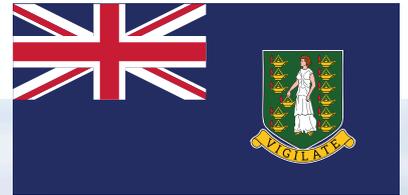


Policy Solution Prototypes

(Output Paper)

The Virgin Islands

Prevention of Marine Litter in the Caribbean Sea



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1 Introduction

Prevention of Marine Litter in the Caribbean Sea (PROMAR) is a regional project which aims to reduce plastic waste streams while promoting circular economy solutions. Eight countries around the Caribbean are taking part in this six-year project funded by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, and supported by United Nations Environment Programme and adelphi. The British Virgin Islands (BVI) are taking part in Phase II of the project, led by local environmental non-profit Green VI and partners at the Ministry for Environment, Natural Resources and Climate Change (MENRCC).

Single-use plastics, plastic bottles, foam containers, and abandoned or discarded fishing gear dominate the marine litter found in coastal clean ups in the BVI and the wider Caribbean region. However, they only account for 12 percent of the solid waste generated by these small island developing states (SIDS). Data shows that SIDS (including the BVI) have 3.5 times the global average of beach litter per kilometre, despite relatively low population sizes and levels of consumption (VI Policy Brief, 2025). Subpar waste management exacerbates the issue, resulting in a significant volume of waste ending up in the environment. This waste impacts key economic sectors in the BVI, particularly Fishing, Shipping and Tourism.

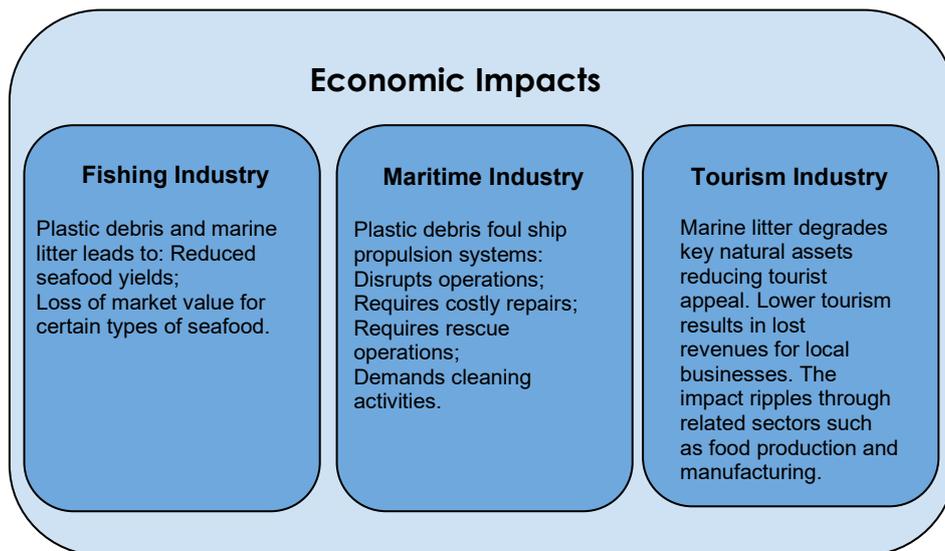


Figure 1: Economic Impacts of marine plastic pollution in the BVI (VI Policy Brief 2025)

In the BVI, current policies and legal frameworks to address the issue of marine litter are outdated and lack sufficient enforcement capabilities, funding, and data and monitoring. Policy interventions are required to develop a framework that governs the full waste management cycle and finds solutions to the funding challenges. The PROMAR project aims to provide expertise and opportunities to bring key stakeholders together to discuss these interventions and find sustainable, circular economy solutions.

A key milestone for the PROMAR project was the National Policy Dialogue and Circular Economy Solutions workshop, held on the 29th and 30th of May 2025. The workshops were hosted by Green VI at Treasure Isle Hotel, Road Town Tortola, and facilitated by Amar Munnolimath, Green and Circular Economy expert from adelphi. The aim was to bring together key stakeholders to discuss the issue of marine plastic pollution and co-create system and policy solutions.

Day one of the two-day workshop was centered around national policy challenges and solutions for plastic pollution. An opening address from Hon. Fraser, current Minister for Environment, set the theme:

“(t)he time is now for smarter policies; circular economy solutions that avoids, reuses and recycles plastic waste; and greater responsibility by product manufacturers and distributors. We don’t have the luxury of the next 10 years to figure this out – the remaining lifespan of our landfill is less and our coastlines continue to rack up plastic waste at a rate that threatens our tourism economy, our fisheries and our health.”

