC).

Andaloussi, K., Achtak, H., Nakhcha, C., Haboubi, K., & Stitou, M. (2021). Assessment of soil trace metal contamination of an uncontrolled landfill and its vicinity: the case of the city of 'Targuist' (Northern Morocco). *Moroccan Journal of Chemistry*, *9*(3), 9-3.

Ansell, C., & Gash, A. (2008). Collaborative governance in theory and practice. *Journal of public administration research and theory*, *18*(4), 543-571.

Aruba Government. GlobalEDGE: Your source for Global Business Knowledge. (n.d.). <https://globaledge.msu.edu/countries/aruba/government>

Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing, and organizational innovation. *Technology in Society*, *66*, 101635.

Baarda, B., & Hidajattoellah, D. (2014). *Research. this is it!: Guidelines how to design, perform and evaluate quantitative and qualitative research*. Noordhoff Uitgevers bv.

Boto, I. & Biasca, R. (2012). *Small Island Economies: Vulnerabilities and Opportunities*

Blomquist, W. (2019). The policy process and large-N comparative studies. In *Theories of the Policy Process, Second Edition* (pp. 261-289). Routledge.

Bryman, A. (2016). *Social research methods*. Oxford university press.

Chamber of Commerce and Industry Aruba. (2023). *New waste management policy February 22, 2023*. <https://arubachamber.com/pages/event-information-new-waste-management-policy-february-22-2023/>.

Desa, A., Ba'yah Abd Kadir, N., & Yusooff, F. (2012). Waste education and awareness strategy: towards solid waste management (SWM) program at UKM. *Procedia-Social and Behavioral Sciences*, 59, 47-50.

Directie Natuur & Milieu. (2022, February 14). About Us - Directorate of Nature & Environment: Directie Natuur & Milieu. Aruba. <https://dnmaruba.org/en/about-us/>

Dusim, H. H., Mapa, M. T., & Mosikon, J. (2017). Important of adequate legislation from the perspective of solid waste management policy. *Borneo Akademika*, 2(1), 35-42.

Emerson, K., Nabatchi, T., & Balogh, S. (2012). An integrative framework for collaborative governance. *Journal of public administration research and theory*, 22(1), 1-29.

- European Commission. (2007). Overseas Countries and Territories Environmental Profiles (pp. 1-121, Rep.).
- Gerlat, A. (2011, July 18). Private Benjamins: The Debate Over Privatizing Waste Collection. Retrieved from <https://www.waste360.com/collection-and-transfer/private-benjamins-debate-over-privatizing-waste-collection>.
- Griffin, L. (2012). Where is power in governance? Why geography matters in the theory of governance. *Political studies review*, 10(2), 208-220.
- Heydarian, N. M. (2016). Developing theory with the grounded-theory approach and thematic analysis. *APS observer*, 29.
- Kantabutra, S., & Avery, G. C. (2010). The power of Vision: Statements that resonate. *Journal of Business Strategy*, 31(1), 37–45. <https://doi.org/10.1108/02756661011012769>
- Kapucu, N., Yuldashev, F., & Bakiev, E. (2009). Collaborative public management and collaborative governance: Conceptual similarities and differences. *European Journal of Economic and Political Studies*, 2(1), 39-60.
- Koiwanit, J., & Filimonau, V. (2023). Stakeholder collaboration for solid waste management in a small tourism island. *Plos one*, 18(7), e0288839.
- Kujala, J., Sachs, S., Leinonen, H., Heikkinen, A., & Laude, D. (2022). Stakeholder engagement: Past, present, and future. *Business & Society*, 61(5), 1136–1196. <https://doi.org/10.1177/00076503211066595>

Martin, J., McCormack, B., Fitzsimons, D., & Spirig, R. (2014). The importance of inspiring a shared vision. *International Practice Development Journal*, 4(2).

McDougall, F. R., White, P. R., Franke, M., & Hindle, P. (2008). *Integrated solid waste management: a life cycle inventory*. John Wiley & Sons.

Mihai, F. C. (2019). Construction and demolition waste in Romania: The route from illegal dumping to building materials. *Sustainability*, 11(11), 3179.

Moreno Romero, A., Uruburu, Á., Jain, A. K., Acevedo Ruiz, M., & Gómez Muñoz, C. F. (2020). The path towards evolutionary—Teal organizations: A relationship trigger on collaborative platforms. *Sustainability*, 12(23), 9817.

