Research Article

The Role of "Crop Project" on the Development of Blue Economy Tourism in the Eastern Carribean

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Abstract

Despite its marine diversity and tourism potential, the Caribbean is highly vulnerable to climate change, natural disasters, and damage from human activities. In response, Caribbean governments are actively implementing the Blue Economy framework and the Eastern Caribbean Regional Ocean Policy (ECROP), with support from the World Bank. The World Bank has launched the Caribbean Regional Oceanscape Project (CROP) to drive sustainable development of marine resources in the Eastern Caribbean. This study focuses on assessing CROP's impact on the Eastern Caribbean's Blue Economy, particularly in the tourism sector. The analysis of literature, databases, and agency reports pertaining to the Eastern Caribbean reveals two key findings. First, governments have adopted the Blue Economy as a central strategy to bolster regional fiscal and financial resilience through ECROP policies. Second, despite ECROP's success in increasing economic potential, there are policy imbalances in the various regions due to uneven regulation of the green industry sector. This can be seen in policies in some Eastern Caribbean regions that override the protection of marine ecosystems in favor of achieving state profits in tourism. To encourage the tourism sector as a driver of sustainable development in this region, countries must shift their governance towards more equitable industry regulation, ensure fair access, and prioritize coastal ecological sustainability.

Keywords: Caribbean; Blue Economy; Tourism; ECROP; Sustainable

Introduction

Caribbean countries have great tourism potential thanks to their beautiful beaches, rich culture and warm climate, attracting millions of visitors each year. The tourism sector is an important component of economic activity for countries in the Eastern Caribbean. Since the 1970s, the region has received more than 26 million visitors annually. The sector contributes significantly to the economy, ranging from 7 to 90 percent of GDP, with an average of about 32 percent (Acevedo et al., 2017).

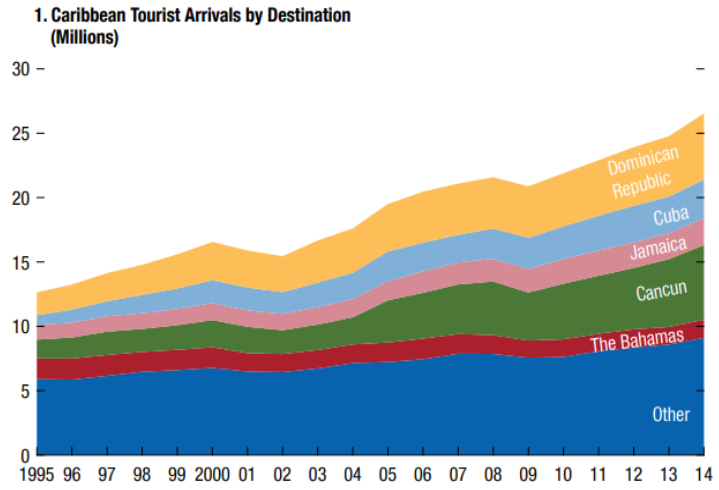

Figure 1. Caribbean Tourist Arrivals, 1995–2014
Source: International Monetary Fund

In the Caribbean, there was a significant shift in market share between 1995 and 2014, with Cancun, Cuba, and the Dominican Republic emerging as significant players with market share increases ranging from 5 percent to 10 percent. In the graph above, it is evident that the Eastern Caribbean region experienced an increase in the number of tourists by destination from 1995-2014. In fact, in 2017, gross revenue from marine and coastal tourism alone was estimated at US$57 billion (World Bank, 2019). Thus, building a sustainable marine economy through better and more effective use of marine resources has enormous potential for income growth, community development, environmental protection and poverty alleviation.

However, unresolved climate issues and marine pollution are problematic and pose a serious threat to the blue economy. However, this tourism growth in the Caribbean faces serious environmental challenges such as pollution, deforestation and coral reef degradation that threaten its sustainability. Poor waste management and plastic waste plus extreme climate change further increase the risks for coastal tourism. Coral reef degradation is one of the most pressing issues, given its critical role for biodiversity and tourism activities such as diving and snorkeling. The World Resources Institute estimates that the annual net economic value of coral reef ecosystem goods and services to the Caribbean exceeds US$3.1 billion, highlighting their importance to the tourism industry. However, much of the reef has been lost to pollution, physical damage and unregulated tourism. Projections suggest that coral reefs could experience severe degradation by 2050 if current trends continue (United Nation, 2011).

Not to mention, the emergence of the COVID-19 pandemic has further worsened the viability of tourism in the Caribbean, with travel restrictions, lockdowns, and a sharp decline in international visitors. With tourism being a key economic driver for many Caribbean countries, the sudden stoppage led to business closures, job losses, and a difficult economy. Small businesses, hotels, and local artisans suffered the most, as they rely heavily on tourist spending. Even when travel resumed, recovery was slow due to lingering health concerns and changing travel patterns. To rebuild the industry, Caribbean countries must focus on diversification, digital marketing, and sustainable tourism strategies.

To maintain sustainability, a balance is needed between tourism growth and environmental preservation through sustainable practices and strict regulations through sustainable blue economy projects through the Caribbean Regional Seascape Project (CROP) program. The CROP project was chosen as an effort to revive the economy in the eastern region of the Caribbean, particularly in the tourism sector.

