

**CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE**

**Faculty of Tropical AgriSciences**



**Ecotourism for Sustainable Development: A Case  
of the Caribbean Region**

**BACHELOR'S THESIS**

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**Author:** Petr Vejvoda

**Supervisor:** Ing. et Ing. William Nkomoki, Ph.D.

## Declaration

I hereby declare that I have done this thesis entitled **Ecotourism for Sustainable Development: A Case of the Caribbean Region** independently. All texts in this thesis are original, and all the sources have been quoted and acknowledged by means of complete references and according to the Citation rules of the FTA.

In Prague

.....  
Petr Vejvoda

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## **Abstract**

Caribbean region is the most tourism-dependent region in the world. Home of mainly conventional tourism, this thesis investigates the transformative potential of ecotourism in promoting sustainable development across the Caribbean. By integrating environmental conservation principles with the economic imperatives of the tourism industry, this study highlights ecotourism's pivotal role in balancing developmental goals with preserving the region's unique natural and cultural assets. The Caribbean, characterized by its rich biodiversity and heavy reliance on tourism, confronts significant challenges such as environmental degradation and socio-economic disparities, often exacerbated by conventional tourism practices.

Employing a case-study approach, this research focuses on several ecotourism initiatives in Saint Kitts and Nevis, and Dominica, examining how these activities contribute to sustainable economic growth while fostering environmental stewardship and cultural integrity. Data was gathered through comprehensive literature reviews, detailed policy analysis, and direct field observations, providing an in-depth exploration of the region's historical dependence on tourism and its recent shift towards more sustainable practices.

The findings reveal that ecotourism significantly enhances environmental awareness and conservation efforts and stimulates local economies by creating employment opportunities and supporting indigenous businesses. Despite these benefits, the thesis identifies critical challenges, such as the need for more robust policy frameworks, enhanced community engagement, and sustainable infrastructure development to support the expanding ecotourism sector.

The thesis argues that ecotourism offers a viable strategy for achieving sustainable development in the Caribbean by aligning tourism activities with environmental conservation and social welfare objectives. Recommendations are made for policymakers, stakeholders, and community leaders to harness the full potential of ecotourism while addressing its inherent challenges.

**Key words:** ecotourism, conservation, natural resources, development, Caribbean



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## **List of the abbreviations used in the thesis**

BGN – Botanical Gardens of Nevis

CARIFORUM – The Caribbean Forum

CBT – Community-Based Tourism

CRRP – Climate Resilience and Recovery Plan

FAO – Food and Agriculture Organization

GDP – Gross Domestic Product

NRDS – National Resilience Development Plan

SBTO – Sustainable Boat Tour Operators

SKN – Saint Kitts and Nevis

SME – Small and Medium Enterprise

SWOT – Strength, Weakness, Opportunity, Threats

TDC – Tourism Development Company

TT – Trinidad and Tobago

TTTIC – Trinidad and Tobago Tourism Industry Certification

UWI – University of West Indies

VPN – Vanilla Paradise Nevis

# 1. Introduction

Ecotourism, a progressive and fascinating field, has emerged as a leading force in guiding regions towards sustainable development, creating a synergy between environmental protection, socio-economic advancement, and cultural preservation. The focal point of this thesis, "Ecotourism for Sustainable Development: A Case of the Caribbean Region," delves into the transformative power of ecotourism, examining how it can effectively harmonise the lucrative allure of tourism with the imperatives of nature conservation and cultural integrity.

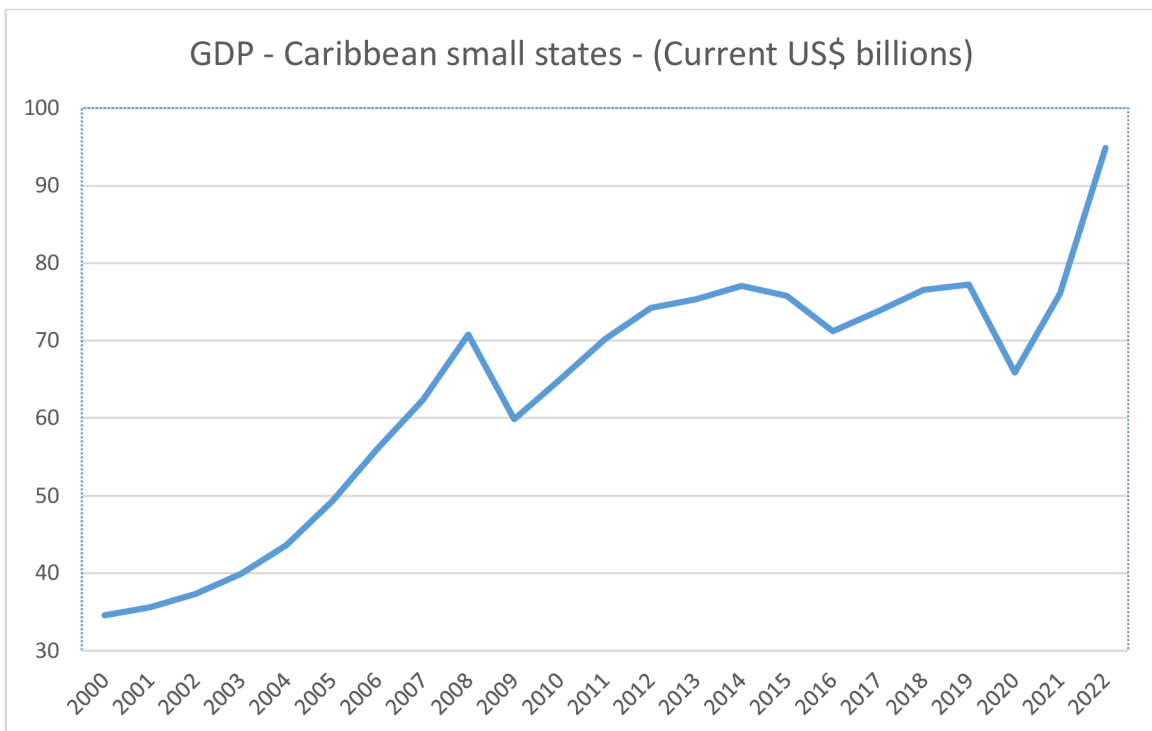
The Caribbean, with its rich tapestry of biodiversity, vibrant cultures, and stunning natural beauty, has captured the hearts of travellers worldwide. The region has long been a prime destination - the Caribbean, consistently identified as the world's most tourism-dependent region, sees substantial contributions from its tourism sector to national economies. This contribution varies between 8% to 40% of the gross domestic product (GDP) across 13 Caribbean small island countries<sup>1</sup> (Laframboise et al. 2014). However, the journey towards ecotourism is one of aspiration and necessity, seeking a balance between economic prosperity and preserving the unique environmental and cultural landscapes. In this context, the principles and practices of ecotourism, as explored in "The Encyclopaedia of Ecotourism" (Weaver 2003), become crucial. Tourism is vital to the Caribbean's economy, driving GDP – which nearly tripled between the year 2000 and 2022 (Figure 1), and job creation across the region (Figure 2) (World Bank 2022). However, the conventional tourism model has been a double-edged sword, bringing prosperity but exacerbating socio-economic disparities and placing undue pressure on the natural environment. This has underscored the need to transition towards more sustainable, ethical travel practices.

The shift towards ecotourism in the Caribbean opens a plethora of opportunities. According to The International Ecotourism Society, ecotourism is now defined as “responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education” (The International Ecotourism Society 2015b).

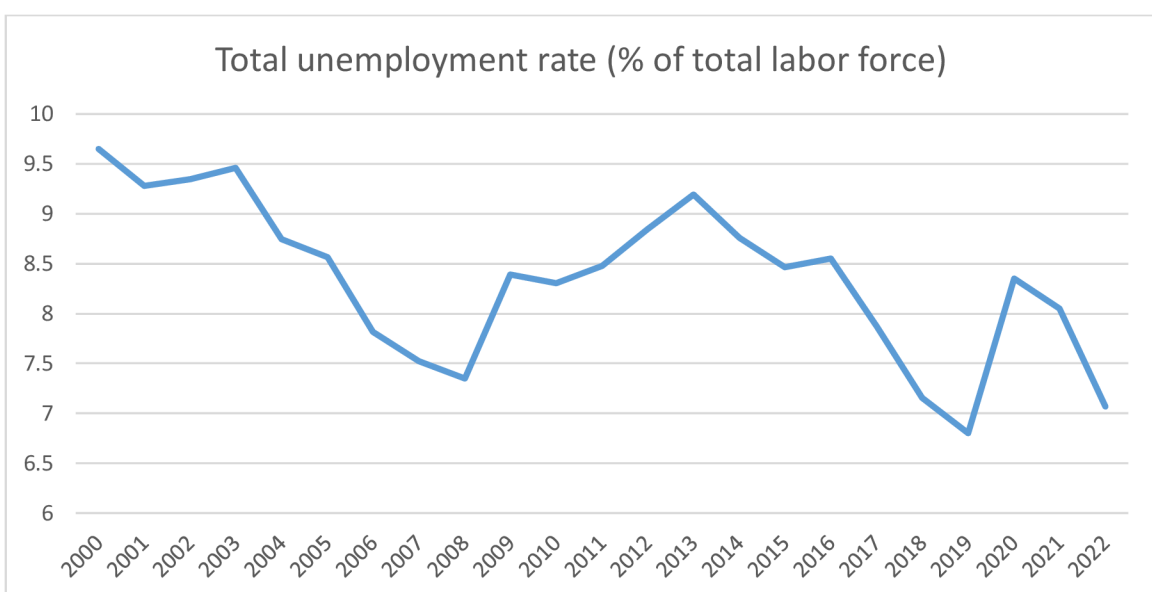
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<sup>1</sup> Caribbean Small Island Countries – Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, Trinidad and Tobago (World Bank 2024)

This position of ecotourism as a powerful catalyst for sustainable development aligns with the United Nations' Sustainable Development Goals, particularly in eradicating poverty, promoting sustainable economic growth, and protecting our planet's ecosystems(United Nations General Assembly 2018).



**Figure 1 GDP in Caribbean Small States, Current USD (World Bank)**



**Figure 2 Unemployment in Small Caribbean States, Current USD (WorldBank)**

In the heart of this narrative lies the Botanical Gardens of Nevis, a vibrant epitome of community engagement, education, and conservation. These Gardens preserve the diverse flora and fauna of the Caribbean and contribute to community welfare and knowledge. On the island of Nevis also lies the Vanilla Paradise Nevis – a vanilla farm that opened a few years back and aims to promote ecotourism properly while growing local vanilla and teaching tourists and locals how to use it. Together, they provide employment, instil a sense of collective responsibility towards nature, and serve as an educational hub, enlightening locals and visitors on the importance of biodiversity and sustainable living practices.

The Island of Dominica, on the other hand, has very little conventional tourism and aims to be the one ecotourism destination in the Caribbean region; it is on a good path. Dominica is known for its natural and lush forests, which are accompanied by huge mountains and volcanos. Together, those things make Dominica a paradise for responsible travelling.

This thesis navigates the socio-economic and environmental facets of ecotourism in the Caribbean, particularly emphasising Saint Kitts, Nevis and Dominica. Through an extensive literature analysis, policy reviews, and first-hand experiences, this work offers a holistic view of ecotourism's potential and challenges in the Caribbean region, contributing valuable insights to the global discourse on sustainable tourism.

## **2. Literature Review**

### **2.1. Tracing the Caribbean's Evolution: An Introduction to History and Tourism.**

#### **2.1.1. The Early History of the Caribbean - A Legacy of Encounters**

The Caribbean, a vibrant region scattered across the Americas, boasts a rich tapestry of history intricately woven with encounters, resilience, and cultural exchange. Its turquoise waters and diverse island chains became a stage for some of the most significant chapters in human history.

### 2.1.2. Pre-Columbian Encounters

Long before European arrival, the Caribbean was home to thriving indigenous societies (Rogoziński 1994). The Taíno, skilled farmers and potters, inhabited the Greater Antilles and Bahamas, while the Island Caribs, known for their seafaring skills, resided in the Lesser Antilles (Crosby 2003). These communities, estimated to number in the millions, developed unique cultures, social structures, and spiritual beliefs adapted to their island environments (Knight 1978).

### 2.1.3. European Arrival and Colonization:

Christopher Columbus's landfall in 1492 marked a turning point in the region's history (Rogoziński 1994). Soon after, European powers, primarily Spain, France, England, and the Netherlands, arrived, drawn by the Caribbean's strategic location and potential wealth (Trouillot 1995). This period witnessed the exploitation of resources, including the establishment of large-scale plantations, often fuelled by the forced labour of millions of Africans brought through the transatlantic slave trade (Figure 3) (Drescher 1987)(Williams 1944).



Figure 3 Sugar Mill in French West Indies, 17th Century

Source: <https://new.millsarchive.org/2022/02/21/sugar-mills-and-slavery-by-stuart-m-nisbet/>

#### **2.1.4. Demographic Shifts and Cultural Exchange and a Legacy of Transformation:**

The arrival of Europeans had a devastating impact on the indigenous population (Rogoziński 1994). Diseases like smallpox and influenza, inadvertently introduced by explorers, decimated indigenous communities (Crosby 2003). Warfare and displacement also contributed to their decline (Knight 1978). The forced migration of Africans through the slave trade significantly altered the region's demographics, giving rise to multiracial societies with diverse cultural influences (Mintz & Price 1992). While the narrative of colonisation is marked by hardship and exploitation, it is crucial to acknowledge the resilience and artistic contributions of all communities in the Caribbean. The region's rich heritage reflects the legacy of encounters and exchange, evident in languages, religions, and cultural practices that continue to evolve today (Brereton 1981).