Nahaei, V. S., Habibizad Novin, M., & Assadi Khaligh, M. (2021). Fuzzy clustering of investment projects in Tabriz Municipality Waste Management Organization with ecological approach. *International Journal of Innovation in Management, Economics and Social Sciences*, 1(2), 28–42. <https://doi.org/10.52547/ijimes.1.2.28>

Overheid Aruba. (n.d.). Kiesrecht. Bestuur & organisatie - Aruba Overheid.

https://www.overheid.aw/bestuur-organisatie/kiesrecht_41173/

Overheid Aruba. (n.d.). *Ministry of Nature informs the residents of Simeon Antonio about waste management*. News - News - Aruba Governance.

https://www.government.aw/news/news_47033/item/ministry-of-nature-informs-the-residents-of-simeon-antonio-about-waste-management_62107.html

Overheid Aruba. (n.d.). Regering. Bestuur & organisatie - Aruba Overheid.

https://www.overheid.aw/bestuur-organisatie/regering_3391

Overheid Aruba. (2018, November 20). The government of Aruba announces a request for information on long-term Sustainable Waste Management Solutions. News - News - Aruba Governance. https://www.government.aw/news/news_47033/item/the-government-of-aruba-announces-a-request-for-information-on-long-term-sustainable-waste-management-solutions_33175.html

Picavet, M. E. B., de Macedo, L. S., Bellezoni, R. A., & Puppim de Oliveira, J. A. (2023). How can Transnational Municipal Networks foster local collaborative governance regimes for environmental management?. *Environmental Management*, 71(3), 505-522.

Pongrácz, E., Phillips, P. S., & Keiski, R. L. (2004). Evolving the Theory of Waste Management: defining key concepts. *WIT Transactions on Ecology and the Environment*, 78.

Radwan, N., & Khan, N. A. (2023). *A Systematic Review of Solid Waste Management (SWM) and Artificial Intelligence Approach*. <https://doi.org/10.21203/rs.3.rs-2575251/v1>

Razali, R., & Anwar, F. (2011). Selecting the right stakeholders for requirements elicitation: a systematic approach. *Journal of Theoretical and Applied Information Technology*, 33(2), 250-257.

Sin, T. J., Chen, G. K., Long, K. S., Goh, I., & Hwang, H. (2013). Current practice of waste management system in Malaysia: Towards sustainable waste management. *1st FPTP Postgrad. Semin. "Towards Sustain. Manag, 1106*, 1-19.

- Social Economic Council Sint Maarten. (2017, March 31). Letter of advice better waste management for Sint Maarten. <http://ser.sx/publications/letter-of-advice-better-waste-management-for-sint-maarten/>
- Susha, I., & Gil-Garcia, J. R. (2019). A collaborative governance approach to partnerships addressing public problems with private data.
- Tukahirwa, J. T., Mol, A. P., & Oosterveer, P. (2010). Civil society participation in urban sanitation and solid waste management in Uganda. *Local Environment*, 15(1), 1-14.
- United Nations. (n.d.). About Small Island Developing States. United Nations. Retrieved from <https://www.un.org/ohrlls/content/about-small-island-developing-states>.
- University of Aruba, Organization, Governance, and Management (2019). Study Guide 2019-2020.
- Vaismoradi, M., Jones, J., Turunen, H., & Snelgrove, S. (2016). Theme development in qualitative content analysis and thematic analysis
- Vierros, M. K., & Harden-Davies, H. (2020). Capacity building and technology transfer for improving governance of marine areas both beyond and within national jurisdiction. *Marine Policy*, 122, 104158.
- Workgroup Waste Processing Aruba 2017-2018. (2018). *Final Integrated Report Solid Waste Management Aruba*, 1–62.

Xiao, Y., Zeng, G. M., Yang, Z. H., Shi, W. J., Huang, C., Fan, C. Z., & Xu, Z. Y. (2009).

Continuous thermophilic composting (CTC) for rapid biodegradation and maturation of organic municipal solid waste. *Bioresource Technology*, 100(20), 4807-4813.

Young, J. (2018, August 5). Talking trash: The pros and cons of privatizing waste management.

Retrieved from <http://www.themunicipal.com/2018/08/talking-trash-the-pros-and-cons-of-privatizing-waste-management/>.

Zasa, F.P. and Buganza, T. (2022), "Developing a shared vision: strong teams have the power,"

Journal of Business Strategy, Vol. ahead-of-print No. ahead-of-print.

<https://doi.org/10.1108/JBS-04-2022-0065>

Appendices

Appendix A: Consent Form

Informed Consent Form

Introduction:

The researcher (Edmarc Kock) from the University of Aruba from the Faculty of Arts and Science in the program of Organization, Governance, and Management is in his last year; therefore, for his thesis, he has to implement research, which means data collection, data analyses, writing up of thesis, checking for coherence, grammar, language, and APA requisites.

Purpose of study

The topic is “How can collaborative governance help address the sustainable waste management challenges in the small island jurisdiction of Aruba?? The purpose of this research is to find out in which way collaborative governance plays a role regarding the situation of waste management systems in Aruba. As a result of the student’s research, stakeholders may consider incorporating some of the positive elements of the research into practice for a sustainable solution for the waste management system.

Conclusion

We thank you for being a part of this research. All the information will remain confidential, and the interviewees will remain anonymous because of the ethics of conducting research. The notes and recordings of the interview will be destroyed after the research is finished.