The CROP Project was established in October 2017 as a significant effort aimed at realizing a sustainable blue economy in the Organization of Eastern Caribbean States (OECS) region. The project is a manifestation of the OECS Commission and its member states' commitment to the World Bank, acting as the Global Environment

Facility (GEF), to develop adequate marine governance as a first step towards implementing a blue economy in the region within the framework of the Eastern Caribbean Regional Seascape Policy (ECROP). The ECROP Policy is the first comprehensive maritime policy in the Eastern Caribbean, which aims to promote sustainable ocean management and blue economy development in the region. Achieving this goal will require sustained efforts and significant long-term investments. The implementation of this project is believed to be in line with all international and regional policies. The CROP project is relevant to the agenda of building a blue economy in the OECS region as it focuses precisely on the policy and planning instruments needed to realize the potential of such economic development.

This study therefore attempts to identify how the CROP Project has significantly impacted the dynamics of the tourism sector under the blue economy concept in the OECS region. The project has helped improve the management of marine resources in the region, which has had a positive impact on the tourism sector. By taking the CROP Project as the object of analysis, the author is able to identify challenges related to the dynamics of the tourism sector and the economy of OECS countries, such as the problem of policy governance mechanisms taken by the governments of OECS member countries. This research attempts to explain how the CROP Project contributes to the achievement of blue economy goals in the tourism sector in the Eastern Caribbean.

Literature Review

This research delves into the literature that serves as a foundation for further discussions on the dependence of coastal and developing countries on marine resource wealth. A significant contribution to this topic is Julian Roberts' (2022) G20 working paper, "The Blue Economy: From Concept to Reality in the Caribbean Region." Roberts' paper examines various forms of marine resource wealth that underpin the global economy within the Caribbean region.

The rationale for selecting this review lies in its extensive descriptions of global marine market products, which are estimated to be worth approximately USD 1,345 billion annually. Notably, ocean services, such as tourism and shipping, constitute the largest contribution to global GDP (USD 880 billion), followed by sectors categorized as marine resources (USD 377 billion) and marine manufacturing (USD 107 billion).

However, the vast potential of the ocean also brings substantial pressures related to its utilization, including threats like exploitation and poor management. One pertinent example is Colombia's oil exploration in the Caribbean Sea, which represents an exploitation practice that poses significant risks to the marine environment and challenges the government's ability to uphold good ocean governance (Sinha, 2015, 314). Consequently, there is an urgent need for an approach that integrates environmental management directly with economic development, epitomized by the 'Blue Economy' concept.

The Organisation of Eastern Caribbean States (OECS) is poised for transformative change towards a vibrant blue economy. Implementing the blue economy approach promises numerous opportunities in the Caribbean region, including the creation of new jobs, higher economic growth rates, poverty reduction, and the achievement of biodiversity and international sustainability obligations (Roberts, 2022).

This paper aims to address the existing gaps by providing an overview of the opportunities, challenges, constraints, and gaps in establishing a blue economy in the Caribbean region. It proposes a foundation for discussions on practical steps that Caribbean countries and the region as a whole can undertake to capitalize on these opportunities. Caribbean efforts towards achieving a blue transition are encapsulated in the Caribbean Regional Oceanscape Project (CROP), as highlighted in the project evaluation report published on the Organisation of Eastern Caribbean States (OECS) website.

Despite the promising potential of the marine resources sector for economic growth through the blue economy concept, challenges persist. One such challenge is industrial growth, which threatens this system and jeopardizes the economic progress of the Caribbean. In response, OECS member states have implemented the Eastern Caribbean Regional Ocean Policy (ECROP), approved in 2013. Aligned with ECROP policy priorities, the OECS has been actively forming partnerships and securing funding to initiate its implementation. On October 14, 2017, the Grant Agreement for the Caribbean Regional Seascape Project (CROP) was signed between the International Bank for Reconstruction and Development (IBRD), aimed at enhancing maritime governance capacity in the Caribbean region (OECS, 2020).

In conclusion, the Caribbean region, with its coastal islands, holds immense potential for a blue transition or blue economy approach. Rich in marine resources, the region is well-positioned to support sustainable economic growth and job creation. The CROP project stands as a crucial step towards facilitating this blue transition in the Caribbean, with the potential to foster sustainable economic growth, increase resilience, and reduce poverty and inequality.

Theoretical Framework

Economic Development

Economic development is a multifaceted concept that encompasses the growth and transformation of urban and rural areas at local, regional, and national levels. It applies to both developing and developed countries and is commonly defined in terms of wealth creation, measured through key economic indicators such as increased employment, per capita income, and gross domestic product (GDP) (Hammer & Pivo, 2016, 26). However, economic development extends beyond mere economic growth; it also highlights the interconnection between economic expansion, social progress, and overall human welfare. This paper examines the strategies that ECROP countries can implement to foster economic development that is contextually appropriate and sustainable. Several indicators signal positive economic transformations within ECROP member states, including GDP growth, an increase in tourism sector activity, and the expansion of mangrove land areas, all of which contribute to broader economic and environmental resilience.

The Blue Economy

The concept of the blue economy was first introduced at the 2012 Rio+20 Conference, emphasizing the conservation and sustainable management of marine and coastal resources. The fundamental premise underlying this approach is that well-preserved ocean ecosystems are not only ecologically beneficial but also economically productive, serving as a critical foundation for sustainable, ocean-based economies. The Economist Intelligence Unit (2015) noted that economic growth within the ocean economy sector is inherently abstract, allowing each nation to define its benchmarks based on unique national circumstances. These benchmarks may include maritime zones, existing economic activities, environmental constraints, the potential for innovative industries, and the capacity to balance development with environmental sustainability (World Bank, 2017, 5).

