Forum: Sustainable Development Commission 2 (SDC2)

**Issue:** Promoting an integrated management approach to the Caribbean

Sea Area

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### Introduction

The Sustainable Development Commission (SDC) was established in order to ensure the effective follow-up of the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit.

Out of the three topics of SDC, the first topic will be discussed throughout this research report. Promoting an integrated management approach to the Caribbean Sea area includes recognizing the interconnectedness of the environmental, social and economic factors. It stresses the importance of collaborative efforts among the nations, stakeholders and communities to address challenges such as overfishing, the impacts of climate change and marine pollution due to tourism. Promoting an integrated management approach to the Caribbean Sea area is crucial due to the fact that numerous people rely on the sustainability of the Caribbean Sea economically.

# **Definition of Key Terms**

### **Sustainability**

Sustainability is the quality of being able to continue over a period of time. From an environmental perspective, it could be defined as the quality of causing little or no damage to the environment and therefore able to continue for a long time. In business, it is the idea that goods and services should be produced in ways that do not use resources that cannot be replaced and that do not damage the environment. An example of a sentence using the word sustainability is 'Many studies have been undertaken to investigate the financial sustainability of traditional pension systems and reform options from the macroeconomic standpoint.'

# **Integrated Management**

Integration is the action or process of combining two or more things in an effective way. This can mean the action or process of successfully joining or mixing with a different group of people, or the process of calculating the integral of a function from a mathematical point of view. An example of a sentence using the word integration is 'Some of the principle roles of taxonomies are to facilitate human understanding, impact structure on an ontology and promote tenable integration.'

Management is the control and organization of something. It could also be the group of people

responsible for controlling and organizing themselves. In business, it means the activity or job of being in charge of a company, organization, department or team of employees. An example of a sentence using the word management is 'Opportunities for reducing the environmental impact of dairy farming managements could be found in a systems approach.'

### Caribbean Sea

The Caribbean Sea is a sea in the North Atlantic Ocean. Under the Gulf of Mexico, it is surrounded by multiple nations including Cuba, Colombia and Venezuela.

### **Fishery**

Fishery is an area of water where fish are caught so they can be sold or the activity itself of growing fish for food or catching fish to sell. From an economic point of view it is the business or industry that is involved in breeding, catching or selling fish. An example of a sentence using the word fishery is 'An optimal fishery management system with logistic fish population growth implies a backward-bending, discounted supply curve for bioeconomic equilibrium sustained yield.'

### Climate change

The term climate change represents the changes in the world's weather, in particular the fact that it is believed to be getting warmer as a result of human activity increasing the level or carbon dioxide in the atmosphere. From the environmental point of view, it signifies the changes in the world's weather, particularly an increase in temperature, thought to be caused by things such as carbon dioxide in the atmosphere. An example of a sentence using the term climate change is 'These figures demonstrate how much additional income a generation would need to offset the effects of both the control and the damage from climate change.'

### **Economic growth**

Economic growth is an increase in the economy of a country or an area, especially of the value of goods and services the country or area produces. An example of a sentence using the term economic growth is 'The aims of this resolution include the acceleration of economic growth, social progress, cultural development among the member states, and the promotion of regional peace.'

#### **Tourism**

Tourism is the business of providing services such as transportation, places to stay, or entertainment for people who are on holiday, in other words, tourists. An example of a sentence using the term tourism is 'Professor Kim suggests that nature-based tourism experiences should be thought of as extraordinary experiences and not as an environmental education tool that promulgates conservation.'

### **Preservation**

Preservation is the act of keeping something the same or of preventing it from being damaged. An example of a sentence using the word preservation is 'Several conditions are formulated that guarantee the preservation of properties like strong normalization and confluence for the systems with the extended reduction relations.'

### **Pollution**

Pollution is damage caused to water, air, and other environments by harmful substances or waste. It could be the act of polluting itself, or the substances that pollute as well. An example of a sentence using the word pollution is 'The implications of restricting use of fertilizer nitrogen for the productivity of arable crops, their profitability and potential pollution by nitrate.'