#### **2.1.5. The Rise of Nationalism and Independence Movements:**

Following centuries of colonial rule, the 20<sup>th</sup> century saw a surge of nationalist movements throughout the Caribbean (Brereton 1981). Inspired by global movements for freedom and self-governance, Caribbean people challenged colonial dominance and advocated political and economic autonomy (Trouillot 1995). During this period, they witnessed various independence movements shaped by each island's unique historical and cultural context (Knight 1978).

#### **2.1.6. The Long Road to Liberation:**

The path towards independence varied across the Caribbean (Crosby 2003). Some countries, like Barbados and Jamaica, negotiated peaceful transitions with their colonial powers (Rogoziński 1994). Others, like Haiti, fought for liberation through revolutionary struggles, culminating in establishing the first Black republic in the world following the Haitian Revolution (1791-1804) (Drescher 1987). Regardless of the approach, the pursuit of independence reflected a collective desire for self-determination and the opportunity to chart the course for the Caribbean's future.

### **2.1.7. The Enduring Legacy of Independence:**

While gaining independence marked a significant milestone, the Caribbean nations continue navigating the complexities of their governance and development as they forge their place in the global community (Mintz & Price 1992). The shadows of the colonial past are still present, influencing economic structures, social dynamics, and the relationship with external powers. However, the spirit of resilience, cultural richness, and a collective desire for a brighter future continue to propel the Caribbean nations forward.

### **2.1.8. Conclusion and Transition to Modern Tourism**

As we delve deeper into the Caribbean's tourist tapestry, we must grasp the historical intricacies that have impacted its evolution. By understanding the region's evolution from its indigenous roots to its current role as a worldwide tourism hotspot, we obtain significant insights into the complexity of Caribbean civilisation and its past and present interconnectivity.

Today, the tourism industry is a pillar of the Caribbean economy, serving as both a result of and a response to historical developments. The lush landscapes, gorgeous beaches, tropical climate and lively cultures that once enticed adventurers and the elite are attracting millions of visitors worldwide today, drawn by the Caribbean's famed hospitality and natural beauty (López 2023).

This inflow of tourists has shifted the region's direction, providing unparalleled prospects for economic growth but simultaneously posing considerable obstacles. Tourism has become vital to the Caribbean's identity and economy, fuelling job creation, infrastructure development, and cultural interaction. On the other hand, the Caribbean region is the most tourism-dependent region in the world. Eight out of ten countries reliant on tourism in 2019 were located in the Caribbean region (World Travel & Tourism Council 2022).

## **2.2. Exploring the Diverse Landscape of the Caribbean**

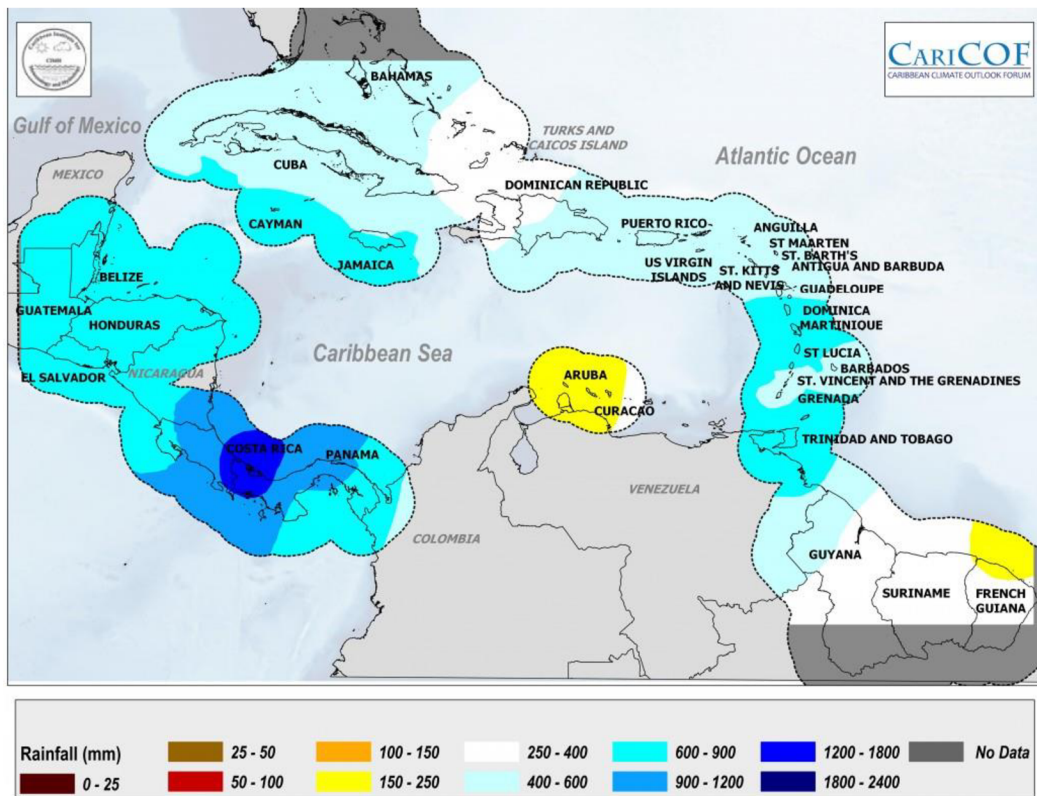
When we gaze at the insular Caribbean, we find a sprawling array of over 700 islands, primarily forged from volcanic and coral origins. These islands create a stretch of archipelagos in a north-eastern direction, effectively demarcating the Caribbean Sea from the Atlantic Ocean. These groupings include the Lucayan Archipelago (comprising the Bahamas and Turks and Caicos, though notably, these do not border the Caribbean Sea), the vast Greater Antilles to the north (consisting of countries like Cuba, Jamaica, Cayman Islands, Puerto Rico (US) and the island of Hispaniola) and the Lesser Antilles, inclusive of the Leeward Antilles (Antigua and Barbuda, Anguilla, US Virgin Islands, British Virgin Islands, Saint Kitts and Nevis and Guadeloupe (FR)) and the Windward Islands (Dominica, Grenada, Martinique (FR), Saint Lucia, St. Vincent and the Grenadines) to the southeast (Fink & Fairbridge 1975). Together, these form what is sometimes referred to as the West Indies Figure 5

Primarily situated atop the Caribbean Plate, the region is a hotbed of tectonic activity, given its intersection with several prominent lithospheric plates such as the North American, South American, Cocos, and Nazca plates (Wessels 2019). This leads to notable volcanic activity and frequent seismic events, vividly depicting the region's dynamic geological landscape (LACGEO 2023).



### 2.2.1. Climatic Challenges of the Caribbean

Moving from the geological to the climatic, the Caribbean's location near the equator gifts it a tropical climate with consistently warm temperatures throughout the year, complemented by substantial rainfall. Rainfall varies from 25 cm annually on the island of Bonaire off the coast of Venezuela up to 300 cm annually on the island of Dominica (Figure 4). Given its location, Caribbean islands have to go through annual hurricane seasons from June to November on most islands (NOAA 2023). In the other half of the year, the so-called “Dry season” comes. The dry season generally occurs between December and March (Moraes et al. 2022). Drought can be incredibly challenging for Caribbean islands because they are uniquely susceptible to sudden droughts which can occur. “Despite often receiving daily rainfall, island ecosystems are particularly vulnerable to drought conditions” (Ramseyer & Miller 2023).



**Figure 4 Caribbean Rainfall Map (August 2015)**

Source: <https://rcc.cimh.edu.bb/caribbean-climatology/>



**Figure 5 Political Map of the Caribbean**

*Source: <https://www.nationsonline.org/oneworld/map/Caribbean-political-map.htm>*

Looking into the geopolitical aspects, the Caribbean is a complex mixture of regions, territories under foreign administration, and independent countries. Despite the array of cultural backgrounds, languages, traditions, and socioeconomic conditions, what binds them is their shared geographic location in the Caribbean Sea and their historical experiences under colonial rule.

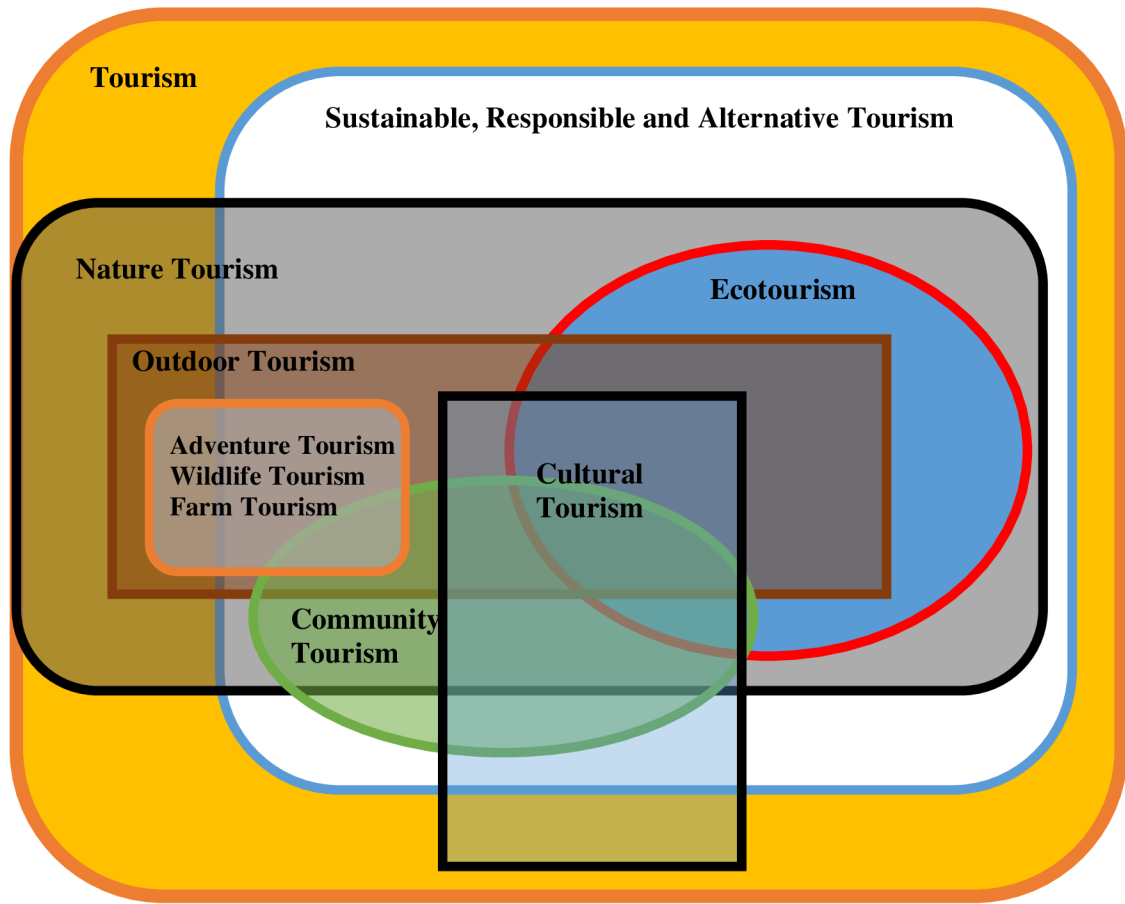
Focusing specifically on the "Small Island Caribbean", which pertains to the Lesser Antilles, we find a compact yet richly diverse collection of islands spreading across approximately 14,000 km<sup>2</sup>. These islands are notable for their relatively small land areas, most of which have been shaped by volcanic activity, resulting in distinctive topographies and natural wealth (Merriam-Webster 1997).

Home to around 4 million residents, this region comprises eight independent nations and fourteen territories under external governance. There has been an indication of a growing emphasis on sustainable practices and eco-tourism development, leveraging the area's unique biodiversity and cultural heritage to foster economic growth while preserving its pristine environments (Granvorka & Strobl 2013).

### **2.3. Tourism vs. Ecotourism**

The dynamics between conventional tourism and ecotourism reveal a spectrum of impacts, benefits, and challenges, necessitating a nuanced analysis to distinguish their respective roles in modern society. On the one hand, conventional tourism is often critiqued for its potential to precipitate environmental degradation and cultural erosion, primarily due to the influx of visitors and associated infrastructural developments (Andrew 2016). Conversely, it is a significant economic driver, contributing to job creation and revenue generation in numerous global locales (Sharpley et al. 2015). Ecotourism emerges as a counterpoint, rooted in principles of sustainability and conservation, aiming to minimise tourism's negative footprint while maximising local community benefits (Buckley 2009). While proponents of ecotourism underscore its potential to foster environmental stewardship and socio-economic benefits for indigenous populations (Weaver & Lawton 2007), critics highlight the challenges of practical implementation and the risk of greenwashing, wherein businesses superficially adopt ecotourism labels without substantial adherence to sustainable practices (Blamey 2001). This dialectic indicates a complex landscape, necessitating rigorous evaluation and strategic planning to harness tourism's potential benefits while mitigating its pitfalls.

Because certain ecotourism features overlap with those of other tourism categories, Figure 6 illustrates the framework for examining ecotourism in the CARIFORUM nations. The diagram illustrates ecotourism's inclusion within nature tourism and its classification among sustainable, responsible, and alternative tourism forms. Regarding attractions and activities, it illustrates potential intersections with outdoor tourism, particularly adventure, wildlife, and agritourism (Wilson et al. 2014).



**Figure 6 Ecotourism and Its Relationship with Related Tourism Types**

Source: Wilson et al. 2014

### **2.3.1. The Importance of Tourism in the Caribbean Region**

Tourism is a cornerstone of economic development in the Caribbean, offering a vital source of revenue, job creation, and business opportunities. Statistics from 2019 underscore the significance of the tourism sector, revealing that it contributed a substantial 13.90% to the region's GDP while employing over 15% of the workforce (World Travel & Tourism Council 2022). Notably, from 2010 to 2019, the Caribbean tourism industry exhibited a moderate average annual growth rate of 3%, outpacing the region's economic growth but falling short of the global tourism industry's average.