This paper explores the commonalities among ECROP member states in relation to the blue economy. It posits that the blue economy serves as a governance framework aimed at mitigating the adverse effects of natural disasters and environmental degradation caused by human activities. Given the aligned geographical characteristics of ECROP nations, there is a significant opportunity for governments to enhance ocean governance by implementing regulatory measures that prioritize sustainable economic development. By doing so, these nations can ensure the long-term viability of their marine resources while simultaneously promoting economic resilience and growth.

Methods

This study employs a qualitative descriptive approach utilizing the literature review method. The qualitative approach adopted by the author involves the presentation and analysis of data obtained through an extensive review of existing literature. Information was sourced from a variety of academic and institutional publications, including project outcome reports and research findings published in peer-reviewed journals and other reputable sources.

The primary data sources include project reports, particularly the Mid-Term Evaluation Report of the Caribbean Regional Seascape Project (CROP), which was published by the OECS Commission and accessed through an online database. This report covers the period between 2013 and 2020, providing a basis for analyzing the annual GDP growth trends across ECROP member states. Additionally, this study incorporates publications from global financial institutions such as the World Bank (2019) and the International Monetary Fund (2016), along with reports from other research institutions that address the blue economy in the Eastern Caribbean. These sources are utilized to illustrate the rationale behind the World Bank's support and financial commitment to advancing the CROP agenda.

Result and Analysis

The Economic Activities of the Maritime Sector in the Eastern Caribbean Pre-Implementation of CROP

The Caribbean nations have economies heavily reliant on the sea, which serves as a primary livelihood source for many inhabitants in the region, encompassing activities such as fishing, tourism, and maritime transportation. As a region susceptible to natural disasters, the Eastern Caribbean countries face challenges in addressing various obstacles to economic growth and regional development. This circumstance has resulted in prolonged dependence on IMF loans, limited export activities, and susceptibility to economic shocks, and natural disasters, placing countries in this region in a precarious position. Before embracing the blue economy concept, Jamaica and Grenada, for instance, already had debt-to-GDP ratios exceeding 100%, followed by seven other countries with debt levels surpassing 75% (IMF, 2016). The vulnerability of these economic conditions prompted the initiation of the blue economy framework, successfully offering opportunities for economic diversification and the creation of new income sources by harnessing marine resources in the Caribbean region.

Aligned with the blue economy concept, which emphasizes sustainable development, Caribbean nations have leveraged this framework to underscore its significance for the overall economies of the region. Various marine sectors have been harnessed, notably the gradual dominance of the fisheries and tourism sectors in bolstering regional economic activities. As island nations, the Caribbean countries possess substantial potential in the tourism sector, which has become a significant source of employment, the primary foreign exchange earner, and a balancing force amid the decline in agriculture and agricultural exports. As a whole, tourism has contributed to 75% of the collective GDP of the OECS (OECS, 2013). The progress of the tourism sector is intricately tied to marine environmental conditions, encompassing cruise tourism, hotels, recreational activities, and water sports. Consequently, the marine environment's quality and status significantly impact this sector's value.

Despite the abundant marine potential, excessive exploitative actions and poor marine management have escalated, resulting in missed economic opportunities. Regionally, the Caribbean Sea faces numerous environmental threats, including unsustainable exploitation of fish and other biotic resources, plastic pollution, and marine habitat degradation due to improper waste disposal (UNDP, 2016).

Threats and Challenges of the Blue Economy in Eastern Caribbean

These unethical practices hamper the Eastern Caribbean region's attempts at economic growth. As overuse of the sea happens without proper regard for coastal sustainability, the community starts to see dangers, especially concerning the sustainability of progress in the tourism sector.

Climate Change

It is believed that the tourism business depends on nice weather. However, the Small Island Developing States (SIDS) are areas susceptible to storms and hurricanes. The majority of SIDS have at least a 10% annual risk of experiencing a storm, according to UNESCO. In Jamaica and the Bahamas, the odds even go up to 24% and 20%, respectively (OCHA, 2017). Damage brought on by climate change manifests itself in altered coral reefs, temperature swings, and problems with water. The World Meteorological Organization (WMO) found that the ten hottest years on record since 1880 all happened after 2000 in terms of temperature increases (CARCEP, 2017).

Climate change poses a significant threat to the tourism industry in Caribbean Small Island Developing States (SIDS). Stephenson's research shows that between 1961 and 2010, warming occurred across the Caribbean region causing coral bleaching, increased frequency of droughts, and increased storm damage. Tropical Storm Erika in 2015 caused damage equivalent to 90% of Dominica's GDP, and 2016 was the hottest year on record, further emphasizing the impact of climate change on the region.

Rising ocean temperatures and acidification are causing significant coral bleaching events that threaten marine biodiversity and a tourism sector that relies heavily on healthy coral reefs. Projections suggest that a 1-meter rise in sea level could cause major economic losses with rebuilding costs reaching 28% of GDP for affected countries. Despite contributing less than 1% to global emissions, Caribbean island countries are highly vulnerable to climate change due to inadequate regulation and poor coastal development practices (CARCEP, 2017). Between 2025 and 2050, the World Travel and Tourism Council predicts the Caribbean will rank as the most dangerous tourist destination worldwide (World Travel & Tourism Council, 2022). Identifying and addressing these risks is a challenge for Small Island Developing States (SIDS) in developing disaster prevention and management policies. These strategies include working with climate experts, securing funding, and promoting scientific and technological cooperation with industrialized countries.