Green VI introduced the PROMAR project and gave a comprehensive overview of the current legislative landscape for waste in the BVI. Attendees were then split into groups for an in-depth discussion on policy challenges and worked together to identify solutions.

Day two of the workshop focused on circular economy solutions. Global examples of successful single-use plastic bans, container deposit schemes and Extended Producer Responsibility (EPR) schemes were given to highlight the many options available to tackle plastic pollution at its source. Groups brainstormed how to implement a plastic ban and developed a roadmap for introducing a Deposit Refund Scheme.

This document serves as the output paper summarizing the prototypes co-created by the workshop attendees, incorporating input and feedback received during the group presentations. The overarching aim is to influence national policymakers in the effective drafting and implementation of marine litter policies. A comprehensive account of the solutions is identified, and a visualization of the mechanism needed to implement them is provided.



Fig. 2: Participants debating

2 Group-wise Policy Prototypes: Identifying challenges and brainstorming solutions

Workshop Day 1: 29th May 2025

Attendees were tasked with identifying key gaps and challenges in effective implementation of existing policies. Challenges identified were categorized into three broad themes: Policy and Funding, Infrastructure, and Awareness and Education. Participants were then split into four groups to brainstorm potential solutions to the challenges identified.

2.1 Policy Challenges Identified

Policy & Funding Challenges	Infrastructure Challenges	Awareness and Education	Other
Outdated/fragmented legislation	Multi-Island logistics	Generational and cultural awareness and attitudes	Insufficient capacity of eco-friendly industry
Lack of comprehensive waste reduction policy	Weak institutional arrangements and blurred responsibilities	Lack of awareness of the public on how to prevent litter	Need to reduce plastic bottle dependency
Limited monitoring and data collection	Need for green infrastructure	Targeting established behaviours and habits	Need for more diversion options
Lack of baseline data	Uncovered bins + improper waste disposal	Educational awareness and cultural shift	Significant waste generated by tourism
Lack of funding	Lack of human resources to enforce current policies	Access to and understanding recycling points	Lack of waste management enforcement
Political Will	Inadequate waste management infrastructure	Societal behaviour and need for more education	Increasing sargassum
Packaging and quantity of imported goods	Limited capacity leads to stockpiling	Perceived affordability and convenience	Regional impact of litter from other islands
Legislation - Loopholes	Enforcement Capacity	Current perceptions	
Natural disasters	Disaster resilience		
Consumer protection to prevent price hiking	Design and maintenance of drop off points/bins		

	Inadequate penalties for waste disposal		
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2.2 Policy Solutions

Group 1: Legislation and Policy

Potential Solutions	Success Factors
Strategic engagement with key segments of the decision-maker population	Awareness & Acceptance, consensus building/ meaningful engagement
Knowledge management: who needs to know what and creation of task forces	Embedded in performance management framework
Safe and responsible use of technology	Capacity building, digital transformation
Waste management fees, fines, grants, international/ regional cooperation, Public/private partnerships	Strong legal framework
Develop agreed strategy	Political will
Map out policy framework that aligns to strategy	

Group 2: Infrastructure

Potential Solutions	Success Factors
Water: rainwater harvesting, wells, springs, watersheds to decrease imported water	Incentivizing water harvesting, water quality testing, introducing it into law
Introduce bottling infrastructure - use recycled plastics	Confidence/trust - improvement of standards
Reduce packaging through increasing agricultural infrastructure	Increase local food production
Increase water filtration, municipal water purification, air-to-water generator	Increase use of technology and innovation
Introducing recycling collections with door-to-door collection system	
Introducing Container Deposit Scheme	Funding ringfenced and well managed
Convert materials on island rather than dispose e.g. polywood	Increased circular economy initiatives
Pass Policy to develop solid waste management system	Multi-island logistics

Capacity building to increase production and diversion	Celebrating champions and recognition schemes/ industry standards and awards
Government: assessing, planning, monitoring, legislating & regulating Limits/thresholds vs use of Single-use Plastic Bottles	Tax imported water bottles

Group 3: Awareness and Education - Enable and Normalize recycling

Potential Solutions	Success Factors
Teaching sustainability/integrating into school curriculum	Curriculum integrated across all schools to foster a culture of sustainability
Educating visitors/tourism at points of entry	Placement of targeted infrastructure and signage at targeted locations
Intuitive waste management system	Clear, convenient and consistent bin network - Private/Public partnership
Media campaigns	Partner branded
Leverage associations and campaigns	Partnerships share messaging
Create sustainability systems at big events	Partnerships reinforce use of system & messaging

