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SINKING SEYCHELLES: TOURISM TO THE RESCUE?

by

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ABSTRACT

In the fight against the international climate crisis, the opinions of small island nation states echo with a unique resonance. These islands, though small in size, and often marginalised in earth's oceans, are bearing witness to the massive impacts of climate change first-hand, standing often times alone and vulnerable against the rising sea levels, extreme weather events, and ecological disturbances that threaten their very existence. As the world wrestles with the urgent need for sustainable solutions, it is important to listen to the insights and experiences of these small island nations and how they have gone about preparing to “accommodate” climate change and global warming into their economies and day-to-day lives.

The climate crisis in recent years has become an urgent global concern, necessitating creative and sustainable solutions to mitigate its widespread and ever-evolving effects. Amidst this backdrop, the tourism industry it was found holds immense potential to drive positive change in the wake of this contemporary crisis affecting both the global North and South. This dissertation sets forth to consider tourism against this backdrop of climate change crisis, and questions if the former can be adapted or positioned to combat the latter, if at all possible. This dissertation will utilise the Seychelles as the primary case study to this investigation to test this hypothesis. In this context theoretical and practical frameworks for climate change and tourism will be devised and then applied to the indicated island nation state. This study aims to recommend various ways in which the Seychelles can off-set its designation as a “sinking nation” by situating tourism, potentially, at the helm of the island nation's economy to combat climate change.

Key words: climate crisis; climate change; global warming; sustainable tourism development; sinking island; the Seychelles; Eastern Africa.

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ACCRONYMS AND ABBREVIATIONS

AOSIS	Alliance of Small Island States
BNT	Bahamas National Trust
BSTI	Bahamas Sustainable Tourism Initiative
CO2	Carbon Dioxide
GHGs	Greenhouse Gases
GDP	Gross Domestic Product
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
MTPA	Mauritius Tourism Promotion Authority
NCCSAO	National Climate Change Strategy and Action Plan
NDCs	Nationally Determined Contributions
NES	National Entrepreneurship Strategy
NGO	Non-Governmental Organisation
SDGs	Sustainable Development Goals
SIDS	Small Island Developing States
SIF	Seychelles Islands Foundation
SIM	Sustainable Island Mauritius
SMEs	Small Medium Enterprises
SPUP	Seychelles People's United Party
SPPF	Seychelles People's Progressive Front
SREP	Scaling up Renewable Energy Program
STL	Seychelles Sustainable Tourism Label
SSTF	Seychelles Sustainable Tourism Foundation
STB	Seychelles Tourism Board
TDZs	Tourism Development Zones
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNWTO	United Nations World Tourism Organisation

WTTC World Travel and Tourism Council

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CHAPTER 1: INTRODUCTION

1.1. Context of the study

This dissertation aims to analyse, interpret and evaluate how tourism can be utilised and/or positioned so as to become a positive developmental tool to combat climate change in the global South. This investigation sets forth the objective to debate how climate change has affected the tourism industry, how destinations have had to adapt their tourism development models, as well as how tourists themselves have adapted to climate change holistically. The Seychelles will be the primary case study for this research. In recent years, the Seychelles has been identified as a “sinking nation” due to the prevalent and increasing impacts it experiences in light of the global climate crisis (United Nations, 2014).

Thus, this study’s purpose is to appraise tourism and climate change in the Seychelles, and how the former can be used to actively combat the influence of the latter, if at all possible. This dissertation will therefore explore how climate change has impacted the Seychelles as a destination and how tourism can be used as a tool to mitigate the devastating impacts of climate change on the country as a whole in the short and long-term. This research will likewise divulge and consider how the Seychelles’ tourism industry has adapted, or how it could adapt, to further changes and development discourses, while still maintaining its “authentic” and “unique” island identity.

The title of this intended study therefore outlines how the climate change crisis has forced tourism to help “save” the sinking island nation of the Seychelles. This dissertation presents a novel approach to the theme of “tourism and climate change” seeing as in studies and literature to date, the former has only been seen as a negative contributor to the latter especially in developing nation states, usually located in the global South. This investigation does not ignore nor dismiss the negative impacts of climate change, however, rather aims to focus on how to strategically ease some of these dire situations by noting tourism development as a potential “solution” instead of only seeing it as the “problem”. It is believed that this distinct approach will inspire and contrast with many other research studies in the field will call for a more inclusive, diversified and transformative approach to the slow resolves and impacts of “universal climate deals” and the “Sustainable Development Goals” (SDGs) (United Nations, 2023).

1.2. Key concepts

1.2.1. Climate change

According to the United Nations (UN) (2022) **climate change** can be described as the changes in weather patterns in a specific region over an extended period of time. (United Nations, 2022) Climate change in recent years has become a growing concern for many countries, in the global North and South, for it will change these areas' usual everyday temperature(s) to be either warmer or colder, in the near future. This is referred to as “global warming” and/or “global cooling” by scientists Palmetto (2022). Palmetto further describes climate change in this context, by differentiating between “weather” and the actual “climate”. Denoting that “weather” refers to local conditions over a short period of time that include temperatures, precipitation and humidity levels, as well as wind speeds (Palmetto, 2022). “Climate” in turn is the long-term patterns in the weather that can affect an area collectively, usually negatively (Palmetto, 2022). Thus, climate change can holistically be considered as a “change in the state of the atmosphere” due to unregulated human activities and unwelcome emissions of carbon that have created “abnormalities in the atmosphere” of the planet as a whole (Turrentine, 2021). On the one hand, climate change has been interpreted by scientists and regulators only for its potential negative impacts it could have on the modern world order and the supposed global village.

1.2.2. Tourism

According to the Cambridge Dictionary (2022), **tourism** in its most simplistic form can be defined as “the professional way of providing services such as accommodation, entertainment, and/or transportation for a person(s) whilst partaking in business activities or vacation-making” – irrespective if that commercial or recreational endeavour is taking place in the global North or global South (Cambridge Dictionary, 2022). The United Nations World Tourism Organisation (UNWTO) in turn describes tourism as a “group of associated activities which a person traveling will partake in” (UNWTO, 2021). Tourism can similarly be described as the “practice of supplying a product or service to a person (tourist) who is travelling to a destination, attraction or site outside of their place of residence” (Morley, 1990: 4). However, it must be stated that in contrast to the aforesaid term, tourism has been perceived by scholars and practitioners in the field for its mostly positive affects it has had on contemporary

economic and societal structures and industries at local, national and international levels to date.

1.2.3. Island

An **island** is defined by Britannica (2022) as an area of land, which is smaller than a continent, that is surrounded by water in its entirety (Britannica, 2022). According to Jedrusik (2011), a group of islands in turn is called an “archipelago”, wherein these land masses can be differentiated either as “oceanic or continental islands” (Jedrusik, 2011). In this context, oceanic islands are islands which rise to the surface from the floors of the oceans; whereas continental islands are unsubmerged land masses that are wholly surrounded by water on a permanent basis (Britannica, 2022). Giaimo (2018) goes on to state that a land mass surrounded by water needs to have soil and vegetation at some level to even be considered an “island” (Giaimo, 2018). Yet the inclusion of mammal habitation on an island varies from publication-to-publication and from practitioner-to-practitioner and does not affect what is deemed to be an island in geographic (or tourism) terms (Giaimo, 2018).

1.2.4. Island tourism

According to Dane (2022) **island tourism** can be demarcated as the activity of tourists going to islands for holiday-making purposes (Dane, 2022). These touristic settings are remote and secluded to the rest of the world when compared to other mainland tourist destinations. Therefore, island tourism encompasses a specific, unique and distinct travel environment which appeals to an array of tourists, for it provides something “different to the other” more visited and commercialised tourism destinations. Thus, island tourism at its core aims to help a visiting tourist to relax and relieve the stress of their day-to-day lives – by experiencing a number of island-produced tourism products and services on offer (Dane, 2022). Thus, conceptually island tourism is inclusive of a sense of freedom and a peaceful environment. Hsiao *et al.* (2021) further defines island tourism as a niche travel market segment which exhibits unique characteristics, such as delicate surroundings and historical aspects in isolated settings, across the vast oceans of the planet (Hsiao *et al.*, 2021). Whereupon tourism activities are then developed in these island settings based on the natural environment and cultural resources available on the land mass, so as to ultimately formulate and create an “island tourism destination” (Hsiao *et al.*, 2021).

Sharpley (2015) concurs with these definitions and descriptions, however, adds that this concept should not be exclusive nor dismissive of the small grassroots and/or indigenous communities usually located within the “touristic make-up” of these island tourism destinations. As it has been found that these islanders rely heavily on this form of tourism to create employment, to maintain standards of living, and to continue to foster a sense of pride for “their island home and culture” (Sharpley, 2015).

1.2.5. Sustainable tourism

Wardle (2021) outlines **sustainable tourism** as all activities and practices associated with the tourism industry at large, that are produced and deployed in a responsible manner, wherein cognisance is taken of a number of delicate social, cultural, environmental, political and economic contexts and spheres (Wardle, 2021). Thus, within the construct of sustainable tourism it is argued that the broader industry needs to find a “balance” between all aspects associated with tourism development discourse so as to safeguard the industry, its infrastructures and environments for generations to come (Wardle, 2021). Sustainable tourism, therefore, aims to diminish the travel markets impact on the environment and all communities involved, therein conserving and protecting both for the future (Srinivas, 2022). Sustainable tourism can similarly be considered as a concept which concentrates on the entire travel experience and aims to draw attention to how to improve experiences within the domain, in an accountable manner, while taking the natural and cultural resources of a specific destination into account (Niediolka, 2014). Thus, at its core sustainable tourism is all about environmental integrity, social justice as well as economic development.

1.3. Chapter outline

This dissertation will consist of six chapters, all of which will contribute to the study on “sinking islands” and how tourism can be utilised as a positive developmental tool for actual and proactive change in the wake of the climate crisis. The Seychelles will serve as the primary case study to this investigation as indicated before.

Chapter 1 begins with a brief overview of the foremost research themes, purpose and aims to be discussed and addressed in this investigation. This chapter provides an overview of definitions to be used, an outline as to how the study will be conceptualised

and contextualised from a transdisciplinary point of view, as well as state what research approach and methodology will be applied to the aforementioned theme(s) so as to reach the noted research objectives.

Chapter 2 in turn is a literature overview on the main discussion points of the study. In this context paying specific attention to literature that appraises climate change and tourism at a global level; as well as tourism development discourses at a local level. This chapter, therefore, discusses the objective of climate change and how it has affected the tourism industry in the global North and South.

Chapter 3 is a theoretical and practical overview which divulges how the “status quo” of doing tourism can be re-structured and re-imagined so to serve as a potentially advantageous tool for socio-economic and socio-cultural change, growth and advancement in the wake of the international climate crisis at a domestic level. This chapter likewise discusses and compares three countries as best practice benchmarks in the global South for the latter. These include: the Maldives in Asia; the Bahamas in South America; and lastly Mauritius in Africa. These countries are considered holistically from a unique global South point of view so as to analyse, interpret and evaluate how they have positioned their tourism products and practices to combat climate change. This chapter discusses the objective on how destinations have had to adapt their tourism models to accommodate the impacts of climate change. This chapter also discusses how tourists have had to adapt to climate change when compiling their business/recreational travels.

Chapter 4 presents a detailed overview of the history of the islands and the origin of the travel and tourism industry of the Seychelles. This chapter discusses Seychellean legislation and policies with regards to tourism, and all the regulatory mechanisms and components the nation state currently has in place, as it pertains to climate change and its envisaged impacts on the country in the short and long term. This section will simultaneously go into a discussion on the tourism industry and what is offered by the Seychelles as an island tourism “hub” for tourists from the global North and the global South.

Chapter 5 in turn addresses and appraises climate change and the Seychelles holistically. This chapter formulates the argument on how tourism can be used to

“save” the “sinking islands” of the Seychelles in light of the climate crisis, if at all possible.

Chapter 6 reflects and gives recommendations on how the tourism industry of the Seychelles can be used to mitigate the potentially lasting effects of the climate crisis. It will also summarise all the findings presented, and comment conclusively on the research aim, purpose and objectives of the study.

1.4. Research approach and methodology

This dissertation will be adopting a case study-based research approach within a qualitative research methodology. A case study-based research approach can be defined as a comprehensive inspection of a specific case(s) within a real-life context (Crowe *et al.*, 2011). Usually, a case study will highlight a specific individual, group, event, belief system or action that requires further inquiry usually from a distinct disciplinary perspective (Cherry, 2022). It is also important to note that this approach and methodology is usually not only reliant on one observation but rather will include multiple observations over a period of time by the researcher(s) involved (Mohan, 2021). Therefore, this dissertation will systematically investigate a specific series of events by using multiple streams of evidence, data, and information in an attempt to study the main research themes denoted above.

Moreover, qualitative research also consists of collecting and examining information, which is non-numerical, so that one can understand the opinions, experiences, and concepts of what that research encapsulates (Bhandari, 2023). Examining this information will thus create an in-depth insight into the problem or help create a new outlook or even new ideas for the investigation going forward. It, therefore, allows for the researcher to expand on someone else’s research (Busetto *et al.*, 2020).

This study will make use of both primary and secondary sources and will integrate data and information obtained from these sources accordingly within the proposed research theme. The primary sources consulted will include government websites, promulgated tourism policies as well as legislative acts, as well as public development and conservation plans. Secondary sources that will be used throughout this

dissertation will in turn include relevant literary sources, accredited journal articles, media publications and newspaper portrayals, as well as appropriate online platforms.

For one to be able to apply this research approach and methodology holistically there is a detailed process, which comprises of eight steps, that needs to be followed according to Thompson (2017). This process includes:

1. Identifying what the problem is and deciding on the main research question(s);
2. Start a literature search and review all relevant and applicable evidence, information and data sets;
3. Create a theoretical and/or practical framework to guide the study going forward;
4. Devise a hypothesis for the investigation, keeping the main themes in mind;
5. Decide on a research design best suited to your designated area of inquiry;
6. Collect the data in the defined case study, ensuring that the latter has clearly defined and demarcated parameters;
7. Analyse the information and evidence collected; and finally
8. Interpret the information and prepare it according to the set standards and criteria of the investigation (Thompson, 2017).

This research process will now be applied to the Seychelles, as the primary case study to this dissertation, whereupon it will be researched (analysed, interpreted and evaluated) how, if possible, tourism can serve as a positive and advantageous tool to mitigate and/or circumvent the climate change crisis. This approach and methodology will be applied from an Afrocentric point of view.

CHAPTER 2: THEORETICAL OVERVIEW FOR CLIMATE CHANGE WITHIN TOURISM DEVELOPMENT

2.1. Introduction

The following chapter provides the theoretical background (literature review) to be used in deciding whether tourism is able to help mitigate climate change at a hyper-local level in an independent African country. Emphasis in this section is placed on the construct of climate change, and its recognition and integration within the tourism value chain.

2.2. Literature overview

According to Nzama (2010) in the article, ‘Managing the socio-cultural impacts of tourism on rural destinations’, the economic benefits of tourism are astronomical. Tourism not only contributes to a host destination’s Gross Domestic Product (GDP), but it also contributes to foreign exchange earnings, job creation, and the development of travel infrastructures (Nzama, 2010). Nzama (2010) expounds on this statement by noting that the tourism industry and its significant influence has had a ripple effect into other sectors, this seeing as the consequence of tourism spending often extends well-beyond the industry itself by stimulating other affiliated domains such as transportation, hospitality, and retail to name but a few. (Nzama, 2010) However, it has been found that if a host destination over-dependes on tourism this can lead to them becoming vulnerable in the face of global uncertainty. This is of critical concern given that the growth of the tourism industry has continued rapidly over the last five decades, but this has, however, come at a cost especially to the environment. (Nzama, 2010)

According to Pang *et al.* (2012), in the article ‘Climate change and tourism: An overview’, there is a clear and prominent relationship between climate change and the tourism industry. Noting that the first contribution the tourism industry makes to the “climate” would be in the form of “transportation practices”, and another would be in the form of “tourism infrastructure projects” (Pang *et al.*, 2012). According to the aforesaid authors, as travel increases so will the above practices and projects, which in turn will lead to higher energy and water consumption, as well as an increase in carbon emissions which ultimately will lead to resource depletion on a large scale. (Pang *et al.*, 2012) According to Pang *et al.* (2012) to combat the climate crisis the tourism industry has to continue to embrace “sustainable practices and policies” (Pang *et al.*, 2012). In this context finding that sustainable tourism strives to minimize the

negative impacts of tourism on the destination and their resources, while at the same time trying to maximize the benefits for the environment and local communities (Pang *et al.*, 2012). The scholars, in this literature-based investigation, also found that there still remains the need to incorporate renewable energy sources, and adopt responsible construction methods, especially as it pertains to developing travel and/or niche market segments, especially in marginalised settings with limited environmental resources. Concluding that tourism companies, operators and practitioners that work within the travel sector will have to start offering carbon offset programs which will allow travellers to be compensated for their emissions by investing or making a donation to a practice or project which reduces Greenhouse Gas (GHG) emissions collectively (Pang *et al.*, 2012).

The article, 'Sustainable tourism and the grand challenge of climate change', written by Scott (2021) discusses how climate change is a challenge for society on a global scale. According to the author, this challenge is increasingly influencing the travel sector's planning, operations, investments, and demands on a "grand scale" (Scott, 2021). In this context, Scott (2021) provides an overview of the main challenges climate change is presenting to sustainable tourism, the evident knowledge gaps in the scholarship, as well as the preparedness within the sector to mitigate the inevitable risks that will be arising in the near future (Scott, 2021). Scott (2021) likewise discusses how "underprepared the tourism sector is in reality" and that at the rate that climate change is moving, there has been a "blatant lack of care for response and preparation" amongst all tourism stakeholders (Scott, 2021).

The article goes on to mention three responses to climate change which should be put into place worldwide, according to Scott (2021). Firstly, that the use of communication and knowledge needs to be improved as it pertains to tourism and climate change. Secondly, that research capacity and interdisciplinary collaboration needs to be increased and improved as regards to the tourism value chain and the climate associated challenges it will face. Lastly, that there needs to be more planning engagements between all role players involved, whereupon more strategic policies need to be implemented to actively combat climate change through sustainable and/or responsible tourism activities and practices (Scott, 2021).

The article further expounds on the impact that the novel coronavirus pandemic of 2019 (COVID-19) has had on tourism industry as well as the challenges posed by climate change in a post-pandemic landscape. Noting that the COVID-19 pandemic led to a sudden stop in the tourism industry, which allowed for reflections to be had on the industry's future in the short and long-term (Scott, 2021). The article further highlights the potential for sustainable tourism transformation post-pandemic, but the options vary on whether the industry will prioritize sustainability considering other more pressing socio-economic challenges faced universally. Scott (2021) also draws parallels between the pandemic and the ongoing climate crisis. Subsequently, the author likewise notes that both matters go beyond political and border considerations, highlighting the value of scientific expertise and many-sided responses (Scott, 2021).

However, unlike the pandemic, the climate crisis lacks a “predictable end”, which makes it crucial for tourism to adopt a long-term flexible perspective as it relates to developmental discourse in particular (Scott, 2021). This urgency to address climate change has been emphasized by global leaders. Scott (2021) in this case points to the perceived influences of “The Paris Climate Agreement”, which aimed to limit global warming to well below two degrees Celsius. (Scott, 2021) The article also echoes and advocates for the need for major emission reductions and achieving net-zero emissions by mid-century (2050s) to avoid disastrous climate events across the developed and developing worlds (Scott, 2021).

However, despite increased awareness and commitments, the aforementioned article expresses concern that the current pace of emission reduction is insufficient (Scott, 2021). The article further examines the gap between voluntary emission reduction and the needed policy objectives, which stress the importance of “urgent climate action” (Scott, 2021). In conclusion the article calls for action within the tourism community to address these climate challenges head-on. This specific article was found to be critical to the argument that climate change has indeed had a lasting impact on the tourism industry globally. This publication also went into great depth about what the tourism industry needs to integrate into their plan to ensure the longevity of the domain as a whole. For the purpose of this investigation, it should likewise be pointed out that the tourism industry has started to implement many of these sustainable strategies proposed by Scott (2021) to help with the development, as well as the progression of

the tourism industry within these contexts, however, to varying successes across the global North and South.

In the article entitled, 'Effects of weather conditions on tourism spending: Implications for future trends under climate change' by Wilkens *et al.* (2017), asserts that tourism is an important industry to many areas around the world and that it has the potential to impact local communities on many levels, especially when it comes to their natural/environmental resources (Wilkens *et al.*, 2017). However, the authors found in this context that climate change was likely to influence tourism due to the fact that weather patterns help determine where and when people travel. The authors looked at destinations which rely on outdoor activities and discovered that the shifts of visitation patterns and touristic spending was drastically changed by climatic events on a seasonal basis. A key finding in this publication was that the temperature has a positive correlation with summer and fall tourism-related spending (Wilkens *et al.*, 2017). This article also goes into detail, and outlines that there remains a need to further research and consider ecosystem changes, uncertainties, and visitor perceptions to fully understand the relationship between climate change and tourism, and how climatic events can influence tourism spending on an annual basis, especially within the global South (Wilkens *et al.*, 2017).

In light of this, Wilkens *et al.* (2017) argue that climate change does indeed affect the weather patterns of a specific area, thus finding that the tourism sector is influenced by the climate (directly and indirectly) on an almost daily basis (Wilkens *et al.*, 2017). Stating that tourism relies on stable environmental conditions to actually be profitable. However, the growing effects of climate change has drastically changed these conditions resulting in a "disturbance" in the tourism sector (Wilkens *et al.*, 2017). The warming climate has led to changes in traditional travel patterns. As is evident in popular natural attractions, such as coral reefs, glaciers, and snow-covered landscape that are now becoming increasingly vulnerable to the effects of the rising temperatures and vast changing atmospheric weather patterns (Wilkens *et al.*, 2017).

This in turn has resulted in tourists being pulled to these destinations at a rapid rate, seeking to experience these sites before they "change or disappear" (Wilkens *et al.*, 2017). According to the scholars this has inevitably led to overcrowding in sensitive ecosystems, thereby worsening their degradation, and increasing climate-induced

changes (Wilkins *et al.*, 2017). The climate change crisis has changed the predictability of weather patterns which has led to unpredictable storms, extreme heatwaves, as well as posing threats to the safety and well-being of travelling tourists. The disruption to seasons has also caused disruption to the availability and quality of outdoor activities which has resulted in a deterrent of potential visitors, which further has an effect on a destination's financial stability. The latter particularly in the global South (Wilkins *et al.*, 2017).

According to Barnett (2022) in the article, 'Security and climate change', there has been little research to date that explores climate change as a security issue from a unique touristic point of view (Barnett, 2022). This article explores the possible connections between the climate crises and its perceived risks to the safety and well-being of visitors to environments outside their places of residence (Barnett, 2022). This publication emphasizes that there is a need for a systematic study of climate change as a security issue for tourists (Barnett, 2022). Noting that environmental problems are recognized as security concerns, however, that climate change receives limited attention within this context. Barnett (2022) goes on to argue that climate change should indeed be considered as a "national security issue" that affects all residents of a particular nation state as well as the individuals that visit that specific country (Barnett, 2022). This is where the concept of "food security and human security" is introduced within the risks of climate change crisis (Barnett, 2022). As Barnett denotes in this article, climate change is becoming the most studied and most profound global event and, in this context, finding that it can no longer be ignored by institutional bodies and/or grassroots communities given its influence and impacts (Barnett, 2022).

Climate change is a globally known phenomenon which has multiple consequences for various sectors in the world, including tourism. Climate change has proved to be one of the most critical global challenges, as it affects various aspects of natural systems, societies, economies, and ecosystems. The findings in the above-mentioned article highlight that there is an urgent need for sustainable strategies to mitigate these effects and ensure the long-term resilience of the tourism sector.

In the article, 'Climate change and changes in global precipitation patterns: What do we know?' by Dore (2005) states that climate change is characterized by the shifts in temperature, sea levels, extreme weather events, and precipitation patterns (Dore,

2005). According to Dore (2005) the latter is mainly attributed to human activities such as the burning of fossil fuels, deforestation, and industrialization at a grand scale. However, in this context it has been found that an “enhanced greenhouse effect” is the primary driver of recent global warming events (Dore, 2005). In addition to this, the burning of fossil fuels, land-use changes and industrial processes have in turn also been found to be significant contributors in the increased concentration of these gases in the atmosphere (Dore, 2005).

Dore (2005) similarly denotes that climate change has had a devastating impact on natural systems. Where it has led to major alterations in ecosystems’ geographical distribution, biodiversity loss and the inevitable disruption of ecosystem services (Dore, 2005). Climate change has further impacted societal systems claims the publication, whereupon stating that climate change presents a range of risks to human societies. The rising sea levels threaten coastal communities, the extreme weather events can potentially result in the loss of life and damage to infrastructure, whereas the everchanging precipitation patterns can have an impact on agriculture and water availability. This is particularly concerning for vulnerable populations in developing countries, for they will endure the most of these impacts (Dore, 2005).

In the article entitled, ‘The climate responsibilities of industrial carbon producers’, published by Frumhoff *et al.* (2021) the responsibility for addressing climate change is appraised against the backdrop of the “United Nations Framework Convention on Climate Change” (Frumhoff *et al.*, 2021). The article further discusses that industrialized nations, being large contributors to historic carbon emissions, hold a special responsibility in preventing climate system interference. This study evaluates the actions of these countries, and the impacts registered companies within them could have taken and have taken in response to climate change (Frumhoff *et al.*, 2021). A key finding of this study was that these companies hold a responsibility for the ever-changing climate around the world at present, but it was also found that these companies could potentially come up with the solution to solve the climate crisis altogether (Frumhoff *et al.*, 2021). This article also described how the mitigation efforts implemented to help decrease the impact these countries and companies are having on the climate crisis have received major backlash (Frumhoff *et al.*, 2021). This article similarly underscores the need for more solutions/policies and changes to be implemented across the board so that the climate crisis is slowed down even if that

means facing constant resistance from stakeholders unwilling to accept to change for the “greater good” (Frumhoff *et al.*, 2021).

In addition, the authors also note that efforts to combat climate change are complicated and require global cooperation. This seeing as there is a major push for countries and companies to transition to renewable energy sources, become more energy efficient, promote reforestation and to generate new policies like carbon pricing scales (Frumhoff *et al.*, 2021). To date there has been substantial progress in the understanding of climate change and how to address it, but there are still several challenges and gaps which persist. These include the need for improved interdisciplinary research, accurate climate models and effective governance principles to facilitate international collaboration (Frumhoff *et al.*, 2021). The path of future climate change depends on the success of mitigation efforts in the present, according to Frumhoff *et al.* (2021). Meaning that without rapid and extensive reduction in GHG emissions the world will continue to experience increasingly severe and irreversible climate catastrophes that will naturally affect all sector including travel and tourism (Frumhoff *et al.*, 2021).