The Decline in Marine Environmental Quality

There is little doubt that several causes contribute to the degradation of marine quality, and marine pollution from large-scale plastic trash and untreated waste dumped into the sea is one of them. A new hazard to significant harm to the West Central Region (WCR) aquatic areas is land-based pollution, including garbage and improperly treated solid waste. Based on volunteer cleanups organized by Ocean Conservancy at the beginning of 2017, plastic beverage waste comprised 21% of all recorded waste. 35% of the plastic objects gathered were single-use plastic garbage (Barne, 2019).

Additionally, projections indicate that, in keeping with the expanding population, the amount of plastic solid waste dumped into the ocean will gradually increase from 0.29–0.79 tons in 2010 to 0.29–0.79 tons in 2025 (Bank, 2019). Beyond plastic waste, production waste from other industrial operations in the WCR, like mining, food processing, chemical manufacturing, and oil refining, could be dangerous. 85% of wastewater that has not been cleaned is thought to be dumped into the Caribbean Sea. If the contamination of these industrial wastes is not controlled, it will surely harm mangrove forests, seagrass beds, and coral reefs.

Climate change may affect coral reefs more severely due to rising ocean pollution. Coral reef illness susceptibility increases when plastic and liquid waste contaminate the ocean. Coral reef death reduces the ocean's capacity to effectively absorb carbon dioxide by impeding carbon fixing (CARSEA, 2007). As this

happens, natural resources, including beaches, dunes, coral reefs, and mangrove forests, become less visually appealing due to pollution in the tourism industry. Coral reefs are expected to lose 11–19% of their value by 2050 if current problems are not resolved. Between US$350 million and US$870 million in revenue losses will result from this hazard each year (World Bank, 2019).

Legislators at the federal and local levels require assistance in preventing marine damage while enforcing waste management regulations. Existing laws concerning public health, hazardous materials management, marine and coastal management, tourism, and trade often lack specific policy recommendations regarding waste disposal (UNEP, 2023).

The establishment of Zero Waste policies in the Caribbean, public education on the importance of sea conservation, and community involvement in supporting regulatory measures will pose significant challenges for Small Island Developing States (SIDS) in their battle against plastic waste production.

The United Nations Environment Programme (UNEP) has endorsed the "Zero Waste in the Caribbean" project. This initiative, under the theme "New Ways, New Waves," aims to strengthen national legislative frameworks and establish a regional policy structure to bolster sub-regional and Caribbean-wide efforts (McKenzie & Van Steen, 2024).

Coastal Ecosystem Degradation

Over the decades, the Eastern Caribbean region's coastline population has directly increased due to the growing economic prospects in the tourism sector. Around 41 million people live 10 kilometers or less from the sea, and roughly 166 million live 100 kilometers or less (CARSEA, 2007). Too many haphazard construction projects are situated near the coast. Due to a lack of proper trash disposal infrastructure, waste from these buildings is frequently automatically dumped into the sea. If structures are not positioned at least 50 meters from the coastline, they will be vulnerable to storm damage and could jeopardize dunes, a dynamic system that maintains coastal order (CARSEA, 2007). Coastal development also causes erosion and changes the way water flows.

Without considering coastal borders, tourism activities—the main driver behind the massive building of beachfront resorts and other tourist amenities—significantly contribute to the destruction of coastal ecosystems. Massive development puts tremendous strain on the damage that coastal ecosystems sustain. Actions that ignore coastal boundaries risk encouraging abrasion, which speeds up coastal erosion and raises the possibility of natural disasters like hurricanes, floods, and tsunamis. Estimates show that 70% of Caribbean island coastlines experience a decline at rates ranging from 0.25 m to 9 m per year due to the region's diminishing coral reef population (CARSEA, 2007).

Based on the data, we suggest that the government develop stricter regulations to control activities that endanger the coastal marine environment. The regulations perhaps mention about governance of marine development more than fifty metres from shore as well as evaluation of activities in favour of habitat protection for overall ecosystem sustainability. Environmentally friendly fishing techniques should also replace other maritime activities that damage marine ecosystems, such as the use of explosives to catch fish. Developing public awareness and participating in international programmes to achieve regional progress are further challenges faced by Small Island Developing States (SIDS).

The Role of CROP in the Blue Economy in the Eastern Caribbean

Economic activities in the Eastern Caribbean focus on marine biodiversity, the tourism sector, and the challenges. The concept of the blue economy and the Eastern Caribbean Regional Ocean Policy (ECROP) adopted by the Caribbean were responded to by the World Bank. This response was realized by initiating the Caribbean Regional Oceanscape Project (CROP). There are five Eastern Caribbean member states that agreed

to the ECROP policy, including Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines.

The five countries meet several considerations and are therefore eligible to participate in ECROP. First, relatively adequate funding is available. These five countries have a higher level of maturity and readiness to implement the project, such as infrastructure, capacity, and political commitment to support the success of the project. Second, the five countries are countries with sufficient financial resources to support the project because the World Bank's contribution is only USD 6.3 million. Third, the five countries are the countries that formed the Organization of Eastern Caribbean States in the Basseterre Treaty.

ECROP contains seven policy and goal points for the sustainability of the implementation of the blue economy in the Eastern Caribbean. Some of these points contain policies on access to resources, ecosystem integrity, sustainable economic development, marine planning and management, public participation, development capacity, and marine resilience risk (OECS, 2013). Based on these points, this article will focus on examining policy point three, related to the promotion of sustainable economic development (blue economy), and point four, related to marine governance reform.