The dependence on tourism is particularly pronounced in certain nations, with Antigua and Barbuda leading the way, with tourism contributing an impressive 83.30 % to its national GDP. Aruba and St. Lucia are closely behind, with contributions of 67.90 % and 59.80 %, respectively, underscoring tourism's pivotal role in these economies.

**Table 1 - Total Travel & Tourism Contribution to GDP in 2019 (in USD bn, 2021 prices & exchange rates)**

<b>Economic Rank</b>	<b>Country</b>	<b>2019 T&amp;T GDP (in billions)</b>
1.	Dominican Republic	14.39
2.	Cuba	12.16
3.	Puerto Rico	5.99
4.	Bahamas	5.82
5.	Jamaica	4.59
6.	Aruba	2.29
7.	Trinidad and Tobago	1.99
8.	Barbados	1.63
9.	Antigua and Barbuda	1.45
10.	St. Lucia	1.36
11.	US Virgin Islands	1.28
12.	Bermuda	1.28
13.	Cayman Islands	1.23
14.	Haiti	1.08
15.	Guadeloupe	1.02
16.	Curaçao	0.83
17.	Martinique	0.81
18.	British Virgin Islands	0.61
19.	Grenada	0.54
20.	St. Kitts and Nevis	0.49
21.	Saint Vincent and the Grenadines	0.34
22.	Anguilla	0.18
23.	Dominica	0.16

Source: WTTC (2022)

In 2019, the Dominican Republic was the region's most significant travel and tourism sector, contributing USD 14.4 billion. As seen in Table 1, Cuba came in second with a donation of almost USD 12.2 billion, followed by Puerto Rico with USD 6 billion. Notably, Puerto Rico had the region's fastest growth rate of 21%, fuelled by ongoing recovery efforts after the destruction inflicted by Hurricanes Irma and Maria in 2017, as seen in Table 2. This growth was driven by a 96% increase in Travel & Tourism capital investment in 2018.

**Table 2 - Travel & Tourism GDP growth 2019 (%)**

<b>Economy Rank</b>	<b>Country</b>	<b>2019 T&amp;T GDP Growth</b>
1	<b>Puerto Rico</b>	21.0%
2	<b>Dominica</b>	17.3%
3	<b>Anguilla</b>	14.3%
4	<b>Jamaica</b>	12.1%
5	<b>Antigua and Barbuda</b>	11.0%
6	<b>St Lucia</b>	8.4%
7	<b>British Virgin Islands</b>	7.7%
8	<b>Curaçao</b>	7.1%
9	<b>Barbados</b>	6.7%
10	<b>Cayman Islands</b>	6.2%
11	<b>Bahamas</b>	6.1%
12	<b>St Vincent and the Grenadines</b>	5.4%
13	<b>Martinique</b>	5.2%
14	<b>Bermuda</b>	2.7%
15	<b>Guadeloupe</b>	2.6%
16	<b>St Kitts and Nevis</b>	2.1%
17	<b>US Virgin Islands</b>	2.0%
18	<b>Haiti</b>	1.9%
19	<b>Dominican Republic</b>	1.8%
20	<b>Grenada</b>	0.7%
21	<b>Aruba</b>	-0.7%
22	<b>Cuba</b>	-1.7%
23	<b>Trinidad and Tobago</b>	-2.2%

Source: WTTC (2022)

Furthermore, the resilience and growth of the tourism sector in the Caribbean were evident in 2019. Countries like Dominica saw a remarkable increase of 43.60 %, with Anguilla following closely at 19 %. Other nations, including St Kitts and Nevis, Puerto Rico, Barbados, St Vincent and the Grenadines, also demonstrated strong performances, recording growth rates ranging from 9 % to 14.60 %. This expansion underscores the tourism sector's ability to bounce back from crises and effectively distribute regional benefits (World Travel & Tourism Council 2020).

Although the intricate relationship between tourism and its surrounding environment, social dynamics, and economic frameworks, encompassing employment opportunities and governance structures, is only sometimes fully appreciated by the public, its significance remains undeniable. Sustaining the long-term viability of tourism destinations across these multifaceted elements is paramount for the industry's continued success (Maggio 2020).

### **2.3.2. The Devastating Impact of COVID-19**

However, the sudden onslaught of the COVID-19 pandemic laid bare the vulnerabilities within the Caribbean tourism sector. Between April and June 2020, the period witnessed a profound standstill in the travel and tourism business, characterised by empty hotels, deserted attractions, and grounded airlines (Indar et al. 2022). This unprecedented disruption underscored the region's heavy reliance on tourism, emphasising the imperative of diversification and long-term growth. The pandemic's toll on tourist arrivals was staggering, with a 65.50% decline observed in 2020 compared to the previous year, plummeting from 32.0 million visits to just over 11 million (ECLAC 2020). Although this decline was less severe than the global average, it profoundly impacted the region's economy.

Additionally, the industry's primary revenue source, visitor spending, experienced a substantial decrease due to the sector's crucial role in the regional economy; the decline in Travel & Tourism had a ripple effect on the overall economy. In 2020, the Caribbean witnessed the most rapid economic contraction globally, with a GDP shrinkage rate of 8.90%, underscoring the severity of the situation (World Travel & Tourism Council 2022).

For example, in Saint Kitts and Nevis, the impact of Covid-19 was extreme. Tourism-related industries, including condo/villa development, hotel and restaurant operations, retail trade of souvenirs and luxury products, and tour and taxi services, contribute considerably to St. Kitts and Nevis' GDP. Estimated tourism spending exceeded \$500 million in 2018 and 2019, excluding the economic impact of overseas students in the country.

**Table 3 Total Visitors by Sea and Air, Saint Kitts and Nevis**

<b>Year</b>	<b>2018</b>	<b>2019</b>	<b>% Change</b>	<b>2019</b>	<b>2020</b>	<b>% Change</b>
<b>Visitor Arrivals by Air</b>	128,579	124,241	<b>-3%</b>	124,241	30,865	<b>-75%</b>
<b>Visitor Arrivals by Sea</b>	1,147,918	982,817	<b>-14%</b>	982,817	270,749	<b>-72%</b>
<b>Visitor Arrivals by Air and Sea</b>	1,276,497	1,107,058	<b>-13%</b>	1,107,058	301,614	<b>-73%</b>

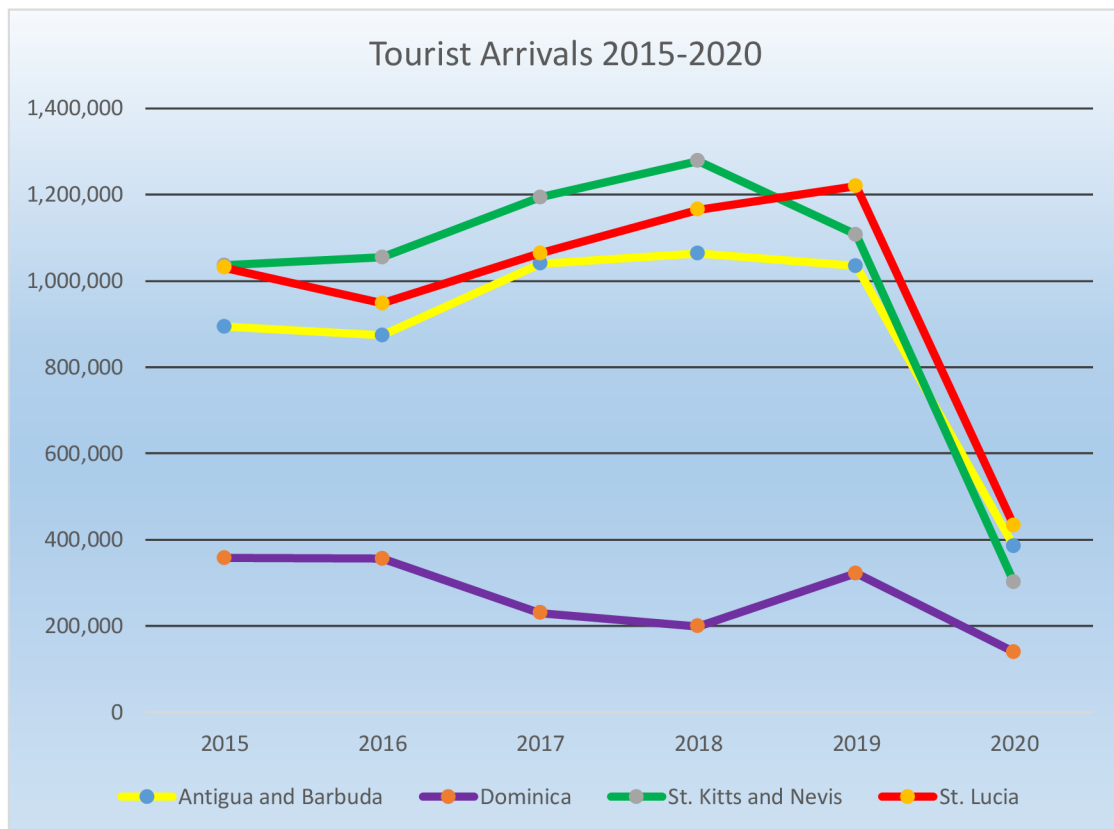
Source: Ministry of Sustainable Development Saint Kitts and Nevis, 2019

These figures are closely related to visitor arrival statistics, which showed a modest 3% decline in air arrivals from 128,579 in 2018 to 124,241 in 2019, followed by a significant 75% decrease in 2020 to 30,865 due to the onset of the COVID-19 pandemic, which resulted in the cessation of regular passenger flights in March and the partial reopening of the border in October (Ministry of Sustainable Development 2019).



The pandemic also harmed maritime arrivals (Pallis 2020), with cruise ship and yacht passenger arrivals falling 14% in 2019 to 982,817 and 72% in 2020 to 270,749 when passenger cruises were halted in April (St.Kitts&Nevis Observer 2020). Overall, the pandemic resulted in a 73% decrease in total air and sea tourist arrivals to 301,614, marking recorded history's most significant substantial negative impact on tourism.

These numbers are similar in the region. The neighbouring countries of SKN – Antigua and Barbuda, Dominica and Saint Lucia have almost identical statistical data for tourist arrivals, see graph in Figure 7.



**Figure 7 Total Tourist Arrivals 2015-2020 (World Bank, 2024)**

St. Kitts and Nevis, St. Lucia and Antigua and Barbuda had a similar number of arriving tourists in 2015-2019. This is primarily due to their rich and extensive tourism sector, which appoints them as vacation destinations heavily relying on mass tourism. On the other hand, Dominica's tourism sector is smaller and more focused on sustainable tourism and ecotourism, with trips to nature and hiking as significant activities. This explains the smaller numbers (Siegler 2023). Additionally, in 2017, Dominica was hit by Hurricane Maria, which damaged 95% of Dominica's housing stock and 225% of the nation's GDP (ECLAC United Nations 2022).

### **2.3.3. Uneven Development and Challenges**

The adverse effects of the pandemic aggravated existing disparities in the region. While tourism has been a boon for some Caribbean nations, others have needed help to harness its benefits effectively. Garraway's (2008) research highlights stark poverty disparities within the region, with countries like Haiti and Suriname grappling with poverty rates nearing 65% and 63%, respectively, between 1996 and 2002. Similarly, nations such as Belize, Dominica, Grenada, Guyana, St. Kitts and Nevis, and St. Vincent and the Grenadines faced poverty rates ranging between 30% and 40%, underscoring the urgent need for inclusive development strategies. Meanwhile, Jamaica, St. Lucia, Trinidad and Tobago, and the Turks and Caicos Islands experienced poverty rates ranging from 20% to 29% during this period (Garraway 2008).

The plight of marginalised communities, particularly indigenous groups residing away from major tourist hubs, further underscores the importance of equitable development. For instance, studies on Mayan communities in Belize reveal alarmingly high rates of child mortality, illiteracy, and malnutrition compared to national averages, highlighting the pressing need for targeted interventions. As Duffy (2002) mentioned in her paper, "Most Mayan people experience social, political and economic marginalisation and even exclusion". This issue could be solved by the money flow from tourism to contribute to local communities and improve their living conditions.

Sustainable and community-based tourism (CBT) offers promising ways to address these challenges, ensuring that tourism revenue fosters local development and contributes to broader regional prosperity.

Fluctuating travel regulations, consumer confidence concerns, and the emergence of new virus variants have posed formidable challenges to the industry's resurgence. However, amidst these challenges lie innovation, resilience, and collaboration opportunities. Sustainable tourism entails increasing the number of tourists visiting a particular country or generating income and better serving the broader development goals of local communities, regions, and nations (Guo et al. 2019).

By embracing sustainable practices, fostering community engagement, and leveraging technology, the Caribbean tourism sector can navigate these turbulent waters and emerge more robust and resilient. Sustainable tourism can serve as an advertisement to help this heavily wounded region. Implementing sustainable practices may require upfront investments in energy efficiency or renewable energy sources. However, these can lead to long-term cost savings through reduced energy and water consumption, waste generation, and operational efficiencies (Willard 2021). Additionally, sustainable tourism can attract eco-conscious travellers, a growing market segment willing to pay a premium for responsible travel experiences (Euromonitor International, 2023 de Araújo et al. 2022).

In conclusion, the COVID-19 pandemic has cast a harsh light on the vulnerabilities of the Caribbean tourism industry while underscoring its indispensable role in regional development. As the region charts its course towards recovery, it must prioritise diversification, inclusivity, and sustainability to build a more resilient and equitable tourism ecosystem. By fostering partnerships, harnessing local resources, and empowering communities, the Caribbean can weather the current crisis and emerge as a beacon of sustainable tourism excellence on the global stage.