Group 4: Circular Economy/Green Business

Potential Solutions	Success Factors
Incubation and acceleration programmes to build green business	<ul style="list-style-type: none"> Green skills programme developed Partnership with HLSCC, schools, NGOs, Govt offices to increase awareness
Access Climate Change Trust Funds	<ul style="list-style-type: none"> Green skills certification obtained Tool kits developed: Access skilled experts, consultants, SOPs, manuals, equipment
Utilize trade investment promotion grants	
Govt to provide small business incentives to develop green businesses	Businesses developed e.g. eco branded souvenirs, local construction materials, agro inputs
Implement Import Duty or ban certain single-use plastics	Decrease in demand for import of single use and increase in use from local water companies

2.3 Policy Solution Prototyping

Groups drew inspiration from successful global policy implementations to design their prototype policy interventions. A crucial aspect of this task involved identifying stakeholders and a critical innovation, transforming the solution from a mere idea into a tangible blueprint for implementation in the BVI. Each solution mechanism visualization is presented below:

Group 1: Implement Waste Management Fees

Specific Challenge Identified: Lack of Funding

Mechanism: Have residential areas pay a flat fee for household waste- to be included in the BVIEC Bill.

Money Flow:
Consumer BVIEC - Funds - Waste Management System

Stakeholders:
Ministry of Communication and Works
BVI Electricity
Dept. of Waste Management
Ministry of Finance
Ministry of Health
Green VI
Developing Partners
General Public

Solution Identified: Implement waste management fees

How?

Get consultation for drafting instructions
Create a policy based on consultations
Creation of legislation for cabinet approval (draft)
Public engagement on legislation

Innovation:
Creation of a dedicated fund

Group 2: Development of Reliable Water Systems

Challenge: Reduced Dependence
on plastic drinking bottles

Solution: Robust, Reliable and
Sustainable water systems

Mechanism:

Ponds, springs, wells, cisterns, air-to-water generators

Policies and subsidies and eco-friendly alternatives

Container deposit schemes (20c refund - 15c to consumer, 3c handling fees, 2c administrative system fund)

Water quality and improvement testing

Tax on imported bottles to reduce demand

Private sector driving change

Bringing household alternatives like cisterns to front of mind

Requirements/law for establishments to provide clean drinking water

Stakeholders:

BVI Customs

Water & Sewage Dept.

BVI Electricity

Private water companies

Community Engagement

Private Sector Companies

Environment Health Dept.

Innovation:

Strict enforcement of quality
regulation to ensure community
trust/demand

Sustainable eco-friendly alternatives
that ensure producer and consumer
trust

Group 3: “Green and Brilliant BVI” Campaign

Challenge: Lack of awareness and education

Solution: Run a campaign: “Green and Brilliant BVI”

Mechanism:

- App development:
- Emphasis on natural/pristine
- Enable and normalize recycling
- Campaign shared via radio, tv, billboards, social media: During ads there is a keyword to find/pay attention to - log into app for information about recycling, where to go etc. and then use magic word from campaign on app or at recycling point to win voucher, discount, etc.
- Some kind of point system for having a streak - daily drop offs/ interactions with app etc.
- Funding - money within the levy that people pay when they enter the BVI, money from the 'green business' CRS (Commercial responsibility scheme) campaign.

Key Stakeholders:

- | | |
|--|--|
| <ul style="list-style-type: none"> o Private media contractors for media campaign o Creatives o Key opinion leaders o Key Government Ministries o Ministry of environment o Ministry of health o Local media houses (TV, radio) | <ul style="list-style-type: none"> o Local NGOs, o BVI tourist board, o Billboard owners o General Public as important stakeholders o Green venues/green businesses that can showcase |
|--|--|

Innovation:

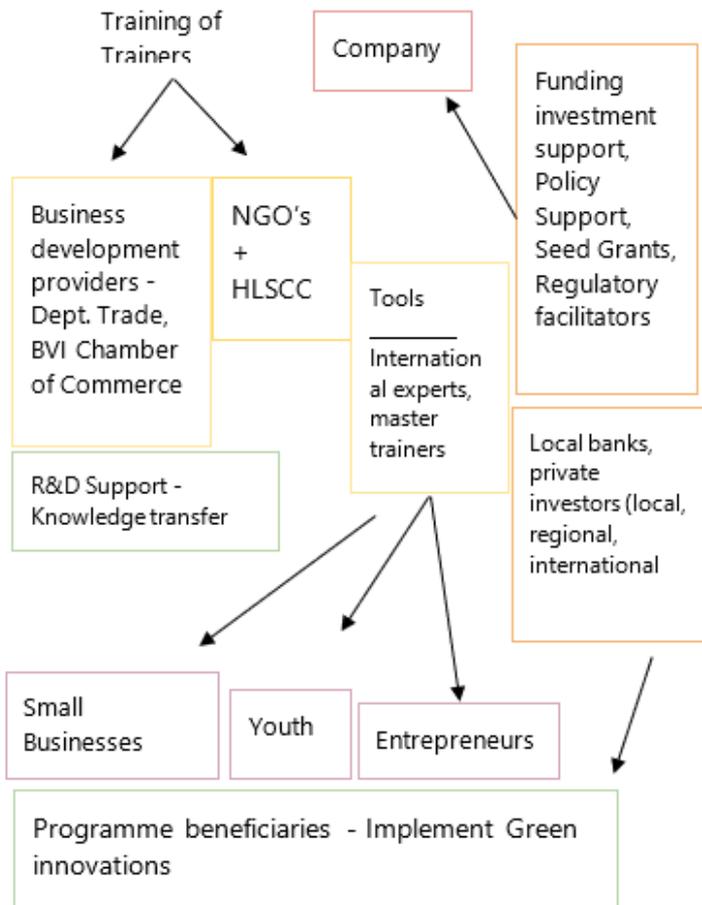
Source of funding
Level of engagement
Gamify - point system

Group 4: Building Green Businesses

Challenge: Lack of circular economy model and reduction of plastic pollution

Solution: Incubation and acceleration programme to build green businesses

Mechanism:



Stakeholders:

- o Govt. (Min. Environment, Dpt. Trade)
- o NGO – Green VI, Chamber of Commerce
- o Community groups
- o Local funding agencies
- o HLSCC
- o Statutory bonds
- o BVI Marine Assoc

Innovation:

Skills, funding, expertise, resources, legislation
Circular economy toolkit

3 Implementing a Plastic Ban

Workshop Day 2: 30th May 2025

As a Small Island Developing State (SIDS), the BVI has a high dependency on imported goods, meaning a large portion of the municipal waste stream is plastic packaging. This offers an opportunity for stricter regulation and the implementation of a ban on the most littered plastic packaging items. Attendees of day two of the workshop were presented with a variety of examples of successful plastic bans from around the world and then tasked with conceptualizing a ban in the BVI.



3.1 Background

There is a strong case for implementing a plastic ban in the BVI, given current waste management strategies and the overwhelming evidence of plastics leaking into the environment. Waste generation in the BVI is high across all islands, with no technical standards, emission limits, reduction incentives, or legal requirements in place for monitoring, reporting or providing public access to information related to waste. The approved Waste Management Strategy aims to address these issues however, and the draft Materials Management Plan points at the need to ban certain items, such as plastic bags, to advance sustainability objectives (VI Policy Brief 2025).