ECROP Policy Goal 3

The third policy goal of ECROP, sustainable development, offers the potential to develop benefits in the economic, social, and cultural sectors. One of these potential benefits is related to the development of tourism. The development of tourism in the Eastern Caribbean has facilitated the opening of job opportunities, achieving better growth, including industrial development, and a comprehensive contribution to the accumulation of GDP at the regional level.

ECROP Policy Goal 4

The fourth policy goal, on the other hand, speaks to the management of all activities on land and sea that affect the marine environment. This management includes mechanisms and regulations related to coastal and marine management at the national and international levels that are implemented in the tourism sector. The management of ECROP is then continued through the CROP project.

CROP developed a policy framework that will be implemented in the Eastern Caribbean based on the two main points of ECROP. There are six component points of the design, including:

1. Participatory implementation of project components
   This includes guidance on how to involve public participation and consider the conditions of the affected communities in decision-making related to natural resources before the ECROP objectives existed.
2. Process for determining eligibility criteria for affected persons
   This includes guidance on how to determine compensation for communities that may be affected.
3. Livelihood recovery and sustainability measures
   This includes ways to address issues related to the preservation, recovery, and sustainability of livelihoods.
4. Dispute resolution mechanisms
   This includes guidance on how to build mechanisms for resolving disputes and settling disputes for affected communities.
5. Administrative and legal procedures
   This is related to state regulations and the accountability of relevant institutions.
6. Monitoring arrangements
   This includes guidance on the system for monitoring and reporting planning results.

The six points refer to improvements in systems for communities and governments to facilitate contributions to the blue economy. Affected communities need social change, while the environment still needs ways to be maintained. Governments need regulations and accountability.

Based on the analysis of the challenges described above, the implementation of CROP has already shown changes from the problems identified in the Eastern Caribbean. The role of CROP in the Eastern Caribbean explains a number of benefits in the social, economic, and environmental sectors while maintaining the sustainability of the blue economy. The benefits of implementing the blue economy are explained in the form of opportunities that can be used as indicators or benchmarks for countries that have not yet adopted the blue economy in the Eastern Caribbean.

Evidence of ECROP's Success in Achieving Economic Blue Growth in the Eastern Caribbean
Income from Tourism

Dominica

Before the implementation of the policy, there was no National Marine Policy in Dominica. A presentation on the blue economy was given in 2015. The ECROP policy and plan were developed and approved by the Cabinet in 2017, covering the areas of biodiversity, pollution control, and tourism. In the tourism sector, the National Tourism Policy and Master Plan is led by the Ministry of Tourism and Culture. Second, the Soufriere/Scott's Head Marine Reserve Management Plan Policy and the Cabrits National Park Marine Area Management Plan, both led by the Ministry of Agriculture, Food, and Fisheries. The appropriate involvement of civil society stakeholders in the development of the marine management system will be important in the context of post-disaster recovery. (Organization of Eastern Caribbean States, 2020)

Through Facebook live streaming due to the pandemic, Dominica remained active in responding to the development of the CROP project. The implementation of the blue economy supported by the CROP project helped Dominica's economy. Marine Spatial Planning (MSP) or marine spatial planning based on CROP is believed to be very effective for mapping and planning the balance of use of marine and coastal resources so that the marine ecosystem is protected while achieving the objectives of tourism, biodiversity conservation, fisheries, oil and gas, mining, and shipping. An example of Marine Spatial Planning at the local level in OECS is the Scotts Head Marine Reserve. This project is one of the national priorities and strategic objectives for coastal and marine spatial planning for the coastal and marine spatial plan for Dominica (Environmental Sustainability Division, 2021).

Early estimates show that Dominica's real GDP output expanded for the second consecutive year, following the Covid-19 pandemic. Economic expansion was driven by the return of the tourism and manufacturing industries. Real GDP grew by 5.9 percent in 2022, following growth of 6.9 percent in 2021. This growth is the highest Dominica has achieved in recent years.

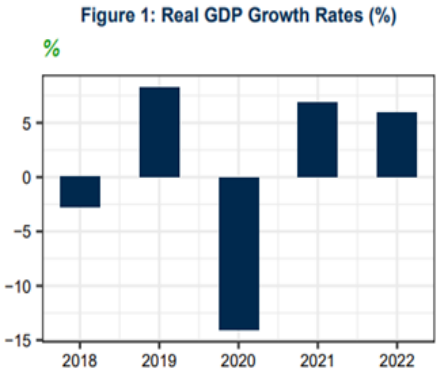

Figure 2. Real GDP Growth Rates of Dominica 2018-2022
Source: Eastern Caribbean Central Bank

The economic expansion reflects an increase in value added in all major sectors. Hotels and restaurants (tourism) grew by a staggering 175.0 percent in 2022, reversing a contraction of 14.1 percent in 2021. Increasing tourist arrivals are also expected to fully stabilize by the end of 2024. The tourism sector, specifically the cruise sector, has fully rebounded and may even exceed 2019 results as cruise demand has increased (Eastern Caribbean Central Bank, 2022).

The CROP project has also helped to improve Dominica's resilience to climate change. This is evidenced by Dominica's increased investment in sectors that can help reduce vulnerability to climate change, such as renewable energy and coastal management.