#### **2.3.4. The Ecotourism Product**

The multidimensional ecotourism product combines tourism components with unique activities and ideologies. Any tourism product may be classified into two types: the total tourism product (which includes all of the elements consumed by a visitor during a visit) and the individual tourism elements (or combinations of these elements) consumed by a visitor (Koutoulas 2015). Individual components include (i) transportation to and from the destination country; (ii) lodging and catering; (iii) excursions (attractions, activities, and facilities); (iv) ground transportation; (v) entertainment; (vi) souvenirs; and (vii) other connected items and services (Wilson et al. 2014).

Similarly, ecotourism can be viewed as a general tourist product or as individual aspects (or combinations of elements, as in tour packages).

However, the emphasis is on the trip component of the ecotourism offering, which can be broken down into attractions, activities, and facilities. Ecotourism attractions are either natural or cultural (Satrya et al., 2023).

Natural attractions include forests, mountains, beaches, lakes, and caves. Cultural attractions include festivals, cultural villages, museums, cuisine, and food. Excursions fall into four categories: leisure, recreational, sightseeing, and instructive. Typical ecotourism excursion activities include animal viewing, bird watching, hiking, exploring, trekking, kayaking, and diving (Wilson et al., 2014; Satrya et al., 2023).

### **2.3.5. Using Ecotourism to Promote Sustainable Development**

In response to the challenges faced by many Caribbean nations, a promising avenue for sustainable development has emerged: **Ecotourism**.

This approach advocates for responsible travel to natural areas, emphasising environmental preservation, support for local communities, and educational opportunities (The International Ecotourism Society 2015a). Moreover, ecotourism presents a viable means of generating stable income by showcasing the Caribbean's natural wonders and pristine landscapes, benefiting companies, communities, countries, and the ecotourism industry.

According to Buckley (2012), ecotourism holds significant potential for promoting sustainability and community involvement while also playing a crucial role in preserving natural and cultural heritage. It represents a concept aimed at fostering an alternative mode of development that prioritises the conservation of natural environments while promoting social and economic diversification. This focus on sustainability is particularly crucial in economically marginalised communities, including those classified as underprivileged, indigenous, or rural.

With its abundant biodiversity and rich cultural heritage, the Caribbean region is exceptionally well-suited for ecotourism initiatives. By integrating ecotourism into the tourism offerings, we can enhance resilience, promote sustainable practices, and mitigate the financial impacts of global crises. Additionally, Scheyvens (2002) and Honey Martha (2008) underscore the role of ecotourism in community development and equitable benefit distribution, highlighting its potential to empower local communities and foster inclusive growth. Community-based tourism (CBT) can be part of ecotourism and vice-versa.

When considering the critical traits of sustainable community-based tourism, we find significant overlap with ecotourism principles. These shared characteristics by George (2020) include:

1. **Environmental Responsibility:** Ensuring that tourism operations do not degrade the natural environment is critical. Instead, they should enhance the experiences of both visitors and residents while adhering to sustainable principles.
2. **Social and Economic Benefits:** Sustainable tourism projects should have a positive social and economic impact on the community, minimising negative consequences associated with tourism activities.
3. **Community Harmony:** Sustainable tourism should respect and safeguard the local community's interests, meeting the needs of tourists without jeopardising the community's overall well-being.
4. **Sustainability and Marketability:** Successful projects balance sustainability objectives and market appeal, satisfying tourists' needs while following environmental and social sustainability guidelines.
5. **Ownership and Governance:** Transparent and equitable governance structures are essential for sustainable tourism initiatives, regardless of ownership structure.
6. **Performance Evaluation:** Effective management mechanisms must regularly assess project performance, focusing on the initiative's sustainability surplus.
7. **Long-Term Perspective:** Sustainable tourism initiatives prioritise long-term sustainability over immediate financial gain, influencing business decisions over time.
8. **Ecological Monitoring:** Constant monitoring is necessary to proactively track and address ecological changes, reducing adverse environmental effects.
9. **Education and Awareness:** Sustainable tourism programs prioritise educating tourists and local community members about sustainable activities and employing scientific behaviour modification techniques to promote sustainable attitudes and behaviours.

Maggio (2020) suggests that while occasionally used interchangeably, ecotourism and sustainable tourism are travel experiences that the Community-Based Tourism model encompasses.

Overall, ecotourism and sustainable community-based tourism share similar goals and principles, making them complementary approaches to promoting responsible travel and fostering sustainable development in the Caribbean region.

Considering the specific challenges and opportunities within the Caribbean region, a market analysis of the ecotourism industry in CARIFORUM<sup>2</sup> was conducted, encompassing both demand and supply aspects (

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<sup>2</sup> CARIFORUM, which stands for the Caribbean Forum, is composed of fifteen nations in the Caribbean region: Antigua and Barbuda, the Bahamas, Barbados, Belize, Dominica, the Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Saint Kitts and Nevis, Suriname, and Trinidad and Tobago.

Table 4).

This analysis was complemented by a needs assessment at regional and country levels, employing the SWOT methodology to identify strengths, weaknesses, opportunities, and threats. Notably, the SWOT analysis for ecotourism overlapped with that of the broader tourism industry due to their close relationship (Wilson et al. 2014).

Specific SWOT analyses were conducted for the ecotourism industry in four selected CARIFORUM countries, revealing common strengths such as natural attractions and established protected areas (e.g. Table 4, Table 5 and Table 6). However, weaknesses included fragmented development approaches and limited financing options for entrepreneurs. Opportunities identified encompassed incentives for investors, particularly SMEs, and the development of comprehensive ecotourism product strategies. Conversely, threats included potential environmental degradation and competition from other ecotourism destinations.

Following the SWOT analysis, a competitive assessment was conducted across the three countries based on indicators such as ecotourism product offering, prices, distribution, and industry organisation. This comprehensive approach aimed to inform strategic decision-making and foster sustainable development in the ecotourism sector within the Caribbean region (Wilson et al. 2014)

**Table 4 - SWOT Analysis for the CARIFORUM Tourism Industry**

Category	Description
<p><b>Strengths</b></p>	<p>CARIFORUM boasts stunning natural beauty and cultural richness, with a well-developed tourism sector backed by regional organizations. A variety of lodging options cater to different budgets, and the region's location near North America and historical links to Europe create accessibility and potential for a wider tourist base.</p>
<p><b>Weaknesses</b></p>	<p>Travel challenges exist due to limited airlift and underdeveloped infrastructure in certain areas (e.g. in Dominica, (Cedric J. Van Meerbeeck et al. 2021)). Accommodation limitations in some destinations hinder expansion. Safety concerns arise due to rising crime rates. Revenue leakage from tourism reduces investment opportunities, and small businesses face difficulties securing financing.</p>
<p><b>Opportunities</b></p>	<p>Emerging Asian markets present exciting opportunities. The industry can diversify by developing new tourism experiences like adventure, cultural, and eco-tourism. Digital marketing offers a powerful tool for promotion and sales. A unified CARIFORUM tourism brand can strengthen market presence. Multi-destination travel packages can be created to combine visits to multiple countries. Encouraging local and regional travel fosters market diversification. Upgrading the tourism value chain enhances the visitor experience. A thriving tourism industry can have a positive ripple effect on other sectors of the economy.</p>
<p><b>Threats</b></p>	<p>The industry is susceptible to economic fluctuations and rising fuel prices. Price competition from other destinations exists. Travel taxes can act as a deterrent. Overdependence on the North American market creates vulnerability. Nearby Central and South American destinations pose competition. Seasonality limits revenue opportunities. Sustainable tourism practices are crucial to address environmental and cultural impacts.</p>

Source: (Wilson et al. 2014)



**Table 5 - SWOT Analysis for Ecotourism Industry in The Bahamas**

Category	Description
<b>Strengths</b>	<ul style="list-style-type: none"> <li>- Abundant natural attractions, including coral reefs, marine life, and diverse ecosystems.</li> <li>- Presence of established protected areas and the Bahamas Natural Trust (BNT) for conservation management.</li> <li>- Formal public and private sector tourism bodies support the well-developed tourism industry.</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>- Perception of mainstream tourism as dominant, potentially conflicting with ecotourism expectations.</li> <li>- Fragmented ecotourism efforts with minimal coordination within the Ministry of Tourism.</li> <li>- Heavy reliance on the North American tourist market, posing vulnerability to market fluctuations.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>- Incentives for ecotourism investors mainly focus on developing ecotourism in the Out-Islands.</li> <li>- Diversification of ecotourism markets, including targeting European tourists.</li> <li>- Potential for sustainable development through ecotourism, aligning with global trends towards responsible travel.</li> </ul>
<b>Threats</b>	<ul style="list-style-type: none"> <li>- Central American destinations' proximity, seen as more natural ecotourism alternatives, potentially diverts tourists.</li> <li>- Overreliance on the North American market, making the industry vulnerable to economic changes.</li> <li>- Conflict between mainstream tourism developments in the Out-Islands and ecotourism principles, risking environmental degradation and visitor dissatisfaction.</li> </ul>

Source: (Wilson et al. 2014)

**Table 6 - SWOT Analysis for Ecotourism Industry in Trinidad and Tobago**

Category	Description
<b>Strengths</b>	<ul style="list-style-type: none"> <li>- Abundant natural attractions</li> <li>- Well-established network of protected areas, including forests, sanctuaries, and wetlands</li> <li>- Twin-island nation provides two distinct ecotourism destinations.</li> <li>- Emphasis on quality through initiatives like the TDC's Tourism Quality Cluster, along with programs such as TTTIC<sup>3</sup>, EarthCheck<sup>4</sup>, and Blue Flag<sup>5</sup>.</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>- The disjointed sector needs a cohesive ecotourism narrative.</li> <li>- Limited financing options for the ecotourism sector.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>- Broadening of TDC's quality initiatives to encompass ecotourism accreditation.</li> <li>- Encouragements for entrepreneurs venturing into ecotourism.</li> <li>- Regional tour operators diversify ecotourism offerings to encompass Product Types 2 and 3<sup>6</sup>.</li> </ul>
<b>Threats</b>	<ul style="list-style-type: none"> <li>- The degradation of natural assets, notably in the Northern Range, is exacerbated by urban sprawl, inadequate farming methods, and unregulated quarrying.</li> <li>- The closeness to South American spots could be seen as competing ecotourism venues.</li> <li>- The rise in visitor numbers could potentially harm and transform natural sites, causing physical degradation.</li> </ul>

Source: (Wilson et al. 2014)

<sup>3</sup> Trinidad and Tobago Tourism Industry Certification

<sup>4</sup> Scientific benchmarking certification in sustainable travel and tourism industry

<sup>5</sup> Internationally recognized award given to beaches, marinas and sustainable boat tour operators (SBTO) that meet strict criteria covering environmental education, water quality, environmental management, and safety and services - <https://green-tt.org/blue-flag-tt/>.

<sup>6</sup> Individual components of ecotourism product include (i) transportation to and from the destination country; (ii) lodging and catering; (iii) excursions (attractions, activities, and facilities); (iv) ground transportation; (v) entertainment; (vi) souvenirs; and (vii) other connected items and services (Wilson et al. 2014).

### 3. Case study of Saint Kitts and Nevis, West Indies

#### 3.1. Introduction



Figure 9 Flag of Saint Kitts and Nevis



Figure 8 Map of Saint Kitts and Nevis

Source: Macedonian Boy & Carport (2012)

Saint Kitts and Nevis, officially called the Federation of Saint Christopher and Nevis is a small island country in the Caribbean Sea. It's part of the Leeward Islands in the Lesser Antilles and holds the title of the smallest independent nation in the Western Hemisphere regarding both size and population. Made up of two main islands, Saint Kitts and Nevis, along with some smaller ones, the country covers about 261 square kilometres altogether (CIA World Factbook 2024a).

The history of Saint Kitts and Nevis is colourful and goes back to ancient times when indigenous peoples lived on the islands long before Europeans arrived. Christopher Columbus is credited with discovering the islands during his second trip to the Americas in 1493, which marked the beginning of European influence. After Columbus, the islands became battlegrounds for European powers like Britain and France, leading to periods of colonisation.

The climate on the islands is typically tropical, with warm temperatures year-round, high humidity, and distinct rainy and dry seasons. The dry season usually lasts from January to April, while the rainy season goes from May to December, with the hurricane season peaking from June to November (Mills & Momsen 2024).

Saint Kitts and Nevis face economic challenges despite its natural beauty and cultural significance. The country heavily relies on income from tourism and struggles with issues like environmental damage, climate change risks, and limited natural resources. Saint Kitts and Nevis boast stunning natural landscapes, including lush rainforests, volcanic peaks, and beautiful beaches, making it a popular destination for eco-tourism and outdoor activities. The islands are home to diverse plant and animal species found nowhere else. (Mills & Momsen 2024)

Economically, Saint Kitts and Nevis have historically depended on agriculture, especially growing sugarcane, but tourism has become increasingly important in recent years. Visitors come from all over the world to enjoy the country's luxurious resorts, historic sites, and natural beauty (Williams et al. 2022),

In conclusion, Saint Kitts and Nevis offer a mix of rich history, breathtaking scenery, and unique culture. Despite economic and environmental challenges, the country remains a top Caribbean destination, providing travellers with unforgettable experiences in its idyllic setting.

### **3.2. Tourism industry in Saint Kitts and Nevis**

The tourism industry has not always been the primary source of income for the St. Kitts and Nevis Federation. The dominant sector in the country's revenue was agriculture, mainly sugarcane cultivation and processing. The sugarcane industry has more than 300 years of history in the country (Mills & Momsen 2024). After the sugar industry shut down in St. Kitts and Nevis in 2005, the government has struggled to make its agriculture strong enough to feed its people and boost the economy.

Sugar cane farming could not be maintained because prices on the global market kept dropping, and the special deals they used to sell to Europe dried up. This made it too expensive for the government to keep supporting the industry.