# **Background Information**

Historically, the Caribbean Sea has faced challenges with overfishing, coral reef degradation, pollution and impacts by climate change. The Caribbean Sea was filled with rich natural resources, while now, it is suffering over the consequences of mistreatment. To retrieve the past ecosystem, attention and management for sustainability is critical in the Caribbean Sea area.

### Nurturing sustainable fisheries management in the Caribbean Sea area

Fish stock and agua sources are crucial for humanity. Over 3 billion people rely on the resources from the ocean and nearly 60 million people are involved in fisheries specifically, identifying concrete evidence that marine life plays a major role in the worldwide industry. Unfortunately, the global community is losing this privilege. Nearly 90% of the marine stocks on our planet are fully exploited, overexploited or excessively used, exemplifying the Tragedy of the Commons. As the majority of the world's fishermen live in developing countries, the Low Income Countries (LIC) around the Caribbean Sea are directly involved, affecting the fisheries and getting affected by their changes. According to such circumstances, providing a sustainable fishery and managing it supportably is pivotal for the Caribbean Sea area. This relates to the 14th Sustainable Development Goal of the United Nations at first hand. However, since fisheries, especially those in coastal or island states, may produce a large amount of a state's GDP, or an economy might be very reliant on the fishing industry, any measures to reduce overfishing and implement regulations may result in significantly damaging the strength and stability of the economy. This also assumes that the majority of fishing industries take place in developing countries, where economics are especially fragile and legislative policy can quickly harm the security of households all around the state. This shows the issue of unsustainable fisheries in the Caribbean Sea is a complex one and deserves careful consideration and evaluation.

### Assessing the impact of climate change on the Caribbean Sea area

Climate change is one of the major global issues. It causes direct harm to the Caribbean Sea area resulting in ocean acidification and decreasing the level of oxygen in the sea. This affects the marine ecosystem in general by collapsing the food chains. This will not only affect the sea creatures but human beings as well. This is not only because human beings benefit substantially from the marine food chain, but also human beings are directly and indirectly involved in the food pyramid.

As one of the most substantial influences, the Earth's surface temperature is now significantly higher and is expected only to skyrocket on and on. This leads to the rise of sea levels, threatening not

only the marine diversity but also the security of the coastal regions. Coral reefs are a good example of a species that is devastated by the ocean temperatures. In addition, the change in rainfall patterns impact the freshwater availability, which determines the agriculture and portable water sources in the region.

Balancing the economic growth gained from tourism with environmental preservation in the Caribbean Sea area

Since the 1800s, human activities for the purpose of economic gain have mainly caused environmental harm by burning fossil fuels such as coal, oil and natural gas. Through the rapid industrialization of once agriculture and handicraft based economics, states were able to increase manufacturing efficiency while employing the urban population. When it comes to the impact of human activities such as the previous example and tourism on the Caribbean Sea and who is to be held responsible for this impact, a conflict between already developed and industrialized states and developing, less industrialized states arises. Many western states have already had the opportunity to expand their economy through industrial development, the U.S and England, with the rest of western Europe in particular, whereas many global south states have only recently gotten the chance to do so, and are still using industrialization as a tool to develop. Therefore, because developing states are more reliant on industrialization, they are more hesitant to give it up and make permanent shifts toward a more clean energy-based economy, which often means it may be less efficient (something developing states cannot afford to be).

From the scope of tourism, the Caribbean Sea area is an attractive region for tourism, possessing stunning landscapes and diverse ecosystems that attract millions of visitors annually. However, the rapid growth of tourism causes a significant challenge: balancing the economic gains with environmental preservation.

Tourism contributes substantially to the economies of Caribbean nations, generating employment and revenue. Nevertheless, unregulated tourism in the Caribbean Sea leads to a detrimental environmental degradation. Issues including overfishing, coral reef damage, pollution from cruise ships, and habitat destruction threaten the region's manifold ecosystems.