Overall, the implementation of the blue economy in the Commonwealth of Dominica through the ECROP policy and the Marine Head Reserve has had a positive impact on the country's economy. Strong economic growth and increasing resilience to climate change show that Dominica is on the right track to achieve sustainable development.

Grenada

Opportunities gained after the implementation of the blue economy supported by the CROP project made Grenada's economy stronger from 2017 to 2021. Although there is no formal National Marine Policy, the Government of Grenada has prepared several planning and policy initiatives in the coastal and nearshore zone. Similar to other OECS countries, marine tourism is another sector that could be affected by future marine area restrictions. Marine-focused livelihoods have emerged as the single largest maritime economic activity in Grenada. Smaller-scale livelihood-generating activities associated with this sector include yachting, boating, and diving (Organization of Eastern Caribbean States, 2020).

This was demonstrated when the tourism sector recovered, and the government also began to increase its capital spending program. Grenada began to implement Grenada's Marine Protected Area Programme or Grenada Marine Conservation Area Program, which aims to protect 25 percent of nearshore or coastal resources by 2020. This naturally had an impact on use, including commercial fishing and recreational use. In addition, in the marine governance sector, Grenada implemented the Marine Multi-Use Zone for the Grenadine Islands (Environmental Sustainability Division, 2021).

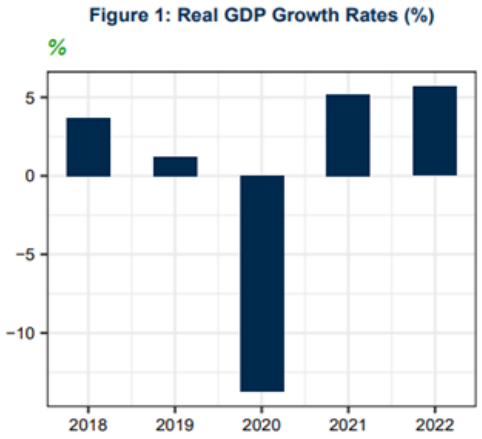

Figure 3. Real GDP Growth Rates of Grenada 2018-2022
Source: Eastern Caribbean Central Bank

Good marine governance can ensure that marine resources are managed sustainably and responsibly, supporting tourism growth and the blue economy. Grenada's GDP growth has been significant year-on-year. Stability is more evident a year after the pandemic in 2020-2022. As the tourism sector continued to recover and supply chain problems also eased, Grenada's trade deficit in goods widened by 40.2 percent year-on-year

to $1.590.8 million. In addition, public sector debt as a percentage of GDP is expected to decline compared to the previous year (Eastern Caribbean Central Bank, 2022).

Table 1. Increase in the number of tourists Grenada 2019-2022

Total Visitors by Category CY 2022						
	2022	2021	% chg 22/21	2020	2019	% chg 22/19
Stopovers	133,162	42,100	216.3%	43,815	162,902	-18.3%
Cruise Visitors	185,830	25,027	642.5%	162,517	338,119	-45.0%
Yacht Visitors	15,835	4,735	234.4%	10,451	24,611	-35.7%
Total Visitors	**334,827**	**71,862**	**365.9%**	**216,783**	**525,632**	**-36.3%**

Source: Grenada Tourism Authority

Good marine governance can ensure that marine resources are managed sustainably and responsibly, supporting tourism growth and the blue economy. Based on the table above, the total number of tourists that increased in 2022 also had an impact on marine transportation, with the use of yachts and cruises increasing by 365 percent (Grenada Tourism Authority, 2023).
Overall, the efforts of the CROP project through good marine governance have successfully implemented a blue economy approach in Grenada. It is believed to have had a positive impact on the country's economy. However, efforts need to be made to reduce Grenada's trade deficit in goods. These efforts can be made by increasing Grenada's exports, reducing Grenada's imports, or a combination of both.

Saint Kitts dan Nevis

Good marine governance can ensure that marine resources are managed sustainably and responsibly, which can support the growth of tourism and the blue economy. Following a marginal decline in economic activity in 2020, preliminary data shows that St. Kitts and Nevis' GDP increased by 7.7 percent in 2022, as the country recovers from the COVID-19 pandemic. Economic activity is projected to continue to recover in 2023, as tourism continues to rebound and the implementation of major infrastructure projects by the government continues (Draft for Client Acceptance OECS, 2021).

Table 2. Increase in the number of tourists St Kitts dan Nevis 2019-2022

Total Visitors by Category CY 2022						
	2022	2021	% chg 22/21	2020	2019	% chg 22/19
Stopovers	79,767	20,210	294.7%	29,695	120,142	-33.6%
Cruise Visitors	452,433	101,897	0.0%	267,562	1,053,388	-57.0%
Yacht Visitors	2,202	47	0.0%	2,382	4,140	-46.8%
Total Visitors	**534,402**	**122,154**	**337.5%**	**299,639**	**1,177,670**	**-54.6%**

Source: Eastern Caribbean Central Bank

The increase in visitor arrivals led to a 124.5% increase in value added in hotels and restaurants. Specifically, total visitor arrivals quadrupled to 537,308 throughout the year. This development had a positive impact on tourism-supporting sectors including sea transportation, with yacht and cruise usage increasing by 337.5%. (Eastern Caribbean Central Bank, 2022)

Activity in the tourism industry is expected to continue to rise, as global travel continues to increase rapidly after most countries have relaxed all protocols. Overall, the implementation of the blue economy in Saint Kitts and Nevis has had a positive impact on the country's economy. Strong economic growth and increased resilience to climate change show that Saint Kitts and Nevis is on the right track to achieving sustainable development.