Food imports have been steadily rising, reaching a staggering \$76 million in 2017, which is 80% of what the nation needs to eat. This problem has been made worse by

climatic disasters and other challenges, like the recent COVID-19 pandemic. The pandemic disrupted food supplies and demand, hurting poor people in cities and rural areas. The government wants to fix these issues and restore a thriving agricultural sector. To achieve this, they asked the FAO for help creating an Agricultural Transformation and Growth Strategy (Williams et al. 2022) to guide the country towards a more productive, competitive, sustainable, and resilient food system over the next decade.

**Table 7 - The SWOT Analysis for Ecotourism Industry in St. Kitts and Nevis**

<b>Category</b>	<b>Description</b>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>- Abundance of natural attractions, including the St. Mary's Biosphere Reserve or Botanical Gardens of Nevis.</li> <li>- Dual-island nation offering two distinct ecotourism destinations.</li> <li>- Collaborative partnerships with renowned international conservation groups like CORAL Reef Alliance and EarthEcho.</li> <li>- Emphasis on sustainable tourism practices that align with global conservation efforts.</li> <li>- Availability of trained personnel through educational institutions like UWI<sup>7</sup> and Clarence Fitzroy Bryant College.</li> </ul>
<b>Weaknesses</b>	<ul style="list-style-type: none"> <li>- Discrepancy between advertised ecotourism positions on official platforms and the national tourism policy needs to be clarified.</li> <li>- Ecotourism products promoted tend to focus more on nature, adventure, and outdoor tourism, potentially overlooking specific ecotourism aspects.</li> </ul>
<b>Opportunities</b>	<ul style="list-style-type: none"> <li>- Potential collaboration with neighbouring OECS countries like Dominica, known for its robust ecotourism initiatives, to offer multi-destination ecotourism packages.</li> <li>- Development of a comprehensive ecotourism product strategy to diversify offerings and attract a broader range of ecotourists.</li> </ul>
<b>Threats</b>	<ul style="list-style-type: none"> <li>- Limited external recognition of ecotourism potential, particularly in niche areas like bird-watching activities.</li> <li>- Risk of environmental degradation and alteration of natural areas due to the physical impact of increased visitor volumes.</li> </ul>

Source: (Wilson et al. 2014)

<sup>7</sup> University of West Indies

In addition to agricultural revitalisation efforts, ecotourism development emerges as a promising avenue for economic diversification and resilience. Ecotourism, with its emphasis on responsible travel to natural areas, not only contributes to environmental preservation but also provides opportunities for local communities and educational initiatives (The International Ecotourism Society 2015b).

By leveraging the rich biodiversity and natural attractions of St. Kitts and Nevis, ecotourism can generate sustainable income streams while showcasing the country's unique landscapes and cultural heritage. Aligning with the broader goals outlined in the Agricultural Transformation and Growth Strategy, promoting ecotourism initiatives can drive economic growth, foster resilience, and enhance sustainability in the Federation.

### **3.3. A Case Study of the Botanical Gardens of Nevis, St. Kitts and Nevis**

Located on Nevis's island and one of my first major contributors to this paper - the Botanical Gardens of Nevis (BGN). The gardens are located on the southern part of the island, approximately 15min by car from the capital city of Nevis – Charlestown. BGN are part of the Montpelier estates and covers an area of almost 8 acres (Fodor's Travel 2024). The gardens are one notable illustration of the Caribbean's potential for ecotourism. Opened in 1998, the Botanical Gardens of Nevis introduces visitors to the glories of nature in a tropical paradise (Douglas Enterprises 2024a). Situated amidst the Montpelier Estate and offering panoramic views of Mount Nevis, these botanical gardens are a distinguished repository of tropical flora within the Caribbean. Upon entering, visitors are greeted by a grand avenue flanked by stately Royal Palms (*Roystonea regia*), guiding them into a meticulously crafted landscape. This carefully designed environment harmoniously integrates with the land's natural contours, presenting an immersive scene of botanical marvels. Bromeliads and orchids are the most important flowers in the gardens and can be seen literally at every step. Some notable trees in the BGN include the Flamboyant Tree (*Delonix Regia*) which is a St. Kitts and Nevis national tree and produces pods filled with seeds called *shack-shacks*, which can be used as a musical instrument; the India Rubber Tree (*Ficus Elastica*) and, of course, a Mango Tree – it is said that there are 44 different kinds of mangoes. This is also why every year in July,

there is a Mango Festival on the island, promoting the connection of the fruit to the island and serving as a tourist attraction during the off-season (Nevis Pages 2023).

Among the lush surroundings, visitors encounter serene water lily ponds and dolphin fountains contrasted with terraced gardens showcasing a kaleidoscope of orchids, bromeliads, ferns and over 100 palm species (Kent 2017).

Furthermore, the gardens offer diverse fruit trees, roses, cacti, and luxuriant vines, enriching the botanical tapestry with their vibrant presence (Douglas Enterprises 2024b). The gardens saw significant development between 2015 and 2020, drawing more visitors and earning money from ticket sales.

The on-site Oasis Restaurant in the Great House in the middle of the BGN (Figure 10), well-known for its Asian and Thai cuisine and use of fresh local ingredients from the gardens, was a great success and attracted many tourists. However, the COVID-19 pandemic resulted in a precipitous drop in tourism, highlighting the need for sustainable practices and the vulnerability of economies reliant on tourism.



**Figure 10 Oasis Restaurant in the Nevisian Great House**

Source: Petr Vejvoda 2023

### **3.3.1. Problematic year for the Botanical Gardens of Nevis**

From 2008 to 2020, The Botanical Gardens of Nevis evolved as a leading Caribbean ecotourism attraction, attracting people from all over the world with its lush, eight-acre expanse of rich tropical flora and also appearing as one of “The 50 Most Beautiful Places in the World” (Johnson 2020). The BGN played a critical role in fostering biodiversity and environmental education for tourists and locals (Douglas Enterprises 2024c).

The gardens became a beacon of eco-conscious exploration, providing an immersive experience that educated visitors on the necessity of protecting biodiversity and creating a deeper relationship with nature (Sharma 2023). The Botanical Gardens of Nevis demonstrated how, when maintained properly, tourism can benefit both local economies and environmental conservation efforts.

The COVID-19 pandemic, on the other hand, posed significant challenges to the worldwide tourism industry, and BGN was not immune. Visitor numbers fell due to travel restrictions and health concerns (World Bank 2020), threatening the gardens' financial stability and capacity to contribute to conservation programmes (as seen in Figure 7).

The Oasis Restaurant, known for its Asian cuisine emphasising Thai dishes, was one of the pandemic's victims. The restaurant, located within the gardens, complemented the ecotourism experience by providing a taste of foreign tastes amidst the natural beauty of the grounds. The shutdown of Oasis Restaurant constituted a revenue loss and a failure to offer a comprehensive ecotourism experience. As the world recovers and tourism recovers, The Botanical Gardens of Nevis has the vital task of restoring and rethinking its role in sustainable tourism. The shutdown of the Oasis Restaurant serves as a sharp reminder of the vulnerability of ecotourism-dependent enterprises, emphasising the importance of resilience, creativity, and a sustained commitment to sustainable practices.



### 3.4. Case study of Vanilla Paradise Farm, Nevis

Located on the west side of Nevis Island, on the Hamilton Estate near an old sugar mill plantation, lies the Vanilla Paradise Nevis (VPN), a vanilla farm established in 2022. The farm was established by nature lover Gina Empson, who was driven by an entrepreneurial spirit and a background in chartered accounting. Gina, a seasoned professional with experience in the United Kingdom and Switzerland, decided to pursue her passion for botany. Recognising the potential of the picturesque island of Nevis for cultivating vanilla, Gina embarked on a new venture in 2022, establishing Vanilla Paradise in Nevis Ltd, an organic vanilla farm focused on sustainability. Following the Nevis Island administration's grant of a Business and Occupation License in early 2023, Gina began the meticulous process of growing premium quality vanilla (Vanilla Paradise Nevis 2023a).



**Figure 11 Vanilla plantation in Vanilla Paradise Nevis**

Source: Petr Vejvoda 2024

*"Cultivating vanilla is a labour-intensive endeavour, requiring meticulous care and attention, especially during hand-pollination—a crucial step in the process,"* says Gina (2024). Despite the challenges, Gina's dedication bore fruit with an early sample harvest in February 2023, signalling a significant milestone for Vanilla Paradise Farm.

The farm's production capacity is expanding by planting thousands of vanilla orchids, aiming to position Nevis as a prominent player in the global vanilla production landscape. This aim was also supported by local government, specifically the Premier of Nevis, Hon. Mark Brantley.

*"As Nevis seeks to diversify the local economy and stimulate growth in the agricultural sector, some interesting developments are happening. One investor is growing vanilla, which we hope to become an export crop,"* said the Premier on the social network X (Mark Brantley 2023).

VPN is an organic farm. Therefore, the management of the farm follows strict rules applied by the owner. When creating the plantation, the weeds were taken out by hand, and no pesticides or herbicides were used in the whole process (Empson 2023). For further weed prevention, a collaboration with another local Nevisian business was established – a local coconut water stand that supplies the VPN with coconut husks used for weeds prevention and mulch. Vanilla orchids grow in mulch, not in the soil, and the fibre-rich husks are perfect for the plant's root system. They are cut in half and brought to the farm, where they dry in the sun; then, three layers of the coconut husks are used in a row grid, as seen in Figure 11. There are currently three plant houses; for each plant house 19, 000 coconut husks are needed. The reusing of the coconut husk by VPN is a perfect example of sustainable agriculture – if not used by the farm, the husks would end up in municipal waste, where they would be burned, affecting the local environment (Vanilla Paradise Nevis 2023b).

### **3.4.1. Vanilla Paradise Nevis as Ecotourism Project**

One of the main aims of VPN is to provide insight to tourists and locals and become ecotourism destinations on the island of Nevis and in the Caribbean region. Nowadays, the VPN offers tours of the farm led by the owner or one of the local employees. The tour occurs every Tuesday between 10 am and 12 pm (Vanilla Paradise Nevis 2024). Since the project started so recently, the tour now only takes 2 hours, but Mrs Empson mentioned in the interview that more specific types of tours and self-guiding tours would be coming once the farm grows bigger. The location of the farm and its proximity to the historic Hamilton Estate's sugar factory can offer excellent development opportunities.

The owner, Gina Empson, chose the location on the Hamilton Estate and has a future development plan for the property, using it as a museum, educational spot, gift shop, and snack bar.

The Hamilton Estate, located on the lower slope of Mt. Nevis to the east of Charlestown's capital, is named after a prestigious Scottish Hamilton family branch. *“Dating back to the middle 17th century, it included more than 580 acres and up to 1951 was one of the largest and most successful sugar plantations”*, as seen in Figure 12. William Hamilton first developed the property in the early 18th century, when the sugar industry peaked. In 1750, William had a visit from his relative James Hamilton, who would eventually become the father of Alexander Hamilton, born in 1757. Despite Alexander Hamilton's brief upbringing on the island, Nevisians today value and take pride in their status as the birthplace of this American leader (Meniketti 2016).



**Figure 12 Nevis Heritage Trail Sign at Hamilton Estate, Nevis**

Combining the perfect location on the Hamilton Estate and an organic, ecological vanilla farm, we get an ideal ecotourism location that would educate locals in sustainable agriculture on the island, provide employment for local communities and help the environment on the island with its organic practices and regulation of biological waste. Last but not least, it would educate and entertain tourists coming to this beautiful island while promoting its rich history and importance while generating income, which would be used for expanding the Vanilla Farm, restoration of the Hamilton Estate and promoting Nevis as an ecotourism destination.

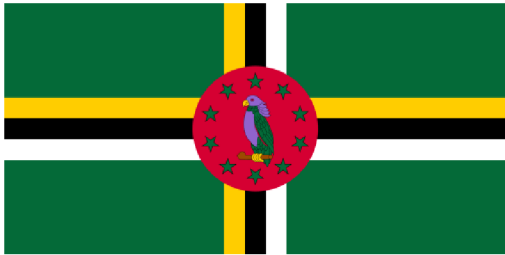


**Figure 13 Ruins of sugar mill at Hamilton Estate**

Source: Petr Vejvoda (2024)

**3.5. Case study of Dominica**

**3.5.1. Introduction**



**Figure 15 Flag of Dominica**

Source: <https://www.hiclipart.com/free-transparent->



**Figure 14 Map of Dominica**

Source: University of Texas, <https://maps.lib.utexas.edu/maps/americas.html>

Dominica, officially known as the Commonwealth of Dominica, is an enchanting island nation nestled in the heart of the Caribbean Sea. Dominica stands out in the Lesser Antilles within the Windward Islands as a gem of natural beauty and cultural richness. Covering approximately 750 square kilometres, it is renowned as one of the largest islands in the Eastern Caribbean (CIA World Factbook 2024b).

The history of Dominica is deeply rooted in its indigenous heritage, with the island originally inhabited by indigenous peoples long before the arrival of European explorers. It was not until Christopher Columbus's voyages in the late 15th century that the island was "discovered" by Europeans, setting off a period of colonial conquests and conflicts among European powers like Britain and France (Momsen & Niddrie 2024).

Dominica boasts a tropical climate with warm temperatures year-round, abundant rainfall, and lush vegetation. The island experiences distinct wet and dry seasons, with the wet season typically spanning from June to November, coinciding with the peak of the hurricane season (Dominica Meteorological Service 2024).