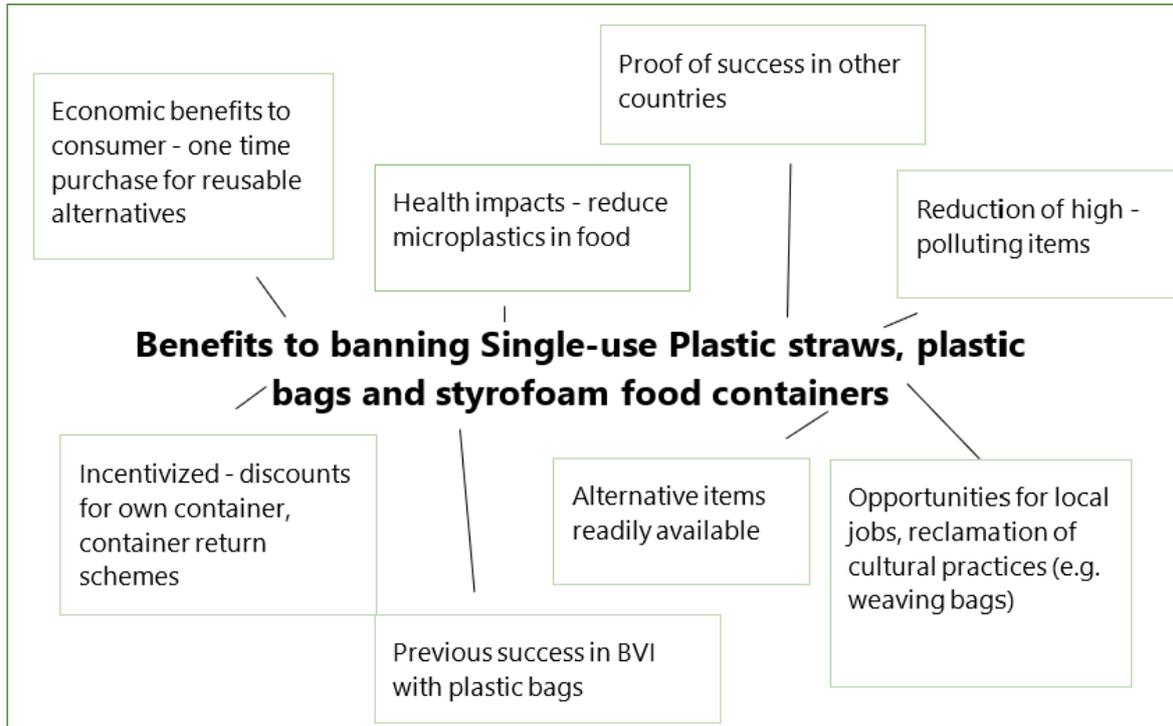
Data from beach sampling records within the BVI and international clean-ups highlights key items which could be the focus of a plastics ban. Single-use plastic straws, plastic shopping bags and styrofoam containers and cups are consistently among the most collected items from beaches and waterways. 8.7 million styrofoam cups, plates and containers have been collected worldwide since 1986 during the Ocean Conservancy's International Coastal Cleanup (ICC Annual report 2024), and single-use plastic straws are one of the top items being found on beaches in the BVI. Plastic bags have been targeted for reduction in the BVI in the past. In 2013, Green VI and Worldhouse Caribbean facilitated a voluntary charge on all plastic bags at all supermarkets. This Memorandum of Understanding continued until the 2017 hurricanes. This initiative saw a reduction in the number of plastic bags being used as supermarket customers chose to bring their own bags rather than be charged more.

The upcoming waste management bill could be a useful tool for introducing a ban, and the evidence suggests that the items listed above should be the first to be targeted.

3.2 Solution Overview

Attendees worked in groups to determine which items would be ideal to ban and how a ban might realistically be implemented in the BVI. All groups agreed that single-use plastic straws, plastic bags,

and styrofoam containers would be the first items to target. Examples from Vanuatu highlighted the success of a phased implementation approach. Workshop attendees agreed this would be the best way forward in the BVI, focusing first on only three items as described above. The ban could then be extended to items such as single-use plastic drink bottles, plastic cups and cutlery.



To successfully implement a ban, alternative options need to be made available. Workshop participants identified the following alternatives:

Banned Item	Alternatives
Single-use plastic straws	<ul style="list-style-type: none"> ● Paper straws ● Metal straws ● Bamboo straws ● Don't use a straw!
Plastic Bags	<ul style="list-style-type: none"> ● Re-useable material shopping bags ● Baskets ● Paper bags ● Cardboard boxes - reuse of waste stream from stock
Styrofoam containers	<ul style="list-style-type: none"> ● Bring own container - encourage businesses to offer discounts ● Containers made from cardboard, paper, calabash ● Container return scheme ● Organic/compostable containers

3.3 Important Stakeholders

Stakeholder	Role
Government: <ul style="list-style-type: none"> Ministry for Environment, Natural Resources, Climate Change Ministry of Health and Social Development Department of Waste Management HM Customs Department Ministry of Tourism, Culture, Sustainable Development Department of Trade 	<ul style="list-style-type: none"> Policy design and implementation Enforcement Subsidies for sustainable alternatives
NGOs e.g. Green VI, Beyond the Reef	Public awareness and education campaigns Business support for sustainable alternatives
Private Sector (Businesses, importers, retailers)	<ul style="list-style-type: none"> Compliance Shift to eco-alternatives
Community groups	<ul style="list-style-type: none"> Promotion of traditional practices, local alternatives Drive awareness campaigns
Regional and international partners	Technical support and expertise Funding (E.g. PROMAR, UNEP)

3.4 Key Feature/Impact

An implementation timeline of 6 months - 1 year was agreed by all workshop attendees, highlighting the urgency with which this is needed, but also the opportunity to do so in a relatively short timeframe. Businesses would need a suitable amount of time to use current stocks and source sustainable alternatives. Government and/or NGOs can highlight suitable alternatives. Time would also be needed for enforcement and monitoring systems to be established at the border, so banned items aren't making their way back into the waste stream. A dedicated campaign to notify the population of the ban and provide assistance to vendors using/selling these items would be key to getting people on board, addressing concerns and helping transition to sustainable alternatives.