According to Shani and Arad (2019) in their article entitled ‘Climate change and tourism: Time for environmental scepticism’ outlines the continuous negative view of tourism on climate change (Shani & Arad, 2019). Highlighting in this context the debated nature of this scientific topic, whilst suggesting that this “connotation of global warming being induced by human activities is highly exaggerated” (Shani & Arad, 2019). The authors further expound that minimal global warming can have a positive effect on humans, animals, and wildlife (Shani & Arad, 2019). This article has been key to consider seeing as it shows that there are a few benefits to the environment, human beings, and animal life that come along with climate change. One of the potential positive features of a small amount of climate change lies in the impact it has on certain ecosystems (Shani & Arad, 2019). According to the authors, warmer temperatures in certain areas may lead to longer growing seasons, allowing plants to bloom. This could result in more vegetation cover, which could have the potential to positively influence biodiversity and ecosystem health in some destinations (Shani & Arad, 2019).

Moreover, another benefit is that some areas which were once inhospitable due to the extreme cold might become more habitable, which could potentially expand the range of certain species and sustainable human activities (Shani & Arad, 2019). In addition, the article also finds that higher levels of carbon dioxide (CO²) can act as a natural fertilizer for certain plants which in turn promotes growth and can enhance crop yields (Shani & Arad, 2019). This increase in CO² has the potential to benefit agriculture where nutrient limitations and water availability were once a significant constraint in that area. This article similarly buys into the idea that with the temperature increase in certain destinations a new prosperous tourism industry could potentially emerge in these unexplored landscapes (Shani & Arad, 2019). In this context also finding that the more land that can be salvaged or expanded, can ultimately increase the surface level for a destination to create new tourism products and services that could attract a diverse set of domestic and international tourists alike. The latter is found to be beneficial for it will generate employment and more money will be coming into the area once starved of revenue systems (Shani & Arad, 2019).

While the overall impact of climate change has a negative impact on human societies, a small percentage of change can offer some advantages. The increase of temperatures could lead to warmer temperatures resulting in a decrease of winter mortality rates. Warmer temperatures will also result in a decrease in energy consumption for heating purposes resulting in less fossil fuels being burnt. This could be a beneficial factor for tourist destinations to want to slow down the climate crisis and ensure that they are not worsening the current state (Shani & Arad, 2019).

According to Belsoy *et al.* (2012), in the article entitled, 'Environmental impacts of tourism in protected areas' there are both positive and negative effects tourism can have on natural resources (Belsoy *et al.*, 2012). The positive effects on the environment include: the upliftment of the destination's economy; the promotion of conservation; the reduction of local migration; as well as the enhancement of socio-cultural understanding levels (Belsoy *et al.*, 2012). The authors go on to elaborate on the negative effects tourism can have on the environment. That include: an increase of consumption in water, energy, and space, as well as landscape destruction; waste production; as well as the loss of ecosystems (Belsoy *et al.*, 2012).

In this challenging environmental context Belsoy *et al.* (2012) also underscores the significance to protect biodiversity in these spaces, noting that the latter is the “intricate web of life on earth” and that “biodiversity contributes to the overall health and functioning of all planetary systems” (Belsoy *et al.*, 2012). In this publication going on to note that every species plays a role in managing ecological balances and providing essential natural services such as pest control, pollination, or water purification (Belsoy *et al.*, 2012). Moreover, finding that ecosystems are adaptable to small environmental changes, however, that extreme changes could result in the delicate ecosystem disintegrating (Belsoy *et al.*, 2012). Therefore, it is important to state that the environment must become a central role player within the tourism value chain, and its various demand and supply systems (Belsoy *et al.*, 2012).

The increase in environmental impacts of tourism is a growing concern for many scholars and practitioners in the field, especially as it pertains to “overtourism”, according to Belsoy *et al.* (2012). Overcrowding in popular destinations can lead to resource depletion as well as habitat destruction. According to them sustainable tourism practices will be imperative to mitigate these negative effects from spiralling out of control (Belsoy *et al.*, 2012). This as sustainable tourism at its core emphasizes responsible travel that minimizes negative impacts and fosters positive contributions to the environment holistically. This will include measures that could be adopted such as carrying capacity assessments, waste management systems, and promoting eco-friendly transportation channels. The destination can make this transition to more “sustainable travel practices and activities” easier by integrating local communities into the decision-making processes and by promoting environmental education amongst locals (Belsoy *et al.*, 2012). However, in adopting this sustainable approach to tourism development discourse there needs to be a balance struck between economic growth and environmental preservation (Belsoy *et al.*, 2012).

In the article, ‘Tourism under climate change scenarios: Impacts, possibilities, and challenges’, by Grimm *et al.* (2018) – the researchers explore the connections between tourism and climatic events, stressing the tourism industry’s sensitivity to environmental shifts and its role in GHG emissions (Grimm *et al.*, 2018). In this publication the authors advocate for sustainable tourism development and “incorporating considerations of climate change outwardness” (Grimm *et al.*, 2018). The authors likewise discuss the influence of climate change on various times scales

by emphasizing the impact of human activities in predetermined time periods. Highlighting in this context the role the tourism industry has played in contributing to these emissions over the last half century (Grimm *et al.*, 2018).

This research similarly acknowledges the existing scientific focus on climate change in developed countries, and it provides a few adaptations and mitigation strategies for the tourism industry to cope with this phenomenon in developing countries as well (Grimm *et al.*, 2018). This article also points out, similar to the above studies, how the tourism industry is extremely sensitive to climate change, and likewise echoes the fact that tourism as an industry contributes to a large portion of GHG emissions (Grimm *et al.*, 2018). Yet Grimm *et al.* (2018) goes on to find that the world is currently experiencing the consequences of climate change and there are huge movements across the globe to try and slow down the climate crisis (Grimm *et al.*, 2018). Nevertheless, the authors also point out despite this “negative space” in which the world currently finds itself that tourism still has the potential to “bring about positive change in the wake of this international crisis” (Grimm *et al.*, 2018). Thus, tourism and the environment must become mutually supportive to one another considering the climate crisis. Grimm *et al.* (2018) concludes by noting that the influx of tourists may not only bring more money into the destination, but that tourists could potentially also help to create new and unique ideas on how one can create sustainable/responsible adaptations/solutions within the tourism model to mitigate the above crisis (Grimm *et al.*, 2018).

The research conducted by Grimm *et al.* (2018), is similar to the findings of Butler (1991), and Homes (2022) supports this idea presented by Grimm *et al.* (2018), in their respective publications, ‘Tourism, environment and sustainable development’ and ‘The link between tourism and climate change’ (Butler, 1991; Homes, 2022). However, both scholars independently emphasize that tourists will also be getting a direct view of how climate change has affected a certain destination, and this will hopefully encourage these tourists to be more conscious of how they conduct their day-to-day lives and do their bit in reducing their own carbon footprint within these destinations (Butler, 1991; Homes, 2022). Additionally finding that every destination needs to enhance their “responsible culture”, their natural environment, and all the products and services which they offer to the visiting tourist in this travel landscape (Butler, 1991; Homes, 2022). This in turn they argue creates authenticity as well as distinctiveness

for a specific destination within a very competitive global tourism market. Wherein this “original approach” to climate change could then be seen as a “positive destination drawcard” worth exploring for visiting tourists, hopefully in marginalised destinations, where they can then potentially contribute to the betterment of the “environment in that specific space” in an array of ways and at various levels (Butler, 1991; Homes, 2022). Both the studies of Grimm *et al* (2018) and Butler (1991), show that climate change goes hand-in-hand with tourism and that if there is more money within a destination, it puts them at an advantage to mitigating the effects of climate change.

Crouch and Ritchie (2017) in their article entitled ‘Tourism, competitiveness, and societal prosperity’ delves deeper into the latter point and considers how societies face decisions which can enhance the well-being and quality of their citizens in the wake of internal problems and external crises. (Crouch & Ritchie, 2017) Finding that there is a growing trend among destinations to adopt tourism as a “main economic strategy” due to the potential economic benefits tourism brings in. (Crouch & Ritchie, 2017) Tourism development in this context was also found to be closely tied to community development. The study thus aimed to explore the relationship between societal prosperity and tourism, and then appraised these competitive scenarios against the backdrop of significant worldwide events that affect all stakeholders involved in the travel domain. (Crouch & Ritchie, 2017)

Tamaki and Ichinase (2019) discuss in their article, ‘Sustainable tourism industry and rural revitalization based on experienced nature and cultural tourism’, the shift from mass tourism organized by travel agents to planned tourism arranged by individual tourist, as well as the challenges which are related to the management shortages within destination management structures (Tamaki & Ichinase, 2019). According to the authors, tourism has played a crucial role in raising awareness about the ongoing battle against the climate crisis. It is further mentioned that tourist destinations, and tourism as a whole, is indeed able to provide tourists with educational programs which will provide the visitors with the chance to learn about the environment and the conservation efforts the destination is taking to preserve its natural and cultural environments (Tamaki & Ichinase, 2019). Not only will the tourists see the direct impact of the climate crisis in these contexts, but the authors found that this can then influence them to become “advocates for climate action” once they return to their places of origin (Tamaki & Ichinase, 2019). The tourist destinations which tourists flock

to can then in turn actively promote sustainable practices and can include information on responsible behaviour, conservation efforts as well as opportunities for the tourists to help support the local sustainability initiatives in and around a specific touristic destination (Tamaki & Ichinase, 2019). The scholars also echo the importance of sustainable and responsible destination managers/management in the climate change equation, noting that these “individuals” and “companies” have the ability to strike that very delicate balance between socio-economic, socio-cultural and environmental aspects of a specific site (Tamaki & Ichinase, 2019).

In the article entitled, ‘Sustainable tourism policies: From crisis-related awareness to agendas towards measures’, by Schanherr *et al.* (2023) the importance of sustainable tourism policies in light of the climate crisis is considered from a touristic point of view. This article aims to highlight the formulation of agendas and strategies for sustainable tourism around the world, with the policies translating into specific measures which in turn are set to address environmental, economic, cultural, and community aspects (Schanherr *et al.*, 2023). This study has contributed to the awareness of the environment and has provided insights into the different approaches to sustainable tourism policies across all continents (Schanherr *et al.*, 2023).

Moreover, the authors go into detail about sustainable tourism policies and the fact that there is often misinterpretation within them, and that the prioritization of short-term objectives can receive some backlash – seeing as change is often seen as a threat within market segments (Schanherr *et al.*, 2023). This article is important for the broader investigation within this dissertation as it shows that the need for sustainability within travel landscapes is far larger than originally expected and is not only the responsibility of the local community on the ground (Schanherr *et al.*, 2023). The authors similarly emphasize that policies need to be implemented on a national and an international level for real success to show at a local level. Noting that by having international policies out there, it will help educate people all around the world so that a specific destination does not have to start the education and communication on the climate crisis from scratch every time a tourist visits (Schanherr *et al.*, 2023).

The publication also found that the latter will help create a consistent international standard of conservation (benchmark for best practice) as well as create universally known mitigation strategies that work to help guide specific countries on what they

should or not do as it pertains to sustainability, climate change and tourism altogether (Schanherr *et al.*, 2023). It was found that the specific country can then take this and create a variation of the strategy to what works best for them – “localised action plans”. (Schanherr *et al.*, 2023). The latter it has been determined will help them (nation states) not feel alienated and it will likewise show that everyone is trying to make an effort to preserve the earth and that it is “not one specific person or place doing all the work on behalf of others” (Schanherr *et al.*, 2023).

2.3. Understanding climate change

Throughout earth’s history global temperatures have risen and fallen naturally – in this context never becoming too hot or too cold for life as we know it to exist. This is because as long as the atmosphere allows energy from the sun to be let in, earth will absorb some of the energy, but will also reflect some of it outwards (Wong, 2016). There are particular gasses, called GHGs, which will absorb this reflected energy, and this is what causes the earth to heat up and allow for all living organisms to survive and prosper on the planet. This process is called the “greenhouse effect” (Wong, 2016; Agovino *et al.*, 2019). However, during this process carbon dioxide is also constantly released into the atmosphere. Many scientists and scholars believe that if too much carbon dioxide is released into the atmosphere this will see earth’s temperature rise at an unnatural pace, which in turn will lead to severe and extreme weather patterns happening more frequently (Agovino *et al.*, 2019). This radical and unnatural shift caused by high levels of carbon dioxide that are directly affecting atmospheric reactions is called, climate change.

Climate change, also known as “global warming”, is referred to as long-term movements in temperature and weather patterns around the planet (Denchak & Turpentine, 2021). These changes can occur naturally through advances in the “solar cycle”, however, human activities since the 1800s have been the main cause of rapid and increased climate change and global warming, and this is due in large part to the burning of fossil fuels on a constant and unregulated basis (Environmental Protection Agency, 2023). Fossil fuels are a mixture of fossilized plants and animal remains from millennia ago (Kopp, 2023). Depending on the type of “fossil” it will determine the amount of heat, as well as the amount of pressure that will be released if

exposed/utilised by humans (Collier *et al.*, 2008). “Fuels are a source of energy”, and fossil fuels are no different (Kopp, 2023). The source of energy in fossil fuels is from the sun which urges photosynthesis to change the water and carbon dioxide into a “molecular structure of archaic animals and plants” (Environmental Protection Agency, 2023).

According to Kopp (2023), fossilized plants and animals are made up of only “carbon dioxide and hydrogen atoms”. This then serves as “fuel” when burnt (Smithsonian, 2023). However, as the fossil fuel material gets buried deeper and deeper and gets exposed to more heat and more pressure from the earth’s core, this will ultimately result in the material breaking apart (Pool, 2014). Plankton decomposes into natural gas and oil, whereas plants become coal (Smithsonian, 2023). Plankton is created by miniscule animals, algae and bacteria which sit at the bottom of the ocean and becomes buried by all types of sediment and other decaying organisms (Dutkiewicz & Krol, 2022). Normal amounts of plankton are crucial in absorbing carbon dioxide but if plankton continues to increase, it will create and form “harmful algae blooms” on a more regular basis (Smith *et al.*, 2008). These blooms produce toxic mixes which can then affect marine life, mammals, as well as humans (Torkelson, 2022). Fossil fuels today are extracted through coal mining and through the drilling of oil and gas wells, situated offshore or on land by most economies of the world (Dutkiewicz & Krol, 2022).

The burning of fossil fuels produces GHG emissions (Denchak, 2022). When GHGs are then released, it creates a “blanket” around the Earth and results in the trapping of all the heat from the sun this then raises the temperatures on earth’s surface as well as in the ocean waters (National Grid, 2023). As indicated above, the release of GHGs is the number one cause of climate change and global warming. There are four specific greenhouse gases that will be considered for this investigation: carbon dioxide; methane; nitrous oxide, and water vapour.

Carbon dioxide is circulated naturally, via the respiration of animals, humans, and plants (Da Silva *et al.*, 2019). Methane on the one hand is produced through decomposition, but copious amounts are being produced by cattle farms, waste dumps and the production of oil and gas (Chu, 2015). Nitrous oxide on the other hand is created through the usage of fertilizers and all nitric-acid production along with the “burning of biomass” (Knuf & Maani, 2022). Lastly, water vapour is created as the

earth's atmosphere warms, but can remain in the atmosphere for years (Sherwood *et al.*, 2018). It is said that the period of 2011 to 2020 was recorded to be the warmest period on planet earth's known history (Sherwood *et al.*, 2018). According to Dahlman and Lindsey (2023) since the late 1800s, earth's temperature is now 11°C warmer than what it was during the Third Industrial Revolution. This historical and rapid rise in temperatures, accompanied by the continued usage of fossil fuels, naturally puts the natural environment of earth in "imminent danger". (Dahlman & Lindsey, 2023).

However, within this context, it is also important to note that climate change as a construct is a difficult phenomenon to study, and "how" as well as "why" the weather and temperatures are so rapidly changing is difficult to comprehend (Dodds *et al.*, 2009). Nevertheless, climate change has a huge effect on earth's chemical makeup, and this is having a ripple effect on all living things inhabiting the planet and their subsequent business and recreational activities. Moreover, widespread and not well-thought-out human activities to date have caused universal temperatures to rise faster and higher, and as this happens, the earths' ice poles are melting at an alarming rate (Sixt, 2020).

This in turn has resulted in the sea levels also rising and could cause islands and coastal zones in particular to become fully submerged by ocean water in the next few decades to come. The latter for its part could result in island habitats being harmed and/or destroyed, and in extreme cases this rise in sea levels will lead to a "mass extinction episode" in terms of the natural, cultural, and historical environments found in these island settings. (Dodds *et al.*, 2009; Field, 2021). Thus, climate change and global warming can cause independent and sovereign nation states to "physically sink" (Dahlman & Lindsey, 2023). Moreover, it can be argued that climate change has had and could have a significant impact on the tourism industry of these islands, especially amongst islands nation states and within country's that rely heavily on their coastal and marine economic zones for income, development, and growth (Evans *et al.*, 2013).

In this context it is also important to be cognisant that within global warming, there are "two systems" used to describe what directly affects the stability of global climates (Field, 2021). Given the outline of this study both need to be considered. The first is a "carbon eating quality", this is something which will take the carbon out of the

atmosphere thus reducing global warming (Wollersheim, 2022). The second is a “carbon releasing quality”, this is something that will release carbon into the atmosphere resulting in an increase in global warming (Wollersheim, 2022). Two examples pertinent to “sinking island destinations” include: changing ocean currents and the difference in water temperatures; as well as the downward and upward slant of the ocean floor layers that hold carbon (Wollersheim, 2022). Originally the ocean absorbs carbon, but after a while it cannot absorb any more so it will then release carbon into the atmosphere (Voosen, 2022). This is then considered to be a “carbon eating quality” in the broader scheme of climate change (Voosen, 2022). Living plants at the correct temperature will eat carbon, but the minute they die, or are living in too high of a temperature, they release all the carbon they absorbed back into the atmosphere and therefore will only absorb a small amount (Cho, 2022). This in turn can then be considered as a “carbon releasing quality” within the context of global warming.

Therefore, it is fair to argue that climate change does not only affect the earth’s temperature, but that it also has a direct effect on everything on the planet itself, especially given that these “eating and releasing” qualities are somewhat controllable. The increase in temperature in turn will result in many “changes” to natural phenomena as we have come to know it. That include more intense droughts; a rise in sea levels; longer fire seasons; wider regions affected by flooding; and the melting of polar ice (Backlund *et al.*, 2009). Thus, climate change will influence/damage infrastructure, agriculture operations, fisheries and ecosystems, the transportation of all goods and services, the quality and availability of water as well as the quality of air (Backlund *et al.*, 2009). Thus, given the wide-ranging, ever-changing, flexible, evolving and fluid impacts and effects of climate change and global warming it is also easy to gage and contextualize how it will and could affect the travel industry holistically, especially as it relates to the need for more sustainable tourism development to mitigate these adverse risks and threats.

2.4. Understanding the tourism system

The tourism industry is a broad, complex and comprehensive industry and is considered to be one of the largest sectors in the world (Camilleri, 2018). The tourism

industry is related to the idea of a person (tourist) who travels to other locations (locally or internationally) for leisure and/or business purposes (Lafferty & Fossen, 2001). Tourism is considered to be a “commercial business” and thus it will have an impact on every other industry surrounding it (Sofronov, 2018). It is, therefore, apt to argue that everyone gains from the tourism system if it is managed “correctly”, “sustainably” and “responsibly”. (Camilleri, 2018) The tourism industry can be crucial for all grassroots community stakeholders seeing as it expands their “economic standing” as well as creates a positive influence on their behalf on the “employment market” (Murphy, 2013).

The tourism industry is similarly a “business” which provides products and services directly and indirectly to pleasure tourists who are away from their usual home environments (Murphy, 2013). Tourism thus provides an opportunity for individuals to witness first-hand the fragile beauty of our planet's ecosystems. By immersing themselves in natural landscapes and environments, tourists gain a deeper understanding of the importance of preserving these natural resources and environments (Deng *et al.*, 2002). Education programs within the tourism system can further enhance visitors' ecological awareness by providing information about climate change impacts and sustainable behaviours. As tourists return home from their journeys with newfound perspectives, they in turn can then become “advocates” for change within their own communities (Ashraf *et al.*, 2019). Environmental awareness, consciousness and protection are thus key elements to all local and international tourism systems.

The consumer is the most vital part of the tourism system (Glaesser, 2003). The consumer is therefore the reason tourism products and services exist in the first place. (Glaesser, 2003). When working in the tourism industry one must put the consumer first and base all decisions around the consumers perceived or established wants and needs. This seeing as every consumer is different, they enjoy doing different activities, eating different foods, and visiting different destinations, attractions and sites, domestically and internationally (Csapo, 2012). The consumer will begin by setting up a budget, think or research an itinerary, decide how long they will be visiting a specific destination, and how they will arrive at the destination (Coursera, 2022). It is also important to note that consumers will go on holiday to “escape” their daily lives, and this will make them more aware of what they would like to do when they go on holiday

and with whom. However, it is also important to stress that the tourist may not know exactly what is offered at a specific destination, attraction or site, so the tourism system of that specific setting will need to make the products/services “visible” to the consumers. This latter part of the tourism system is where the “touristic experience” is created for the tourist’s enjoyment once they reach these predetermined destinations, and engage with the attractions, sites and peoples within them (Glaesser, 2003).

This travel experience in turn will relate to how the consumer will get to the destination and the experience of the consumer throughout that specific journey (Aldebert *et al.*, 2011). If the consumer has a negative experience travelling to a destination, it will have an impact on the destination they are visiting or on the tourist’s promotion of the specific destination (Frick & Brent, 1991). This is due to the fact that a consumer would be put into a “bad mood” if the experience travelling to that destination was bad and it would put a “dark cloud” on the rest of the experience as the tourist would create preconceived ideas as to how the destination will manage them as tourists going forward and how the products/services will react or live up to their expectations (Murphy, 2013). This could then have them talking to their friends and family about the negative experience and could thus influence them to not visit that specific destination. Consequently, in the cases of “negative word-of-mouth” advertising the tourism system of that specific destination might “lose out” significantly in an array of areas, wherein a “repeat visit” by the consumer (tourist) is not certain (Cooper, 2012).

Thus, it is fair to argue that the conceptualization and contextualisation of the tourism system, as outlined above, is imperative to the operational workings of the travel service sector in the short and long term on a local, national, and international level. However, despite the evident successes of the tourism system it is also important to be cognisant of its negative impacts on the environment it has had, especially over the last century.

2.5. Chapter summary

This chapter considered a broad theoretical framework to climate change and tourism as expounded upon by an array of scholars from various transdisciplinary perspectives and points of view. That included: Butler (1991); Dore (2005); Nzama (2010); Pang *et al.* (2012); Wilkens *et al.* (2017); Crouch and Ritchie (2017); Grimm *et al.* (2018);

Tamaki and Ichinase (2019); Shani and Arad (2019); Belsoy *et al.* (2019); Schanherr *et al.* (2020); Scott (2021); Frumhoff *et al.* (2021); Barnett (2022); as well as Holmes (2022). This chapter also outlined and underscored that more has to be done in practice to protect this fragile balance tourism, the environment and its associated ecosystems, especially in light of the ever-changing and evolving global climate crisis. This theoretical framework to climate change and tourism will now have to be explored in practice.

CHAPTER 3: PRACTICAL OVERVIEW FOR CLIMATE CHANGE AND SUSTAINABLE TOURISM DEVELOPMENT

3.1. Introduction

The climate crisis has become an urgent global concern, necessitating creative and sustainable solutions to mitigate its effects. Amidst this backdrop, the tourism industry it was found (theoretically) holds immense potential to drive positive change and contribute towards a more sustainable future. The following chapter explores how tourism can be utilized as a potentially powerful tool for change wherein fostering environmental consciousness, promoting renewable practices, supporting local communities, and encouraging policymakers to prioritize responsible, green and environmentally friendly practices. This section will likewise consider how climate change has affected tourism and vice versa, before the benchmarking of global South case studies in South America (Bahamas), Asia (Maldives) and Africa (Mauritius). The latter to showcase how the travel and tourism industry can be positioned as a potential (positive) asset in the wake of the dire climate situation.

For the purpose of this study the Maldives, Bahamas, and Mauritius were chosen as case study islands to compare to the Seychelles due to their similar environmental challenges and economic dependencies on tourism. These islands share tropical climates, which make them highly vulnerable to the impacts of climate change, such as rising sea levels, increased storm frequency, and coral reef degradation. Examining these islands provides a comprehensive understanding of how climate change affects small island nations. Additionally, tourism plays a crucial role in their economies, offering significant revenue and employment opportunities. Sustainable tourism practices can contribute positively by funding conservation efforts and promoting climate resilience, demonstrating how the tourism sector can be a driving force for both economic stability and environmental sustainability.

3.2. Benchmarking case studies in the global South

Benchmarking case studies are essential tools for one to improve their performance and competitiveness in today's dynamic tourism industry. The importance of benchmarking case studies lies in their ability to drive innovation, inform strategic decision-making, and foster a culture of continuous improvement. The sub-section below will take the practical framework above on climate change, tourism systems, sustainable tourism development and the environmental impacts of tourism and apply it now to case studies in the global South. That include Maldives (Asia); the Bahamas (South America); and Mauritius (Africa). This benchmarking is envisaged to assist in the appraisal of how the Seychelles, if at all possible, can mitigate the effects of climate change and global warming.

3.2.1. Asia: Maldives

The Maldives is a chain of islands situated in the Indian Ocean, about 700 kilometers southwest of Sri Lanka (Dairopoulos, 2019). This Asian nation state is composed of 26 atolls, which are made up of over 1,000 coral islands. Due to where the Maldives is situated it makes it one of the world's most geographically dispersed countries. The Maldives is strategically located, with India and Sri Lanka to the north, Malaysia and Indonesia to the east and Kenya and Tanzania to the west. (Maldives Tourism, 2023)

This nation is renowned for its stunning beaches, clear waters, and vibrant marine life – and is often referred to as an “island paradise in the Indian Ocean” (Maldives Tourism, 2023).

The Maldives’ location contributes to its rich marine biodiversity. The surrounding waters are home to a vast array of marine species, including vibrant coral reefs, fish, sea turtles, and various other marine life. This biodiversity is not only essential for the Maldives but also for the entire Indian Ocean region (Ranjan, 2023). The Maldives plays a crucial role in the conservation and protection of this valuable ecosystem. The Maldives’ strategic location has turned it into a major tourist destination in Asia. With its picturesque landscapes, luxury resorts, and water-based activities, the country attracts tourists from all over the world, making it a major tourist hub (Maldives Tourism, 2023).

Tourism has helped the Maldivian economy, generating revenue, providing employment opportunities, and boosting the country's overall development (Marcus, 2021). While its location is a boon for tourism and biodiversity, it also makes the Maldives highly vulnerable to the effects of climate change, particularly rising sea levels (Manzo *et al*, 2021). The nation's low-lying islands are at risk of submersion, which has led to international attention and cooperation on climate change mitigation and adaptation efforts (Manzo *et al.*, 2021). The Maldives plays a crucial role in advocating for climate action and highlighting the challenges faced by similar small island nations in the region, on a global stage. The Maldives’ is also a significant destination for its geopolitical importance (Shahid *et al*, 2023). The Maldives' location in the Indian Ocean grants it geopolitical significance as it lies along major maritime routes, making it a key area for international shipping and trade. As a result, the Maldives maintains diplomatic relations with various countries, particularly its maritime neighbouring nations, to ensure security and stability in the region (Ranjan, 2023: 557).