Sustainable tourism practices are crucial to maintain a balance. Governments and stakeholders are implementing measures such as marine protected areas, eco-tourism initiatives, and regulations on fishing and waste disposal. These efforts are generated from the aim to mitigate the negative impacts of tourism on the environment while promoting economic growth.

# **Major Countries and Organizations Involved**

### Mexico

Mexico's relationship to promoting an integrated management approach to the Caribbean Sea area is significant due to its geographical location as it shares a coastline along the Caribbean Sea. As

a country with interest in the Caribbean Sea's ecological health and economic success, Mexico actively participates in initiatives aimed at the sustainable management of the Caribbean Sea.

Through collaborations with neighboring countries and international organizations, Mexico contributes to the sustainable management of the Caribbean Sea. Mexico's involvement in the corporations such as Association of Caribbean States(ACS) and the Caribbean Community(CARICOM) eases discussions on policies and strategies for the region's sustainable development.

Mexico's commitment extends to environmental conservation and marine protection. The country implements conservation programs and initiatives within its territorial waters that have implications for the broader Caribbean Sea ecosystem. Mexico's measures such as establishing marine protected areas, promoting sustainable fishing practices, and addressing pollution contribute to the overall goal of integrated management in the Caribbean Sea area.

Additionally, Mexico's engagement in scientific research and data sharing activities provide support to understanding the Caribbean Sea's dynamics. By fostering partnerships and cooperation, Mexico plays a crucial role in promoting an integrated approach that addresses environmental concerns while fostering economic growth and stability across the Caribbean Sea area.

#### Colombia

Colombia's relationship with promoting an integrated management approach to the Caribbean Sea area is from many different aspects and significant. As a nation with a coastline along the Caribbean Sea, Colombia is interested in the sustainable development of the marine ecosystem of the Caribbean Sea.

Colombia actively engages in regional collaborations and initiatives aimed to address the challenges facing the Caribbean Sea. Colombia participates in organizations such as the ACS and the CARICOM, contributing to discussions and agreements that promote an integrated management approach for the Caribbean Sea area.

Through the commitments and efforts to environmental conservation and marine protection, Colombia uses strategies within its territorial waters that have broader implications for the health of the Caribbean Sea. Policies establishing marine protected areas, conservation projects, and sustainable fisheries management are three of the many measures that Colombia uses to preserve the Caribbean Sea area's biodiversity.

Moreover, Colombia's commitment to multilateral agreements, such as the Cartagena Convention, underscores its dedication to the protection and management of the Caribbean Sea's marine resources.

### Venezuela

As a country with both Caribbean and Atlantic coastlines, Venezuela's engagement in promoting an integrated management approach to the Caribbean Sea area is integral as there are challenges and opportunities present in the marine ecosystem of the Caribbean Sea area.

Venezuela is involved in ACS and the CARICOM, contributing to discussions and agreements focused on the management of the Caribbean Sea area. Venezuela also contributes within its territorial waters through marine protected areas and promoting sustainable fisheries. Despite the political and economic challenges, Venezuela continues to be involved in the management of the Caribbean Sea area, and its active contribution is essential.

# **Timeline of Events**

Date (start - end)	Name	Description
March, 27th, 2003	Caribbean Regional Fisheries Mechanism (CRFM) Meetings	The Caribbean Regional Fisheries Mechanism (CRFM) was established in 2003 with its headquarters in Belize City, Belize, after the signing of the "Agreement Establishing the CRFM" in 2002. It operates as an intergovernmental organization dedicated to promoting responsible utilization of the region's fisheries and aquatic resources for the benefit of present and future populations.  The CRFM comprises three key bodies: the Ministerial Council, the Caribbean Fisheries Forum, and the CRFM Secretariat. Its membership includes countries such as Anguilla, Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the Turks and Caicos Islands.  The mission of the CRFM is to facilitate and
		promote sustainable practices in the use of fisheries resources while aiming to generate economic and social benefits for the Caribbean region. This involves collaborative efforts, discussions, and strategic planning among member nations to ensure the long-term viability of fisheries and aquatic resources in the Caribbean.
July, 24th, 1994	Association of Caribbean States (ACS) Summits	The Summit of the Association of Caribbean States (ACS) stands as the organization's paramount gathering, convened periodically at the highest level. It serves as a platform that brings together Heads of State and/or Government, or their High-Level Representatives, encompassing the entire membership spectrum. This includes