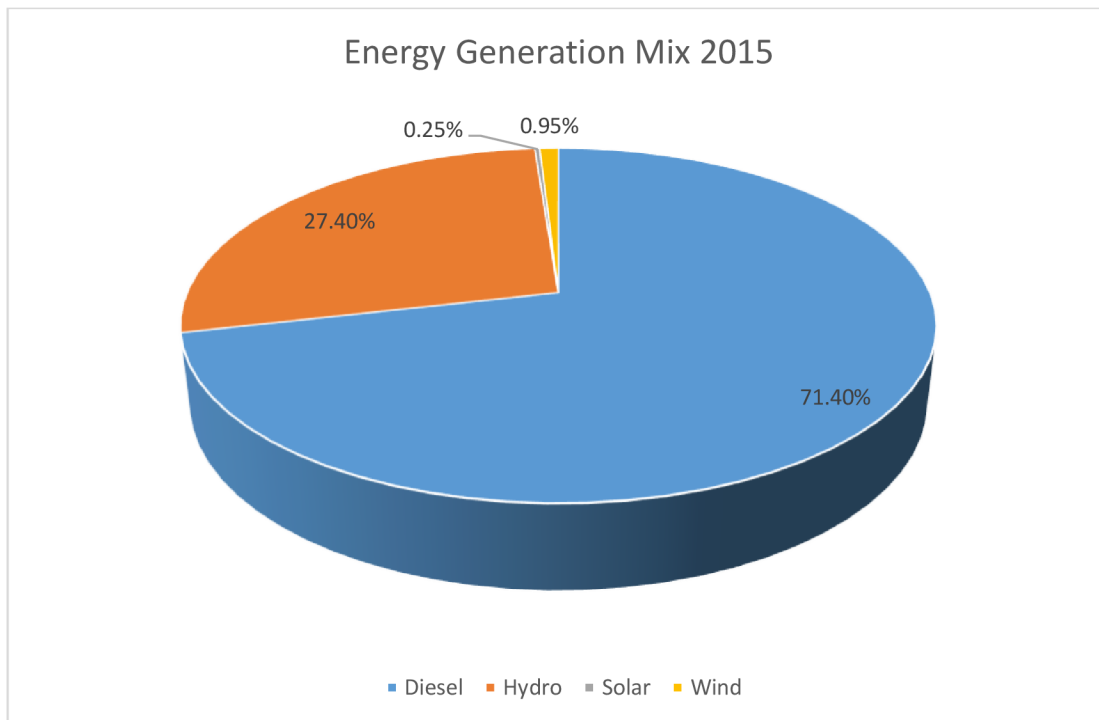
Dominica's landscape is a testament to its unparalleled beauty, featuring verdant rainforests, majestic waterfalls, and a pristine coastline. With a staggering 365 rivers and a motto “*A river for every day of the year*”, Dominica's abundant water resources play a pivotal role in shaping local life and ecosystems (Procházková 2012). Interestingly, other Caribbean countries consider Dominica as an alternative source of water supply during times of scarcity (DOWASCO et al. 2011).

### **3.5.2. Dominica’s Sustainability and Future Ecological Goals**

This abundance of water has diverse applications, from supporting industries such as bottled water manufacturing, agriculture, and tourism to powering hydropower generation (Joseph 2023) and meeting household consumption needs. Recognising its strategic position, the Dominican government has positioned itself to export water, further enhancing its economic potential (Dominica News Online 2018).

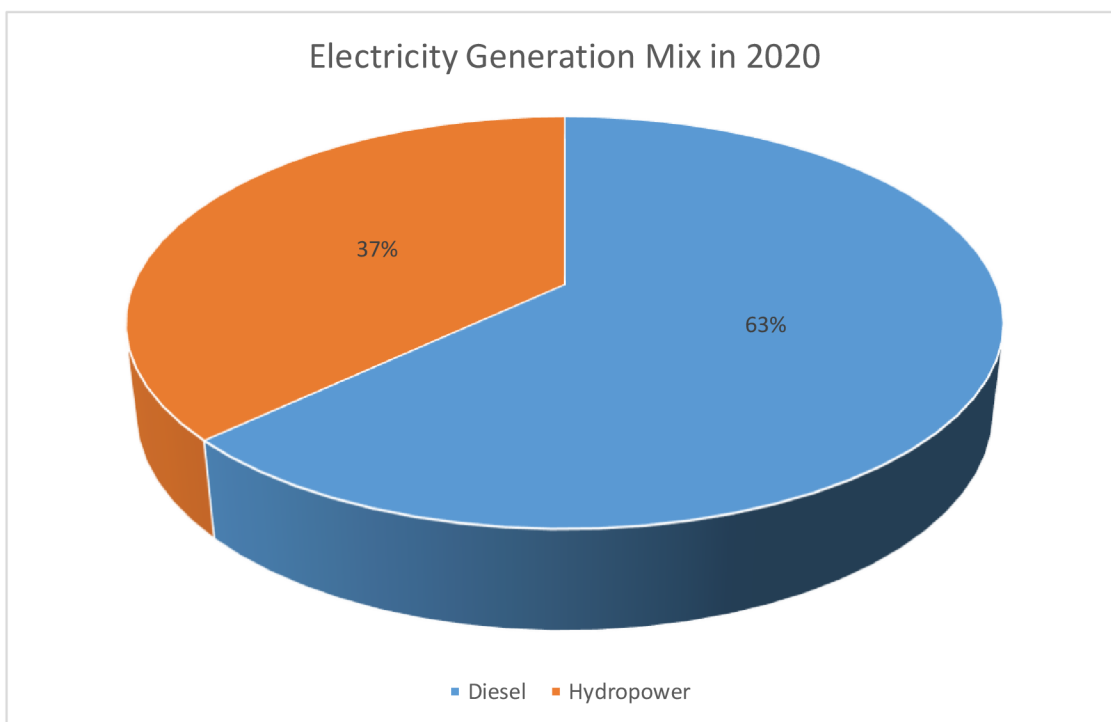
Furthermore, discussions about Dominica's water supply's long-term relevance for the region highlight its potential for economic growth, particularly in climate change and drought.

Dominica's commitment to becoming carbon neutral by 2030 relies heavily on its abundant water resources. Hydropower, fuelled by its numerous rivers, is a significant player in achieving this goal (Climate Resilience Executing Agency of Dominica 2020). Statistics show that the energy generation from diesel generators in 2015 (Figure 16) accounted for 71.40%, compared to the year 2020, accounting for 63%. In 2015, renewable hydro energy accounted for 27.40%; in 2020, it was 37% (Figure 17), marking a rise in renewable energy production and progress towards the nation's goal (National Renewable Energy Laboratory 2020).



**Figure 16 Dominica's Electricity Generation in 2015**

Source: <https://www.nrel.gov/docs/fy15osti/62704.pdf>



**Figure 17 Dominica's Electricity Generation in 2020**

Source: <https://www.energy.gov/eere/articles/dominica-island-energy-snapshot-2020>



### 3.5.3. Ecotourism in Dominica

Beyond its natural resources, Dominica is a haven for ecotourism enthusiasts and outdoor adventurers, offering diverse activities such as hiking, diving, and birdwatching. The island's rich biodiversity, including endemic species found nowhere else, makes it a prime ecotourism destination, drawing visitors seeking sustainable and immersive travel experiences (Government of the Commonwealth of Dominica, 2023). The island's commitment to preserving its natural heritage is evident in its extensive network of national parks, marine reserves, and protected areas, as seen in Figure 18 (Ministry of Environment 2013).

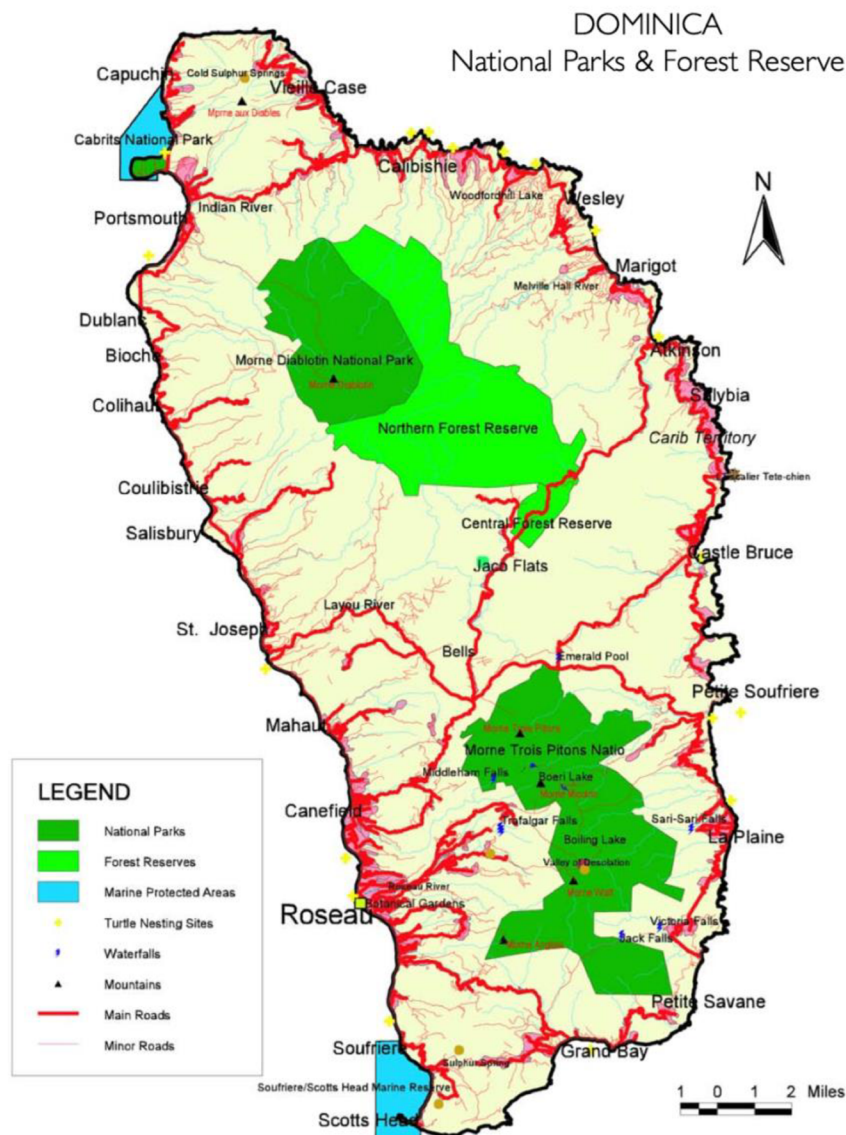


Figure 18 Map of Dominica's Protected Areas

Source: <https://www.cbd.int/doc/world/dm/dm-nbsap-01-en.pdf>

While historically reliant on agriculture, particularly banana cultivation (Ministry of Agriculture Dominica 1996), Dominica has increasingly embraced sustainable tourism as a vital economic development tool. Following the devastation wrought by Hurricane Maria in 2018, Dominica launched the National Resilience Development Strategy 2030 (NRDS). This strategy provides a comprehensive framework for leading the country's recovery efforts. The NRDS emphasises the significance of prioritising people-centred development and outlines 43 resilience objectives (Climate Resilience Executing Agency of Dominica 2020). These objectives are intended to address many aspects of resilience, including climate-resilient systems, prudent catastrophe risk management, and effective disaster response and recovery. The Climate Resilience and Recovery Plan (CRRP), a crucial component of the NRDS, is built on three pillars: climate resilient systems, prudent disaster risk management systems, and effective disaster response and recovery (World Bank & Baron, 2023).

The CRRP expands on these foundations by identifying six essential areas for improving climate resilience in Dominica. These categories include building solid communities, growing a robust economy, creating well-planned and long-lasting infrastructure, promoting increased collective consciousness, improving institutional structures, and maintaining and using natural and other distinctive assets.

The support of resilient tourism is one of the concepts in the “Robust Economy” section of the CRRP. It mainly aims to help Dominica’s economy, and the delivery time is 2030. This concept aims to show that the tourism sector is vulnerable to climate change and extreme weather conditions, resulting in low incoming tourists and thus lowering the nation’s GDP. The number of tourists can drop by more than 20% after a significant natural disaster (like Hurricane Maria in 2017) and lower the nation’s GDP by at least 5% (Mu et al.,2023). Another concept in the CRRP suggests turning the local library into a “Museum-Hurricane Experience”, a repository of Dominica’s hurricane experience and resilience journey serving as a regional "hub" for climate-related data to educate visitors (particularly Dominican children) about data on climate change scenarios. The experience would demonstrate the impact of climate change using modern technologies to visitors and show what is Dominica doing to prevent it. (Climate Resilience Executing Agency of Dominica 2020).

### 3.5.4. Notable Ecotourism Places and Activities in Dominica

Nevertheless, Dominica is already promoting its ecotourism activities and serves as a nature destination in the Caribbean. Some of the notable ecotourism places on the island are:

1. Cabrits National Park
2. Indian River
3. Morne Diablotin Trail
4. Syndicate Nature Trail
5. Emerald Pool
6. Morne Trois Pitons National Park
7. Boeri Lake
8. Middleham Falls
9. Freshwater Lake
10. Trafalgar Falls
11. Boiling Lake
12. Sulfur Springs



Figure 19 Map of ecotourism places on Dominica

Source: <https://www.erudit.org/fr/revues/teoros/2012-teoros02529/1036568ar/>

Dominica exemplifies ecotourism and sustainable tourism in the Caribbean with its exceptional natural beauty, cultural diversity, and unwavering commitment to environmental conservation. Dominica's natural environments, which include rainforests, waterfalls, and coastlines, provide a stunning setting for sustainable travel experiences. Its vast network of national parks and protected areas reflects the island's dedication to protecting its natural heritage.

Dominica's plans to become carbon neutral by 2030 (Climate Resilience Executing Agency of Dominica 2020), aided by renewable energy sources such as hydropower, demonstrate its proactive commitment to tackling climate change. The National Resilience Development Strategy 2030 and the Climate Resilience and Recovery Plan are comprehensive frameworks for leading the country's recovery and strengthening resilience to climate-related challenges.