3.5 Foreseen Challenges

Implementation risks or limitations include:

- Public resistance and behaviour change
- Push-back from suppliers/vendors
- Enforcement and capacity
- Availability of alternatives
- Import dependency

4 Deposit Refund Scheme Roadmapping Exercise

Another powerful tool for addressing marine plastic pollution, and challenges in waste management more generally is a Deposit Refund System (DRS). A Deposit Refund System addresses the lack of funding for a comprehensive Waste and Materials Management strategy. A charge is placed on imported goods and refunded when the item is returned. An excellent example is Kiribati (adelphi, 2023). This system operates as a partial refund system whereby the consumer receives some of the deposit back with the rest entering a special fund to pay for waste management services.

Workshop attendees worked in groups to design a Deposit Refund Scheme in the BVI and identify key features and challenges for implementation.

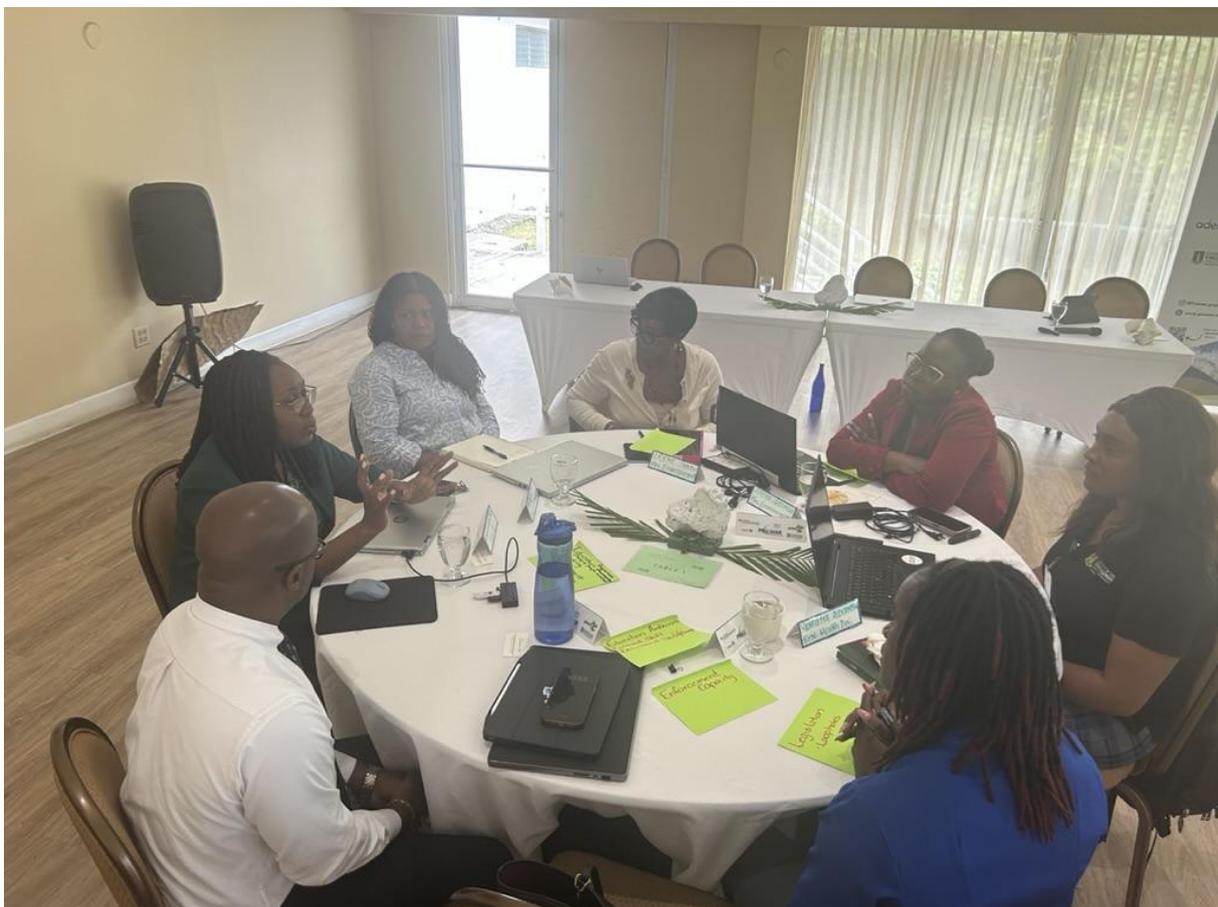


Fig. 3: Representatives from Government brainstorm policy interventions

4.1 Group 1: Plastics and Cans

Scope: Cans, plastic bottles, HDPE (Chlorox, detergent)