The history of the Maldives is a testament to the resilience of its people, their unique culture, and the ever-present influence of the surrounding sea. The early history of the Maldives is shrouded in mystery, but it is believed that the islands were first settled around 2,500 years ago (Forbes & Ali, 1980). These early inhabitants were likely seafarers and traders from the Indian sub-continent and/or more outwardly parts

southeast Asia. Buddhism was the predominant religion during this period, and the islands were known for their remarkable Buddhist stupas and monasteries (Kreamey, 2022). Remnants of this era can still be seen in ancient ruins scattered across the islands. The turning point in the history of the Maldives came in the 12th century when Islamic missionaries arrived, introducing Islam to the local population (Mohamed, 2017). The Maldives gradually converted to Islam, a transition that transformed the islands culturally, socially, and religiously. Today, the Maldives remains a predominantly Muslim nation, with Islam deeply woven into the fabric of its society. The latter most likely influencing various components of “island life” and perhaps contributing significantly to shaping its unique cultural identity today (Rajan, 2023). This religious transformation within the country significantly impacted Maldivian culture, shaping its values, customs, and outlooks.

It is also important to note that the archipelago's early inhabitants were likely descended from Indo-Aryan peoples, which laid the foundation for the Maldivian language, Dhivehi, and its script, Thaana (Pijpe *et al.*, 2013). The Maldivian language, although influenced by Sanskrit, Arabic, and other Indian languages, has a unique linguistic identity (Midhath, 2020). Maldivian literature, primarily in the form of historical and religious texts, reflects the deep-rooted Islamic heritage of the nation (Midhath, 2020). The strategic location of the Maldives also made it a desirable target for European colonial powers. Over the centuries, the islands fell under the influence of various European powers, including the Portuguese and the Dutch (Phadnis & Luithui, 1981). However, the Maldivian sultans, in alliance with various regional powers, managed to retain a degree of independence, maintaining their unique island cultural identity (Walker, 2023).

In 1887, the Maldives became a British protectorate, marking a period of British colonial rule that continued until the mid-20th century (Rehan, 2022). During this time, the Maldives retained its internal independence but was under “British protection” (Rehan, 2022). In 1965, the Maldives achieved full independence, gaining recognition as a sovereign nation on the world stage. The latter half of the 20th century saw significant changes in the Maldives, both politically and economically. The nation transitioned from a sultanate to a Republic in 1968, and in the years that followed, various leaders played pivotal roles in modernizing the country and its associated industries (Male, 2021).

Furthermore, oral traditions have played a crucial role in preserving the Maldivian way of life through folk tales, poetry, and songs (Lydersen, 2009). Maldivian cuisine is a delightful fusion of flavours, influenced by South Indian, Sri Lankan, and Arabic culinary traditions (Armstrong, 2023). The Maldives has a rich tradition of craftsmanship, including skills in boat building, woodcarving, and lacquer work (Hogle, 2022). The most celebrated craft is the construction of traditional Maldivian boats, known as “dhonis” (Stephen, 2022). These vessels are marvels of craftsmanship, designed for both function and beauty, and are integral to the daily life of the Maldivian people (Stephen, 2022).

The development of tourism in the 1970s was a turning point for the nation state, transforming the Maldives into a global tourist destination known for its luxurious resorts, coral reefs, and aquatic activities (Kundur, 2012). The Maldives has experienced rapid economic development in recent decades, driven primarily by its thriving tourism industry (Rajan, 2023). This sector has transformed the nation's economy, leading to improved infrastructure, and living standards for its people (Sathiendrakumar & Tisdell, 1989). Over the past few decades, the Maldives has emerged as one of the world's most sought-after tourist destinations, particularly in the broader global South and on the Asian sub-continent. In this context it was found that tourism is the “lifeblood” and “lifeline” of the Maldivian economy, contributing significantly to its GDP and providing employment opportunities to a large portion of the population (Kachroo-Levine, 2021).

The Maldives has become renowned for its exclusive and high-end resorts, which attract honeymooners, divers, and travellers seeking a luxurious escape. This influx of tourists has fuelled the growth of the hospitality and service industries, and a significant percentage of the population is engaged in various tourism-related activities (Kundur, 2012). Tourism in the Maldives primarily revolves around its beautiful islands, each offering a unique experience. The revenue generated from tourism has been found to be vital for the nation's development and infrastructure improvement (Soken-Huberty, 2023). The income generated from room rates, food, activities, and excursions contributes significantly to the nation's income. Tourism has also brought about cultural exchange in the Maldives (Forgeard, 2023). This seeing as visitors have the opportunity to immerse themselves in the local culture, including experiencing traditional Maldivian cuisine, music, and dance (Forgeard, 2023). The warm and

welcoming nature of the Maldivian people adds an enriching layer to the overall touristic experience. Furthermore, the diverse workforce in the tourism industry provides travellers with insights into different cultures and traditions, creating a harmonious blend of global influences in this “island paradise” (Lacalle, 2021).

The aforesaid rapid growth of tourism in the Maldives over the past few decades, however, has brought both economic prosperity and significant environmental challenges. The Maldives boasts some of the most diverse and vibrant marine ecosystems in the world (Stanley, 2023). Unfortunately, the influx of tourists has led to negative and dire consequences for these delicate ecosystems. One of the primary concerns is coral bleaching, a result of rising sea temperatures and ocean acidification (Baird *et al*, 2009). Coral bleaching can lead to the death of corals, undermining the natural beauty and ecological integrity of the Maldivian reefs (Baird *et al.*, 2009). Additionally, water pollution from tourist activities, such as snorkelling, diving, and boating, can disrupt the balance of marine ecosystems and harm the sensitive coral polyps (Gedik & Mugan-Ertugral, 2019).

The rapid growth of tourism has also created significant challenges in terms of waste management and pollution control (Koliotasi *et al*, 2023). The increase in hotels, resorts, and restaurants has led to a surge in waste production, including non-biodegradable materials such as plastic bottles and packaging, accompanied by the improper disposal thereof, have often resulted in pollution of both land and marine environments (McDowall, 2023). Efforts to combat this issue include government regulations, such as the 2017 “Plastic Bag Ban”, and initiatives by resorts to reduce single-use plastics (Karasik, 2022). However, achieving a sustainable waste management system remains a challenge in the Maldives, given the remote location of many islands and the need for effective recycling and waste reduction programs (Karthikheyan, 2010).

Climate change poses a significant threat to the Maldives, a nation with a maximum elevation of only 2.4 meters above sea level (Singh *et al*, 2001). Rising global temperatures and melting ice caps have contributed to rising sea levels, making the Maldives especially vulnerable to the impacts of climate change (Igini, 2023). The erosion of coastlines, saltwater intrusion into freshwater sources, and increased

flooding are some of the immediate consequences of global warming, specifically rising sea levels (Elton, 2023).

While tourism is not the primary driver of climate change in this specific context, the transportation of tourists to and within the Maldives, often involving long-haul flights and speedboats, contributes to carbon emissions (Ritchie, 2020). Additionally, the energy demands of resorts and hotels, often met by fossil fuels, further exacerbate the nation's carbon footprint. The Maldives is acutely aware of the environmental challenges posed by tourism and has taken several measures to promote sustainable practices. Many resorts have adopted eco-friendly initiatives, such as solar power installations, rainwater harvesting, and waste reduction programs (Munasinghe, 2010). Moreover, the Maldivian government has established marine protected areas to conserve critical habitats and promote responsible tourism (Nazeem, 2023). To mitigate the environmental impact of tourism, it is essential for tourists, the government, and the private sector to collaborate in adopting sustainable practices (Smailes, 2022). This includes responsible waste disposal, supporting renewable energy, and engaging in conservation efforts like coral restoration and marine protection. The Maldives remains an important player in international environmental discussions due to its vulnerability to climate change and rising sea levels.

However, for the purpose of this dissertation it is also important to point out that the Maldives has introduced five creative ways to combat the effects of climate change and to prevent climate change from further damaging their country and ultimately their economy (Munasinghe, 2010; Ritchie, 2020). The first strategy they have implemented is their transition to renewable energy. They have introduced renewable energy sources so as to not rely on fossil fuels. Wind and solar projects have similarly been put in place to exploit the natural resources the Maldives has sustainable and responsible (by the people for the people) (My Maldives, 2022).

The second is coral reef protection. The Maldives has many natural barriers which have provided them with a “barrier” against storm surges and flooding, which in turn supports and protects their marine biodiversity. The Maldives is working with the Blue Marine Foundation in their quest to restore their coral reefs so that they do not lose that “natural storm surge barrier quality” or their marine life which makes them as a destination one of the best tourist destinations (My Maldives, 2022). Coral reefs are

crucial for the Maldives' environment and economy, providing coastal protection and supporting tourism and fisheries. The government has initiated several coral reef conservation and restoration projects to combat coral bleaching and degradation caused by climate change. The "Coral Reef Monitoring Framework" involves regular assessments of reef health and biodiversity, while the "Reefscapers" program focuses on active restoration through coral propagation and transplantation (Rolls, 2023). These efforts aim to enhance the resilience of coral reefs, ensuring their survival amid changing ocean conditions.

The third strategy is that the nation state has implemented is adaptive infrastructure development program. This more specifically in the construction and real-estate departments of the government. They have been tasked to construct elevated buildings as coastal defences and have improved their water management system in these specific spaces. These systems have been created to be climate-resilient and they need to be able to withstand the impacts of rising sea levels and any other extreme weather events (My Maldives, 2022). The Maldives has become a global leader in climate change advocacy and has implemented numerous campaigns to mitigate and adapt to the impacts of climate change. One of the most significant campaigns by the Maldives is its transition to renewable energy. Recognizing the detrimental effects of fossil fuels, the Maldivian government launched the "Scaling Up Renewable Energy Program" (SREP) with the goal of achieving carbon neutrality (French, 2023). The program focuses on increasing the use of solar power and other renewable energy sources. In 2019, the Maldives inaugurated its first large-scale solar power project, the 5MW Kudagiri Solar Power Plant, which significantly reduces the reliance on diesel generators (Chen, *et al*, 2023). Additionally, the Maldives has implemented decentralized renewable energy systems across various islands, promoting energy independence and sustainability. Given the Maldives low-lying geography, they have prioritized coastal protection and adaptation measures to safeguard its islands from rising sea levels and storm surges. The government has invested in constructing sea walls, revetments, and breakwaters around vulnerable islands. Furthermore, the Maldives has implemented the "Safer Island Strategy," which involves relocating communities from highly vulnerable islands to safer, elevated ones (Bishop, 2023). This proactive approach not only protects lives and properties but also ensures sustainable development in the face of climate change.

The Maldives has emerged as a prominent advocate for global climate action. As a founding member of the Alliance of Small Island States (AOSIS), the Maldives has been at the forefront of international climate negotiations, calling for ambitious climate targets and financial support for vulnerable nations (Rasheed, 2019). Agriculture in the Maldives faces challenges from salinity intrusion, erratic rainfall, and soil degradation due to climate change.

The fourth strategy is that they are collaborating internationally. They are consistently engaging in international forums where they raise awareness and discuss solutions. The Maldives is exceptionally vocal in this regard it was found, and advocates for stronger global action to be put in place to reduce GHG's. The last strategy that the Maldives is implementing, is that they are creating awareness in their communities as well as educating their communities about climate change and global warming. The Maldives wants their communities involved in this fight against the climate crisis and by educating the community and involving them in important decisions. This step is projected to encourage the local community to practice these strategies at home and in their daily lives and routine (My Maldives, 2022).

Thus, it is fair to argue that the Maldives as an island nation is under a lot of pressure to combat the climate crisis and the evident effects climate change is having on the country whole, including its tourism industry. In this context the Maldives government has put forward various "tactics" they believe can help their tourism market segments to become more sustainable and responsible (My Maldives, 2022). The first tactic that the Maldives government has implemented is green agriculture and living. This approach is about reducing the use of chemical fertilizers and pesticides to prevent groundwater and soil contamination (My Maldives, 2022). This strategy morphs into the second tactic being green power and infrastructure. This as the majority of the Maldives power comes from diesel generators and the use of this is not only expensive, but it is contributing greatly to the release of GHGs. The Maldives plan to move from diesel-based energy systems, into hybrid solar-diesel systems (My Maldives, 2022).

The third tactic is health emergency preparedness. Medical systems are usually the first responders when extreme weather events take place, but first responders are particularly vulnerable to the impacts of climate change. Extreme weather events can

overwhelm infrastructure and it can have a significant effect on the health-care service delivery during emergencies. The Maldives did assessments on their health-care facilities and the policies in place. This assessment has forced the government to create climate-resilient health system. This will include the removing of harmful chemicals, safely disposing of health-care waste, reduce water consumption as well as improve transportation for both patients and staff (My Maldives, 2022). The fourth tactic that the Maldives is taking is that they have formulated and deployed marine protected areas and ecosystems. This plan aims to protect their marine life and coral reefs. It has involved creating a network of marine reserves as well as implementing sustainable fishing practices to ensure that there is long-term survival of these precious resources (My Maldives, 2022). The last tactic that will be discussed is their sustainable tourism initiative. The aim of this is to reduce the environmental impact that the tourism industry has had. It includes the development of eco-friendly resorts and the promotion of sustainable tourism activities. The latter naturally inclusive of responsible development discourse and sustainable tourism products and services around the island nation (My Maldives, 2022).

3.2.2. South America: Bahamas

The Bahamas is an enchanting archipelago comprising over 700 islands and cays, and has become renowned for its pristine beaches, turquoise waters, and rich cultural heritage (Carl, 2021). Geographically, this nation is situated in the western Atlantic Ocean, southeast of the United States of America, north of Cuba, and northwest of the Turks and Caicos Islands (Imtias, 2023). The archipelago is geographically characterized by its low-lying limestone and coral-based formations, with the highest point being Mount Alvernia on Cat Island, reaching an elevation of only 63 meters (Gilbertson & Gilbertson, 2013). This unique geological composition influences the island nation's susceptibility to natural disasters such as hurricanes and tropical storms. The latter naturally shaping the Bahamas' socio-economic dynamics and environmental practices (Eckelbarger, 2019).

The strategic location of the Bahamas has contributed to its historical importance in international trade, navigation, and colonial expansion. (Bahamas Government, 2023) Historically, the Bahamas has served as a critical waypoint for maritime routes, facilitating trade between Europe and the Americas (Sanchez & Wilmsmeier, 2009).

Additionally, its proximity to the United States of America has established it as a popular destination for tourists, leading to the development of a “robust tourism-based economy” (Mohr, 2021). Understanding the precise geographical location of the Bahamas is crucial for comprehending its geopolitical significance, environmental diversity, and historical relevance.

The Bahamas holds a rich and diverse history that spans across centuries. Its “story” begins long before the arrival of European explorers, with the indigenous peoples who inhabited these islands. Over the years, it has experienced colonialism, piracy, slavery, and eventual independence, shaping the island nation we know today (Buchan, 2000:97). Prior to European contact, the Bahamas were inhabited by the Lucayan people, an indigenous Arawakan-speaking group (Ostapkowicz *et al.*, 2023). They settled in the archipelago around the 9th century, establishing a society based on fishing, agriculture, and intricate societal structures (Mavrakis, 2019). Their skilled craftsmanship in pottery and woodwork reflected their sophisticated culture, while their interactions with other indigenous groups within the Caribbean fostered a unique regional identity (Nag, 2023). Christopher Columbus's arrived in the Bahamas in 1492, and this marked the initiation of European colonization in the region (Khomina, 2016).

The Spanish colonialists quickly established control, exploiting the islands for their strategic position and natural resources. Miller (1945) further discusses that this period witnessed the decimation of the Lucayan population due to forced labour and diseases brought by the Europeans, resulting in the virtual extinction of the Lucayan civilization by the mid-16th century (Miller, 1945). The 17th century saw the Bahamas becoming a haven for pirates and privateers (Bialuschewski, 2009). However, by the early 18th century, the British asserted dominance in the region, leading to a period of additional colonial governance that lasted for centuries (Bialuschewski, 2009). The islands became integral to the transatlantic slave trade, wherein plantations emerged, and the mass-slave produced cultivation of crops like cotton and sisal started (Farnsworth, 1996).

However, it was found that the exploitation of enslaved Africans, in particular, profoundly shaped the socio-economic landscape of the Bahamas and left an indelible mark on its cultural composition (Bahamas Government, 2023). By the mid-20th century, the Bahamas, under British rule, began to strive for self-governance, but with

the efforts of key figures such as Sir Lynden Pindling and the Progressive Liberal Party it finally led to constitutional reforms, and eventually, full independence in 1973 (Hines, 2023). Since then, the Bahamas has flourished as a sovereign island nation state, developing a robust economy centred on tourism, finance, and international trade (Bahamas Government, 2023).

The Bahamas' colonial history, primarily shaped by British rule, has significantly influenced the nation's language and communication patterns (McClain, 2016). The remnants of British colonialism are still visible in the prevalent use of the English language, often infused with distinctive Bahamian dialects and expressions (Palmer, 1994). According to Johnson (2018), the language in the Bahamas bears the traces of the island's colonial past, a testament to the enduring impact of historical interactions on linguistic evolution (Johnson, 2018). As highlighted by Thompson (2019), the Bahamian culinary scene serves as a tangible testament to the amalgamation of various cultural influences with the fusion of African, West Indian, and European culinary practices and how this has given rise to a vibrant gastronomic culture characterized by dishes such as conch salad, peas and rice, and guava duff (Thompson, 2019). Thus, the blending of diverse culinary traditions highlights the way in which historical encounters have contributed to the formation of a distinct Bahamian culinary identity.

According to Smith (2016), the historical struggles for emancipation and independence have profoundly shaped the societal values and collective consciousness of the Bahamian people. (Smith, 2016) The memories of the fight against slavery and the quest for autonomy have fostered a strong sense of resilience, community, and national pride among Bahamians (Smith, 2016). These values are embedded in the fabric of Bahamian society, influencing the way individuals perceive themselves and their place in the world (Bahamas Government, 2023).

The Bahamas boasts an array of natural resources, ranging from its extensive coastlines and coral reefs to its diverse flora and fauna. According to Mace (2021), the country's coral reefs are essential for maintaining marine biodiversity and function as natural barriers, protecting the islands from erosion and storm damage (Mace, 2021). Additionally, the abundant marine life in the Bahamian waters serve as a significant source of livelihood for local communities. The tourism sector in turn in the nation is a

crucial contributor to the country's economy it has been determined (Bahamas Government, 2023). However, the government has recognized the need for sustainable practices to protect the natural environment and its associated ecosystems whilst still maximizing the benefits of tourism (Bahamas Government, 2023). According to a study by Bethal *et al.* (2021), the implementation of sustainable tourism practices, such as eco-friendly resorts and responsible waste management, is pivotal in ensuring the preservation of these delicate island ecosystems (Bethal *et al.*, 2021).

Furthermore, the work of Miller and Thompson (2017) emphasizes the significance of community engagement in sustainable tourism initiatives, highlighting the positive impacts on local economies and cultural preservation. Despite the rich natural resources and efforts towards sustainable tourism, the Bahamas faces several challenges. Climate change and its associated impacts, including rising sea levels and extreme weather events, pose significant threats to the country's coastal communities and ecosystems (Miller & Thompson, 2017). As highlighted by Forbes and Grant (2019), the Bahamas has taken active measures to mitigate these challenges through the implementation of coastal management strategies and the promotion of renewable energy sources to reduce GHG emissions (Forbes & Grant, 2019). Recognizing the climate challenges the Bahamas are facing the Bahamian government and various other organizations have initiated a few campaigns to combat climate change. These efforts include policy development, renewable energy projects, environmental conservation, and public awareness campaigns. The Bahamian government has taken strides in establishing a strong policy and regulatory framework to address climate change. In 2015, The Bahamas approved the Paris Agreement, committing to reduce greenhouse gas emissions and adapt to climate impacts. The National Climate Change Policy (2015) outlines detailed strategies to mitigate and adapt to climate change, emphasizing the need for sustainable development, disaster risk reduction, and the protection of natural resources (Koehl *et al.*, 2022). The Climate Change and Environmental Health Act, enacted in 2019, further strengthens the government's commitment by establishing a legal framework for climate action (Rose, 2019). This act mandates the development of national adaptation and mitigation plans, the integration of climate change considerations into national development planning, and the establishment of a Climate Change Advisory Board to oversee implementation.

Transitioning to renewable energy is a cornerstone of The Bahamas' climate action strategy. The government aims to generate 30% of the country's energy from renewable sources by 2030. Two initiatives have been launched to achieve this:

- **Solar Energy Projects:** The Bahamas has invested in solar energy projects, particularly on its remote Family Islands, which rely heavily on expensive and polluting diesel generators (Bahamas Information Services, 2023). The installation of solar photovoltaic systems in these areas reduces carbon emissions, lowers energy costs, and enhances energy security.
- **Public-Private Partnerships:** Collaborations between the government and private sector entities have accelerated the deployment of renewable energy. The Solar for Schools Program, a partnership with the non-profit organization Solar Head of State, installs solar panels on public school buildings, reducing energy costs and promoting environmental education (McKenzie, 2023).

The Bahamas is now raising public awareness and fostering a culture of environmental organization are essential components of The Bahamas' climate action strategy. Campaigns and programs aim to educate citizens about the impacts of climate change and encourage sustainable practices. One of this is the Climate Change Awareness Week (Luszczek, 2019). This is held annually, and this event involves a series of activities, including seminars, exhibitions, and community clean-ups, to highlight the importance of climate action. Government agencies, NGOs, and private sector partners collaborate to promote sustainable practices and share information on climate change mitigation and adaptation.

For this purpose of this study, it has been established that the Bahamas, as an island nation state, relies heavily on travel and tourism practices and processes as a significant source of revenue and employment (Bahamas Government, 2023). According to statistics from the Bahamas Ministry of Tourism, the sector contributes approximately 60% to the country's GDP and provides employment for around 50% of its workforce (Bahamas Government, 2023). The infusion of foreign exchange through tourism activities has likewise played a pivotal role in the economic stability and growth of the nation, wherein empowering local communities and fostering entrepreneurship within the hospitality sector specifically (Rose, 2021). However, there exists a dependence risk that makes the Bahamian economy vulnerable to fluctuations in

global tourism demand (McKenzi, 2021). The rapid expansion of the tourism industry in the Bahamas has led to environmental challenges, including overexploitation of natural resources, increased waste generation, and the degradation of marine ecosystems (Rose, 2021). The delicate balance between environmental conservation and tourism development thus poses a critical risk for sustainable growth on the islands.

To address these issues, the government of the Bahamas has initiated several measures, such as the establishment of marine protected areas and the promotion of sustainable tourism practices (Stoffle & Minnis, 2007). Sustainable development initiatives, including eco-tourism and responsible waste management programs, have likewise been formulated and implemented to mitigate the adverse impacts on the environment and preserve the natural beauty of the archipelago (Sotka, 2022). The Bahamas in the latter context seems to focus on sustainable tourism development to ensure long-term economic prosperity while safeguarding its unique natural heritage (Bahamas Government, 2023). This adoption of eco-friendly practices, community-based tourism projects, and the integration of renewable energy sources in the hospitality sector were determined to be crucial for achieving actual sustainability goals (Sheller, 2021).

The Bahamas has implemented various initiatives to promote sustainable tourism development in an attempt to combat the adverse effects of climate change and global warming on the island chain (Bahamas Government, 2023). In this context the government has focused on marine conservation, recognizing the critical role of the country's marine ecosystems in attracting tourists (Bahamas Government, 2023). The establishment of the Bahamas National Trust (BNT) and its partnership with local communities and international organizations exemplifies the commitment to preserving the marine environment by way of responsible activities and practices (Bahamas National Trust, 2023). The BNT actively engages in the management of national parks and protected areas, enforcing regulations to prevent overfishing, marine pollution, and habitat destruction (Leonard, 2023). By way of the BNT the island nation was also able to establish the Bahamas Sustainable Tourism Initiative (BSTI) in recent years (Bahamas National Trust, 2023).

Moreover, BSTI has played a pivotal role in promoting sustainable tourism practices across the archipelago (Turner, 2021). The initiative emphasizes responsible tourism development, encouraging stakeholders to adhere to sustainable guidelines, and fostering community involvement in tourism planning and decision-making processes (Smith, 2019). Through the BSTI various sustainable practices have been adopted to minimize the ecological footprint of tourism. Several resorts and hotels have embraced eco-friendly technologies, such as solar panels, rainwater harvesting systems, and energy-efficient appliances, to reduce energy consumption and promote renewable energy sources. Additionally, some establishments have implemented waste management strategies, including recycling programs and composting, to minimize the impact of solid waste on the environment (Minalic, 2000; Bahamas National Trust, 2023).

Sustainable tourism in the Bahamas through the aforementioned initiative have also emphasized the preservation, conservation and protection of the island nation's rich cultural heritage. The promotion of local arts, crafts, and traditions has become a focal point for many tourism initiatives (Sitek, 2022). The integration of cultural experiences, such as traditional music performances, culinary tours featuring authentic Bahamian cuisine, and heritage festivals, not only provides tourists with an immersive experience but also supports the livelihoods of local communities (Sugathan & Ranjan, 2019). Through sustainable and responsible community-based tourism projects, residents actively participate in the travel and tourism industry of the country, wherein this context it was found that they were allowed to foster their own sense of cultural pride and economic empowerment (Zivrali, 2022). Thus, by way of the BSTI a balance is struct constantly between climate change risks and socio-environmental activities.

Investing in sustainable infrastructure is a fundamental strategy for ensuring the long-term sustainability of tourism in the Bahamas (Fletcher, 2021). According to the Bahamas Ministry of Tourism (2022), developing eco-friendly resorts, implementing renewable energy solutions, and improving waste management systems are vital steps toward reducing the environmental footprint of tourism activities (Bahamas Ministry of Tourism, 2022). By incorporating solar power and rainwater harvesting systems in resort construction, the Bahamas can significantly reduce its reliance on non-renewable energy sources and minimize the strain on local ecosystems (Johnson, 2017).

The above institutional body also found that promoting eco-tourism and raising environmental awareness among tourists are essential for fostering sustainable tourism practices in the Bahamas (Ministry of Tourism, 2022). The establishment of educational programs within tourist facilities and the integration of eco-friendly activities, such as nature hikes and wildlife conservation projects, can in turn help visitors develop a deeper appreciation for the country's biodiversity and natural resources (Bahamas Government, 2023). Encouraging responsible tourist behaviour through information campaigns can similarly contribute to the preservation of fragile ecosystems and cultural heritage sites it has been found (Zgolli & Zaiem, 2018). Involving local communities in the decision-making processes and sharing the economic benefits of tourism with them was also deemed by the Ministry as crucial for the sustainable development of the tourism industry on the island nation (Bahamas Government, 2023; Ministry of Tourism, 2022; Marsh, 2022).

According to Haynes *et al.* (2019), empowering local communities through capacity building and entrepreneurship programs can likewise foster a sense of ownership and responsibility for the conservation of natural resources and their subsequently ecosystems that they hold (Haynes et al., 2019). Collaborative initiatives between the government, private sector, and local communities can likewise ensure that tourism development aligns with the needs and aspirations of Bahamian residents, leading to a more sustainable, diversified and inclusive tourism industry (Lopes, 2021).