Saint Lucia

The marine area of Saint Lucia is also a crucial habitat for biodiversity, providing natural capital to support the Blue Economy, and must be preserved and, if necessary, enhanced. In managing, regulating, and utilizing marine governance, Saint Lucia employs Marine Spatial Planning (MSP) or marine spatial planning. Saint Lucia implements a Marine Management Area (MMA) policy that focuses on protecting and sustainably managing marine resources. This policy shares similarities with the processes used to implement MSP, particularly in establishing the Soufrière Marine Management Area (SMMA). Furthermore, Saint Lucia has established a management regime for the Pointe Sable Environmental Protection Area (PSEPA), encompassing land and sea areas. The innovative approach to marine zoning used in the Marine Spatial Planning framework frames marine environmental management to enable and support the achievement of Blue Economy policy objectives.

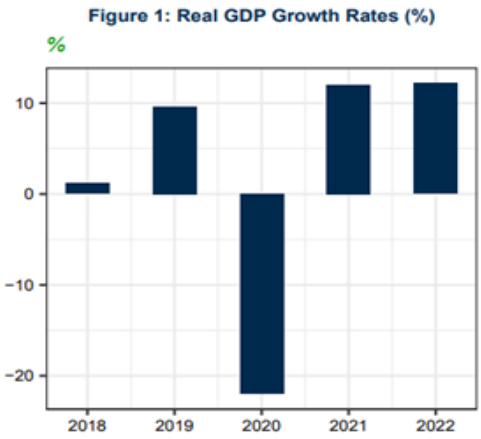

Figure 4. Saint Lucia GDP Growth Rates 2018-2022
Source: Eastern Caribbean Central Bank

Establishing successful marine governance policies helped Saint Lucia's GDP develop at an exceptional rate of 15.9% in 2022. This growth is the greatest that Saint Lucia has had in a while. Saint Lucia's economy is growing because of the country's manufacturing, agricultural, and tourism sectors and other allied industries. One of the main drivers of Saint Lucia's economy, the tourism industry expanded by 67.6 percent in 2022. Increased demand from domestic and foreign tourists is the reason for this expansion.

The value added to hotels and restaurants increased by 67.6 percent due to increased visitor numbers. In particular, arrivals increased by 78.7% to 356,237, or around 84.0 percent of all appearances in 2019. US and UK arrivals exceeded 2019 totals, 59.0 percent and 23.0 percent of all overnight arrivals, respectively. All other source markets, including the Caribbean and Europe, saw an exponential rise in visitor arrivals, although the numbers are still below pre-pandemic levels (Saint Lucia Tourism Authority, 2023). Saint Lucia's economy has benefited from the introduction of the Blue Economy, and the nation's strong economic growth suggests that it is headed toward sustainable development.

Saint Vincent dan Grenadines.

One of the most essential policy measures introduced in the Caribbean Regional Oceanscape Project (CROP) implementation in Saint Vincent and the Grenadines was the National Ocean Policy (NOP). Creating and carrying out the Coastal Master Plan and Marine Spatial Plan are the main objectives of this policy. In the opinion of the Organization of Eastern Caribbean States (OECS), these strategies will help St. Vincent and the Grenadines smoothly transition to the Blue Economy.

The success of its execution has been attributed to the departments and organizations overseeing operations in the inland, coastal, and nearshore regions mentioned in the Coastal and Marine Spatial Planning (CMSP) document. The plan's geographical scope reaches the highest point in the coastal watershed to the exclusive economic zone's (EEZ) seaward direction. A comprehensive approach to regulating the interaction between land and water is made possible by the plan's integrated coastal zone management policy guidelines, significant Blue Economy priority investments, and marine zoning, all intended to work in concert.

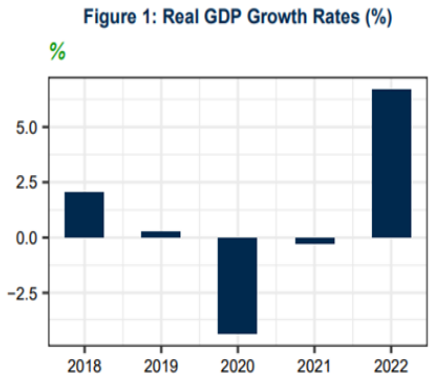

Figure 5. Real GDP Growth Rates of Saint Vincent and the Grenadines
Source: Eastern Caribbean Central Bank

CROP has brought about opportunities that have significantly impacted Saint Vincent and the Grenadines' economy. In contrast to the prior year, the nation's economy is expected to grow in 2022. The rebound in the building, wholesale, retail, and tourism industries is mainly responsible for the improved performance. In contrast to the 0.8 percent growth in the year before, Saint Vincent and the Grenadines economy is predicted to expand by 5.0 percent in 2022.

Tourist numbers from important markets have increased, contributing to this expansion. As cruise ship passengers increased from 24,311 to 120,315 in 2022 and cruise ship arrivals increased from 8,079 to 38,452 in 2022, the tourist sector has also shown improved performance. The average tourist income increased significantly from 24,230 in 2021 to 62,303 in 2023. Furthermore, by strengthening Saint Vincent and the Grenadines' resistance to climate change, the CROP project has helped. The country's increased investments in fields like coastal management and renewable energy that can lessen vulnerability to climate change indicate this.