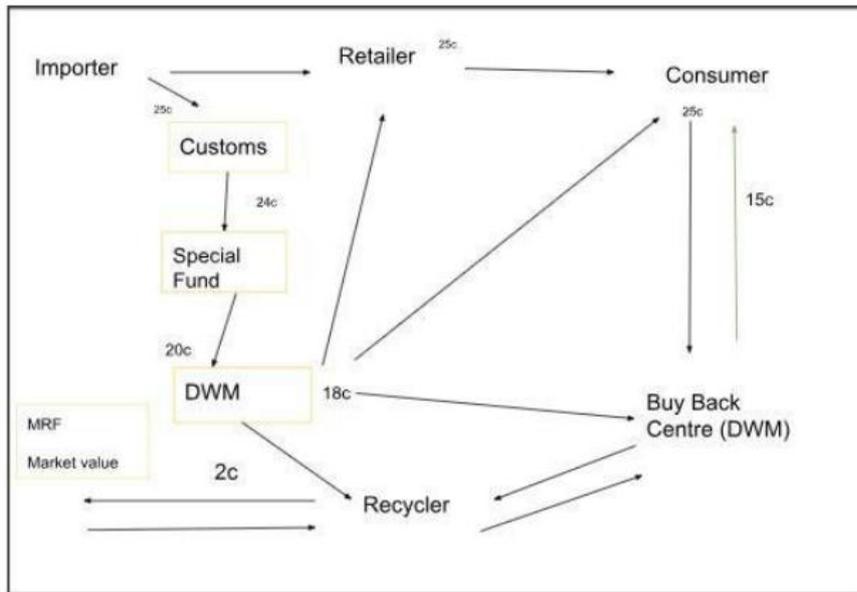
Financials:

- Costs for setting up and operations to be considered - estimated 2M initial investment from government to build a robust and sustainable system
- R&D, Administration and logistics are all considerations for implementation
- Deposit Refund Systems to be designed to sustainably cover system costs

Key Features:

- Creation of a special fund
- Creation of a purchase center to be managed by the Waste Management Department

Mechanism Visualization:



4.2 Group 2: Deposit Refund Scheme in Theory

Scope: All packaging types should be included in the Deposit Refund Scheme, with initial implementation focusing on plastic, glass and aluminium beverage containers.

Waste streams to target DRS long term:

- Plastic containers
- Plastic bottles
- Tin/steel cans
- Hazardous waste
- Glass
- Tetrapak

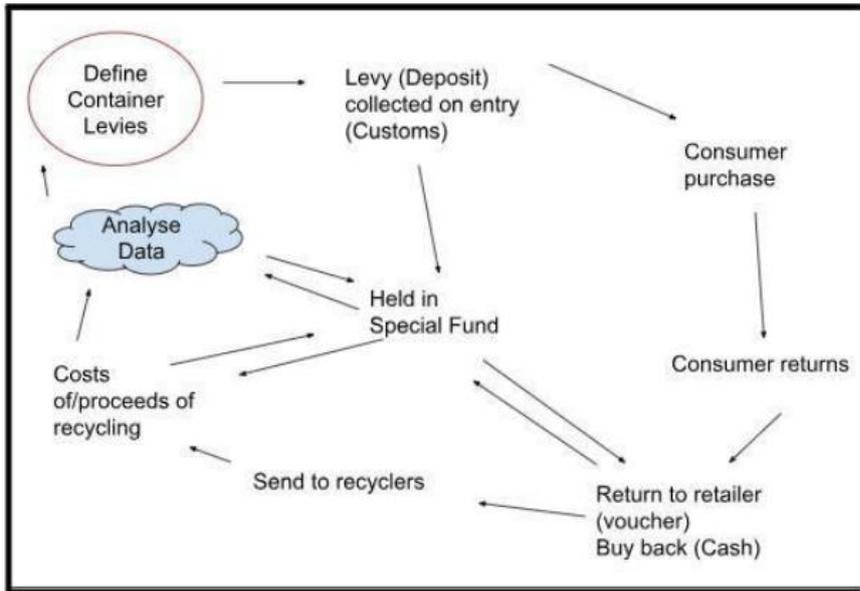
Financials:

- A key feature of this scheme would be the differentiation of material types by value. Plastics would have a higher price as they cost the environment more, whereas glass would be lower to encourage more use, as it's easier to recycle. The refund system would help to manage the contamination issue as items must be returned clean to get the deposit back.