		Member States, Associate Members, Founding Observer Organizations, Observer Countries, Social Actors, Observer Organizations, along with Specially Invited Guests from various international and regional entities. The summit serves as a crucial forum for comprehensive discussions, collaborations, and engagements among key stakeholders across the Caribbean region and beyond.
Third Saturday of September	International Coastal Cleanup Day	The International Coastal Cleanup® (ICC) collaborates with global volunteer organizations and individuals to clean up litter from beaches and water bodies worldwide. With the participation of millions of volunteers, the ICC has emerged as a symbol of positive change, motivating and guiding actions to protect our oceans. Over its history, more than 17 million volunteers have gathered and removed over 350 million pounds of trash, highlighting the collective effort and dedication toward preserving our marine environments.
2008	Caribbean Biodiversity Fund (CBF) Meetings	The Caribbean Biodiversity Fund operates three distinct programs targeting different environmental concerns. The Climate Change Program aims to distribute grants to local, national, and regional projects, focusing on Ecosystem-based Adaptation (EbA) to support effective climate change adaptation in the marine and coastal zones of the insular Caribbean. Meanwhile, the Conservation Finance Program concentrates on funding initiatives for biodiversity and natural resource protection, primarily utilizing the Endowment Fund. This fund's proceeds are invested in country-based

		sub accounts managed by National Conservation
		Trust Funds (NCTFs) to oversee national-level
		grant programs. Finally, the Nature-Based
		Economies Program, funded by KfW, centers on
		the Advancing Circular Economy (ACE) Facility.
		This initiative collaborates with public and private
		partners to fund projects that apply circular
		economy principles, aiming to minimize marine
		waste and litter through infrastructure investments,
		data generation, policy support, and consumer
		education in the Caribbean region.
2008	Caribbean Challenge Initiative (CCI) Gatherings	The Caribbean Challenge Initiative (CCI) serves as
		an innovative platform that brings together
		governments, international cooperation agencies,
		and the private sector in voluntary collaboration. Its
		primary goal is to collectively undertake actions
		aimed at conserving and sustainably managing the
		marine and coastal environment of the Caribbean
		region.
-	Scientific Symposia and Research Conferences	The anniversary year centered on celebrating 100 years of research and education from Wageningen University & Research, highlighting their international excellence and achievements. Various events like symposia, workshops, and discussions revolved around the central themes of life, food, and earth. Renowned national and international researchers, alongside their own faculty, engaged in discussions covering diverse Wageningen topics. These exchanges sparked new ideas and critical questions, leading to fresh insights into pressing global challenges like climate issues and food scarcity.

1974	United Nations Environment Programme (UNEP) Caribbean Regional Seas Programme Meetings	The UNEP Regional Seas Programme, established in 1974, stands as UNEP's vital regional mechanism for conserving marine and coastal environments. Operating as an action-oriented program, it executes region-specific initiatives by uniting stakeholders such as governments, scientific communities, and civil societies. These initiatives are governed by Multilateral Environmental Agreements, each holding meetings of the Contracting Parties to oversee their implementation and progress.
2000	Caribbean Environment Forum and Exhibition(CEF)	The CEF series, hosted biennially since 2000 by the Caribbean Environmental Health Institute (CEHI), is a flagship initiative organized by the Caribbean Community (CARICOM). This event focuses on addressing health and environmental issues in the Caribbean region, serving as a vital platform for discussions, collaborations, and initiatives aimed at improving the region's environmental health landscape.
-	The Caribbean Sustainable Energy Forum (CSEF)	The Caribbean Sustainable Energy Forum (CSEF) centers its efforts on enhancing energy efficiency, promoting renewable energy sources, and ensuring energy security specifically tailored for Small Island Developing States (SIDS). This forum addresses crucial energy-related concerns within SIDS, aiming to foster sustainable and resilient energy practices in the Caribbean region.
1995	ReCaribe	Since 1995, Clean Islands International (CII) has been organizing the annual ReCaribe conference, dedicated to addressing waste management

	concerns within the broader Caribbean region. This
	conference serves as a significant platform for
	discussions, exchanges of ideas, and collaborative
	efforts aimed at finding sustainable solutions to
	waste management challenges in the Caribbean.