Preserving the Bahamas' diverse marine ecosystem has therefore been found to be integral to sustainable tourism development on the island nation. Therefore, implementing strict regulations to protect coral reefs, mangroves, and other marine habitats is imperative to prevent overfishing and habitat degradation (Cooney *et al.*, 2019). Sustainable tourism development discourse in the Bahamas has played a pivotal role in the preservation and conservation of its rich biodiversity (Bahamas Government, 2023). Initiatives such as the protection of marine habitats, the promotion of responsible waste management, and the implementation of eco-friendly practices have significantly contributed to the reduction of the environmental footprint of the tourism industry on the island specifically (Lee, 2014). National park and reserve establishments as marine protected areas, such as the Exuma Cays Land and Sea Park, has been found to not only safeguard the marine life but has also enhance the appeal of the Bahamas as a destination for ecotourism (Bullard & Anderson, 2008).

Through the promotion of local arts, crafts, and traditions, sustainable tourism similarly has empowered local communities, providing them with economic opportunities and mechanisms to preserving their unique island cultural heritage (Acha-Anyi, 2016). Community-based tourism initiatives, such as homestays and cultural tours, have not only enhanced the tourism experience for visitors but have also allowed the local population to actively participate in and benefit from a responsible tourism industry (Kang, 2017). Furthermore, sustainable tourism development has also contributed to the economic viability and long-term sustainability of the Bahamas as an island tourism destination (Bahamas Government, 2023). By promoting responsible tourism practices, the country has attracted environmentally conscious tourists, leading to a positive impact on the local economy (Gaval, 2016). In addition, the emphasis on sustainable development has also facilitated the diversification of the tourism sector especially as it relates to creating employment opportunities and stimulating the growth of small and medium tourism enterprises (SMEs). Therefore, it can be argued that the promotion of sustainable practices has not only bolstered the economic resilience of the Bahamas but has also ensured the long-term sustainability of the tourism industry, wherein effectively mitigating the risks associated with the over-reliance on mass tourism.

The Bahamas has seen first-hand the devastating effects of climate change. As the sea level rise, it can lead to the submergence of more than 50% of the country's total land area by the 2050s (Brown *et al.*, 2020). The Bahamas is highly aware that time is running out when it comes to the effects of global warming and have now been exceptionally proactive in trying to adapt and combat climate change. The island nation in this context has set forth various strategies to mitigate the above. The first approach is the Green Climate Smart Hospital Policy and Strategy (Murray, 2022). In 2020, this plan was created, and the aim of this action plan was to build climate resilience into health facilities so as to protect human health from the effects of climate change. (Murray, 2022) The second approach is waste management (Deopersad & Bethel, 2017). Solid waste management has become a growing problem in the Bahamas. Due to the islands being remote and spread over a vast geographical area, the collection and transportation of waste has become quite complex. Extreme weather events and the increase in these events has also added some difficulties to this system. To combat this, the Bahamas has set up a solid waste treatment system,

which will collect, store, manage and transport waste to specific regional waste management facilities. They also plan to stop the burning of waste out in the open environment. (Bahamas Government, 2023)

The third idea that the Bahamas has implemented is community sensitization to minimize single-use plastic (Evans, 2020). This includes, plastic drinking cups, cotton buds which has plastic stems and cosmetic bottles. This is a massive challenge on the islands, as the only way of disposing them in the past was through burning them at localised waste dumps. (Bahamas Government, 2023)

The fourth strategy implemented by the Bahamas is the “Green Smart Island” initiative (Valero & Alleng, 2019). This is where the Bahamas will create green cities and islands which are environmentally forthcoming. (Valero & Alleng, 2019) This will provide people with clean air, water, land, and “green spaces” to create awareness among communities to practice environmentally friendly habits. (Bahamas Government, 2023) The last strategy that has been identified is the push towards more green technology, infrastructure, and transportation (Smailes, 2022). Transportation is one of the biggest energy consumers and the Bahamas has started to control the use of vehicles on some islands and encourage walking and cycling to and from their destinations. (Bahamas Government, 2023) It is believed by the Ministry of Tourism (2022) that these five approaches to a “greener economy” will also influence travel and tourism products and services for the better. (Ministry of Tourism, 2022) This naturally key for the island nation as it continues to strive to formulate and implement responsible and sustainable practices and projects to combat the effects of global warming and climate change collectively.

3.2.3. Africa: Mauritius

Mauritius is a small island nation state that is situated on the southwestern part of the Indian Ocean, approximately 900 kilometers east of Madagascar (Henley, 2023). The isolation of the island is a key geographical aspect, as it has contributed to its unique ecosystem, biodiversity, and vulnerability to external environmental factors. (Lyll, 2021). According to Bowman (2023), the topography of Mauritius is characterized by mountain ranges, plateaus, and a picturesque coastline. The highest peak, Piton de

la Petite Rivière Noire, rises to an elevation of only 828 meters above sea level (Bowman, 2023; Veldwijk, 2022).

Mauritius has a fascinating microcosm of history, where various colonial powers left their indelible marks on its culture, society, and economy. Throughout its history, Mauritius has experienced the influences of the Portuguese, Dutch, French, and British, resulting in a diverse and multifaceted society (Meeke, 2017). Before the arrival of colonial powers, the island of Mauritius was uninhabited. Its discovery is attributed to the Portuguese navigator Dom Pedro Mascarenhas, who visited the island in the early 16th century (DBpedia, 2023). However, it was the Dutch who established the first recorded settlement on the island in 1638, naming it "Mauritius" after Prince Maurice of Nassau (Sankari, 2017). The Dutch abandoned the island in 1710 due to various challenges, including cyclones, a lack of resources, and Asian slave-labour resistance (Steinberg & Paxton, 1969). The French quickly took colonial control of the island nation state soon after in 1715. (Maree, 2019). The French introduced sugarcane cultivation and African slaves to work on the plantations, setting the stage for the island's sugar industry, which would later become a cornerstone for its economy (Robertson, 1930: 1806). Furthermore, French language, law, and culture left a lasting imprint on the Mauritian society that is still very much visible even today (Mauritius Government, 2023).

The British seized control of Mauritius in 1810 during the Napoleonic Wars. (Ballhatchet, 1995) They continued to develop the sugar industry, but unlike the French, the British abolished slavery in 1835, leading to the importation of indentured labourers from India, China, and other parts of mainland Africa (their colonies) to maintain the workforce on the island (Burroughs, 2008: 253). These diverse immigrant groups, along with the now established Creole population, continued to contribute to the rich cultural tapestry of Mauritius. According to Ballhatchet (1995), British colonialism established a framework for "governance, education, and legal systems that still influence the nation" today. (Ballhatchet, 1995) Mauritius embarked on its journey towards independence in the mid-20th century (Houbert, 1981).

In 1968, Mauritius finally achieved independence from British colonial rule, becoming a sovereign nation within the Commonwealth of States (Moyo & Mtolo, 2019). This momentous event marked the beginning of a "new chapter" in the island's history with

the establishment of the first democratic government. (Mauritius Government, 2023) After gaining independence, Mauritius faced the challenge of nation-building, including creating and building a transformative “national identity” that transcended the diverse cultural and ethnic backgrounds of its population (Servansingh, 2017; Eisenlohr, 2007). Tourism has become a crucial driver of economic growth and development in many countries around the world, with Mauritius being no exception. Mauritius has experienced remarkable economic growth over the last few decades, largely due to the development of its tourism sector (Hodge, 2019). The tourism industry in Mauritius accounts for a substantial portion of the country's GDP and provides direct and indirect employment to a significant portion of the population (Mauritius Tourism Authority, 2020). The tourism sector is also a major source of foreign exchange earnings in Mauritius. The inflow of foreign currency through the tourism industry helps the country maintain a stable balance of payments, which is essential for economic stability and environmentally responsible development (Ministry of Finance and Economic Development, 2019). However, economically, the nation continued to rely on the sugar industry but did diversify into textile manufacturing and tourism activities, which contributed in principle to its now independent economic growth (Ogg, 2023). In recent years, Mauritius has positioned itself as an offshore financial centre and has made substantial progress in areas such as education and healthcare. However, challenges remain, including environmental sustainability, income inequality, and political stability (Eisenlohr, 2007).

However, it has been found that the “importance of Mauritius” transcends its geostrategic position, its geographical size and small population. (Ogg, 2023) According to Sobhee (2009), Mauritius is often hailed as an economic success story for it has transformed itself from a “low-income, agricultural-based economy to a diverse and dynamic one” wherein the country has successfully attracted foreign investments and has established itself as a global hub for financial services and information technology (Sobhee, 2009: 36). Historically, the sugar industry was the backbone of the Mauritian economy. While its significance has waned, sugar still plays a crucial role in the nation's agricultural landscape, however, tourism is one of Mauritius's most vital economic sectors, attracting visitors from around the world (Chikhuri, 2022).

Sustainable tourism development has similarly played a crucial role in diversifying the Mauritian economy. (Mauritius Government, 2023) The industry has spurred growth in various sectors such as agriculture, construction, and the service industry, leading to a more “robust and balanced economic structure” (Fauzel, 2016). However, the rapid growth of the travel and tourism industry on the island nation state has led to concerns about environmental degradation specifically from academia and practitioners alike. (Roopun, 2016) Large-scale hotel and resort construction, infrastructure development, and increased waste generation have resulted in ecosystem disturbances and habitat destruction (Roopun, 2016). These ecosystems are vulnerable to pollution, overfishing, and damage from recreational activities, threatening their long-term sustainability (Bunce *et al.*, 2017). The increase in the number of tourists has also led to greater waste generation and pollution. Inadequate waste management practices, including improper disposal of plastic waste, have likewise posed serious environmental threats to the country’s fragile natural environment (Bissoondoyal, 2016).

Mauritius' journey towards becoming a prominent tourism destination began in the late 20th century. The country's government recognized the potential of its natural beauty and cultural attractions and started promoting it as an ideal tourist destination (Chinnan, 2019). The development of infrastructure, such as airports, roads, and hotels facilitated the growth of the tourism industry. Hume (2005) points out that the liberalization of the economy in the 1980s played a crucial role in attracting foreign investments, which positively affected the travel industry especially from a private sector point of view. (Hume, 2005) The establishment of the Mauritius Tourism Promotion Authority (MTPA) further enhanced the marketing and promotion of Mauritius as a sustainable global tourist destination in the late 1990s and into the 2000s (Mauritius Tourism Authority, 2023).

Sustainable tourism in this context addresses the need to balance economic growth, environmental conservation, and social well-being within the tourism industry of the island nation (Zolfani *et al.*, 2015). Mauritius has made commendable efforts in preserving its natural resources and promoting environmentally sustainable tourism. One key initiative in this milieu was to establish “protected areas for vulnerable marine ecosystems”, including coral reefs (Bjorklund, 1974). The Mauritian government, in collaboration with non-governmental organizations, have established an array of

marine protected areas (MPAs) to conserve and rehabilitate the fragile coral reefs (Mauritius Government, 2023). Strict regulations and sustainable fishing practices also help maintain the health of these ecosystems (Singh *et al.*, 2018: 3283).

Furthermore, the development of eco-friendly resorts that utilize renewable energy sources and implement waste reduction strategies have similarly contributed to a reduced ecological footprint for the island nation (Reid, 2022). Reid (2022) further mentions that one of the key strategies for achieving sustainable tourism in Mauritius is the development of “sustainable green infrastructures”. (Reid, 2022) This involves investing in eco-friendly construction practices and reducing the environmental impact of tourism-related facilities. Mauritius is renowned for its cultural diversity, with various ethnic groups living in harmony on the island. Sustainable tourism practices in Mauritius also prioritize the preservation of cultural heritage and local traditions. The government supports initiatives that aim to highlight the island's rich history and cultural identity while respecting the rights and customs of indigenous communities (Wilson, 2008: 62)

Sustainable tourism practices within communities have also been instrumental in maintaining economic stability in Mauritius. These practices include the promotion of community-based tourism, where local communities participate in tourism activities and benefit from the industry's profits directly (Nunkoo & Ramkissoon, 2012). These strategies have led to increased employment opportunities and social upliftment for various villages around the island. (Wilson, 2008: 64) Despite the commendable efforts in promoting sustainable tourism, Mauritius still faces several challenges as they pertain to travel. The aforementioned rapid expansion of the tourism industry has raised concerns about “overdevelopment and ecosystem degradation” especially (Ceballos-Lascuráin, 2015). Where in this context it has been found that maintaining a balance between tourism development and environmental conservation remains an ongoing challenge. Additionally, issues such as waste management, water scarcity, and the carbon footprint of tourism activities require continued attention (Nunkoo & Ramkissoon, 2012).

Government policies play a central role in shaping the sustainability of the tourism sector in Mauritius (Guo *et al.*, 2019). The authors further discuss that tourist destinations have already enacted and enforced policies that promote responsible

tourism practices on the island (Guo *et al.*, 2019). These policies include incentives for businesses that adopt sustainable practices and penalties for those that do not. Educating tourists, industry stakeholders, and the local population about the importance of sustainability was also found to be a common occurrence in this context. Awareness campaigns and training programs are also initiated by the public sector especially as they relate to the environmental and social impacts of tourism and how to mitigate them on the island (Norton, 2022). An example of these awareness campaigns would be that in 2008, the Sustainable Island Mauritius (SIM) Project was created to help make Mauritius a leading and sustainable island destination (Redd, 2023). The objective of the SIM Project is to promote sustainable tourism, growing the sustainable impacts and improving awareness. In this context it was also found that education measures in the Mauritian context can lead to more responsible tourist behaviour as well, on-top of creating a better understanding of the importance of sustainable practices. (Mauritius Government, 2023) Mauritius has consequently shown a commitment to biodiversity preservation, sustainable tourism development as well as responsible economic practices through the creation of a number of “conservation zones”, such as the Blue Bay Marine Park, which is in large part are funded by visiting tourists to the area (Raubenheimer *et al.*, 2017). These efforts have bolstered the island's resilience to climate change, securing its long-term appeal to tourists. The diversification of tourism services and the promotion of niche markets such as eco-tourism and cultural tourism have likewise contributed to increased revenue for the island according to Rappensperger (2023). However, balancing the conservation of fragile ecosystems with the expansion of tourism remains a complex task for this island nation state.

In light of this Mauritius has created and integrated many strategies to help with this “environmental battle” (Mauritius Government, 2023). The first is the Mauritian government is now encouraging locals and visitors to eat less meat wherever possible and have recommended following a vegetarian diet rather (Torrella, 2022). The impact of meat on the country's climate has been found to be enormous. Forests are destroyed to produce industrial meat and tonnes of carbon dioxide is released into the atmosphere during this process. By consuming less meat, it will result in farmers to farm fewer meat animals, thus the methane released by these animals will be reduced secondly (Mauthoor *et al.*, 2014). The second strategy implemented is that the

government has placed a “huge drive on recycling” (Rappensperger, 2023). This movement towards recycling includes the idea of using food waste as a form of compost. The latter helps prevent chemical compost from being utilized and it also prevents large amount of waste to be sent to designated waste dumps in an already limited and confined natural space. The less waste sent to these dumps it was found, the less waste that will need to be burnt to preserve space. Thus, carbon emissions will be decreased drastically (Mauritius Government, 2023).

The third strategy is the planting of trees throughout the island and its neighbouring atolls (Aujayeb, 2022). The planting of trees it was determined will help in many ways for trees clean the air, protect biodiversity habitats, stabilize the soil, and offset carbon dioxide. This in turn has an overall effect on the climate crisis and helps with the restoration of forests that were cut down for urbanization reasons (Mauritius Government, 2023). The last tactic they have put in place is water management (Proag, 2006). Climate change and ironically sustainable tourism development (which Mauritius depends on heavily) have been found to be one of the main factors causing water shortages on the island. They have encouraged tourists and locals to be more water wise and conscious of how much water they consume and utilise whilst doing daily tasks (Aujayeb, 2022).

3.3. Chapter summary

This chapter considered various practical frameworks to understanding the complexities behind climate change, tourism systems, sustainable tourism development, as well as the environmental consequences of tourism. This section then took these frameworks and applied them to three distinct island nation case studies. That included: the Maldives (Asia); the Bahamas (South America); and Mauritius (Africa). The latter was done to consider how other island nations approach these themes within their nation specific tourism industries and how other countries (such as the Seychelles) can utilise these best practice benchmarks to combat climate change and global warming.

CHAPTER 4: THE SEYCHELLES IN PERSPECTIVE

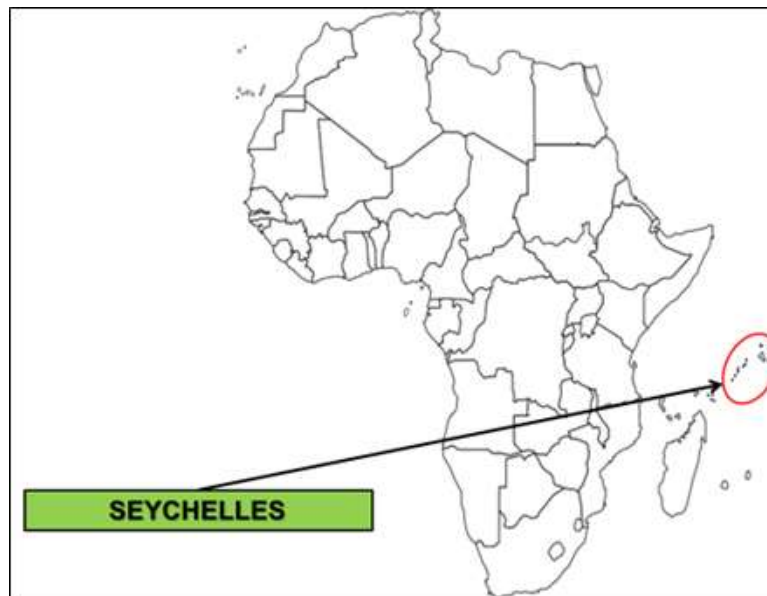
4.1. Introduction

Nestled in the heart of the Indian Ocean, the Seychelles, an archipelago of 115 islands, beckons travellers with its breath-taking natural beauty and diverse cultural tapestry (Miller, 2023). This enchanting paradise has long captivated the imagination of those seeking an idyllic escape from the ordinary. With its lush rainforests, pristine white-sand beaches, and vibrant coral reefs, the Seychelles offers a unique perspective on a world where nature's splendour and human heritage intertwine harmoniously. This chapter will embark on a journey to explore the Seychelles from a multifaceted touristic perspective, delving into its rich history of the islands and the country's tourism industry. It is envisaged that this section will provide the theoretical and practical background to the next chapter where the Seychellean tourism industry will be analysed and appraised for its climate change and global warming measures and mechanisms.

4.2. Situating the Seychelles as a case study

The Seychelles, officially designated as the Republic of the Seychelles, is a chain of islands found in the Indian Ocean, just off the coast of Eastern Africa. (See Figure 1) The Seychelles is regarded as one of the world's smallest countries by the United Nations (Sparks, 2021; United Nations, 2023). This island nation shares maritime borders with an array of African and Asian countries including Comoros, Madagascar, Mauritius (to the south), Maldives (to the north), as well as the French Overseas Territories of Mayotte and R union (to the west).

Figure 1: The Seychelles in relation to continental Africa



Source: Jones & Phillips (2011)

The Seychelles today holistically consists of 115 islands of which Mahé, Praslin and La Digue are designated as the main or “public islands” to the nation state (Seychelles Tourism, 2021). Victoria serves as the official capital, economic seat, and tourism hub to the lesser islands for this sparsely populated country (See Figure 2). The Seychelles is comprised of two main island groups: firstly, the Mahé group which comprises of more than 40 dominant rocky mountainous islands. The second group are the coralline islands, and they consist of 70 flat coralline islands (Seychelles Government, 2022).

These coralline islands rise only a few feet above sea level and are typically flat with coral reefs surrounding them. They also have limited residential populations and are largely waterless in comparison to the more mountainous islands. In turn, the rocky mountainous islands are where one finds the most densely populated parts of the

country, as well as the agricultural hubs for the nation given the abundance of water in these areas given their elevation above sea level (Seychelles Tourism, 2021).

Figure 2: The islands of the Seychelles



Source: Seychelles Tourism (2021)

As an up-and-coming coastal tourist destination in the global South, the Republic of Seychelles has captivated travellers and scholars alike for many years with its pristine beaches, unique biodiversity, and rich cultural heritage (Benedict & Benedict, 2009). This as the group of islands has been found to offer an alluring blend of natural beauty and historical significance to visitors from all walks of life (Seychelles Government, 2022). According to Nichols (2018) the Seychelles’ “unparalleled beauty”, has made it a coveted destination for sustainable tourism activities, while its strategic location has made it a crossroads of diverse cultures and peoples, adding to its unique island identity (Nichols, 2018).

This remote location of the Seychelles, combined with its isolation from major continental landmasses, has likewise contributed to its unspoilt environment, a major draw for tourists seeking an escape from “urban life” (Seychelles Government, 2022). One of the Seychelles’ most alluring features is its year-round tropical climate, characterized by warm temperatures, ample sunshine, and gentle trade winds (Fitchett *et al.*, 2020). This consistent and moderate climate in turn makes the Seychelles an appealing destination for tourists seeking to escape harsh weather conditions

elsewhere. In this context beaches on the one hand, such as Anse Lazio and Anse Source d'Argent, have become world-renowned for their powdery white sands and crystal-clear waters, providing an idyllic setting for sunbathing, swimming, and water sports. The lush rainforests, on the other hand, subsequently also offer opportunities for eco-tourism and community-based tourism, with an abundance of natural habitats, kept biomes, flora and fauna and tucked away villages waiting to be explored by visitors (Balmford *et al.*, 2020).

The Seychelles boasts a rich and diverse pre-colonial history that remains a source of fascination and inquiry. According to Gardiner (1907), the Seychelles archipelago was originally inhabited by several indigenous groupings, with the primary communities being the “Seychellois” (Gardiner, 1907). These groups were then infiltrated/colonised by a range of other cultural groupings as time went on in the late eighteenth century. That included: the East Africans; the Austronesians, the Gibraltarians, the Malabar Indians, as well the French and British settlers (Gardiner, 1907). This diverse ethnic composition contributed to the formation of the very unique Seychellean island identity visible today, characterized by its blend of African, Austronesian, and European cultural elements (Seychelles Government, 2022). Seychellean culture has been deeply rooted in this diverse cultural heritage of what the country deems as its “indigenous peoples” (Seychelles Government, 2022). Religious beliefs in the pre-colonial Seychelles were similarly diverse. Indigenous people practiced a form of “ancestral worship” and believed in the presence of spirits in their natural surroundings, which influenced their approach to nature and conservation (Englebert, 2000). Arab and Indian traders also introduced elements of Islam and Hinduism into this space, which coexisted with indigenous spiritual beliefs for a long time before colonial settlers arrived (Hollanda, 2009).

According to Englebert (2000) the pre-colonial economy of the Seychelles was primarily based on agriculture, fishing, and regional trade, but coconut cultivation was central to the Seychellois economy at that stage, seeing as the coconut palm provided not only food but also material for thatch roofing, boat building, and the production of various handicrafts (Englebert, 2000). Additionally, the islands' fertile soil supported the cultivation of crops such as vanilla, cinnamon, and nutmeg, which were highly sought after in the global market at that stage (Pilbeam, 1986). The latter continued well into the early part of the 1900s.

In the early 1900s, the United States of America leased an area on the main island, Mahé, and in 1963 built a specialised air force satellite tracking station there (Englebert, 2000). This then bought regular air travel to the Seychelles, thus connecting it to not only to mainland Africa but also to Europe and Asia more broadly (Hollanda, 2009). The Seychelles were granted independence in 1976, within the Commonwealth of Nations (Holt-Biddle, 2004). It is also important for the purpose of this dissertation to note that the Seychelles slowly abandoned its socialist economy and started to follow a “market-based economy” towards the late 1970s which led to the islands becoming an “island tourism destination of choice” in Africa, as well as in the global South more broadly (Seychelles Government, 2022).

This Seychelles' post-independence political landscape, however, was marked by a series of transitions and challenges. The country's first President, James Mancham, was overthrown in a coup led by France-Albert René in 1977 (Zuber, 2022). Hatchord (1993) discusses how this coup had far-reaching implications for Seychelles' political stability. In the aftermath of the coup, René established a one-party state, the Seychelles People's Progressive Front (SPPF), which ruled the island nation for several decades to come (Seychelles Government, 2022). The Seychellean political system underwent significant transformation when multi-party democracy was reintroduced in the early 1990s (Zuber, 2022). The 1993 elections marked a turning point in the country's political history and resulted in a new constitution and political reforms, which favoured tourism and foreign revenue systems (Hatchord, 1993).

Thus, the Seychelles' economic development, after gaining independence, has been characterized by a transition from a “primarily agricultural economy” to one based on experienced-based niche market experiences (Zuber, 2022). The tourism sector has therefore played a central role in the country's economic growth, with its new and distinct focus on “luxury tourism products and services centred around coastal and marine experiences” (Zuber, 2022). The country has also engaged in various economic reforms, including the liberalization of its financial sector and has also initiated more efforts to attract foreign investments (Nicette, 2022). Despite facing challenges such as high debt levels, the Seychelles have managed to achieve “sustained economic growth” in recent years, thanks to “prudent fiscal management and structural reforms” across this geographically distinct area (Barra *et al.*, 2022).

Today, the Seychelles has a thriving tourism industry, with numerous luxury resorts, sprawling beaches, marine parks and reserves as well as cultural villages and home stays. The government's efforts to promote sustainable tourism development in these contexts have also gained international visibility, wherein the importance of preserving, conserving and protecting the Seychelles' unique natural and cultural heritage for future generations has been emphasised and recognition continentally and internationally (United Nations, 2023).

4.3. Situating tourism in the Seychelles

Tourism has become a global phenomenon, with travellers seeking new, unique and “exotic” tourism systems to explore on a consistent basis at a local, regional, national, continental and international level (Urry, 1990). One such destination, that meets these criteria, that has gained prominence in recent years is the Seychelles. The advent of tourism in the Seychelles has had a profound impact on its economy, culture and environment. According to the Seychelles Nation (2021) tourism in the Seychelles can be traced back to the late eighteenth century when the islands were discovered by European explorers (Seychelles Nation, 2021). French and British colonial powers played a crucial role in shaping the early history of travel on the island chain, with its historical remnants still very much visible today in the nation state's touristic offerings and activities (Zuber, 2022).

Thus, the end of colonial rule in 1976 marked a significant turning point for the Seychelles, leading to increased opportunities for socio-economic growth, including within a newly formulated post-independent tourism segment of the island. With the Seychelles idyllic landscapes and tropical climate, the archipelago has become a popular destination for tourists seeking luxury, relaxation and adventure (Seychelles Government, 2022). According to the World Travel and Tourism Council (WTTC), the travel and tourism sector of the island contributed 63.5% to the country's GDP in 2019 (WTTC, 2019).