Key features:

- Use of tech for data and tracking, use of barcodes
- Vouchers for stores vs straight cash back - provide options for consumers and retailers
- Charter industry - job creation for services to collect directly from yachts,
- Assists with material collection and increases diversion significantly.

Mechanism Visualization:



4.3 Group 3: A Focus on Plastic Bottles

Scope: Plastic bottle (numbers: 2,5,6)

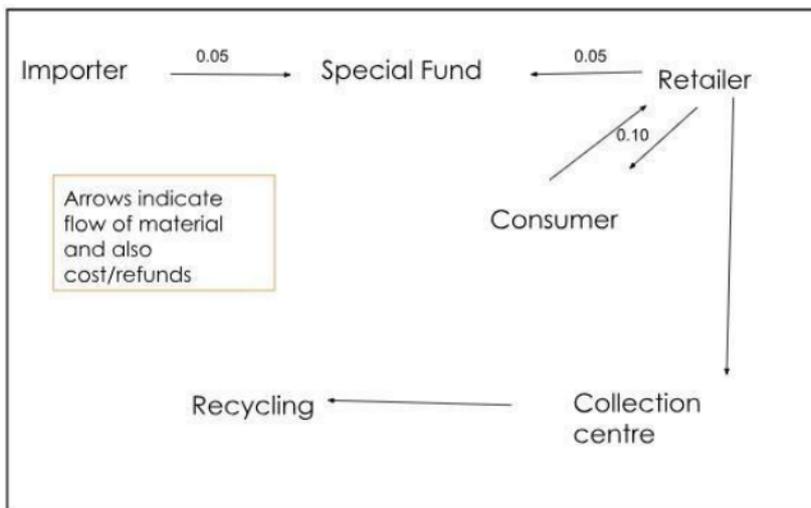
Financials:

- Access environmental levy through the Climate Change Trust Fund
- Create a special fund for deposit fees
- 25 cents: 10 cents (to special fund), 15 cents (returned to consumers)

Key Features:

- SMART reverse vending machines at supermarkets, retailers, schools, mobile units.
- Create a points system with badge levels (Green, Bronze, Gold)
- Opportunity to gamify the system to encourage participation
- QR Code with real time data to further increase participation as well as report back on system issues

Mechanism Visualization:



5 Recommendations

- **Enact the Waste Management Act:** Finalize and implement the Waste Management Act to unify fragmented laws, define roles, and empower enforcement. Introduce sustainable financing mechanisms.
- **Implement User Fees:** Develop a Deposit Refund Scheme and a household waste collection levy to reduce dependency on government subsidies and strengthen institutional capacity, coordination, and enforcement.
- **Ban harmful plastics and promote alternatives:** Implement a single-use plastics ban on items discussed. Incentivize sustainable packaging through customs and procurement policies.
- **Equip Department of Waste Management and Environmental Health:** Expand recycling and circular economy initiatives and clearly assign mandates across agencies with legal authority and tools for compliance. Scale up the We Recycle programme, polywood production, and composting to divert waste from landfill.
- **Enhance Public Education and Community Engagement:** Facilitate additional workshops that deep dive into plastic ban policies, deposit refund schemes, and circular economy solutions. Connect with VI Public Service-Learning Institute to increase audience and drive sustainable thinking across all government departments. Create working groups to continue co-creation of solutions across various stakeholder groups, expand school-based waste education, clean-up campaigns, and the Green Pledge programme to drive behaviour change.
- **Improve data collection and monitoring:** Establish annual waste accounting and marine litter tracking systems to guide policy and measure progress. Invest in Infrastructure and inter-island transport. Improve collection systems and streamline waste transfer between islands.

These recommendations, when implemented collectively, aim to address the marine litter challenge in the British Virgin Islands, and the wider Caribbean region. Engaging stakeholders, enhancing data collection, and equipping key government departments with the right tools and legal authority will drive the BVI to a cleaner and more sustainable marine environment.

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Photos

- https://drive.google.com/drive/folders/1G51fR30F-uQL1-AyvoQIJEnQWq-1h80c?usp=drive_link



Fig. 4: EPR Capacity building workshop attendees. Photo Reference Green VI

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