Dominica hopes to highlight its resilience journey and educate visitors about the effects of climate change through programmes like resilient tourism and unique experiences.

Iconic ecotourism attractions such as Cabrits National Park, Indian River, and Morne Trois Pitons National Park help Dominica cement its reputation as a top destination for ethical and immersive tourism experiences. Dominica's Boiling Lake is the world's largest, providing visitors with a one-of-a-kind natural wonder. Dominica's indigenous Kalinago (Caribs) area exemplifies the value of community involvement in protecting cultural heritage and fostering sustainable tourism (Jackson 2015).

## **4 Aims of the Thesis**

The primary objective of the thesis is **to investigate the potential of ecotourism to promote sustainable development in the Caribbean region while addressing the challenges of socio-economic development and environmental conservation.**

The investigation was done through a comprehensive literature review and case study of the region. A personal visit to the area with data collection through questionnaire, interviews with various stakeholders and observation of local places and activities connected to ecotourism.

To achieve the primary objective, four specific objectives were formulated:

- 1) Provide insight into the region's history, climate, and geography, as well as its connection to the current state of tourism.
- 2) Comparison of conventional tourism and ecotourism and learning about other sustainable and responsible tourism forms.
- 3) Addressing the current situation in Saint Kitts and Nevis and Dominica regarding their sustainability plans, implementation of ecotourism activities and its contribution to the nation's development.
- 4) Contribute to advancing ecotourism as a viable pathway towards achieving sustainable development goals in the Caribbean.

## 5 Methods

This research was conducted mainly on the island of Nevis - St. Kitts and Nevis, with some additional secondary data collected from the island of Dominica. Supporting data were collected from the island of Barbuda – Antigua and Barbuda, and Barbados. The study area shares a similar tropical climate and location in the Lesser Antilles. The Federation of Saint Kitts and Nevis consists of 2 islands (St.Kitts and Nevis) covering an area of 261 km<sup>2</sup>, the capital city of Basseterre and having an overall population of 54,817 (CIA World Factbook 2024a). The island of Nevis is a smaller one of the federation; it has an area of 92.98 km<sup>2</sup>, and the capital city is Charlestown. The country is divided into 14 parishes, nine on Saint Kitts and five on Nevis.

The main practical part of this study was conducted in the Botanical Gardens of Nevis located in Montpelier Estates, Saint John Figtree Parish, Nevis. The data collection methods used included a questionnaire with qualitative as well as quantitative questions (See Appendix 1 and Appendix 2), personal interviews with various stakeholders such as tour operators, government officials, local business owners working in the ecotourism or tourism sector, local residents or members of the local communities, tourists coming to the island, attendance at Nevis Tourism Board conference, and thorough literature review. An online questionnaire using the Google Forms program consists of 9 sections:

1) Demographics, 2) Understanding Stakeholder Perspective, 3) Assessing Ecotourism Impact on Local Development, 4) Overcoming Challenges and Concerns, 5) Cultural Preservation and Heritage, 6) Involvement of Local Communities and Individuals, 7) Development of Ecotourism Activities and Environmental Awareness, 8) Future of Local Development with Ecotourism and 9) Own Additional Comments

It was sent to 20 respondents, out of which 15 answered the questions. They responded online after my visits. Due to the study's small scale, a second supportive survey by Baker & Unni (2021) addressed and supported my questionnaire findings. Both visits to the location were between January and February 2023 and 2024 for a total time of 9 weeks.

The afterwards data analysis was based on the data collection and personal experiences from the location and talks with local residents. This paper focuses on the tourism sector in this region and its connection to the socio-economic development in the Caribbean region, primarily focusing on the islands of St. Kitts and Nevis and Dominica, comparing the countries' views, importance and approaches. While the majority of tourists come to St. Kitts and Nevis because of its pristine water, amazing beaches and luxury resorts, Dominica's approach focuses more on nature tourism and sustainability.

The Reason for choosing this topic for the thesis was a deep personal interest in tourism and the Caribbean region. The possibility of volunteering and data collection at the Botanical Gardens of Nevis also had a significant impact on choosing this topic.

## **6 Limitations of the study**

The data collection and observation were limited due to my schedule on the island and financial possibilities (the whole research and travel costs were paid for by me with the help of my family). Therefore, insufficient data, mainly from Saint Kitts and Nevis, were collected and had to be supported by a survey study by Baker & Unni (2021). Although having interviewed a government official from the Ministry of Tourism, more questions needed to be answered. I tried to connect with Mr. Hanley, but my emails were unanswered. The same goes for the government body in Dominica. More governmental participation in the questionnaire or interviews would give better and more accurate answers.

Since the thesis topic is ecotourism in the Caribbean region, I had to source my information from trustworthy but sometimes unscientific sources. This is due to the nature of the developing area. Also, I couldn't find many recent studies on similar topics in the Caribbean. There appear to be many studies from the 90s, but I tried to avoid them since their information could be outdated. Among the limitations is the need for more personal experience conducting research in the field. This may have affected the delivery of the thesis and the choice of research methods.

## **7 Results**

The findings of this thesis highlight the complex and transformational consequences and opportunities of ecotourism in the Caribbean region, mainly through thorough case studies of Saint Kitts & Nevis and Dominica. The analysis base is a mix of qualitative interviews, extensive field observations, detailed investigations of current literature, and a questionnaire and survey by Baker & Unni (2021) discussing similar topics and questions.

The questionnaire respondents list consists of 15 respondents with various backgrounds - the residents, small businesses, communities, tourists, and volunteers working in the tourism field in the Federation of St. Kitts and Nevis. However, results from countries such as Antigua and Barbuda or Barbados were also received. Due to the small number of answers, the survey of Baker & Unni (2021) was used to provide more relevant data and support the findings of this thesis.

### **Economic Impact**

The results from the questionnaire indicated that 73% of the respondents consider ecotourism very important for the economic development of their country. Similar results were discussed by Baker & Unni (2021), who found that residents viewed the economic consequences of tourism positively. On the other hand, the survey brought many concerns about negative impacts like increased cost of living and dependency on seasonal tourism. The respondents' concerns in the questionnaire are financial instability and lack of government support in the field of sustainable tourism. The focus of the Nevis Tourism Authority (NTA) on marketing to older tourists from the US and Canada reflects a strategic choice based on the financial capability of this demographic to engage in luxury travel.

The Vanilla Paradise Nevis illustrates how agro-tourism, as a component of ecotourism, supports economic diversification and sustainability in agriculture while following all ecotourism guidelines, aiming to become Nevis's main sustainable tourism attraction.

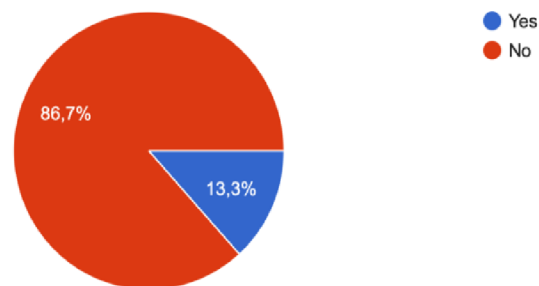


### **Environmental Impact**

While 86.70 % of the questionnaire respondents felt uninformed about the negative effects of ecotourism (Figure 20), such as loss of traditional values and dissociation, the survey only supported the claim with local concerns about pollution and resource degradation. This highlights a critical gap in environmental education and communication within ecotourism frameworks. Historical and climatic factors significantly shape tourism strategies in the Caribbean. The region's history of colonisation and climatic challenges like hurricanes necessitate resilient tourism models based on seasonality.

Do you feel adequately informed about the potential negative impacts of ecotourism on the environment?

15 odpovědí



**Figure 20 Questionnaire Results – Education about potential negative impacts of ecotourism**

### **Socio-Cultural Dynamics**

The questionnaire results showed a general belief that ecotourism helps maintain cultural authenticity, with most respondents affirming its positive impact. The survey also supports the claim that tourism enhances community pride and cultural conservation. Underscoring words of one respondent of the questionnaire saying ecotourism "encourages pride in the past/history of the region". The survey also mentions "Americanization" and social pathologies as minimal but present concerns.

The Botanical Gardens of Nevis exemplifies a successful ecotourism initiative with triple conservation, educational, and community development objectives, contributing to local biodiversity conservation while offering employment to the local population.

### **Community Involvement and Perceptions**

Involving members of the local community in ecotourism activities or employing them in the sector of ecotourism was seen as necessary by the respondents of the questionnaire and is supported by not only the survey but even the ecotourism activities in Dominica, where ecotourism initiatives foster substantial community involvement, mainly through employment in ecotourism ventures—for instance, the popular indigenous community in Dominica, in Kalinago territory.

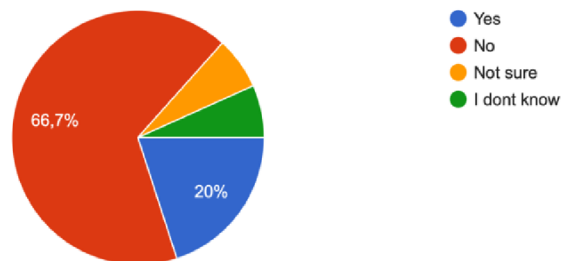
Furthermore, the NTA's efforts to raise tourism awareness among residents through collaborations and events such as the Mango Festival aim to boost local participation and tourist interest.

The survey by Baker & Unni (2021) mentions the need for active community support to achieve effective tourism management.

## Policy Support and Development Outlook

The respondents in the questionnaire saw financial support from the government as inadequate, while 66.70% of them think that local policies do not support ecotourism development. The survey has similar results claiming dissatisfaction with government policies. The interviews specifically mentioned the slow process of local governments and their inability to make fast decisions, which slows local ecotourism activities' development process.

Do you believe that government policies adequately support ecotourism development in the Caribbean?  
15 odpovědí



**Figure 21 Questionnaire Results - Are government policies supporting ecotourism development?**

## Future Perspectives

The study found widespread optimism about ecotourism's role in local development, with most respondents from the questionnaire seeing it as a long-term source of income. This is consistent with findings from the survey, which acknowledges current issues and finds that residents still have a generally positive attitude toward tourism, forecasting future benefits if handled sustainably (e.g. adapting more ecotourism activities). The potential to attract the younger generation through social media channels, which are now underutilised despite their ability to share and promote travel experiences, is a strategic marketing opportunity.

The questionnaire and survey reveal a complex context in which ecotourism offers benefits and problems. While there are obvious benefits in economic development, cultural enrichment, and community engagement, the environmental management challenges, financial stability, and cultural preservation demand careful planning. The future of ecotourism in the Caribbean depends on a balanced approach that maximises advantages while limiting risks through expanded educational and marketing campaigns, regulatory change, and inclusive community participation.

The uneven adoption of ecotourism across Caribbean regions, such as Dominica, which is leading in environmental conservation efforts but trailing in the number of incoming tourists, highlights the need for targeted strategies to enhance local policies and external economic pressures.

## 8 Discussion

The findings derived from the questionnaire and survey conducted as part of this thesis underscore the socio-economic benefits of ecotourism, echoing results observed in broader studies. Notably, both tools suggest employment opportunities in the ecotourism sector and thus improved livelihoods within local communities, a trend supported by the ecotourism literature Scheyvens (2002). For instance, the Botanical Gardens of Nevis, discussed in Sections 3.3. and 3.3.1, preserve biodiversity, promote horticulture and facilitate community involvement and educational programs. This aligns with Honey Martha (2008), who suggests that such integrated ecotourism practices enhance conservation efforts and local economic benefits.

Additionally, the Nevis Tourism Authority conference in 2023 discussed how targeted marketing towards older tourists from North America is currently prioritised due to their financial stability and interest in luxury travel. While effective in tapping into a lucrative market, this strategic choice overlooks the dynamic and influential younger demographic, who are active on social media and could significantly enhance the visibility and attractiveness of Nevis as a travel destination.

### **Botanical Gardens of Nevis**

The Botanical Gardens of Nevis exemplifies a successful ecotourism initiative with triple conservation, educational and community development objectives. BGN (see Section 3.3) contribute to local biodiversity conservation while offering employment to the local population. Buckley (2012) has highlighted similar findings, where well-managed ecotourism sites significantly bolster conservation efforts and heighten visitor engagement with nature. The economic impact, detailed in Table 7 (SWOT Analysis for Ecotourism Industry in St. Kitts and Nevis), further validates the positive socio-economic implications of such initiatives. Unfortunately, BGN slowly started to disappear from the tourism agencies' offer lists because of massive competition in the tourism mass tourism sector on the island. Also, since the cruise ships carrying thousands of tourists to the federation only stop at Port Zante, Basseterre, St. Kitts, for one day on average, most of the tourists stay only on St. Kitts, and very few go the additional 30-minute ferry ride to reach the island of Nevis. Therefore, all the tourism agencies and attractions compete heavily for tourists while trying to fit into the tight cruise ship schedule (Figure 19).