One of the most direct and significant impacts of tourism on the Seychelles economy is its ability to create widespread employment. The tourism sector provides jobs to a substantial portion of the population. Data from Statista (2022) reveals that in 2019, approximately 25% of the total employed population in the Seychelles worked in the

tourism sector, encompassing various roles in accommodation, food services, tourist guiding and transportation (Statista, 2022). Thus, tourism has played a pivotal role in reducing unemployment rates and improving the overall standard of living for all inhabitants of the island chain. This growth of the tourism industry in the Seychelles has also been a driving force behind infrastructure development (Statista, 2022). This as more tourists visit the country, there appears to be a need to expand and upgrade tourism infrastructure in particular to accommodate touristic needs and wants, in the short and long term. This includes investments in airports, ports, roads, and telecommunications, which benefit not only tourists but also local residents. This economic contribution from tourism has likewise led to improvements in healthcare, and education benefiting the local population directly (Statista, 2022). Yet, it is also important to point out that although tourism development discourse in the Seychelles has bolstered various segments of the island's economy it has sadly also affected its indigenous cultural groupings and fragile natural ecosystems.

The influx of tourists from around the world has exposed locals to various “outside” customs, languages and traditions. However, this cultural exchange has been found to have both positive and negative implications for the inhabitants of this island nation. While it promotes multiculturalism and tolerance, it can also lead to the erosion of traditional values and practices. Moyle *et al.* (2010) have explored the impact of tourism on indigenous cultures and emphasized the need for sustainable and responsible tourism practices to protect these cultural heritages especially amongst indigenous communities under threat from internal risks and/or external threats (Moyle *et al.*, 2010). The fragile ecosystems of the islands face similar barriers and threats, such as overdevelopment, pollution, and habitat degradation. Researchers like Paterson *et al.* (2018) have similarly emphasized the importance of sustainable tourism practices and environmental conservation in this context, similar to that of the socio-cultural milieu above, to safeguard these unique biodiversities, biomes and habitats, and to keep them away from the “inherent evils that sometimes come along with tourism products and services” (Paterson *et al.*, 2018).

Over the years, the development of travel and tourism in the Seychelles has been influenced by a multitude of factors (Moyle *et al.*, 2010). Historically, the Seychelles has been shaped by colonization, which has played a significant role in blending cultures which in turn helped in influencing its travel development. This historical

legacy has left an indelible mark on the Seychelles' culture, contributing to its appeal as a unique destination in the global South (Rogers, 2016). Geographically, the Seychelles' remote location has likewise had both positive and negative impacts on its travel development. Its isolation has preserved its natural beauty, making it a “haven for nature lovers” (Stones, 2021). Yet, Philpot *et al.* (2012) denotes that this remoteness has also posed challenges for its travel development. This seeing as high transportation costs and limited accessibility have historically deterred budget travellers from visiting the island chain, leading to a focus on high-end, luxury tourism within the economic sector (Philpot *et al.*, 2012). Yet, recent efforts to improve transportation infrastructure and expand air travel connections have mitigated some of these barriers, promoting greater inclusivity and diversification for the Seychelles' various tourism systems. The Seychelles has continually sought to enhance its accessibility to the global community. They have done this by recent developments in flight connections which represent a significant stride towards this goal, with notable contributions from airlines such as Condor, which has resumed flights to Seychelles with the introduction of the new Airbus A330 Neo-900. This essay explores the implications of these new flight connections for Seychelles' tourism industry, economic growth, and global accessibility. The introduction of new flight routes to Seychelles is pivotal in making the destination more accessible to travellers from various parts of the world. Historically, reaching Seychelles has been a challenge due to limited direct flights and high travel costs. However, the recent influx of new flight connections, including Condor's resumption of services, signifies a transformative change. The Airbus A330 Neo-900, known for its advanced technology, fuel efficiency, and increased passenger capacity, exemplifies the modernization of air travel routes to Seychelles. This development not only shortens travel times but also offers a more comfortable and reliable flying experience, thereby encouraging more tourists to consider Seychelles as a viable vacation destination.

The Seychelles' natural beauty and rich marine life have consequently also been key influences in the development of travel on the islands. The country has made significant efforts to preserve its environment through marine protected areas and conservation programs (Seychelles Government, 2022). This commitment to sustainable tourism has likewise attracted eco-conscious travellers, positioning the Seychelles as a “global leader in responsible tourism practices” (Ettinger, 2023).

Moreover, the Seychelles' susceptibility to climate change has motivated the government to prioritize sustainability and resilience in the tourism industry. This includes sustainable energy initiatives, waste management, and adaptation strategies. However, despite these efforts it should also be noted that the country's economy heavily relies on tourism, which has led to substantial investments in the industry, but has also raised serious concerns regarding “overdependence” (Katranis, 2020).

Nevertheless, according to a study by Zhao *et al.* (2023), tourism is a major contributor to the Seychelles' annual GDP, making it essential for the nation's economic stability. While the travel industry has been a source of prosperity for the Seychelles, it also faces challenges, especially in terms of its scarce and limited natural resources. Environmental concerns such as over-tourism and the impact on delicate ecosystems are ever-present issues that still require management and mitigation by all tourism stakeholders and role players involved (Day, 2021). This seeing as that delicate balance between tourism development and environmental sustainability has yet to be reached in the Seychelles.

Yet, despite these challenges the future prospects of the travel industry in the Seychelles remains objectively promising. This as the Seychellois government's commitment to sustainability and responsible tourism, combined with the archipelago's distinct natural and cultural heritage, continues to attract visitors from around the world. Research by Hall (2020), however, highlights the potential for “conscious further growth” and the “need for diversification” to reduce the industry's vulnerability to fluctuation in the travel system (demand and supply) of the Seychelles (Hall, 2020). Thus, the need for sustainable tourism development and responsible travel practices was once again recognised as a key area of research, collaboration and investment going forward by all travel and tourism stakeholders of the island nation (Hall, 2020).

Sustainable tourism is a growing global trend, and the need thereof in the Seychelles cannot be overestimated. As travellers increasingly seek destinations that prioritize environmental conservation and responsible travel, the Seychelles is well-positioned to capitalize on this “tourism trend” (Christoff, 2022). The Seychelles has already taken significant steps to protect its marine and terrestrial ecosystems with the establishment of oceanic reserves and sustainable fishing practices. However, the country has indicated that in the future, it may continue to develop eco-friendly accommodations

and engage more with community-based conservation efforts to preserve its unique cultural assets as well. (Seychelles Government, 2022) The latter to remain competitive and attractive to a broader range of travellers from both the global North and South. Vienna (2021) denotes that to ensure the Seychelles remains a desirable destination, effective marketing and branding strategies will become vital to sustainable tourism development in the near future (Vienna, 2021). This includes promoting the Seychelles' unique selling points, leveraging digital marketing channels, and forming partnerships with international travel agencies to “brand” the island nation in a responsible way (Vienna, 2021). This in addition to building and maintaining a strong online presence and engaging with potential visitors through social media and other platforms (Christoff, 2022).

Two notable initiatives in promoting sustainable tourism growth and advancement on the islands are the Seychelles Sustainable Tourism Label (SSTL) and the Seychelles Sustainable Tourism Foundation (SSTF). The first according to the global Sustainable Tourism Council (2017) is a certification program which encourages businesses to adhere to environmentally friendly and socially responsible practices. (Sustainable Tourism Council, 2017) The second is the Seychelles Sustainable Tourism Foundation (SSTF), which partners with local communities to enhance their economic opportunities while conserving natural resources (St. Ange, 2019).

Therefore, based on the above, and the highlighted initiatives, it is fair to argue that the future of travel in the Seychelles hinges on the nation's commitment to sustainable and responsible practices and projects for its natural as well as cultural heritage. However, this commitment to preserve, protect and conserve in light of a rapid growing travel domain will naturally require various legislative and regulatory mechanisms to be put into place throughout the island nation to maintain set standards and requirements.

4.4. Legislative and regulatory mechanisms for tourism in the Seychelles

To ensure the continued sustainable growth of its tourism industry, the government of the Seychelles has enacted comprehensive legislation known as the *Tourism Development Act* (Seychelles Government, 2022). The Seychelles has a rich history of tourism as outlined above, with its first international airport opening in 1971 that saw a steady influx of tourists since then come to the island chain (Simeon, 2022). Since then, the tourism industry has evolved significantly, and in this context the government has recognized the need for a robust legal framework to regulate and manage it effectively. Consequently, the *Tourism Development Act of 2019* was created and promulgated to address these concerns (Seychelles Government, 2019).

This Tourism Act in the Seychelles is a comprehensive legal framework that governs various aspects of the tourism industry today. It was enacted to promote sustainable and responsible tourism practices, safeguard the environment, and protect the interests of both tourists and the local community (Seychelles Government, 2022). According to the Republic of Seychelles (2019), there are five key provisions of the *Tourism Development Act of 2019* (Republic of Seychelles, 2019). That include:

1. **Licensing and regulation:** One of the primary objectives of the Act was to establish a licensing system for all tourism-related businesses; this system ensures that accommodation facilities, tour operators, and other hospitality, tourism and leisure entities adhere to quality standards and sustainable practices; wherein it was found that licensees in this context must meet specific criteria to operate, including environmental compliance and adherence to fair business practices.
2. **Environmental conservation:** The Act similarly places a strong emphasis on environmental conservation and sustainability; legally requiring tourism businesses to adopt eco-friendly practices, conserve natural resources, and protect the unique flora and fauna of the Seychelles; this aligns with the country's envisaged commitment to preserving its pristine environment, natural resources and cultural heritages.
3. **Local participation:** The Act encourages the active involvement of Seychellois's in the tourism industry; and sets aside provisions for preferential treatment in licensing and employment for local citizens,

aiming to ensure that the economic benefits of tourism are distributed more equitably among the population.

4. **Consumer protection:** The Act also safeguards the rights of tourists by requiring tourism operators to provide accurate information about their services, ensure fair pricing, and maintain high standards of service quality; this sub-section also establishes a mechanism for addressing consumer complaints and disputes.
5. **Destination management:** The Act likewise promotes destination management, emphasizing the need for a coordinated approach among various stakeholders, including government bodies, businesses, and local communities; thus the Act provides a legal framework that encourages the development of sustainable tourism infrastructure and the protection of culturally sensitive spaces. (Republic of Seychelles, 2019)

According to the Seychelles Government (2022), the *Tourism Development Act of 2019* is a “comprehensive and effective legal framework designed to regulate and manage the country's burgeoning tourism industry” (Seychelles Government, 2022). Where in this context it is denoted that this Act ensures the continued growth of the sector, but also allows for the safeguarding of the Seychelles' natural beauty and cultural heritage for future generations. By implementing the Act's provisions effectively and adapting to changing circumstances, the Seychelles can maintain its status as a premier global tourism destination while preserving its unique ecosystems and promoting equitable economic development.

One of the five provisions of the *Tourism Development Act* is **licensing and regulation**. The licensing and regulation of the tourism industry in Seychelles are primarily overseen by the Seychelles Tourism Board (STB). The STB is a government agency responsible for promoting tourism, regulating the industry, and ensuring compliance with established standards (Hohnholz, 2012). The regulatory framework of this agency consists of various licenses and permits those businesses involved in tourism must obtain to operate legally. The Republic of Seychelles (2012) describes that these licenses cover a range of activities, from accommodation services to tour operations, diving centres, and transportation services. Accommodation establishments, such as hotels and guesthouses, are required to obtain an

"Establishment License" from the STB. This license then ensures that the accommodation facilities meet certain quality and safety standards whilst operating on the islands (Seychelles Government, 2022).

Restaurants and eateries that cater to tourists are also regulated and must obtain a "Restaurant License" (Seychelles Government, 2022). This license in turn helps maintain food safety and hygiene standards at all facilities in the Seychelles. Tour operators and travel agencies must also secure a "Tour Operator License" to organize and conduct tours within the Seychelles natural and cultural environments of the island nation state (Seychelles Government, 2022). Diving centres, given the importance of marine tourism in the country, must additionally also adhere to safety and environmental standards through a "Dive Centre License" (Seychelles Government, 2022). Transportation services, such as car rental companies similarly also require a "Tourist Ground Transport Operator License" (Seychelles Government, 2022).

While the licensing and regulation framework is vital for the Seychelles tourism industry, it is not without its challenges and criticisms. Some businesses may find the process of obtaining licenses time-consuming and bureaucratic, potentially hindering their operations. Moreover, the need to comply with environmental standards can be seen as a constraint by some, although these measures are essential to protect the environment (Joubert, 2023). Martinez and Kukutschka (2023) add that there can be concerns about the potential for corruption or favouritism in the licensing process, which could result in unfair advantages for certain businesses (Martinez & Kukutschka, 2023).

The second provision of the *Tourism Development Act* is **environmental conservation**. As tourism continues to grow, so does the need for sustainable development and environmental conservation in the Seychelles. Environmental conservation is now a crucial provision stipulated in the aforementioned policy that is aimed at preserving the country's unique biodiversity and ensuring the long-term sustainability of its tourism industry (Seychelles Government, 2022).

A key sub-component of this provision in the *Tourism Development Act of 2019* is the establishment and maintenance of additional protected areas, game reserves and national parks. In this context the Seychelles' government has recognized the importance of preserving natural habitats, and this legislation mandates the protection

of these sensitive ecosystems and critical biodiversity areas (Geary, 2020). For instance, the Vallee de Mai and Aldabra Atoll, both UNESCO World Heritage Sites, are protected under this Act, ensuring their long-term conservation (Bhand, 2023). According to Munday & Murray (2017) another important sub-component in this provision is – marine conservation. The two authors discuss how the marine environment is a significant tourist attraction, and its protection is paramount in the Seychelles.

They also stress how the *Tourism Development Act of 2019* includes provisions for marine conservation, such as regulations on marine activities and the establishment of marine protected areas. This ensures that the rich coral reefs and diverse marine life remain intact for future generations to enjoy in and around the Seychelles (Munday & Murray, 2017). The final sub-component worth highlighting in this provision is wildlife protection. This Act also addresses the protection of terrestrial and marine wildlife. In this context prohibiting the harming or disturbance of wildlife and their habitats, ensuring the well-being of the Seychelles' unique flora and fauna. The protection of species like giant tortoises and various seabirds was also found to be crucial for both environmental and touristic reasons (Seychelles Government, 2022). The latter three sub-components are thus central in this provision of the *Tourism Development Act of 2019* as they set the stage for positive environmental impacts from tourism to occur in the near future, if they are adhered to.

There are also many benefits observed for the aforementioned regulatory provision of the legislative mechanism. That include:

1. **Long-term sustainability:** By preserving the Seychelles' natural assets, the country ensures that it can continue to attract tourists for generations to come, this as sustainable practices ensure that the environment remains pristine and attractive, securing the island's tourism industry's future.
2. **Competitive advantage:** Sustainable and environmentally responsible tourism practices give the Seychelles a competitive edge in the global tourism market, especially amongst other smaller island nations; this as eco-conscious travellers are increasingly seeking destinations that prioritize environmental conservation, making the Seychelles an

appealing choice to visit especially in the highly competitive travel landscape of the African continent.

3. **Economic growth:** The tourism industry is a significant contributor to the Seychelles' economy, therefore by safeguarding the environment, the country sustains this economic engine; moreover, it generates revenue through eco-tourism initiatives, like the two indicated above.
4. **Preserving cultural heritage:** Environmental conservation also plays a crucial role in preserving the cultural heritage of the Seychelles. The rich biodiversity and natural beauty are integral to the country's identity, and by protecting these assets, the Seychelles consequently safeguards and conserves its unique cultural heritage (Munday & Murray, 2017; Geary, 2020; Christoff, 2022).

The third provision in the *Tourism Development Act of 2019* is **local participation**. One significant aspect of these regulations being implemented by the Seychelles government is the provision for local participation in the holistic tourism industry. Local participation in the tourism industry is a fundamental provision within this legislative and regulatory mechanism for the island nation. The STB, in collaboration with the government, has worked diligently to integrate locals into the tourism sector as of late and this has now become common policy across the island with the assistance of the Act (Seychelles Government, 2022). This inclusion takes various forms, including policies that encourage local entrepreneurship, such as the National Entrepreneurship Strategy (NES) which encourages job creation for Seychellois citizens, and the protection of local culture and heritage (Seychelles Government, 2022). Within this provision of local participation in the Seychelles' aforementioned tourism legislation there are also various sub-components that one needs to be mindful of. These include:

1. **Local entrepreneurship:** This Act promotes local entrepreneurship by providing financial incentives, training programs, and preferential treatment for Seychellois-owned businesses in the tourism sector; this then encourages the establishment of local hotels, restaurants, tour operators, and other enterprises, thereby increasing economic benefits for the local population.
2. **Job creation:** Another significant provision in the Act is the requirement for tourism establishments to hire Seychellois citizens, promoting job

creation and reducing unemployment rates; this approach ensures that locals benefit directly from the industry's economic activities.

3. **Heritage and culture Protection:** This Act contains various provisions for preserving and promoting local cultural groupings within the tourism sector; it likewise encourages the incorporation of traditional elements and indigenous knowledge into tourism activities, ensuring the industry remains authentic and reflective of the local culture.
4. **Environmental conservation:** The Act emphasizes the importance of environmental sustainability by enforcing eco-friendly practices in tourism operations; this approach in turn safeguards the Seychelles' natural beauty, which is a primary attraction for tourists, and also ensures the preservation of local ecosystems for future generations (Shen & Bleich, 2022; Soja, 2022; Trinajstic *et al.*, 2022).

Local participation in the tourism industry has also been found to hold numerous benefits for the Seychelles as a whole. Firstly, it fosters economic growth by creating jobs, supporting local businesses, and increasing the income of Seychellois citizens. This not only reduces poverty and inequality but also stimulates overall economic development. Secondly, involving local entrepreneurs in the tourism sector enhances the authenticity and uniqueness of the Seychelles' travel offerings. This of particular importance as visitors are increasingly seeking authentic cultural experiences in marginalised settings, and the presence of local businesses in these spaces ensures that tourists can engage with the Seychellois way-of-life in a respectful and meaningful way (Li & Li, 2022). Thirdly, it was also found that local participation in the tourism industry contributes to social cohesion and promotes a sense of ownership among the Seychellois population (Thunin, 2023). As locals become active stakeholders in the sector, they are more likely to support and protect the industry, thus fostering its long-term sustainability.

The fourth provision of the *Tourism Development Act of 2019* is **consumer protection**. With any thriving tourism industry, the protection of consumer rights is paramount to ensure the continued development, advancement and growth of this sector (Seychelles Government, 2022). Consumer protection within the tourism industry of this island nation is critical for several reasons. Petrovic and Milicevic (2019), mentions that firstly, it contributes to the reputation of the destination. A

destination that ensures the safety, satisfaction, and fair treatment of its visitors is likely to attract more tourists and receive positive reviews (Petrovic & Milicevic, 2019). Secondly, it fosters trust and confidence among tourists, encouraging repeat visits and word-of-mouth recommendations (Wang *et al.*, 2020). Thirdly, it helps sustain the local economy by ensuring that tourists' needs are met (and surpassed), thereby increasing their spending, and contributing to the livelihoods of those involved in the industry (Feltoon, 2022).

Consumer protection mechanisms in the aforementioned promulgated policy also include a number of sub-components that are important to consider for the purpose of this dissertation. These include:

1. **Legal framework:** This Act serves as a legal framework to protect consumers in the tourism industry; in turn also providing a solid foundation for safeguarding consumers' rights within the tourism sector; the Act also includes provisions for the redress of grievances and the resolution of disputes.
2. **Regulatory bodies:** The STB plays a pivotal role in regulating the tourism industry and ensuring consumer protection; they oversee standards, accreditation, and licensing for tourism service providers; the STB also provides information to tourists about their rights and obligations while visiting the Seychelles.
3. **Tourism service quality standards:** The Seychelles has implemented standards and codes of practice to enhance the quality of services offered to tourists; this Act legalises these activities and processes for tourism businesses on the island to use.
4. **Tourism Ombudsman:** The Seychelles has also established a Tourism Ombudsman by way of this Act to address consumer complaints and disputes in the tourism sector; this component also strives to keep the country to its set forth best practice and benchmarked principles for sustainable tourism development (Seychelles Government, 2022; Tirant-Gherardi, 2023).

The last provision of the *Tourism Development Act of 2019* is **destination management**. To manage the growth of the tourism industry, the government has

implemented this provision along with various sub-components within it to manage this growth responsibly. Thus, destination management is an integral part of Seychelles' tourism legislation. This is evident in the *Tourism Development Act 2019*, which recognizes the importance of sustainable tourism and destination management. This Act emphasizes the need for destination planning and management to ensure that tourism growth aligns with the principles of sustainable development (Seychelles Government, 2022).

In this regulatory mechanism sustainable tourism development was also found to be a fundamental concept that underpins the Seychelles' approach to tourism holistically. Thus, meaning that Seychelles' tourism legislation not only emphasizes the importance of destination management (theory) but also outlines specific strategies to achieve sustainable tourism in practice. In this context it was also found that destination management, as a provision in the aforesaid tourism legislation, also enables the government of the country to set guidelines, rules and regulations to protect the environment at a more comprehensive level throughout the archipelago (Lodge, 2022). Destination management is thus a crucial provision in the tourism legislation of the Seychelles, where it serves as a cornerstone for achieving sustainable tourism development while preserving the environment and ensuring that the local communities' benefit from tourism (Ferreira, 2019). For the purpose of this dissertation, it is also important to note that the most important sub-component to be legislated from this provision is the formulation and deployment of Tourism Development Zones (TDZs) across the island chain.

In recent years, the government of the Seychelles has taken significant steps to boost tourism through the establishment of Tourism Development Zones (TDZs). These zones have been designed to encourage sustainable tourism growth, create economic opportunities, and protect the country's natural environment. TDZs are thus a strategic approach to foster sustainable tourism growth country wide. They are designated geographical areas where special policies, incentives, and regulations are to be implemented to promote tourism-related activities (Corbet, 2018). TDZs are designed to attract investments, encourage infrastructural development, and enhance the overall tourism experience within a region with clearly defined parameters (Seychelles Government, 2022).

The *Tourism Development Act of 2019* further outlines the importance of these TDZs. Noting TDZs play a pivotal role in driving sustainable tourism growth in the Seychelles. By channelling investments and promoting responsible tourism practices, they contribute to the long-term preservation of the country's natural beauty and cultural heritage (Lusigi, 2023). TDZs also promote and elevate economic opportunities for all role players involved. The development of infrastructure is similarly a key feature of TDZs. It has also been found that there are three central objectives of TDZs in the Seychelles. The first is biodiversity conservation. TDZs aim to strike a balance between tourism development and conservation, ensuring that natural assets are preserved for future generations. The second is job creation. TDZs are expected to create job opportunities for Seychellois (Ngulube, 2022). They aim to reduce unemployment and promote inclusive economic development. And the last objective is infrastructure enhancement. Improving infrastructure within TDZs is essential to attract tourists. By building modern facilities and enhancing connectivity, the Seychelles can remain competitive in the global tourism market (Soshkin, 2019).

In retrospect Edgell (2020) and Christoff (2022) also outline and discuss the multiple benefit that have arisen from the *Tourism Development Act* which has been gleaned from its influence on the island tourism domain since its promulgation in 2019. That include:

1. **Sustainable tourism development:** The primary objective of the Act was to promote sustainable tourism in the Seychelles, and by regulating and guiding the industry, it ensures that tourism activities have minimal negative impacts on the environment and local communities while providing long-term economic benefits.
2. **Economic growth:** The Act seeks to stimulate economic growth by increasing tourist arrivals and revenue, and by maintaining high-quality services and environmental preservation, the Seychelles can attract more tourists and generate greater economic gains.
3. **Community involvement:** The Act aims to include local communities in the tourism sector, thus empowering them economically; this encourages the development of small and medium-sized tourism enterprises owned by Seychellois and also promotes cultural and heritage preservation.

4. **Environmental conservation:** A core objective of the Act was to safeguard the natural beauty of the Seychelles, and by imposing strict environmental regulations on tourism businesses, the legislation contributes to the preservation of the archipelago's unique biodiversity and ecosystems (Edgell, 2020; Christoff, 2022).

Singgalen *et al.* (2017), also found that this Tourism Act has ensured that tourism businesses minimize their environmental footprint and contribute to local communities. Secondly, the Act's quality standards have similarly been found to improve the overall quality of tourism services, making Seychelles more attractive to tourists seeking a high-quality experience. Thirdly, tourists can have confidence in their safety when participating in various activities around the island, thanks in part to the safety regulations outlined in the Act. Lastly, the Act's efforts to market Seychelles as a top-tier tourist destination have similarly led to increased international visibility and more visitors (Singgalen *et al.*, 2017).

Additionally, it is also important to note that the *Tourism Development Act of 2019* in also contextualises and conceptualised various aspects of the tourism industry on the island chain. Where in this context it was found that in addition to the above also encompasses the roles and responsibilities of tourism service providers, the obligations to protect the environment, the promotion of sustainable tourism practices, and the welfare of tourists (Jacobsen, 2021). The Act thus plays a pivotal role in shaping Seychelles' tourism sector, ensuring that it remains a sustainable and attractive destination for visitors from around the world. Meaning that the *Tourism Development Act of 2019* provides the foundation upon which the Seychelles' tourism sector operates.

In light of this the Act underscores the importance of environmental protection in the context of tourism, and it defines measures to safeguard the Seychelles' natural resources and unique ecosystems. Tourist activities and developments are to be regulated according to the Act so as to minimize adverse effects on the environment. Community engagement is another key aspect of the *Tourism Development Act* where in this context it was found that the Act should encourage tourism businesses to collaborate with local communities and promote their participation in the industry. This involvement is seen as a means to distribute the economic benefits of tourism more

equitably. Tourist safety and welfare are priorities outlined in the Act. It mandates service providers to ensure the well-being of tourists, with specific provisions regarding accommodation standards, health and safety measures, and emergency procedures

Thus, it is fair to argue from the above context that the archipelago nation has adopted a conservation-oriented approach to tourism, aiming to protect its unique natural environment and biodiversity as well as cultural settings and spaces through proactive and continuous tourism regulation going forward.

4.5. Chapter summary

This chapter divulged the captivating history of travel in the Seychelles, and also considered the post-independent tourism industry the country relies on so heavily today. In this context finding that the Seychelles has undergone a remarkable transformation from being a “hidden gem to a sought-after destination” from a touristic point of view. However, in this rapid growth it has also been recognised that there is an inherent need to implement rules and regulations country-wide to manage and mitigate these developments, especially as they pertain to the country’s limited and scarce natural and cultural resources – and how the latter as to become “flexible” with regards to tourism activities and offerings. Tourism legislation was likewise at the centre of this chapter. The governments hand-on approach in creating and implementing sustainable tourism policies was discussed, including the attempts to preserve the ecosystems and promote responsible travel throughout the archipelago. Specific emphasis was placed on the *Tourism Development Act of 2019* and how through its various provisions it has been legislating and regulating tourism against the various environmental consequences it might face on the island chain. The chapter concluded by emphasizing the relationship between the Seychelles’ economic affluence and environmental situation, and how these two components need to be amended again in the wake of the climate change crisis on the horizon for the Seychelles.