# **Relevant UN Treaties and Events**

Towards the sustainable development of the Caribbean Sea for present and future generations:
 resolution / adopted by the UN General Assembly 73/229

# **Previous Attempts to solve the Issue**

Efforts to sustainably manage the Caribbean Sea area have been ongoing ever since. As mentioned previously, many nations regarded this issue as an international problem that should be handled from a broader perspective. Countries such as Mexico, Colombia and Venezuela have attempted to solve this issue through contributing and cooperating in organizations including the ACS and the CARICOM. These previous efforts involve collaboration among governments, international organizations, Non - Governmental Organizations, and local communities.

# **Possible Solutions**

### **Nurturing sustainable fisheries management in the Caribbean Sea area:**

Efforts to implement sustainable management of fisheries can be made through legislative policies. This potentially includes marking area closures, banning the fishing of endangered species, and setting forth quotas, among other things. Any act to violate these policies should be met with an appropriate response; warnings and fines. However, if any violations of these policies are to expand into multi-actor crimes, such as the illegal market selling of endangered species, then it is to become an issue of the state, in which the UN may not respond with force or threat and is to respect the sovereignty, territorial integrity and political independence of other States (Article 2 of the UN Charter). Additionally, it should be recognised that with the implementation of quotas comes the risk of destabilizing the incomes of fishery employees, possibly causing significant decreases in income. This may be prevented through a series of subsidies, by which the government can fund through increased prices on exported fish or by simply evaluating the opportunity cost of investing that money elsewhere.

Assessing the impact of climate change on the Caribbean Sea area:

Among other organizations and international projects, COP 28, promises the alleged coordination of states to reduce carbon emissions, therefore regulating global temperatures. COP 28 is widely regarded as a global effort towards sustainable development since it involves state representatives from all over the world. This new attempt can be the key to tackling climate change and its atrocious impacts on the Caribbean Sea area.

As a Conference of the Parties to the United Nations Framework Convention on Climate Change(UNFCCC), COP 28 stands as a pivotal international effort aiming to coordinate and commit states worldwide to significantly reduce carbon emissions. This would impact regulating global temperatures, addressing the escalating threat of climate change. This could also implement crucial measures that would possibly safeguard the Caribbean Sea's marine ecosystems, tackle the environmental degradation and rising sea levels.

# Balancing the economic growth gained from tourism with environmental preservation in the Caribbean Sea area:

By the end of 2022, there were 28.3 million registered tourist visits in the Caribbean, approximately 52.4% more than there were in 2021. Tourism, and all sectors that depend on it, make up around 26% of the GDP and are responsible for 35% of employment in the Caribbean. (International Trade and Integration, UN). Tourism additionally generates demand for local businesses and supports the employment of local labor. However with increasingly unsustainable tourism practices, the surrounding habitats and ecosystems, including coral reefs and jungles, are losing their biodiversity. To combat these ecological threats and preserve the Caribbean environment, while maintaining most economic stability and growth could be educating and raising awareness campaigns.

Education and awareness campaigns play a pivotal role in encouraging responsible tourism. Engaging tourists and local communities in conservation efforts fosters a sense of respect towards the environment, encouraging practices that minimize ecological harm.

Collaboration between governments, local communities, businesses, and environmental organizations is the solution. By developing and enforcing sustainable tourism policies, monitoring tourist activities, and investing in eco-friendly infrastructure, the Caribbean can foster economic growth while safeguarding its invaluable natural resources for future generations.

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