Consent Form for Research

- I..... voluntarily agree to participate in this research study.
- I understand that even if I agree to participate now, I can withdraw at any time or refuse to answer any question without any consequences of any kind.
- I have had the purpose and nature of the study explained to me in writing, and I have had the opportunity to ask questions about the study.
- I agree to my interview being audio-recorded.
- I understand that all information I provide for this study will be treated confidentially.
- I understand that in any report on the results of this research, my identity will remain anonymous. This will be done by changing my name and disguising any details of my interview that may reveal my identity or the identity of people I speak about.
- I understand that I am free to contact any of the people involved in the research to seek further clarification and information.
- Names, degrees, affiliations, and contact details of researchers (and academic supervisors when relevant).

Signature of research participant

Signature of participant

Date

Signature of researcher

I believe the participant is giving informed consent to participate in this study.

Signature of researcher

Date

Interview Questions

Interviewers:	Edmarc Kock
Interviewee Name/Organization:	
Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Not Applicable
Age Category:	<input type="checkbox"/> Below 20 <input type="checkbox"/> 20-25 <input type="checkbox"/> 26-29 <input type="checkbox"/> 30-35 <input type="checkbox"/> 36-39 <input type="checkbox"/> 40-45 <input type="checkbox"/> 46-49 <input type="checkbox"/> 50-55 <input type="checkbox"/> 56-59 <input type="checkbox"/> 60-65 <input type="checkbox"/> 66-69 <input type="checkbox"/> 70-75 <input type="checkbox"/> 76-79 <input type="checkbox"/> 80-85 <input type="checkbox"/> 86+
Location:	
Occupation:	
Level of Education	
Time Period:	1 Hour

Appendix B: Topic List for Organizations

What is your role within the organization?

Could you share the mission and vision of your organization?

How well-acquainted is your organization with the waste management situation in Aruba?

(Please provide details)

What are the primary waste management challenges currently faced in Aruba?

What factors do you believe contribute to these waste management challenges?

Considering Aruba's status as a small island developing state, how does it impact waste management in the region?

What specific roles and responsibilities do your organization hold concerning waste management in Aruba?

Which other stakeholders does your organization collaborate with, and what is the nature of this collaboration?

Could you elaborate on your organization's level of involvement in the development and implementation of waste management policies and what motivates this level of engagement?

Among the stakeholders involved, who typically assume a leadership role in shaping waste management policies, and what factors influence this leadership?

What strategies or initiatives could enhance stakeholder participation in the development and implementation of waste management policies in Aruba?

What sustainable solutions do you propose to address the waste management challenges in Aruba?

Are there any specific waste reduction or recycling programs initiated by your organization in Aruba, and what impact have they had on waste management practices?

How does your organization monitor and assess the environmental impact of waste management activities in Aruba, and what measures are in place to minimize negative effects?

Can you share any innovative technologies or practices that your organization has introduced or explored to improve waste management efficiency and sustainability in Aruba?

In your opinion, what role can public awareness and education play in addressing waste management challenges in Aruba, and how does your organization contribute to this aspect?

Are there any ongoing or upcoming initiatives or projects that your organization is involved in to further enhance waste management in Aruba, and what are their objectives?

Appendix 3: Topic List for Individuals (Who Have Insights into Waste Management in Aruba)

What is your role in the field of waste management?

Could you share your perspective on the mission and vision for waste management in Aruba?

How well-acquainted are you with the waste management situation in Aruba? (Please provide details)

In your view, what are the primary waste management challenges currently faced in Aruba?

What factors, in your opinion, contribute to these waste management challenges?

Considering Aruba's status as a small island developing state, how do you believe it impacts waste management in the region?

What specific roles and responsibilities do you hold concerning waste management in Aruba?

With whom do you collaborate in your efforts related to waste management, and what is the nature of this collaboration?

Could you elaborate on your level of involvement in the development and implementation of waste management policies and what motivates this level of engagement?

Among the stakeholders involved, who, in your experience, typically assumes a leadership role in shaping waste management policies, and what factors influence this leadership?

From your perspective, what strategies or initiatives could enhance stakeholder participation in the development and implementation of waste management policies in Aruba?

What sustainable solutions do you propose to address the waste management challenges in Aruba?

Have you been personally involved in initiating or supporting any waste reduction or recycling programs in Aruba, and what impact have they had on waste management practices?

How do you monitor and assess the environmental impact of waste management activities in Aruba, and what measures do you advocate to minimize negative effects?

Can you share any innovative technologies or practices you've encountered or explored to improve waste management efficiency and sustainability in Aruba?

In your opinion, what role can public awareness and education play in addressing waste management challenges in Aruba, and how do you contribute to this aspect?

Are there any ongoing or upcoming initiatives or projects that you are involved in to further enhance waste management in Aruba, and what are their objectives?