Arrivals		Departures	
<b>Norwegian Sky</b> 2,405 passengers	18 Apr 2024 - 08:00	<b>Norwegian Sky</b> 2,405 passengers	18 Apr 2024 - 17:00
<b>Celebrity Beyond</b> 3,373 passengers	19 Apr 2024 - 08:00	<b>Celebrity Beyond</b> 3,373 passengers	19 Apr 2024 - 17:00
<b>Brilliant Lady</b> 2,860 passengers	19 Apr 2024 - 08:00	<b>Brilliant Lady</b> 2,860 passengers	19 Apr 2024 - 17:00
<b>Icon Of The Seas</b> 7,600 passengers	23 Apr 2024 - 08:00	<b>Icon Of The Seas</b> 7,600 passengers	23 Apr 2024 - 18:00
<b>Carnival Magic</b> 4,428 passengers	24 Apr 2024 - 07:00	<b>Carnival Magic</b> 4,428 passengers	24 Apr 2024 - 17:00
<b>Explorer Of The Seas</b> 3,938 passengers	25 Apr 2024 - 11:00	<b>Explorer Of The Seas</b> 3,938 passengers	25 Apr 2024 - 19:00

**Figure 22 Cruise schedule at Port Zante, St. Kitts**

Source: [https://cruisedig.com/ports/baseterre-st-kitts?utm\\_content=cmp-true](https://cruisedig.com/ports/baseterre-st-kitts?utm_content=cmp-true)

### Vanilla Paradise Nevis

Vanilla Paradise Nevis illustrates how agro-tourism, as a component of ecotourism, supports economic diversification and sustainability in agriculture while following all ecotourism guidelines, aiming to become Nevis's main sustainable tourism attraction. This venture educates visitors on sustainable agricultural practices while promoting local economic development, mirroring findings from Milder et al. (2011) on the economic resilience provided by agro-tourism. The operational details and visitor experiences at VPN, discussed in Section 3.4, highlight its role in fostering sustainable agricultural practices and local engagement. Even though VPN is a relatively young business on the island, it already received support from the premier of Nevis, Hon. Mark Brantley, which can serve as a successful marketing. On the other hand, based on the interviews with the owner, Gina Empson, the government could be faster when dealing with businesses such as VPNs. This was confirmed by the owner of the Botanical Gardens, Christi Douglas, as well.

In the case of VPN, the owner's development plan of expanding to neighbouring Hamilton Estate is stagnating because the government still needs to finish all the necessary processes. *"It has been months since they received our proposal to lease part of the Hamilton Estate, restore the foreman's residence house from our funds to its former design, and use it as a souvenir shop for the farm. Then, after approximately 20-30 years, it would return to the Nevis Government"*, says Gina. The house would also serve as a museum and information point for the Hamilton Estate, and in 20 to 30 years, the

government would get a renovated historic house. It is more than a fair deal; nowadays, there is only a sign in the ground marking the Hamilton Estate (Figure 12), and that is a shame, given its historical importance.

### **Historical, Climatic, and Geographical Insights**

The thesis demonstrates how historical and climatic factors shape tourism strategies in the Caribbean. The region's history of colonisation has heavily influenced its tourism development, shifting from the agriculture sector to the tourism sector, with climatic challenges like hurricanes necessitating resilient tourism models based on seasonality. This finding aligns with McGregor et al. (1998), who noted similar historical and climatic impacts on tourism in island states. The connection between the region's history and its current ecotourism practices is pivotal; the region's agricultural history could be a perfect bridge to modern times of sustainable tourism (Monzote 2013), as discussed in section 2.1.8. The geographical location and vulnerability to harsh climate are highlighted in Figure 4 (Caribbean Rainfall Map) and discussed in section 3.5.3.

### **Comparison of Ecotourism and Conventional Tourism**

The thesis supports the view that while conventional tourism has driven economic growth, it often leads to environmental (for instance, the reliance on big cruise ships (Balceiro 2022)) and socio-economic challenges (Weaver 2003). In contrast, ecotourism initiatives such as those analysed in Sections 3.2 and 3.3 offer sustainable alternatives that benefit both the environment and the local communities. However, balancing tourist satisfaction with conservation goals remains a challenge, as (Buckley 2012) noted, and is echoed in the discussions surrounding the sustainability of ecotourism practices.

### **Current Situation in Saint Kitts and Nevis and Dominica**

This thesis highlights the uneven adoption of ecotourism across the Caribbean, with Dominica leading in environmental conservation efforts and among the last in the number of incoming tourists (Figure 7). This variability is documented in section 3.5 and supported by Patterson et al. (1998), who discuss different levels of ecotourism implementation in the Caribbean. The specific cases of SKN and Dominica provide concrete examples of how local policies and external economic pressures influence ecotourism development.

Although different in the tourism sector, St. Kitts and Nevis and Dominica have a common strategy to improve their development: The Citizenship By Investment Programme (IMF 2021). This development tool is quite common in the Caribbean region, and it provides citizenship to person/people who make a monetary contribution to the country's development. Either by buying a property or donating money straight to development funds, this controversial opportunity grants the buyer full citizenship and all its perks within months (conditions apply) (Government of the Commonwealth of Dominica, 2023).

### **Assessing Ecotourism's Impact on Sustainable Development**

Ecotourism's progress as a strategic approach to sustainable development is gaining traction in academia and practice, particularly among scholars such as Honey (2008), who suggest that it can combine environmental conservation with economic rewards. This thesis builds on that premise by evaluating specific ecotourism programmes in the Caribbean, particularly in Saint Kitts and Nevis and Dominica. It comprehensively examines how ecotourism interacts with sustainable development goals (SDGs), focusing on local community participation, biodiversity conservation, and economic growth. Ecotourism, by definition, supports several important SDGs, including SDG 8 (Decent Work and Economic Growth), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), and SDG 15 (Life on Land).

The thesis demonstrates the realization of these goals in concrete terms through various case studies. However, one of the most significant obstacles to expanding ecotourism is ensuring it does not become a victim of its success. This contradiction underlines the importance of robust regulatory frameworks and ongoing community engagement in ensuring the integrity of ecotourism efforts.



Further research on this topic would be beneficial because promoting ecotourism insufficiently will not contribute to the region's long-term development on social and economic levels, whilst pushing the promotion of ecotourism excessively may harm ecotourism destinations. The distinction between popular ecotourism and mass conventional tourism is minimal. Climate problems and harsh weather conditions in the Caribbean region might restrict tourism, acting as a check on too much and too little activity.

## 9 Conclusions

This thesis has examined the transformative potential of ecotourism as a strategy for sustainable development within the Caribbean, the world's most tourism-dependent region known for its rich biodiversity, vibrant cultures, and profound historical significance. Through detailed case studies of Saint Kitts, Nevis, and Dominica, was explored how ecotourism preserves the environment and fosters significant socio-economic benefits for local communities.

The implications of these findings are significant. A crucial need is for deeper community involvement in ecotourism projects to ensure the benefits are equally distributed. This involvement not only supports economic benefits but also fosters environmental stewardship among local populations. Additionally, robust policy frameworks are necessary to facilitate the sustainable growth of ecotourism, underscoring the need for governmental action in policy development and support.

To address these issues, several targeted recommendations are proposed:

1. **Enhancing Infrastructure:** To support the growth of ecotourism, improvements in transportation and tourism facilities are essential. This will help overcome the accessibility issues currently faced by many ecotourism sites.

2. **Government Initiatives:** Government-led initiatives are crucial for promoting and regulating ecotourism. This includes implementing subsidies for sustainable practices and enforcing environmental regulations to ensure that tourism activities do not adversely affect the natural environment.

3. **Conservation Efforts:** Strengthening conservation efforts is vital. This can be achieved by involving local communities in conservation activities and using a portion of tourism revenues to fund environmental protection projects. These efforts will help mitigate tourism's negative impacts and enhance ecotourism ventures' sustainability.

### **Suggestion for Future Research:**

Further studies should definitely be broader, including more countries from the region, and investigate the long-term impacts of ecotourism on economic stability and environmental conservation in the Caribbean. Exploring the scalability of successful projects like those in Nevis and Dominica could provide insights into replicating these models across other islands.

In conclusion, ecotourism represents a hopeful pathway towards sustainable development in the Caribbean. By balancing economic growth with environmental conservation and cultural preservation, ecotourism can provide the region with a resilient and prosperous future, setting a precedent for similar global initiatives. This thesis contributes to academic discourse and offers actionable recommendations that can influence policymaking and practical implementations in ecotourism, making it a vital force for sustainable change.

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# **Appendices**

## **List of the Appendices:**

**Appendix 1 – Questionnaire first part**

**Appendix 2 – Questionnaire second part**

## Appendix 1: Questionnaire – first part

Section Number	Name of the Section	Description of the section	Question number	Question	Type of question
Section 1	Demographics	This section helps me to get to know you	1	If you wish, please state your name or name of your organization.	Open, Voluntarily
			2	State your affiliation (government, community, business, tour operator, tourist, local resident, etc.)	Open, Mandatory
			3	How many years of involvement in ecotourism sector you have ?	Open, Mandatory
Section 2	Understanding Stakeholder Perspective	What do you know about ecotourism?	1	How familiar are you with the concept of ecotourism?	Linear Scale 1-10 (1 - I have no idea // 10 - I know plenty), Mandatory
			2	Do you believe ecotourism has the potential to contribute positively to local development in the Caribbean?	Yes or No, Mandatory
			3	On a scale of 1 to 10, how important do you think ecotourism is for the economic development of communities in the Caribbean?	Linear Scale 1-10 (1 - Irrelevant // 10 - Very Important), Mandatory
			4	How effective do you think ecotourism is in creating employment opportunities for local communities?	Linear Scale 1-10 (1 - Not at all // 10 - Very effective), Mandatory
			5	Do you have any comments or additional info for this section ? (OPTIONAL)	Open, Optional
Section 3	Assessing Ecotourism Impact on Local Development	Is ecotourism helping local development ?	1	To what extent do you believe ecotourism activities benefit the social well-being of local communities?	Linear Scale 1-10 (1 - Not at all // 10 - Very Important), Mandatory
			2	Has ecotourism contributed to environmental conservation efforts in the Caribbean?	Multiple choice: Yes, No or I am not sure, Mandatory
			3	How involved are local communities in the planning and decision-making processes of ecotourism initiatives?	Linear Scale 1-10 (1 - Not at all // 10 - Very Involved), Mandatory
			4	Do you feel adequately informed about the potential negative impacts of ecotourism on the environment?	Multiple choice: Yes, No or own short answer, Mandatory
			5	Do you have any comments or additional info for this section ? (OPTIONAL)	Open, Optional
Section 4	Overcoming Challenges and Concerns	What is needed to be done. Some known challenges of ecotourism are: Balancing tourism and conservation, Pollution and waste, Displacement and gentrification, Leaking revenue or Corruption and mismanagement. And many more...	1	Have you encountered any challenges in the sustainable development of ecotourism in the Caribbean? If yes mention any.	Open, Short Answer, Mandatory
			2	To what extent do you think these challenges can be addressed to ensure the long-term viability of ecotourism initiatives?	Linear Scale 1-10 (1 - Hard to say // 10 - Easy to address), Mandatory
			3	Do you believe that government policies adequately support ecotourism development in the Caribbean?	Multiple choice: Yes, No or own short answer, Mandatory
			4	How effective do you think government policies are in promoting sustainable ecotourism in the region?	Linear Scale 1-10 (1 - Not at all // 10 - Very effective), Mandatory
			5	Do you have any comments or additional info for this section ? (OPTIONAL)	Open, Optional

## Appendix 2: Questionnaire – second part

Section Number	Name of the Section	Description of the section	Question number	Question	Type of question
Section 5	Cultural Preservation and Heritage	Can local culture still be seen around you and your community despite being tourist destination ?	1	How important is the preservation and promotion of local culture and heritage in ecotourism activities?	Linear Scale 1-10 (1 - Not at all // 10 - Very Important), Mandatory
			2	Do you think ecotourism helps maintain cultural authenticity in the Caribbean?	Multiple choice: Yes, No or own short answer, Mandatory
			3	How satisfied are tourists with their overall ecotourism experience in the Caribbean?	Multiple choice: Very satisfied, Satisfied, They like it, They do not like it, or own short answer, Mandatory
			4	Do you believe ecotourism operators and stakeholders prioritize environmental sustainability in their offerings?	Multiple choice: Yes, No or own short answer, Mandatory
			5	Do you have any comments or additional info for this section ? (OPTIONAL)	Open, Optional
Section 6	Involvement of Local Communities and Individuals	How much are locals involved in tourism activities ?	1	How involved are local communities in ecotourism activities as employees or service providers?	Linear Scale 1-10 (1 - Not at all // 10 - Very Involved), Mandatory
			2	Do you believe that ecotourism provides meaningful employment opportunities for individuals in local communities?	Multiple choice: Yes, No or own short answer, Mandatory
			3	On a scale of 1 to 10, how important is it for ecotourism activities to involve and benefit local communities directly?	Linear Scale 1-10 (1 - Not at all // 10 - Very Important), Mandatory
			4	Have you noticed an increase in the development of ecotourism activities in your community over the years?	Multiple choice: Yes, No or own short answer, Mandatory
			5	Do you have any comments or additional info for this section ? (OPTIONAL)	Open, Optional
Section 7	Development of Ecotourism Activities and Environmental Awareness	What is the importance of Ecotourism to the environment ?	1	To what extent do you think ecotourism has raised environmental awareness among local residents?	Linear Scale 1-10 (1 - Not at all // 10 - Very Much), Mandatory
			2	What would be the pros and cons of tourism to your business, and can ecotourism help you and your community?	Open long answer, Mandatory
			3	In your opinion, what is the most significant way that ecotourism contributes to local development in the Caribbean?	Open long answer, Mandatory
			4	Any additional comments or insights you would like to share regarding ecotourism and its impact on local development in the Caribbean? (mandatory field)	Open long answer, Mandatory
Section 8	Future of Local Development with Ecotourism	What could be done for better future ?	1	How do you envision the future of local development with the growth of ecotourism in the Caribbean?	Open long answer, Mandatory
			2	Do you believe that ecotourism has the potential to be a sustainable source of income for local communities in the long term?	Multiple choice: Yes, No or own short answer, Mandatory
			3	On a scale of 1 to 10, how optimistic are you about the future of ecotourism in driving local development in the Caribbean?	Linear Scale 1-10 (1 - Not at all // 10 - Very Optimistic), Mandatory
			4	Do you have any comments or additional info for this section ? (OPTIONAL)	Open, Optional
Section 9	Last but not least	n/a	1	Please add anything that you'd like to add, introduce your business and give some details or examples of your work. (OPTIONAL, but VERY APPRECIATED)	Open, Optional