

Defining the Elements of Blue & Circular  
Growth for Island Sustainability &  
Generation of Project Ideas

# Blue Economy and Climate Resilience

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## Overview

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# 1. Overall context & justification of project

## THE CURRENT ECONOMIC MODEL

IS LINEAR



AND UNSUSTAINABLE



- Many characteristics present a favorable context to **implement SBCE models** in **Caribbean islands**.
- SBCE models should be incorporated into island economies, given the **urgent challenges of climate change to their livelihoods**.

## 2. Challenges islands face

- **Scarce land mass**
- **Vulnerable economies:**
  - dependant on industries that rely on oceans
  - heavily reliant on imports
- **Energy, water, food, and material dependence**
- **Waste and pollution** of land, coastal and marine resources, sometimes created by disasters (Disaster Waste, DW)
- **Subject to climate hazard events**
- **Inequitable distribution of resources and poverty conditions**



BEACH ON TRINIDAD & TOBAGO

### 3. Opportunities for islands

- **Potentially lower costs for renewable energy**
- **Can incorporate waste as a resource into new processes**
- **Create region-wide energy markets** that can benefit from economies of scale
- **Develop aquaculture** that favours local communities
- **Develop marine biotechnology** to create new food supply sources, preventive therapeutic measures, novel drugs, health and personal care products



**EEZ CLAIMS OF VARIOUS  
CARIBBEAN SEA COUNTRIES**

## 4. Approach to the Blue Economy (sustainable use of oceans)

**Blue Economy** aims at reconsidering the way in which humans interact with the ocean, **developing the “ocean economy” in a sustainable way** (preserving the ocean’s health) **by unlocking the potential of natural capital for economic growth.**

Elements	Driving force
<ul style="list-style-type: none"> <li>• Sustainability</li> <li>• Economic growth (welfare and prosperity)</li> </ul>	<ul style="list-style-type: none"> <li>• World’s population growth</li> <li>• Per capita growth</li> <li>• Global migration to cities and coasts</li> <li>• Industrialization of the oceans and coasts.</li> </ul>

## 5. Components of the Blue Economy

Activity	Ocean Service	Existing Industries	Related industries	Drivers
<b>Living resources</b>	<ul style="list-style-type: none"> <li>Seafood;</li> <li>Biotechnology</li> </ul>	<ul style="list-style-type: none"> <li>Fisheries</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable fisheries;</li> <li>Aquaculture;</li> <li>Pharmaceutical chemicals</li> </ul>	<ul style="list-style-type: none"> <li>Demand for food, cosmetics and pharmaceutical products;</li> <li>R&amp;D activities</li> </ul>
<b>Non-living resources</b>	<ul style="list-style-type: none"> <li>Minerals;</li> <li>Energy;</li> <li>Freshwater</li> </ul>	<ul style="list-style-type: none"> <li>Seabed mining;</li> <li>Oil and gas</li> </ul>	<ul style="list-style-type: none"> <li>Deep seabed mining;</li> <li>Renewables, ocean energy;</li> <li>Desalination</li> </ul>	<ul style="list-style-type: none"> <li>Demand for minerals, energy, alternative energy and freshwater</li> </ul>
<b>Trade &amp; Tourism</b>	<ul style="list-style-type: none"> <li>Trade;</li> <li>Tourism</li> </ul>	<ul style="list-style-type: none"> <li>Shipping; Port infrastructure and services;</li> <li>Tourism</li> </ul>	<ul style="list-style-type: none"> <li>Eco-tourism</li> </ul>	<ul style="list-style-type: none"> <li>Growth in seaborne trade and tourism;</li> <li>R&amp;D activities</li> </ul>
<b>Ocean Restoration</b>	<ul style="list-style-type: none"> <li>Carbon sequestration;</li> <li>Coastal protection;</li> <li>Waste disposal</li> </ul>		<ul style="list-style-type: none"> <li>Carbon sequestration;</li> <li>Coastal habitat protection and restoration;</li> <li>Assimilation of nutrients and waste</li> </ul>	<ul style="list-style-type: none"> <li>R&amp;D in ocean activities</li> </ul>

## 6. Link to SDG #14

SDG 14 seeks to ***“conserve and sustainably use the oceans, seas and marine resources for sustainable development”***

### Targets:

- Prevent and significantly **reduce marine pollution** by 2025
- Sustainably manage and **protect marine and coastal ecosystems** by 2020
- Minimize and **address the impacts of ocean acidification**
- Effectively **regulate harvesting and end overfishing**
- **Conserve** at least 10 percent of **coastal and marine areas** by 2020
- **Prohibit certain forms of fisheries** by 2020
- **Increase the economic benefits to Small Island Developing States** by 2030
- **Increase scientific knowledge**
- **Provide access for small-scale artisanal fishers to marine resources/markets**
- Enhance the conservation and sustainable use of oceans and their resources by **implementing international law** as reflected in UNCLOS



## 7. Climate resilience (how Blue Economy combats Climate Change)

Mitigation	Adaptation
<ul style="list-style-type: none"> <li>• <b>Reduction of GHG emissions</b></li> <li>• <b>Reutilization, reduction and recycling</b> of materials</li> <li>• Utilization of <b>renewable energies</b></li> <li>• Promotion of <b>energy efficiency</b></li> </ul>	<ul style="list-style-type: none"> <li>• Build <b>resilience to extreme weather events</b></li> <li>• Promote restoration and ecosystem services that <b>protect marine and coastal environments</b></li> <li>• <b>Improve coastal resilience and protect islands and coastal zones against sea level rise</b></li> </ul>

## 8. Delivering a Blue Economy

Delivering a Blue Economy requires different elements:

- **Domestic coastal management policy** in place
- **Informed policy-making**
- **Development of Coastal and Marine Spatial Plans**
- New **investment requirements**
- Better information to **value non-market goods and services**
- **International cooperation**
- **Ocean economy accounting**
- Addressing **knowledge gaps on marine life**

## 9. Blue Economy interventions

Ocean Energy	Ecosystem and Restoration Services
<p><b>Renewable energy</b> options specifically <b>related to the ocean:</b></p> <ul style="list-style-type: none"> <li>• <b>Wind energy</b> (offshore wind plants)</li> <li>• <b>Ocean Thermal Energy Conversion (OTEC)</b> (deep-sea water industry)</li> <li>• <b>Sea water air conditioning (SWAC)</b> (deep-sea water industry)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Bolstering ecosystems</b></li> <li>• <b>Contributing to restoration services</b></li> </ul> <p><u>Examples:</u></p> <ul style="list-style-type: none"> <li>• Coral conservation</li> <li>• Working with endangered flora and fauna species</li> <li>• Protecting coastal blue carbon habitats</li> <li>• Ocean clean up</li> <li>• Coastal management</li> <li>• Mangrove restoration and conservation</li> <li>• Ecosystem valuation</li> </ul>

## Conclusions

- Urgency of **implementing a Blue Economy model in islands** ➡ **Climate Change**
- Islands face **challenges** to implement sustainable **Blue Economy** ➡ But they also have **opportunities**.
- **Climate change** can be addressed through **Blue Economy mitigation and adaptation measures**.
- **Blue Economy interventions** can be related to:
  - **Renewable energy options in the ocean** (e.g. wind energy)
  - **Bolstering ecosystems and contributing to restoration services**

# iThank you!

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