Overall, the economy of Saint Vincent and the Grenadines has benefited from adopting the blue economy. Sustainable development is within reach for Saint Vincent and the Grenadines, as seen by the country's strong economic growth and heightened resistance to climate change.

ECROP in Achieving SDGS 14

Targets of maritime conservation and restoration are the main emphasis of the ECROP program, which supports sustainable development in line with SDG 14's goals. The five member states of ECROP benefit from newfound success in the marine industry, waste management, conservation area extension, and problem-solving related to waste management. ECROP conducts media information development, training, and educational campaigns through various initiatives. New regulations have also been implemented in keeping with the Caribbean Challenge endeavors. For example, conservation regulations mandate that 20 percent of marine areas be included in Marine Conservation Areas. The ECROP member nations have begun to expand the number of marine conservation areas under these regulations.

These policies are a component of the framework that ECROP created by directing objectives and developing policies to improve sustainable development by expanding conservation areas. The increasing number of

Caribbean nations having coastal management plans serves as proof of this. CROP member states have noticeably superior coastal and marine management capacities compared to other Caribbean countries. Only 20% of non-participating Caribbean nations had coastal and marine management plans in 2022, compared to 80% of participating countries (Bank, 2019).

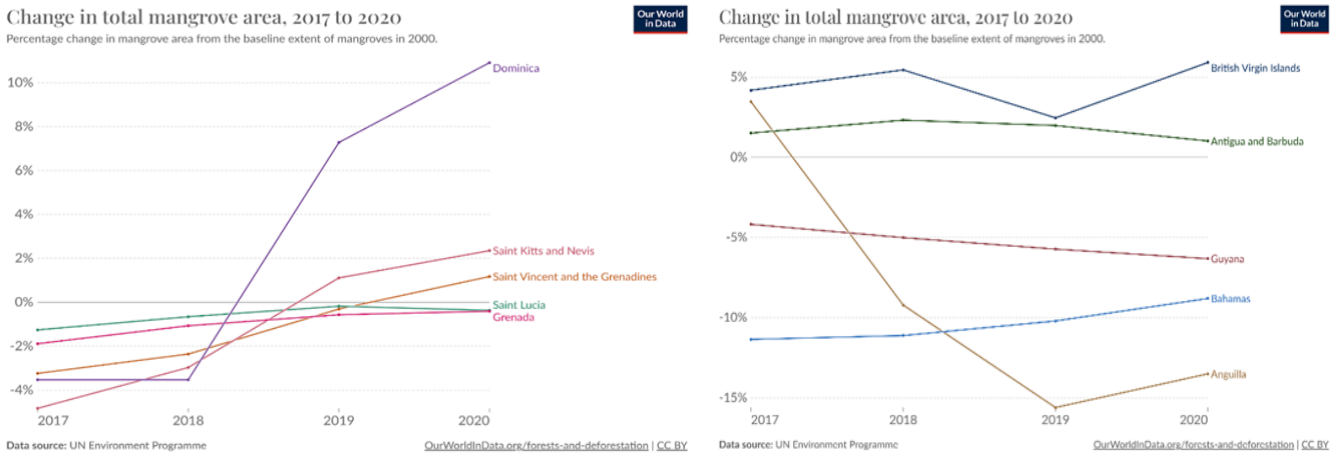

Figure 6. Comparison of mangrove land area of five ECROP member countries with other SIDS countries from 2017-2020
Source: Our World in Data

The graph above indicates that the five countries participating in the ECROP program have notably succeeded in increasing the percentage of mangrove land expansion, in contrast to other Eastern Caribbean countries whose graphs tend to fluctuate. The enhancement of coastal management capacity is also a target of the CROP program to improve coastal management. Therefore, the expansion of mangrove areas serves as evidence that the success of the ECROP program in assisting Eastern Caribbean countries in achieving the blue economy aligns with the sustainable development goals of SDG 14.

Conclusion

A situational review of the success of the ECROP program in five Eastern Caribbean countries, namely Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines, provides an overview of the importance of sustainable development to achieve the concept of the blue economy. The implementation of the blue economy in the Eastern Caribbean has had a number of significant impacts. These impacts can be seen through the control of the sensitivity of the resilience of the blue economy sector to internal shocks such as damage to coastal ecosystems due to human activity or external shocks such as the vulnerability of the Caribbean to climate change. Countries that have adopted the blue economy through the CROP program show a percentage increase in good resolution opportunities, especially in the advancement of the tourism sector.

This study shows the achievement of the five ECROP member countries in developing strategies to improve the tourism sector, starting with the success of the five countries in expanding conservation areas and the utilization of marine resources through environmental campaigns and open education that involve not only policy makers, but also relevant communities. The study then continued by showing data on the success of the ECROP program seen from the percentage increase in revenue in the tourism sector in each country,

which was then concluded with a comparison of the success opportunities with countries that were not involved in the ECROP program.

Overall, this study has proven that: First, the Eastern Caribbean government through the ECROP program has successfully adopted the blue economy as a primary approach in strengthening regional fiscal and financial resilience through sustainable development policies. Second, behind the success of ECROP in increasing economic potential, there are differences in the results of the formation of policies for the development of the blue economy sector between ECROP member countries and other Eastern Caribbean countries.

Countries that do not participate in the ECROP program tend to pay less attention to sustainable development policies for the management of marine ecosystems, in contrast to the five ECROP member countries that strive to maintain the sustainability of marine ecosystems through policy formation such as the expansion of conservation areas which actually opened up new opportunities for the improvement of the blue economy in the tourism sector.

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