CHAPTER 5: CLIMATE CHANGE AND THE SEYCHELLES

5.1. Introduction

The world-wide occurrence of climate change has become one of the biggest challenges of the 21st century. Amongst the nations considered and researched, one of the most vulnerable to the impacts of the former is the island tourism destination of the Seychelles. As indicated in the previous chapter, the Seychelles is situated in the Indian Ocean and is known for its pristine coral reefs, lush landscapes, and diverse marine life. However, the growing threats caused by climate change loom over this idyllic haven, pushing for thorough analysis, interpretation, and evaluation of the available data. This chapter will thus appraise climate change, and its subsequent impacts, within a clearly defined area, in this case being the Seychelles. The section will also recommend ten ways in which the Seychelles can adapt to climate change

and/or mitigate to its inevitable risks and threats at a local, regional and national level in the short and long term. These recommendations for adaptation were compiled in part based on the aforementioned theoretical and practical overviews (Chapter 2 and 3) and how they have conceptualised and contextualised in the case study (Chapter 4) to date.

5.2. Theme application to the case study

As established above, climate change poses a major threat to the world's islands, affecting their ecosystems, biodiversity, and the livelihoods of local communities inhabiting these often times marginalised spaces. The Earth has gone through a set of “unique changes” in recent years, and of these most noticeable impacts of climate change on islands is the rise in sea levels. Scientifically evidence devastatingly supports the conclusion that human activities, specifically the emissions of GHGs, contribute to global warming which has resulted in the melting of polar ice caps and glaciers. Thus, the main driver of rising sea levels is the warming of Earth. The burning of fossil fuels releases carbon dioxide and other GHGs into the atmosphere, which in turn is creating a heat-trapping barrier which in turn is raising global temperatures at an alarming rate. This warming, as found in the theoretical and practical frameworks above, are leading to the melting of ice sheets in Antarctica, as well the glaciers in mountainous regions on the Arctic region.

As sea levels rise, it ironically increases the risks of floods and other extreme weather events on land. This specific effect of climate change poses a great threat to coastal ecosystems, which are considered to be one of the most productive and biodiversity in the world. Coastal wetlands, coral reefs, and mangrove forests face the threat of flooding and loss of habitat head-on. Yet, this “invasion” of saltwater into freshwater ecosystems also jeopardises the survival of many species adapted to specific salinity levels. However, the consequences climate change has induced an array of events into these fragile biomes such as ocean acidification, coral bleaching along with the dilapidation of coral reefs. The loss of these coral reefs will not only diminish the biodiversity, but it will impact the fisheries which many island communities rely on for food and economic activities.

The outcome of rising sea levels thus go beyond the ecological impacts, as it is now reaching coastal communities and economies as well. The rising sea levels have a direct impact to human settlements, specifically economic implications. The latter to which tourism is a major part of. Low-lying coastal regions are especially vulnerable and face increased risks of flooding, erosion, and storm surges. Coastal infrastructure (roads, ports, and buildings) in this context has been found to be at extreme risk of complete destruction or damage, which can in turn lead to a huge financial loss for all stakeholders involved or residing in the specific setting. The movement of populations, further inland or higher up, due to the rising sea-levels also creates concern of social and geopolitical stability, as climate-induced migration may cause a strain on resources and increase the competition for habitable land. However, islands, as defined above, are known to be susceptible to extreme weather events, yet most research suggests that these events are becoming more frequent due to climate change with these island masses unable to mitigate the constant onslaught. Climate change was also found to bring about various health risks, including the spread of vector-borne diseases, heat-related illnesses, and food insecurity. These threats it was established will affect the most vulnerable communities in these already marginalised settings.

The Seychelles has a unique blend of biodiversity, indigenous cultural groupings, and economic resilience which has makes it a great subject for exploration. Despite the island nation's natural beauty, the Seychelles faces multiple ecological challenges, and this is mainly due to climate change, human activities, and invasive species. The rising sea-levels in particular threaten the low-lying islands, and the coral bleaching is affecting marine ecosystems at a great speed. Conservation efforts by the Seychelles Government and local community stakeholders have thus been identified as being crucial to mitigating these challenges. The Seychelles economy has evolved from their reliance on agriculture to a more service-based economy, which is driven by fisheries and tourism. The Seychelles relies on fisheries for both domestic consumption as well as for export earnings. The increase in sea temperature disrupts fish migration patterns, which will then lead to changes in the distribution and quantity of fish stocks. This will naturally have a negative impact on the livelihoods of the Seychellois peoples as well as visitors to the island chain. The Seychelles also (over)relies on the tourism industry, however, if the attractiveness of the islands is under threat by climate change

events, it will not only damage the natural beauty of the island, but it will also deter potential tourists from coming back for a repeat visit in the near future.

The Seychelles with its low-lying coastal areas face the ever-growing threat of rising sea levels. The Intergovernmental Panel on Climate Change (IPCC) for the country estimates that global sea levels could rise by one meter (1m) by the end of the century (Seychelles Government, 2022). This is naturally a major threat to the local community of the Seychelles for most of the locals reside along the coast. Coastal erosion and saltwater intrusion into freshwater sources further enhance the country's vulnerability to that of the climate crisis.

A further impact of climate change on the Seychelles of sea temperatures beginning to rise out of control. This excess heat (trapped in the atmosphere), as conceptualised and contextualised above, is being absorbed by the oceans, which is resulting an overall increase in the sea's temperature, naturally affecting an island nation in its entirety. Although the consequences of rising sea level temperatures are complex and sometimes intangible, one of the most visible and tangible impacts it has is on the bleaching of coral reefs, with the Seychelles being no different. As discussed above, elevated sea temperatures create stress in coral organisms, causing them to eject symbiotic algae, which causes the loss of vibrant colours and makes the coral more susceptible to diseases.

As was established climate change is a global challenge that needs combined efforts from nations all around the world to address it proactively. The Seychelles Government has recognized that they as a country are vulnerable to climate change and have developed and implemented a range of policies to help adapt and mitigate the impacts of climate – as was expounded upon above and encapsulated within the promulgated policy, known as *Tourism Development Act of 2019* and its various provisions. However, in addition to these mechanisms and components put forward, the Seychelles has also identified further future interdisciplinary research as a way to adapt and/or mitigate the effects of climate change on the island nation, and its subsequent tourism industry. To address the challenges that the Seychelles is facing efficient, vigorous research is thus crucial to encourage the understanding of local climate patterns, ecosystem vulnerabilities, and adaptation strategies. However, in this

context two main challenges in terms of further research into climate research and tourism have been identified by the Seychellois Government. That include:

1. **Limited Resources:** there are many resource constraints which are hindering the comprehensive climate change research in the country; a few of these hindrances that were identified are limited funding and inadequate research infrastructures that create barriers to leading large-scale long-term studies; technical support and expertise on the topic have also been key deterrents in this context.
2. **Data gaps:** there is not much historical data specific to the Seychelles, so accurate models and future predication becomes more difficult when wanting to consider the impacts of climate change on the archipelago; thus, addressing these gaps in data becomes particularly important in creating effective climate change mitigation strategies especially as they relate to the ever-changing and evolving domain of tourism on the island.

However, in highlighting the challenges faced to do intensive research on the topics at hand, the Seychellois Government has also identified big opportunities for the advancement of research once these two significant challenges can be overcome. These include:

1. **International collaboration:** Joint efforts with international research institutions can help conquer resource limitations; this ability to be able to share expertise, funding, and knowledge with others will be instrumental in the fight against and within the climate crisis.
2. **Technology integration:** Improvements in technology, such as remote sensing and satellite imaging, also offer new ways of collecting data in inaccessible areas. Using this technology in research will help increase the accuracy and scope of climate studies from a touristic point of view.
3. **Community engagement:** By involving local communities in research initiatives, it creates a better understanding of their priorities; including the local community will also empower them and they will be more willing to participate in climate change adaption strategies to come.

Effective climate change research is thus central for the Seychelles at both a local, regional and national level to mitigate the above outlined risks of rising sea levels and high-water temperatures as well as their subsequent sub-effects on the fragile and scarce natural resources and environments of the island chain. Consequently, it can therefore be argued that the climate crisis has forced the Seychelles to acknowledge the vulnerability of its tourism industry and has forced the Seychelles into diversifying their economic activities and offerings. Thus a reinterpretation of its travel landscape is needed desperately in the wake of the looming climate crisis.

Nevertheless, as climate change is a pressing global issue that has gained significant attention, in theory and in practice, due to its devastating impacts on environments, economies, and societies all around the world. The burning of fossil fuels, deforestation and the industrial processes contribute to the release of great levels of carbon dioxide, methane, and nitrous oxide. Deforestation, in particular, it was found not only affects the climate, but it also leads to a loss of biodiversity and ecosystems. Forests are a habitat to many animal and plant species, many of which are easily susceptible to the climate crisis, thus disrupting their ability to provide essential services such as water purification, pollination, and soil stabilization as indicated above especially in marginalised settings where the need is even greater for a stable ecosystem. The consequences of deforestation thus extend further than the immediate vicinity. The changes in land cover and the changes in natural vegetation patterns have an influence on regional and global climate patterns. Based on this it can be stated that the Seychelles has been directly affected by deforestation. The Seychelles once had large forests covering a noteworthy portion of their land. However, the historical exploitation of these natural resources, driven by colonial interests has set the scene for deforestation on a large island-wide scale. Both British and French colonialists it was found exploited timber and the other resources by way of plantation creation on the various islands. The three main causes for deforestation in the Seychelles were found to be:

1. **Commercial logging:** this is the global need for timber; however, the extraction of these hardwoods has led to the degradation of these large forest areas.
2. **Agricultural expansion:** the need for agricultural land has grown since the Seychellois population has grown; the expansion of these activities

has resulted in the clearing of land, resulting in deforestation at a great scale.

3. **Tourism infrastructure development:** the tourism industry has had massive growth, and this has led to an increase of construction in infrastructure to cater to the entire sector on the island chain; this tourism industry drive has, however, has been found to be at the cost of the environment.

It is also important to point out that the interpretation of climate change is not limited to scientific dialogue, as it extends into the areas of policy and economics. This as the costs involved with dealing with the outcome of climate change far exceed the costs of being initiative-taking in the fight to mitigate and adapt to climate change. This economic perspective encourages the urgency to address climate change as a risk management issue, pushing policymakers to create strategies that will balance the short-term costs with the long-term benefits. This investigation has also shown that climate change interpretation also includes social and cultural dimensions, as the communities are the ones who grapple with the consequences of environmental shifts. This in turn has forced the world to look at small local communities and involve them in decision-making structures from start to finish, especially if they are located in coastal regions that are easily affected by the impacts of global warming. Coastal erosion and flooding are becoming increasingly prevalent, endangering the Seychelles' infrastructure and habitable areas. As indicated above it has been found that more than 40% of the Seychelles population live within 100 meters of the coastline, aggravating the vulnerability of these communities to the intruding sea. It is also important to point out that most tourism infrastructures, products and services also fall within this "climatic buffer zone" on the island chain.

The Seychelles economy relies heavily on tourism, making it vulnerable to the adverse effects of climate change. This as the country's beautiful beaches and coral reefs attract tourists from all around the world. However, it was found that extreme weather events can damage travel infrastructure, corrode beaches, and impact marine ecosystems, reducing the attractiveness of the Seychelles as a tourist destination collectively. This loss in revenue it was determined will have a devastating effect on the economy, and can lead to significant unemployment, lowered government revenues, and an increase in poverty. This reliance on tourism as a main contributor

to their GDP has thus forced the Seychellois Government to diversify its economy, and this has become imperative to mitigate the risks associated with climate change and global warming.

However, for the purpose of this investigation it must also be pointed out that the Seychelles has made admirable strides in mitigating the impacts of climate change in recent years, despite being very much aware of the various challenges and barriers still facing the island nation when it comes to the topic at hand. The Seychelles has submitted their Nationally Determined Contributions (NDCs) (under the *Paris Agreement of 2015*), where they outline their commitment to reducing GHG emissions, with a specific focus on the energy sector. The introduction of both solar and wind energy being used throughout the country is a testament to their dedication to combat the crisis. Another sustainable development initiative that has been implemented in this regard is the Blue Economy Roadmap, which has the goal of promoting responsible ocean-based economic activities. The country has done this by creating marine protected areas to help safeguard its biodiversity and ecosystems. These marine protected areas help conserve the Seychelles coral reefs, in particular, from destructive activities. In addition, to these two mechanisms, the Seychelles has also implemented awareness campaigns for the public on the climate crisis and global warming and how certain tourism products and services may be contributing to these negative environmental impacts, as recommended in the Agreement. However, apart from these three efforts, the country remains open to new, creative and unique ways to combat the climate crisis, theoretically and/or practically.

5.3. Ways the Seychelles have combated climate change

In the face of growing global fears regarding the climate change, the Seychelles has arisen as an initiative-taking force in implementing creative strategies to combat the bad effects of environmental shifts. The Seychelles has committed themselves to sustainable development and environmental conservation through a multifaceted approach. In light of this, and based on the research conducted in this investigation, the following ways to combat climate change in the Seychelles are proposed for further consideration and exploration at an institutional level or by tourism stakeholders across or associated with this island nation state. These include:

1. **Renewable energy promotion:** the Seychelles implemented the *Energy Act of 2012* in its commitment to transition towards renewable energy sources; this Act outlines the development of solar and wind energy projects, so that it can reduce the nations reliance on fossil fuels; this innovative project aims to control solar energy by installing floating solar panels on reservoirs, which in turn reduces the reliance on fossil fuels. This project can be a goal or an idea for all other Small Island Developing States (SIDS), to utilize.
2. **Climate resilient infrastructure:** the Seychelles have designed and constructed physical structures and systems which can withstand or adapt to the impacts of climate change; they have used innovative technology, such as advanced weather monitoring systems to help with their early detections of unnatural weather occurrences; this specific infrastructure has been engineered to be flexible and capable of functioning in the ever-changing environmental conditions of the island chain.
3. **Adaption planning:** the Seychelles acknowledges that the rising of sea-levels is a major threat, that has forced them to implement policies which focus on coastal protection and infrastructure development; the Conservation and Climate Adaptation Trust also outlines the strategies to improve coastal resilience through the conservation of seawalls, artificial reeds, and other protective mechanisms; the conservation of biodiversity and restoration of ecosystems plays an important role in enhancing the Seychelles resilience to climate change; the Seychelles National Biodiversity Strategy and Action Plan (2015), summarizes the measures to protect and restore key ecosystems. The Seychelles has similarly and continuously engaged in international forums to address climate change issues, and to advocate for collective action amongst SIDS and other global South nations. The Seychelles has also seen that investments into resilient infrastructure are crucial to mitigate the impact of the rising sea levels and extreme weather events. This can include the construction of sea defences, relocating vulnerable communities away from high-risk areas, as well as upgrading building codes.
4. **Ecosystem conservation:** the Seychelles has adopted a “Blue Economy” strategy. The Ministry of Fisheries and Blue Economy (2023) describe this

strategy as it being about supporting sustainable economic growth through oceans-related sectors and activities, while improving human well-being and social equity and preserving the environment. This is done by prioritizing the sustainable use of marine resources.

5. **Community engagement:** the Seychelles has involved the community in this fight against the climate crisis by having many community-driven projects. Examples of this are beach clean-ups, coral reef protection and mangrove restoration projects.
6. **Education and awareness:** the Seychelles continues to have educational programs and participatory workshops with community members, and the government have likewise included the local community in decision-making processes as they relate to climate change and tourism. This has helped the Seychellois' want to adopt sustainable practices, due to the sense of ownership they obtain through these initiatives.
7. **International collaboration:** the Seychelles has adopted a thorough policy framework to address climate change, with the focus being on both adaption strategies and mitigation. The National Climate Change Strategy and Action Plan (NCCSAP), works as an administrative document, which outlines the country's goals and their actions to tackle climate change at an international level. The Seychelles is actively engaging in international collaborations to identify the boundaries and mitigation efforts when it comes to the climate crisis.
8. **Carbon footprint reduction:** the government of Seychelles has seen the importance of addressing climate change and that they have a unique ecosystem that they need to protect. One of the main steps the Seychelles has done to combat this crisis has been the development and implementation of the SSTL and the SSTF. The aim of these strategies are to reduce carbon emissions while moving towards a more sustainable and durable economy. The Seychelles has also introduced eco-friendly transportation to help with the reduction of carbon emissions.
9. **Sustainable fisheries:** the Seychelles National Parks Authority oversees all protected areas, which in turn emphasizes the importance of sustainable tourism and biodiversity conservation.

10. Waste management: the Seychelles government has implemented waste separation, where one separates their waste into non-recyclable waste and recyclable waste. The Seychelles has also invested in evolving their waste treatment facilities so that it includes recycling plants and composting centres. The Seychelles no longer sell plastic bags, and this is another way in which that is trying to reduce waste.

It is believed by spending more resources on these already established ways they can significantly help reduce the impact of climate change on the archipelago. As indicated above these recommendations can now be taken further to be implemented at an institutional level.

5.4. Chapter summary

This chapter delved into an analysis, interpretation, and evaluation of climate change in the Seychelles. It focused on the impacts, causes, future scenarios, and a few mitigation strategies that can now be further explored by stakeholders and role players at a higher level in government or in academia.

CHAPTER 6: RECOMMENDATIONS AND REFLECTIONS

In the fight against the global climate crisis, the opinions of small islands echo with a unique resonance. These islands, though small in size, are bearing witness to the massive impacts of climate change, standing vulnerable against the rising sea levels, extreme weather events, and ecological disturbances that threaten their very existence. As the world wrestles with the urgent need for sustainable solutions, it is important to listen to the insights and experiences of these small island nations and how they have gone about preparing for various worst-case scenarios when it comes to climate change and global warming holistically.

The Seychelles and the three case studies share a few similarities in both tourism and climate change. All four island nations are renowned for their stunning beaches, clear turquoise waters, and luxurious resorts, making them top destinations for travellers

seeking tropical getaways. Tourism plays a crucial role in their economies, driving substantial revenue and employment. However, these nations are also highly vulnerable to the impacts of climate change. Rising sea levels, increasing temperatures, and more frequent and severe weather events threaten their coastal ecosystems, infrastructure, and tourism industries. These islands face the dual challenge of protecting their natural beauty, which is the cornerstone of their tourism appeal, while adapting to and mitigating the effects of a changing climate. Efforts in sustainable tourism, conservation initiatives, and international cooperation are essential for their future resilience and economic stability.

This dissertation investigated the heart of the climate crisis from the perspective of a small island nation in the Seychelles, and how it and its tourism systems have started to adapt to the imminent risks and threats posed by the climate crisis, in this context offering a few reflections that come from this connection of vulnerability and resilience. To achieve the latter this dissertation considered the overview of the theoretical and practical frameworks associated with climate change and tourism, and then applied them in principle to the case study of the Seychelles.

Based on the above research, this dissertation has thus determined that the Seychelles will not be able to assist or help the Seychelles from “sinking”, however, that it may produce revenue streams to support the Seychellean Government to come up with more creative and innovative ways to combat the various effects of climate change in the near future so as to adapt and mitigate all systems on the island to a “new normal” brought on by the climate crisis. Thus, tourism has been found in this dissertation to be an important tool to delay the effects of climate change on the island in the short and long term, however, it was found that it could ultimately not stop climate change nor global warming from happening.

SOURCES

ADGER, W., ARNELL, N. & TOMPKINS, E. 2009. 'Successful adaptation to climate change across scales'. *Global Environmental Change* 15 (2), pp. 77-86.

AFRICAN DEVELOPMENT BANK. 2015. <[Seychelles - Infrastructure Action Plan Report.pdf \(afdb.org\)](#)>. Access: 28 April 2023.

ACHA-ANYI, P. 2016. 'Planning and development of sustainable tourism products in local communities'. *African Journal of Hospitality, Tourism and Leisure* 5 (3), pp. 1-20.

AGOVINO, M., CASACCIA, M., CIOMMI, M., FERRARA, M. & MARCHESANO, K. 2019. 'Agriculture, climate change and sustainability: The case of EU-28'. *Ecological Indicators* 105 (1), pp. 525-543.

ADAM, L. 2018. 'Globalization and cultural change in the Seychelles'. *International Journal of Cultural Studies* 21 (5), pp. 553-569.

ADGER, W., HUGHES, T., FOLKE, C., CARPENTER, S. & ROCKSTROM, J. 2018. 'Social-ecological resilience to coastal disasters'. *Science* 309 (5737), pp. 1036-1039.

AKELLA, A., SAINI, R. & SHARMA, M. 2009. 'Social, economic, and environmental impacts of renewable energy systems'. *Renewable Energy* 34 (2), pp. 390-396.

ALDEBERT, B., & DANG, R.J. & LONGHI, C. 2011. 'Innovation in the tourism industry: The case of tourism'. *Tourism Management* 32 (5), pp. 1204-1213.

ALEXANDRA, J. 2021. 'How do the Cultural Dimensions of Climate Shape our Understanding of Climate Change?'. *Climate* 9 (4), p. 63.

ALLEN, R. 2022. <[History of the Seychelles | Oxford Research Encyclopaedia of African History](#)>. Access: 01 October 2023.

AL-MULALI, U., FEREIDOUNI, H. & MOHAMMED, A. 2015. 'The effect of tourism arrival on CO2 emissions from transportation sector'. *An International Journal of Tourism and Hospitality* 26 (2), pp. 230-243.

ALTEXSOFT. 2022. <[Experiential Travel Explained: Players, Distribution Landscape, and Opportunities | AltexSoft](#)>. Access: 01 February 2023.

AMLA, H. 2015. <[Seychelles' ecotourism haven where the birds are in charge - CNN's Inside Africa explores the wonders of Bird Island - Seychelles News Agency](#)>. Access: 01 October 2023.

ANDERSON, D., GILBERT, P. & BURKHOLDER, J. 2002. 'Harmful algal blooms and eutrophication: nutrient sources, composition, and consequences'. *Estuaries* 25 (1), pp. 704-726.

ANON. 2008a. <[SeriesM_83rev1e.pdf \(un.org\)](#)>. Access: 22 April 2022.

ANON. 2016b. <[The positive and negative effects of tourism on the social-cultural environment of a country. \(linkedin.com\)](#)>. Access: 23 March 2023. ANON. 2022c.

ARCHER, B. & FLETCHER, J. 1996. 'The Economic Impact of Tourism in the Seychelles'. *Annals of Tourism Research* 23 (1), pp. 32-47.

ARDOIN, N. 2004. 'Ecological challenges in the Seychelles'. *Environmental Studies* 31 (2), pp. 245-260.

ARKEMA, K., GRIFFIN, R., MALDONADO, S. & SILVER, J. 2013. 'Linking social and ecological resilience in Chesapeake Bay'. *PLoS ONE* 8 (6), p. 65088.

ARMSTRONG, A. 2023. <[What is the food culture in the Maldives? - Employment Security Commission \(ncesc.com\)](#)>. Access: 15 September 2023.

ARMSTRONG, L. 2023. <[How Seawalls Can Help Protect Your Home from Flooding \(restorationmasterfinder.com\)](#)>. Access: 11 November 2023.

AROWOLO, D. 2010. 'The Effects of Western Civilisation and Culture in Africa'. *Afro Asian Journal of Social Science* 1 (1), pp. 1-13.

ARTETA, C. & KASYANENKO, S. 2022. <[Food insecurity and economic misery in low-income countries | Brookings](#)>. Access: 15 November 2023.

ASHRAF, M., HOU, F., KIM, W., AHMAD, W. & ASHRAF, R. 2019. 'Modelling tourists' visiting intentions toward ecofriendly destinations: Implications for sustainable tourism operators'. *Business Strategy and the Environment* 29 (1), pp. 54-71.

ATASOY, M. & ATASOY, FG. 2020. 'The impact of climate change on tourism: a causality analyses'. *Turkish Journal of Agriculture- Food Science and Technology* 8 (2), pp. 515-519.

AUSTEN, R. 1987. 'The Transports of Metaphor: Reconsidering French Humanism in the Age of the Atlantic Slave Trade'. *The William and Mary Quarterly* 44 (2), pp. 259-284.

BABII, A. & NADEEM, S. 2021. <[Tourism in a Post-Pandemic World \(imf.org\)](#)>. Access: 03 February 2023.

BACK, K. 2022. <[Climate Changes, So Should We... | Cambridge English](#)>. Access: 10 August 2023.

BACKLUND, P., JANETOS, A. & SCHIMEL, D. 2009. *The effects of climate change on agriculture, land resources, water resources, and biodiversity in the United States*. Nova Science, New York.

BAGUS, S., IMADE, S., NYOMAN, S. & PUTU, W. 2019. 'Community based tourism as sustainable tourism support'. *Russian Journal of Agricultural and Socio-Economic Sciences* 94 (10), pp. 70-78.

BAHAMAS INFORMATION SERVICES. 2023. <[An Initiative to Develop Solar Energy Microgrids Across the Family Islands Launched - Government - News \(bahamas.gov.bs\)](https://www.bahamas.gov.bs/news)>. Access: 06/07/2024.

Bahamas Ministry of Tourism. 2020. Sustainable Tourism. Retrieved from: [Island Vacations - The Official Website of The Bahamas](https://www.bahamas.gov.bs/tourism).

Bahamas Ministry of Tourism. 2020. Economic Impact of Tourism in the Bahamas. Retrieved from: [Economic Environment - Bahamas Investment Authority - Government](https://www.bahamas.gov.bs/economy).

Bahamas National Trust. 2023. <[Who We Are - Bahamas National Trust \(bnt.bs\)](https://www.bnt.bs/)>. Access: 15 September 2023.

BAILLEUL-LESUER, R. 2014. 'Natural history and national identity in the Seychelles'. *Island Studies Journal* 9 (2), pp. 187-204.

BAIRD, A., BHAGOOLI, R., RALPH, P. & TAKAHASHI, S. 2009. 'Coral bleaching: the role of the host'. *Trends in Ecology & Evolution* 24 (1), pp. 16-20.

BALLHATCHET, K. 1995. 'The structure of British official attitudes: Colonial Mauritius, 1883-1968'. *The Historical Journal* 38 (4), pp. 989-1011.

BALLANTYNE, R., PACKER, J. & AXELSEN, M. 2009. 'Trends in Tourism Research'. *Annals of Tourism Research* 36 (1), pp. 149-152.

BALMFORD, A., GREEN, R. & PHALAN, B. 202. 'What are the research priorities for the environment in Seychelles?'. *Oryx* 54 (1), pp. 1-4.

BALLOCH, Q., SHAH, S., SHEERAZ, M., IQBAL, N., MAHAR, M. & KHAN, A. 2023. 'Impact of tourism development upon environmental sustainability: a suggested framework for sustainable ecotourism'. *Environmental Science and Pollution Research* 30 (3), pp. 5917-5930.

BANDYOPADHYAY, D., SAHA, S. & MANDAL, S. 2019. 'Cultural heritage and sustainable tourism: A case study of Mauritius'. *Tourism Management Perspectives* 30 (1), pp. 102-112.

BARKLEY, S. 2022. <[7 Ways to Set Realistic Expectations for Yourself \(psychcentral.com\)](https://www.psychcentral.com/7-ways-to-set-realistic-expectations-for-yourself/)>. access: 17 July 2023.

BARNETT, J. & WATERS, E. 2016. 'The tourism-climate-migration nexus: An exploratory case study of the Maldives'. *Climatic Change* 137 (1-2), pp. 83-95.

BARRA, J., SINGH, J., ALWIE, S. & HUSSAIN, I. 2022. 'Exploring Factors Hindering MSME Growth in Seychelles: Challenges and Strategies the MSMEs use to Sustain Business'. *Electronic Journal of Business and Management* 7 (3), pp. 29-47.

- BARRETT, S. 1992. 'Economic growth and environmental preservation'. *Journal of Environmental Economics and Management* 23 (3), pp. 289-300.
- BASHIR, F. 2019. <[How to reduce inflow and infiltration in a wastewater network | Blog \(dhigroup.com\)](#)>. Access: 11 November 2023.
- BASSI, A. 2016. 'Renewable energy and island economies: The case of Cape Verde'. *Renewable and Sustainable Energy Reviews* 58 (1), pp. 1427-1439.
- BAUM, T. 1994. 'The development and implementation of national tourism policies'. *Tourism Management* 15 (3), pp. 185-192.
- BAZILIAN, M., ONYEJI, I., LIEBREICH, D., MACGILL, I., CHASE, J., SHAH, J., GIELEN, D., ARENT, D., LANDFEAR, D. & ZHENGRONG, S. 2011. 'Re-considering the economics of photovoltaic power'. *Renewable Energy* 36 (2), pp. 657-664.
- BBC NEWS. 2022. <[What is climate change? A really simple guide - BBC News](#)>. Access: 01 February 2023.
- BEAVER, K. 2014. <[Seychelles \(plant-talk.org\)](#)>. Access: 01 October 2023.
- BEECH, A. 2019. 'Sustainable tourism development zones: An analysis of policy implementation in the Seychelles'. *Journal of Sustainable Tourism* 27 (10), pp. 1127-1143.
- BELL, C. 2022. <[How Is Climate Change Going To Affect My Small Business? | Bionic](#)>. Access: 17 July 2023.
- BELLARD, C., BERTELSMEIER, C., LEADLEY, P., THUILLER, W. & COURCHAMP, F. 2012. 'Impacts of climate change on the future of biodiversity'. *Ecology Letters* 15 (4), pp. 365-377.
- BELSOY, J., KORIR, J. & YEGO, J. 2012. 'Environmental Impacts of Tourism in Protected Areas'. *Journal of Environmental and Earth Science* 2 (10), pp. 1-11.
- BENEDICT, M. & BENEDICT, B. 1982. *Men, women, and money in the Seychelles*. University of California Press, Berkley.
- BERBET, M. & COSTA, M. 2003. 'Climate Change after Tropical Deforestation: Seasonal Variability of Surface Albedo and Its Effects on Precipitation Change'. *Journal of Climate* 16 (12), pp. 2099-2104.
- BETHEL, B., BURAVLEVA, Y. & TANG, D. 2021. 'Blue Economy and Blue Activities: Opportunities, Challenges, and Recommendations for The Bahamas'. *Water* 13 (10), p. 1399.
- BHAND, A. 2023. <[Vallée de Mai Nature Reserve: A UNESCO World Heritage Site \(traveltriangle.com\)](#)>. Access: 15 October 2023.
- BHANDARI, P. 2023. <[What Is Qualitative Research? | Methods & Examples \(scribbr.com\)](#)>. Access: 05 May 2023.

BIALUSCHEWSKI, A. 2009. 'Pirates, markets and imperial authority: economic aspects of maritime depredations in the Atlantic World, 1716-1726'. *Global Crime* 9 (1-2), pp. 52-65.

BISHOP, J. 2023. <[Building higher islands could save the Maldives from sea-level rise, says study - Tyndall Centre for Climate Change Research](#)>. Access: 06/07/2024.

BISOON, D. 2019. 'Environmental challenges in the tourism sector of Mauritius'. *The Environmentalist* 39 (2), pp. 130-142.

BISSOONDOYAL, U. 'Plastic waste and its management in Mauritius'. In Benneh, G. 2016. *Perspectives in environmental management in Mauritius* (pp. 117-135). Springer.

BISSOONAUTH, C. & GURIB-FAKIM, A. 2018. 'Festivals in Mauritius: A tool for cultural sustainability and promoting cultural diversity'. *Tourism Recreation Research* 43 (3), pp. 357-368.

BJORKLUND, M. 1974. 'Achievements in marine conservation, I. Marine parks'. *Environmental Conservation* 1 (3), pp. 205-217.

BLACK, D. 2013. <[The Ecological Importance of Wetlands – Blue North](#)>. Access: 11 November 2023.

BOADO, K. 2023. <[7 Benefits of Sustainable Tourism & How to Travel Responsibly | Go Overseas](#)>. Access: 15 September 2023.

BOGWASI, T. 2023. <[The Importance of Tourism on Economies and Businesses | Brimco](#)>. Access: 15 August 2023.

BORMANN, KJ., BROWN, RD., DERKSEN, C. & PAINTER, TH. 2018. 'Estimating snow-cover trends from space'. *Nature Climate Change* 8 (11), pp. 924-928.

BOSQUE, IR., MARTIN, HS. & SALMONES, MG. 2009. 'A framework for tourist expectations'. *Journal of Culture, Tourism and Hospitality Research* 3 (2), pp. 139-147.

BOSWELL, R. 2008. *Challenges to identifying and managing intangible cultural heritage in Mauritius, Zanzibar, and Seychelles*. Council for the Development of Social Science, Dakar.

BOURONIKOS, V. 2021. <[How Digital Technology in Tourism is Affecting the Way we Travel - Institute of Entrepreneurship Development \(ied.eu\)](#)>. Access: 01 October 2023.

BOWMAN, L. 2023. <[Mauritius | Geography, Maps, History, & Facts | Britannica](#)>. Access: 15 September 2023.

BRA. K. 2019. <[Climate change is impacting your favorite vacation destinations. Here's how. - Sustainable Travel International](#)>. Access: 17 September 2022.

BRENNA, L. 2020. <[Seychelles, one third of the ocean becomes a marine protected area - LifeGate](#)>. Access: 29 April 2023.

BRITANNICA. 2022. <[island | Definition, Types, Examples, & Facts | Britannica](#)>. Access: 01 September 2022.

BRODIN, J. & MENDILUCE, M. 2023. <[Comment: We'll only beat climate change if we help small businesses cut emissions – and fast | Reuters](#)>. Access: 17 July 2023.

BROWN, A. 2018. 'Tourism and Employment in the Seychelles'. *Economic Development Quarterly* 34 (2), pp.189-204.

BROWN, C., SMITH, D. & JOHNSON, P. 2019. 'Advances in flood risk management: An overview'. *Wiley Interdisciplinary Reviews: Water* 6 (2), p. 1331.

BROWN, M. 2017. 'From Bananas to Cannibals: Seychelles Food History'. *Gastronomica* 17 (4), pp. 60-67.

BROWN, T., ACKERMANN, T. & MARTENSEN, N. 2016. 'Solar Power Integration on the Seychelles Islands'. *The Journal of Field Actions Science Reports* 15 (9), pp. 46-53.

BUCHAN, K. 2000. 'The Bahamas'. *Marine Pollution Bulletin* 41 (1-6), pp. 94-111.

BULLARD, J. & ANDERSON, L. 2008. <www.oas.org>. Access: 15 September 2023.

BUNCE, S. 2010. <[glass.waste.report_s4s.pdf \(s4seychelles.com\)](#)>. Access: 15 October 2023.

BUNCE, M., NUGENT, L. & MCCLANAHAN, T. 2017. 'Tourism as a chronic threat for coral reefs'. *Environmental Management* 60 (2), pp. 215-227.

BURRIDGE, G. 2021. <[A history of Seychelles prior to settlement. Were we ever alone? – Glynn Burridge](#)>. Access: 15 August 2023.

BURROUGHS, P. 2008. 'The Mauritius rebellion of 1832 and the abolition of British colonial slavery.' *The Journal of Imperial and Commonwealth Society* 4 (3), pp. 243-265.

BUSETTO, L., WICK, W. & GUMBRINGER, C. 2020. 'How to use and assess qualitative research methods'. *Neurological Research and Practice* 2 (14), pp. 1-10.

BUTLER, R. 1991. 'Tourism, Environment, and Sustainable Development'. *Environmental Conservation* 18 (3), pp. 201-209.

CAMBRIDGE DICTIONARY. 2020. <[TOURISM | meaning in the Cambridge English Dictionary](#)>. Access: 22 April 2022.

CAMILLERI, MA. 'The Tourism Industry: An Overview', in CAMILLERI, MA. 2018. *Travel Marketing, Tourism Economics, and the Airline Product*. Springer Nature, Cham.

CARL, C. 2021. <[* Where is BAHAMAS Located? \[Bahamas Map\] • FollowthePIN.com](#)>. Access: 15 September 2023.

CARRINGTON, D. & GOULDING, N. 2014. <[Mauritius: The world's melting pot | CNN](#)>. Access: 15 September 2023.

CAVE, J. & BROWN, K. 2012. 'Island Tourism: Destinations: An editorial introduction to the special issue'. *International Journal of Culture and Tourism and Hospitality Research* 6 (2), pp. 95-113.

CEBALLOS-LASCURAIN, H. 2015. 'Tourism and sustainable development: The global importance of tourism'. *Journal of Sustainable Tourism* 23 (4), pp. 431-448.
Central Statistical Office. 2021. Economic Indicators. Retrieved from: [Index \(govmu.org\)](#) .

CHAKRABARTI, O. 2021. <[Indigenous Definition & Meaning - Merriam-Webster](#)>. Access: 25 March 2023.

CHAN, Y. 2019. <[Tour operators must be well versed with laws and contracts \(malaysiakini.com\)](#)>. Access: 15 October 2023.

CHEN, G., JAIN, A. & STOLP, S. 2023. <[Why the Maldives 5 MW solar project is a game changer \(worldbank.org\)](#)>. Access: 06/07/2024.

CHEN, H. & RAHMAN, I. 2018. 'Cultural tourism: An analysis of engagement, cultural contact, memorable tourism experience and destination loyalty'. *Tourism Management Perspectives* 26 (1), pp. 153-163.

CHERRY, K. 2022. <[Case Study: Definition, Examples, Types, and How to Write \(verywellmind.com\)](#)>. Access: 05 May 2023.

CHIKHURI, K. 2022. <[Economic diversification: The Mauritian experience \(unctad.org\)](#)>. Access: 15 September 2023.

CHINNAN, T. 2019. <[The evolution of Tourism in Mauritius \(1st part\) \(lexpress.mu\)](#)>. Access: 15 September 2023.

CHITTLAPILLAY, A. 2022. <[Rise of experiential travel and its impact on tours and activities, ET HospitalityWorld \(indiatimes.com\)](#)>. Access: 01 October 2023.

CHO, R. 2019. <[How Climate Change Impacts the Economy \(columbia.edu\)](#)>. Access: 01 February 2023.

CHRISTOFF, J. 2022. <[Research Shows More Travelers Looking for Sustainable Options | TravelPulse](#)>. Access: 01 October 2023.

CHU, J. 2015. <[How is methane formed? | World Economic Forum \(weforum.org\)](https://www.weforum.org)>. Access: 01 February 2023.

CLIFTON, J., ETIENNE, M., BARNES, DKA., BARNES, RSK., SUGGET, DJ. & SMITH, DJ. 2012. 'Marine conservation policy in Seychelles: Current constraints and prospects for improvement'. *Marine Policy* 36 (3), pp. 823-831.

CLIFTON, J., OSMAN, E.O., SUGGETT, D.J. & SMITH, D.J., 2021. 'Resolving conservation and development tensions in a small island state: A governance analysis of Curieuse Marine National Park, Seychelles'. *Marine Policy* 1 (127), pp. 1-9.

COLLIER, B. & RAGIN, M. 2022. <[As Climate Risk Grows, So Will Costs for Small Businesses \(hbr.org\)](https://hbr.org)>. Access: 17 July 2023.

COLLIER, P., CONWAY, G. & VENABLES, T. 2008. 'Climate change and Africa'. *Oxford Review of Economic Policy* 23 (2), pp. 337-353.

Conservation and Climate Adaptation Trust of Seychelles Act 2015. Available at: [Conservation and Climate Adaptation Trust of Seychelles Act - Climate Change Laws of the World \(climate-laws.org\)](https://climate-laws.org) (Accessed: 11 November 2023).

COONEY, M., GOLDSTEIN, M. & SHAPIRO, E. 2019. <[How Marine Protected Areas Help Fisheries and Ocean Ecosystems - Center for American Progress](https://www.americanprogress.org)>. Access: 15 September 2023.

COOPER, R. 2021. <[10 Nature and Biodiversity Innovations - Climate Action](https://www.10nature.org)>. Access: 15 November 2023.

COSTA, H., SPORUT, E., SANTANI, T., MCDANIEL, M., HUNT, J., BOUDREAU, D., RAMROOP, D., RUTLEDGE, K. & HALL, H. 2022. <[Greenhouse Effect \(nationalgeographic.org\)](https://www.nationalgeographic.org)>. Access: 01 February 2023.

COURSERA. 2022. <[The 4 Ps of Marketing: What They Are and How to Use Them | Coursera](https://www.coursera.org)>. Access: 21 March 2023.

COX, R. 2023. <[What Is Regenerative Tourism? \(countryandtownhouse.com\)](https://www.countryandtownhouse.com)>. Access: 10 August 2023.

COX, Z. 2019. <[Effects of Bycatch From Fishing | Olive Ridley Project](https://www.oliveridleyproject.org)>. Access: 16 November 2023.

CROWE, S., CRESSWELL, K., ROBERTSON, A., HUBY, G. AVERY, A. & SHEIKH, A. 2011. 'The case study approach'. *BMC Medical Research Methodology* 11 (100), pp. 1-9.

CSAPO, J. 'The Role and Importance of Cultural Tourism in Modern Tourism Industry'. in KASIMOGLIU, M. & AYDIN, H. 2012. *Strategies for Tourism Industry. Micro and Macro Perspectives*. INTECH, Croatia.

DAHLMAN, L. & LINDSEY, R. 2023. <[Climate Change: Global Temperature | NOAA Climate.gov](#)>. Access: 01 February 2023.

DAIROPOULOS, A. 2019. <[Where is the Maldives and How Do You Get There? | Travelstart.co.za](#)>. Access: 16 September 2023.

DANE, K. 2022. <[What is Island Tourism? What are the key factors while planning an Island Resort? - Owlgen](#)>. Access: 27 April 2022.

DA SILVA, C.M., DA SILVA, LL., SOUZA, TC., DANTAS, TC., CORREA, SM. & ARBILLA, G. 2019. 'Main Greenhouse Gases Levels in the Largest Secondary Urban Forest in the World'. *Atmospheric Pollution Research* 10 (2), pp. 564-570.

DAVIDS, C. 1994. 'Colonialism and the Criminal Law: The Transition from Slavery to Wage Labour in Seychelles Prior to 1903'. *Humanity & Society* 18 (1), pp. 22-38.

DAY, J. 2012. 'Challenges of Sustainable Tourism'. *Journal of Tourism Research and Hospitality* 1 (2), pp. 1-3.

DBPEDIA. 2023. <[About: Pedro Mascarenhas \(dbpedia.org\)](#)>. Access: 15 September 2023.

DENCHAK, M. 2022. <<https://www.nrdc.org/stories/fossil-fuels-dirty-facts>> Access: 06/07/2024.

DENCHAK, M. 2019. <[Algal Blooms 101 \(nrdc.org\)](#)>. Access: 16 November 2023.

DENCHAK, M. 2019. <[Greenhouse Effect 101 | NRDC](#)>. Access: 01 February 2023.

DENCHAK, M. & TURRENTINE, J. 2021. <[What Is Climate Change? | NRDC](#)>. Access: 01 February 2023.

DENG, J., KING, B. & BAUER, T. 2002. 'Evaluating natura attractions for tourism'. *Annals of Tourism Research* 29 (2), pp. 422-438.

DESTINATION NSW. 2011. <[Tourism-Business-Toolkit-VOL1-Chapter1.pdf \(destinationnsw.com.au\)](#)>. Access: 17 July 2022.

DODDS, R. & BUTLER, R. 2019. 'The phenomena of overtourism: A review'. *International Journal of Tourism Cities* 5 (4), pp. 519-528.

DODDS, F., HIGHHAM, A. & SHERMAH, R. 2009. *Climate Change and Energy Insecurity: The Challenge for Peace, Security and Development*. Earthscan, New York.

DOGLEY, D. 2010. 'A Government's Perspective on Safeguarding Biodiversity: The Seychelles Experience'. *BioTropica* 42 (5), pp. 572-575.

DOGLEY, V. 2016. 'The Creole language in Seychelles'. *Language in Society* 45 (5), pp. 663-684.

DORE, M. 2005. 'Climate change and changes in global precipitation patterns: What do we know?'. *Environmental International* 31 (8), pp. 1167-1181.

DUBE, R. 1995. 'Multiplier Effect and the Tourism Sector'. *The Indian Economic Journal* 42 (3), pp. 145-153.

DUBE, K. & NHAMO, G. 2020. 'Evidence and impact of climate change on South African national parks. Potential implications for tourism in the Kruger national park'. *Environmental Development* 33 (1), p. 100485.

D'UNIENVILLE, R. 2018. 'Sustainable Tourism in the Seychelles'. *Tourism Studies* 39 (2), pp. 167-182.

DUTKIEWICZ, S. & KROL, A. 2022. <[Phytoplankton | MIT Climate Portal](#)>. Access: 01 February 2023.

EASY NTER GLOBAL. 2020. <[5 A's to a Successful and Priceless Destination/Vacation - \(easynterglobal.com.ng\)](#)>. Access: 03 February 2023.

ECKELBARGER, N. 2019. <[Natural Disasters in The Bahamas - The Borgen Project](#)>. Access: 15 September 2023.

EDGELL, M. 2017. 'International Sustainable Tourism Policy'. *The Brown Journal of World Affairs* 22 (1), pp. 25-36.

EISENLOHR, P. 2007. 'Creole Publics: Language, Cultural Citizenship, and the spread of the nations in Mauritius'. *Comparative Studies in Society and History* 49 (4), pp. 968-996.

ELTON, C. 2023. <[The impact of rising sea levels is being 'underestimated', scientists warn | Euronews](#)>. Access: 15 September 2023.

ENGLEBERT, P. 2000. 'Pre-Colonial Institutions, Post-Colonial States, and Economic Development in Tropical Africa. *Political Research Quarterly* 53 (1), pp. 7-36.

Energy act 2012. Available on: [sey146026.pdf \(fao.org\)](#) (Accessed: 11 November 2023).

Environmental Protection Act 2016. Available on: [Environment Protection Act 2016 \(No. 18 of 2016\). | UNEP Law and Environment Assistance Platform](#) (Accessed on: 15 October 2023).

Environmental Protection Act 1995. Available on: [CHAPTER 63 \(fao.org\)](#) (Accessed: 15 October 2023).

EPA. 2022. <[Causes of Climate Change | US EPA](#)>. Access: 01 February 2023.

ERNESTA, S. 2020. <[Seychelles ranked amongst the top 20 world's most expensive countries to live in - Seychelles News Agency](#)>. Access: 15 August 2023.

ERNESTA, S. 2019. <[6 deep connections the 'Isle de Séchelles' has with France - Seychelles News Agency](#)>. Access: 01 October 2023.

ERNESTA, S. 2021. <[Seychelles National Parks Authority working to clean up, analyse waste on Curieuse Island - Seychelles News Agency](#)>. Access: 10 November 2023.

ETIENNE. 2022. <[Why Tourism is So Important to The Seychelles \(kreolcars-seychelles.com\)](#)>. Access: 18 April 2023.

ETONGO, D. 2019. 'Climate change adaptation in Seychelles: Actors, actions, barriers and strategies for improvement'. *Seychelles Research Journal* 1 (2), pp. 43-66.

ETONGO, D. & ARRISOL, L. 2021. 'Vulnerability of fishery-based livelihoods to climate variability and change in a tropical island: insights from small-scale fishers in Seychelles'. *Discover Sustainability* 2 (48), pp. 1-28.

ETONGO, D., BANDARA, A., MURUGAIYAN, A., BRISTOL, U., NANCY, K., PETROUSSE, B. & SINON, S. 2022. 'Risk perceptions, vulnerability, and adaptation to climate change at farm level across four agricultural zones in Seychelles'. *World Development Sustainability* 13 (49), pp. 1-24.

ETTINGER, J. 2023. <[How The Seychelles Is Bringing Eco Luxury to the Indian Ocean – Ethos \(the-ethos.co\)](#)>. Access: 01 October 2023.

EUROSTAT. 2014. <[Glossary: Tourism - Statistics Explained \(europa.eu\)](#)>. Access: 01 February 2023.

EVANS, L., HICKS, C., FIDELMAN, P., TOBIN, R. & PERRY, A. 2013. 'Future Scenarios as a Research Tool: Investigating Climate Change Impacts, Adaptation Options and Outcomes for the Great Barrier Reef, Australia'. *Human Ecology* 41 (6), pp. 841-857.

FARNSWORTH, P. 1996. 'The Influence of Trade on Bahamian Slave Culture'. *Historical Archaeology* 30 (4), pp. 1-23.

FAUZEL, S. 2016. 'Tourism and Employment Spillovers in a Small Island Developing State: A Dynamic Investigation'. *Theoretical Economics Letters* 6 (2), pp. 138-144.

FELTOON, L. 2022. <[The Benefit of Consumer Protection — Legal Insurance Blog — December 27, 2022 \(legal-insurance-blog.com\)](#)>. Access: 15 October 2023.

FERREIRA, M. 2019. <[Role of Destination Management and Destination Marketing in Tourism \(pragueeventery.com\)](#)>. Access: 15 October 2023.

FIELD, C. 2012. *Managing the risks of extreme events and disasters to advance climate change adaptation: special report of the Intergovernmental Panel on Climate Change*. Cambridge University Press, Cambridge.

FILHO, W. 2022. 'Will climate change disrupt the tourism sector?'. *International Journal of Climate Change Strategies and Management* 14 (2), pp. 1-6.

FILLOY, A. 2020. <[Positive Impacts of Tourism — Part 3: Culture | by Alejandro Filloy | Medium](#)>. Access: 01 October 2023.

FISHER, S., DINSHAW, A., MCCGRAY, H., RAI, N. & SCHAAR, J. 2015. 'Evaluating climate change adaption: learning from methods in international development'. *New Directions for Evaluation* 2015 (147), pp. 13-35.

FITCHETT, J., ROBINSON, D. & HOOGENDOORN, G. 2017. 'Climate sustainability for tourism in South Africa'. *Journal of Sustainable Tourism* 25 (6), pp. 851-867.

FITCHETT, J., FORTUNE, S. & HOOGENDOORN, G. 2020. 'Tourists reviews of weather in five Indian Ocean islands'. *Singapore Journal of Tropical Geography* 41 (2), pp. 171-189.

FLETCHER, J. 2021. <[Impact investing: the importance of sustainable infrastructure in EM \(schroders.com\)](#)>. Access: 15 September 2023.

FORBES, F. & ALI, F. 1980. 'The Maldives Islands and their historical links with the coast of Eastern Africa'. *Kenya Past and Present* 12 (1), pp.15-20.

FORBES, D. & GRANY, B. 2019. 'Climate change impacts in the Bahamas: A case study of coastal community vulnerability, adaptation and resilience'. *Environment, Development and Sustainability* 21 (6), pp. 2879-2901.

FORGEARD, V. 2023. <[Travels Through Culture: Understanding its Influence on Tourism - Brilliantio](#)>. Access: 15 September 2023.

FORGEARD, V. 2023. <[The Power of Collaboration: The Importance of Community Participation in Ecotourism Planning - Brilliantio](#)>. Access: 15 September 2023.

FRENCH, A. 2023. <[Shifting Towards Renewable Energy in the Maldives - The Borgen Project](#)>. Access: 06/07/2024.

FRICK, GR. & BRENT, R. 1991. 'Measuring Service Quality in the Travel and Tourism Industry'. *Journal of Travel Research* 30 (2), pp. 2-9.

GALI-ESPELT. 2011. 'Identifying cultural tourism: a theoretical methodological approach'. *Journal of Heritage Tourism* 7 (1), pp. 45-58.

GARDINER, J.1907. The Seychelles Archipelago. *The Geographical Journal* 29 (2), pp.148-168.

GAVAL, I. 2016. <[The economic benefits of Sustainable Tourism - Ecobnb](#)>. Access: 15 September 2023.

GEARY, M. 2020. <[How the Seychelles is Setting an Example for Protecting Marine Biodiversity | Earth.Org](#)>. Access: 15 October 2023.

GEDIK, S. & MUGAN-ERTUGRAL, S. 2019. 'The Effects of Marine Tourism on Water Pollution'. *Fresenius environmental bulletin* 28 (2), pp. 863-866.

GERLACH, J. 2008. 'Setting Conservation Priorities- A Key Biodiversity Area Analysis for the Seychelles Islands'. *The Open Conservation Journal* 2 (7), pp. 44-53.

GERLACH, J. 2009. *The Coleoptera of the Seychelles Islands*. Pensoft, Bulgaria.

GERLACH, J. N.d. <[Seychelles conservation \(islandbiodiversity.com\)](http://islandbiodiversity.com)>. Access: 01 April 2023.

GIAIMO, C. 2018. <[What Is an Island, Exactly? - Atlas Obscura](#)>. Access: 01 September 2022.

GIANOU, K. 2014. <[1406009.pdf \(wa.gov\)](#)>. Access: 11 November 2023.

GIAMPICCOLI, A., MTAPURI, O. & NAURIGHT, J. 2019. 'Tourism development in the Seychelles: a proposal for a unique community-based tourism alternative'. *Journal of Tourism and Cultural Change* 19 (4), pp. 444-457.

GILBERTSON, E. & GILBERSTON, M. 2013. <[Bahamas – Mount Alvernia – Country Highpoints](#)>. Access: 15 September 2023.

GLAESSER, D. 2003. *Crisis Management in the Tourism Industry*. Routledge, London. Global Sustainable Tourism Council. 2017. Seychelles Sustainable Tourism. Label (SSTL) Achieves GSTC Recognition. [Seychelles Sustainable Tourism Label \(SSTL\) Achieves GSTC Recognition | GSTC \(gstcouncil.org\)](#) .

GOODWIN, H. 2002. 'Local Community Involvement in Tourism around National Parks: Opportunities and Constraints'. *Current Issues in Tourism* 5 (3-4), pp. 338-360.

GOODWIN, H. 2017. 'The challenge of overtourism'. *Responsible tourism partnership* 4 (1), pp.1-19.

GOVERNMENT OF SEYCHELLES. 2015. 'Seychelles National Biodiversity Strategy and Action Plan'. Available at: [CBD Strategy and Action Plan - Seychelles \(English version\) \(fao.org\)](#) (Accessed: 11 November 2023).

GO2AFRICA. 2023. <[Seychelles Travel Advice | Go2Africa](#)>. Access: 28 April 2023.

GRANT, K. 2015. <[10 measures that must be taken to prevent more flooding in the future | The Independent | The Independent](#)>. Access: 11 November 2023.

GREEN, B. 2021. <[The Importance of Ecotourism – Bethesda Green](#)>. Access: 15 September 2023.

GREENJOURNAL. 2020. <[How Climate Change Impacts Small Businesses | Green Journal](#)>. Access: 17 July 2023.

GRIMM, I.; ALCONTARA, L. & SAMPAIO, C. 2018. 'Tourism under climate change scenarios: impacts, possibilities, and challenges'. *Brazilian Journal of Tourism Research* 12 (3), pp. 1-22.

GUO, Y., JIANG, J. & LI, S. 2019. 'A Sustainable Tourism Policy Research Review'. *Sustainability* 11 (11), p. 3187.

GURIB-FAKIM, A. & BRENDLER, T. 2004. *Medicinal and aromatic plants of Indian Ocean islands: Madagascar, Comoros, Seychelles, and Mascarenes*. Medpharm, Stuttgart.

HALL, D. & BROWN, F. 2008. 'The Tourism Industry's Welfare Responsibilities: An Adequate Response?'. *Tourism Recreation Research* 33 (2), pp. 213-218.

HALLEGATTE, S., VOGT-SCHILB, A., BANGALORE, M., ROZENBERG, J. & ZWANE, A. 2022. 'The economics of climate adaptation'. *The World Bank Research Observer* 37 (1), pp. 1-27.

HALLEGATTE, S., GREEN, C., NICHOLLS, R. & CORFEE-MORLOT, J. 2013. 'Future flood losses in major coastal cities'. *Nature Climate Change* 3 (9), pp. 802-806.

HARDY, D. 2021. 'Food Security, Small Island States and Globalization: The Example of Seychelles'. *Seychelles Research Journal* 3 (1), pp. 82-99.

HARDY, JT. 2003. *Climate Change: Causes, Effects, and Solutions*. John Wiley & Sons Ltd, England.

HARVEY, C. 2019. [<Mountain Glaciers Are Major Contributors to Rising Seas - Scientific American>](#). Access: 10 November 2023.

HATCHORD, J. 1993. 'Re-Establishing a Multi-Party State: Some Constitutional Lessons from the Seychelles'. *The Journal of Modern African Studies* 31 (4), pp. 601-612.

HAUER, M., FUSSELL, E., MUELLER, V., BURKETT, M., CALL, M., ABEL, K., MCLEMAN, R. & WRATHALL, D. 2020. 'Sea-level rise and human migration'. *Nature Reviews Earth and Environment* 1 (1), pp. 28-39.

HAYNES, N., DARNELL, A. & SANDIFORD, P. 2019. 'Empowering Communities: A Key to Sustainable Tourism Development in the Caribbean'. *Journal of Sustainable Tourism* 27 (8), pp. 1147-1164.

HE, C. 2020. [<Why is a DMO Important to a Destination? - Solimar International>](#). Access: 10 August 2023.

HENLEY, R. 2023. [<Where Is Mauritius on a Map? - \[TravelRepublic Blog\]>](#). Access: 15 September 2023.

HES, D. 2022. [<Seychelles focuses on boosting tourism capacity | Southern & East African Tourism Update>](#). Access: 29 April 2023.

HINES, B. 2023. <50 years ago, the Bahamas gained its independence. And I covered it. Here's how | Opinion | Miami Herald>. Access: 15 September 2023.

HODGE, H. 2013. 'The British on the Indian Ocean Frontier: The Seychelles'. *Journal of Eastern African Studies* 7 (3), pp 443-465.

HODGE, N. 2019. 'Mauritius: Economic Success and Environmental Challenges'. *Economic Perspectives* 43 (4), pp. 1-16.

HOEGH-GULDBERG, O., POLOCZANSKA, E., SKIRVING, W. & DOVE, S. 2017. 'Coral reef ecosystems under climate change and ocean acidification'. *Frontiers in Marine Science* 4 (158), pp. 1-20.

HOEGH-GULDBERG, O., MUMBY, P.J., HOOTEN, A.J., STENECK, R.S., GREENFIELD, P., GOMEZ, E., HARVELL, C.D., SALE, P.F., EDWARDS, A.J., CALDEIRA, K., KNOWLTON, N., EAKIN, C.M., IGLESIAS-PRIETO, R., MUTHIGA, N., BRADBURY, R.H., DUBI, A. & HATZIOLOS, M.E. 2007. 'Coral Reefs Under Rapid Climate Change and Ocean Acidification'. *Science* 318 (5857), pp. 1737-1742.

HOGLE, C. 2022. <What is the food culture in the Maldives? - Employment Security Commission (ncesc.com)>. Access: 15 September 2023.

HOHNHOLZ, L. 2014. <Tourism industry bonds closer with communities through tourism week in Seychelles (eturbonews.com)>. Access: 15 August 2023.

HOHNHOLZ, L. 2012. <Key members of Seychelles tourism deliberate on promotion of destination (eturbonews.com)>. Access: 15 October 2023.

HOHNHOLZ, L. 2023. <Seychelles Tourism Environmental Sustainability Levy Starts (eturbonews.com)>. Access: 15 October 2023.

HOLLANDA, S. 2009. 'Seychelles: A Multicultural Society'. *Seychelles Heritage Journal* 1 (1), pp. 12-23.

HOPE, B. 2022. <https://www.nationalgeographic.com/environment/article/fossil-fuels>>. Access: 10 August 2023.

HOMES, W. 2020. <<https://www.seagoinggreen.org/blog/the-link-between-tourism-and-climate-change>>. Access: 29 March 2023.

HOUBERT, J. 1981. 'Mauritius: Independence and Dependence'. *The Journal of Modern African Studies* 19 (1), pp. 75-105.

HSIAO, C., KUO, C. & TUAN, C. 2021. 'Island Ecological Tourism: Constructing Indicators of the Tourist Service System in the Penghu National Scenic Area'. *Frontiers in Ecology and Evolution* 9 (15), pp. 1-19.

HU, W. & WALL, G. 2005. 'Environmental Management, Environmental Image and the Competitive Tourist Attraction'. *Journal of Sustainable Tourism* 13 (6), pp. 617-635.

HUME, D. 2005. 'An analysis of the development of tourism in Mauritius'. *The Journal of Tourism Studies* 16 (1), pp. 22-31.

IGINI, M. 2023. <[What Causes Sea Level to Rise? | Earth.Org](#)>. Access: 15 September 2023.

IMTIAS, N. 2023. <[Is The Bahamas Part Of The US? \(Interesting FACTS!\) - TravelPeri](#)>. Access: 15 September 2023.

INFOPLEASE. 2022. <[Seychelles | Facts & Information | Infoplease](#)>. Access: 23 March 2023.

INTERNATIONAL MONETARY FUND (IMF). 2019. Seychelles: 2019 Article IV Consultation. IMF Country Report No. 19/202.

INTERNATIONAL TRADE ADMINISTRATION. 2022. Bahamas- Market Overview. Available at: [Bahamas - Market Overview \(trade.gov\)](#).

JACKSON, J. 2018. 'Income inequality and economic growth in Seychelles'. *University of Seychelles Journal of Social Sciences* 1 (1), pp. 35-49.

JACOBSEN, S. 2021. <[Department of Tourism issues norms and standards for tourism \(theplannerguru.co.za\)](#)>. Access: 15 October 2023.

JEDRUSIK, M. 2011. 'Island Studies. Island Geography. but What is and island?'. *Miscellanea Geographical* 15 (1), pp. 201-212.

JENKINS, K., MCCAULEY, D., HEFFRON, R., STEPHAN, H., REHNER, R. & REICHE, D. 2016. 'Renewable energy policy and public perceptions of renewable energy: A cultural theory approach'. *Energy Policy* 93 (1), pp. 255-264.

JOHANSSON, A. 2023. <[Global Warming vs. Climate Change | Facts – Climate Change: Vital Signs of the Planet \(nasa.gov\)](#)>. Access: 01 February 2023.

JOHNSON, L. 2018. 'Language and Identity in the Bahamas: Tracing the Legacy of Colonialism'. *Caribbean Cultural Studies* 25 (3), pp. 89-104.

JOHNSON, S. 2017. <[Green evolution | The Bahamas Investor](#)>. Access: 15 September 2023.

JOHNSON, P. & SMITH, D. 2017. 'Flood resilience of urbanized catchments'. *Water Resources Research* 53 (10), pp. 8127-8143.

JONES, A. & PHILLIPS, M. 2011. *Disappearing destinations: climate change and future challenges for coastal tourism*. CABI, London.

JONES, B., O'NEIL, B., MCDANIEL, L., MCGINNIS, D. & MEARNES, L. 2019. 'Future population exposure to US heat extremes'. *Nature Climate Change* 9 (11), pp. 894-899.

JONES, G. & POLUNIN, N. 2017. 'Climate change and globalisation: Impacts on the Nemo's world'. *Environmental Conservation* 34 (1), pp. 1-9.

JONES, R. 2019. 'Reducing vulnerability to climate change: A socially based approach'. *Environmental Science & Policy* 17 (4), pp. 347-358.

JOUBERT, P. 2023. [<Proposed tourism levy meets further resistance By Patrick Joubert -Seychelles Nation>](#). Access: 15 October 2023.

JUN, P., GILLENWATER, M. & BARBOUR, W. 2023. [<Microsoft Word - 2.4 CO2 CH4 N2O Transportation-Water-borne Navigation.doc \(iges.or.jp\)>](#). Access: 15 November 2023.

KACHROO-LEVINE, M. 2021. [<50 Years in the Maldives: How the Archipelago Became a World-Famous Tourist Hot Spot \(travelandleisure.com\)>](#). Access: 15 September 2023.

KAMER, L. 2022. [<Seychelles: employment in tourism 2019-2020 | Statista>](#). Access: 20 April 2023.

KAMER, L. 2022. [<Seychelles: tourism value added to GDP 2005-2020 | Statista>](#). Access: 01 October 2023.

KANG, S. 2017. [<How can community-based tourism provide meaningful experience to both visitors and residents? | CityNet Blog \(wordpress.com\)>](#). Access: 15 September 2023.

KARAPETYAN, S. 2022. [<Need for investment in ICT infrastructure as Seychelles develops its 'Investor Map' with UNDP - Seychelles News Agency>](#). Access: 15 August 2023.

KARASIK, R. 2022. [<Plastic Pollution Policy Country Profile: Maldives \(duke.edu\)>](#). Access: 15 September 2023.

KARTHIKHEYAN, T. 2010. 'Environmental Challenges for Maldives'. *South Asian Survey* 17 (2), pp. 343-351.

KATRANIS, D. 2020. [<d.katranis.htmng_20_06_2020.pdf \(ihu.edu.gr\)>](#). Access: 01 October 2023.

KEMP, Y. 2023. [<Floating solar plant to be built in Seychelles \(esi-africa.com\)>](#). Access: 15 November 2023.

KHAN, A. & AMELIE, V. 2015. [<Assessing climate change readiness in Seychelles: implications for ecosystem-based adaptation mainstreaming and marine spatial planning | SpringerLink>](#). Access: 19 June 2022.

KHOMINA, A. 2016. [<Columbus Reaches the Americas: On This Day, 1492 | Gilder Lehrman Institute of American History>](#). Access: 15 September 2023.

KNUFF, K. & MAANI, C. 2022. <[Nitrous Oxide - StatPearls - NCBI Bookshelf \(nih.gov\)](#)>. Access: 01 February 2023.

KOEHL, A., KEUSCHNIGG, I., HIGHAM, C. & CHAN, T. 2022. <[From COP26 to COP27: Four climate laws passed in the last year - Grantham Research Institute on climate change and the environment \(lse.ac.uk\)](#)>. Access: 06/07/2024.

KOLIOTASI, A., ABELIOTIS, K. & TSARTAS, P. 2023. 'Understanding the Impact of Waste Management on a Destination's Image: A Stakeholders' Perspective'. *Tourism and Hospitality* 4 (1), pp. 38-50.

KOPP, O. 2023. <[Fossil fuel | Meaning, Types, & Uses | Britannica](#)>. Access: 01 February 2023.

KREAMEY, J. 2022. <[Maldives' intriguing Buddhist era | Maldives Traveller](#)>. Access: 15 September 2023.

KUNDUR, S. 2012. 'Development of Tourism in Maldives'. *International Journal of Scientific Research Publications* 2 (4), pp. 1-5.

LACALLE, E. 2021. <[Message from Mews](#)>. Access: 15 September 2023.

LAFFERTY, G. & FOSSEN, A. 2001. 'Integrating the tourism industry: problems and strategies'. *Tourism Management* 22 (1), pp. 11-19.

LAI, A., HENSLEY, J., KRUTLI, P. & STAUFFACHER, M. 2016. *Solid Waste Management in the Seychelles*, case study, viewed on 15 October 2023, <[cs_2016_report.pdf \(ethz.ch\)](#)>.

LAI, O. 2023. <[5 Coral Reefs Under Threat And Dying in 2023 | Earth.Org](#)>. Access: 01 August 2023.

LAI, O. 2022. <[Water Shortage: Causes and Effects | Earth.Org](#)>. Access: 11 November 2023.

LANE, M. 2016. 'Political Theory on Climate Change'. *Annual Review of Political Science* 19 (1), pp. 107-123.

LAU, C. 2018. <[Sustainable Tourism, The Case of Seychelles | Insights - ELEVATE \(elevatelimited.com\)](#)>. Access: 15 August 2023.

LAURENCE, D. 2018. <[Seychelles Tourism Academy creating opportunity, career paths for Seychellois graduates - Seychelles News Agency](#)>. Access: 28 April 2023.

LAURENCE, D. 2020. <[Job market moves in Seychelles: More people seeking work, tourism jobs re-emerging - Seychelles News Agency](#)>. Access: 15 August 2023.

LEAL FILHO, W. 2022. 'Will climate change disrupt the tourism sector?'. *International Journal of Climate Change Strategies and Management* 14 (2), pp. 212-217.

LEE, C. 2016. 'An investigation of factors determining industrial tourism attractiveness'. *Tourism and Hospitality Research* 16 (2), pp. 184-197.

LEE, D. 2014. <[Ecotourism in The Bahamas - on Terra Firma - \(hgchristie.com\)](#)>. Access: 15 September 2023.

LEONARD, M. 2023. <<https://ournews.bs/sustainability-first-the-beauty-of-bahamas-national-trust-parks/>>. Access: 15 September 2023.

LEVY, K., SMITH, S. & CARLTON, E. 2018. 'Climate Change Impacts on Waterborne Diseases Moving Toward Designing Interventions'. *Current Environmental Health Reports* 5 (2), pp. 272-282.

LI, L. & LI, S. 2022. 'Do Tourists Really Care about Authenticity? A Study on Tourists' Perceptions of Nature and Culture Authenticity'. *Sustainability* 14 (5), P. 2510. *Licenses Act 2010*. Available on: [source.pdf \(seylli.org\)](#) (Accessed on: 15 October 2023).

LINDSEY, R. 2022. <[Climate Change: Global Sea Level | NOAA Climate.gov](#)>. Access: 10 November 2023.

LODGE, D. 2022. <[How can Ecotourism Support Environmental and Social Sustainability? — Sea Going Green](#)>. Access: 15 October 2023.

LOPES, M. 2021. <[Stakeholder Engagement in Destination Planning - Solimar International](#)>. Access: 15 September 2023.

LUSIGI, A. 2023. <[Transforming tourism by investing in people and planet | United Nations Development Programme \(undp.org\)](#)>. Access: 15 October 2023.

LUSZCZEK, G. 2019. <[New Eco-Schools Children for Children Campaign to Support The Bahamas — Young Reporters for the Environment \(yre.global\)](#)>. Access: 06/07/2024.

LYALL, N. 2021. <[14 Important Things To Know About Mauritius - Travel Guide 2023 Updated \(traveltriangle.com\)](#)>. Access: 15 September 2023.

LYDERSEN, K. 2009. <[Microsoft Word - Preservation of Language.doc \(jaysbar.net\)](#)>. Access: 15 September 2023.

MACE, K. 2021. <[Coral Reefs and Why They Need to Be Conserved – Wildlife Leadership Academy](#)>. Access: 15 September 2023.

MALE, K. 2021. <[Independence Day: a look back at the beginning of establishment of diplomatic relations \(raajje.mv\)](#)>. Access: 15 September 2023.

MANZO, D., ZEE, G., UDDIN, S. & JOVANOVIC, D. 2021. <[Facing dire sea level rise threat, Maldives turns to climate change solutions to survive - ABC News \(go.com\)](#)>. Access: 15 September 2023.

MARCUS, L. 2021. <[How the Maldives became the biggest 2020 international tourism success story | CNN](#)>. Access: 15 September 2023.

MAREE, V. 2019. <[Mauritius: How the French influenced this beautiful African island \(cnbc.com\)](#)>. Access: 15 September 2023.

MARINE CONSERVATION SOCIETY SEYCHELLES. 2020. <[Welcome to MCSS](#)>. Access: 17 September 2022.

MARSH, J. 2022. <[How Community-Based Tourism Benefits Local Communities — Sea Going Green](#)>. Access: 15 September 2023.

MARTEL, J. 2022. <[The Best Carbon Offset Programs for 2023 \(investopedia.com\)](#)>. Access: 15 August 2023.

MARTINEZ-ALIER, J. 1995. 'The environment as a luxury good or "too poor to be green"?''. *Ecological Economics* 13 (1), pp. 1-10.

MARTINEZ, R. & KUKUTSCHKA, B. 2023. <[CPI 2022: Corruption as a fundamental threat to... - Transparency.org](#)>. Access: 15 October 2023.

Mauritius Tourism Authority. 2020. Tourism Statistics. Retrieved from: [Tourism Sector \(govmu.org\)](#) .

Mauritius Tourism Promotion Authority (MTPA). 2021. Tourism Statistics. Retrieved from [Courthouse Research Specialists | DFW Texas | Abstracting Title Research | 214.994.9521 \(tourism-mauritius.mu\)](#) .

MAVRAKIS, E. 2019. <[New book reveals untold history of pre-colonial Caribbean islands – Research News \(ufl.edu\)](#)>. Access: 15 September 2023.

MAXIMOVA, Y. 2019. <[10 Negative Effects of Tourism You Should Know About | by Yana Maximova | Medium](#)>. Access: 17 July 2023.

MCCLAIN, A. 2016. <[\(99+\) Effects of Colonialism: The Bahamas | Ashley McClain - Academia.edu](#)>. Access: 15 September 2023.

MCCLAIN, J. 2021. <[Strict Requirements for Sustainable Hotels | .TR \(tourism-review.com\)](#)>. Access: 15 October 2023.

MCDOWALL, J. 2023. <[Managing waste in tourist cities | Resource.co](#)>. Access: 15 September 2023.

MCKENZI, N. 2021. <[TIME TO EVOLVE: Bahamas ranked sixth most tourism-dependent economy in the world – Eye Witness News \(ewnews.com\)](#)>. Access: 15 September 2023.

MCKENZIE, N. 2023. <[Abaco schools solar project named 'best resilience project' in the Caribbean – Eye Witness News \(ewnews.com\)](#)>. Access: 06/07/2024.

MEEKE, K. 2017. <[History, culture and things to do in Mauritius - Saga](#)>. Access: 15 September 2023.

MIDHATH, M. 2020. <[Ras Online - A brief history on the language of the Maldives](#)>. Access: 15 September 2023.

MILLER, A. 2023. <[A guide to island-hopping in the Seychelles \(nationalgeographic.com\)](#)>. Access: 06/07/2024.

MILLER, M. & THOMPSON, J. 2017. 'Engaging the community in sustainable tourism development: The case of Andros, The Bahamas'. *Journal of Sustainable Tourism* 25 (12), pp. 1777-1795.

MILLER, W. 1945. 'The Colonization of the Bahamas, 1647-1679'. *The William and Mary Quarterly* 2 (1), pp. 33-46.

MINALIC, T. 2000. 'Environmental management of a tourist destination'. *Tourism Management* 21 (1), pp. 65-78.

MINISTRY OF FINANCE AND ECONOMIC DEVELOPMENT. 2019. Budget Speech 2019-2020. [Home \(govmu.org\)](#) .

Ministry of Fisheries and Blue Economy. 2023. <[The Department of Blue Economy – Ministry of Fisheries and Blue Economy \(mofbe.gov.sc\)](#)>. Accessed: 11 November 2023.

MINISTRY OF PLANNING AND EXTERNAL RELATIONS. 1990. *National Development Plan, 1990-94*. Ministry of Planning and External relations, Seychelles.

MOHAMED, A. 2017. <[Conversion of the Maldives to Islam - IslamiCity](#)>. Access: 17 September 2023.

MOHAMMED, O. 2021. <[Seychelles looking to diversity economy beyond tourism post-COVID - minister | Reuters](#)>. Access: 01 October 2023.

MOHAN, R. 2021. <[What is a Case Study? \[+6 Types of Case Studies\] - Venngage](#)>. Access: 03 May 2023.

MOHR, J. 2021. <[The Bahamas: A Close but Unfamiliar U.S. Partner - War on the Rocks](#)>. Access: 15 September 2023.

MOORE, P. 2020. <[Festival Kreol, Seychelles - Peter Moore](#)>. Access: 01 October 2023.

MOORE, R. 2019. <[IPCC Report: Sea Level Rise Is a Present and Future Danger \(nrdc.org\)](#)>. Access: 15 November 2023.

MORLEY, CL. 1990. 'What is tourism? Definitions, concepts, and characteristics'. *Graduate School of Management, Royal Melbourne Institute of Technology* 1 (1), pp. 3-8.

MORGAN, C., STUDDERT, J. & TIRATELLI, L. 2021. <[Communities vs Climate Change: the power of local action - New Local](#)>. Access: 11 November 2023.

MOYLE, B., CROY, G. & WEILER, B. 2010. 'Tourism interaction on islands: the community and visitor social exchange'. *International Journal of Culture, Tourism, and Hospitality* 4 (2), pp. 96-107.

MOYO, N. & MTOLO, I. 2019. <[History of Conflict and its Impact on Mauritian Development \(politicaleconomy.org.za\)](#)>. Access: 15 September 2023.

MUNASINGHE, M. 2010. 'Addressing the sustainable development and climate change challenges together: applying the sustainomics framework'. *Procedia-Social and Behavioural Sciences* 2 (5), pp.6634-6640.

MUNDAY, R. & MURRAY, L. 2017. 'Sustainable Tourism in the Seychelles: From Policy to Practice'. *Island Studies Journal* 12 (2), pp. 215-236.

MURPHY, P. 2013. *Tourism: A community approach*. Routledge, New York.

NATIONALGRID. 2023. <[What are greenhouse gases? | National Grid Group](#)>. Access: 01 February 2023.

NATIONAL GRID. 2023. <[What are greenhouse gases? | GHGs explained | National Grid Group](#)>. Access: 01 February 2023.

NATURE PROTECTION TRUST OF THE SEYCHELLES. 2010. < [NPTS2010.indd \(islandbiodiversity.com\)](#)>. Access: 17 April 2023.

NAZEEM, N. 2023. <[Maritime Updates, Maldives: Leading Marine Conservation Organisations in Maldives \(mmj.mv\)](#)>. Access: 15 September 2023.

NEVIL, J. 2001. <[INTEGRATING BIODIVERSITY INTO THE TOURISM SECTOR \(cbd.int\)](#)>. access: 15 October 2023.

NGULUBE, M. 2022. <[How does infrastructure contribute to job creation? \(worldbank.org\)](#)>. Access: 15 October 2023.

NICETTE, S. 2022. <[Seychelles' economic reforms are model for other developing countries, says IMF exec - Seychelles News Agency](#)>. Access: 01 October 2023.

NICETTE, S. 2023. <[Seychelles' National Biodiversity Centre calls for more people to plant endemic species at home - Seychelles News Agency](#)>. Access: 18 April 2023.

NICETTE, S. 2023. <[UNESCO World Heritage: 40th anniversary of Seychelles' Vallee de Mai - Seychelles News Agency](#)>. Access: 01 October 2023.

NICHOLLS, P. 2018. 'The Door to the Coast of Africa': The Seychelles in the Mascarene Slave Trade, 1770-1830. Doctor of Philosophy (PhD) thesis, University of Kent.

NIEDIOLKA, I. 2014. 'Sustainable Tourism Development'. *Regional Formation and Development Studies* 3 (8), pp. 1-10.

NORTON, M. 2022. <[10 Effective Ways to Promote Sustainable Tourism - WanderWisdom](#)>. Access: 15 September 2023.

NUGENT, J. 1965. <[The Seychelles: Really Away From It All - The Atlantic](#)>. Access: 17 July 2023.

NUNKOO, R. & RAMIKISSOON, H. 2012. 'Power, trust, social exchange and community support'. *Annals of Tourism Research* 39 (2), pp. 997-1023.

NZAMA, T. 2010. <[Managing socio-cultural impacts of tourism on the rural tourism destinations in Kwazulu-Natal with special reference to areas within and around the world heritage sites \(journals.co.za\)](#)>. Access: 10 August 2023.

OCEAN. 2022. <[What Are Fossil Fuels? | Smithsonian Ocean](#)>. Access: 01 February 2023.

OGG, M. 2023. <- [The Mauritian sugarcane industry – united behind sustainability - Bonsucro](#)>. Access: 15 September 2023.

OKAFOR, J. 2023. <[Environmental Impacts of Tourism \(trvst.world\)](#)>. Access: 10 August 2023.

O'KEEFFE, J. & MCINTYRE, L. 2022. <[Red tides and health risks for recreational water users | National Collaborating Centre for Environmental Health | NCCEH - CCSNE](#)>. Access: 16 November 2023.

ONE PLANET NETWORK. 2023. <[Climate change & tourism | One Planet network](#)>. Access: 01 February 2023.

ONE WORLD. 2023. <[Seychelles - A Country Profile - Nations Online Project](#)>. Access: 18 April 2023.

OSTAPKOWICZ, J., SCHULTING, R. & DAVIES, G. 2023. "' For there is no rock": Lucayan stone celts from The Bahamas and Turks and Caicos Islands'. *Journal of Anthropological Archaeology* 70 (1), pp. 1-21.

OTERO, J. 2022. 'Heritage Conservation Future: Where We Stand, Challenges Ahead, and a Paradigm Shift'. *Global Challenges* 6 (1), pp. 1-7.

OTT, S. 2012. 'Colonialism and cultural identity in the Seychelles'. *Journal of African History* 55 (3), pp. 377-397.

OTTO, FEL., WOLSKI, P., LEHNER, F., TEBALDI, C., VAN OLDENBORGH, GJ., HOGESTEGER, S., SINGH, R., HOLDEN, P., FUČKAR, NS., ODOULAMI, RC. & NEW, M. 2018. 'Anthropogenic influence on the drivers of the

Western Cape drought 2015-2017'. *Environmental Research Letters* 13 (12), p.124010.

PALMER, C. 1994. 'Tourism and colonialism: The experience of the Bahamas'. *Annals of Tourism Research* 21 (4), pp. 792-811.

PALMETTO. 2022. <[What Is Climate Change? \(Definition, Causes, and Effects\) \(palmetto.com\)](https://www.palmetto.com)>. Access: 01 September 2022.

PANG, S., MCKERCHER, B. & PRIDEAUX, B. 2012. 'Climate Change and Tourism: An overview'. *Asia Pacific Journal of Tourism Research* 18 (1), pp. 4-20.

'Parastatal'. 2023. *Collins Dictionary*. <[Parastatal definition and meaning | Collins English Dictionary \(collinsdictionary.com\)](https://www.collinsdictionary.com)>. Access: 02 April 2023.

PATERSON, G., NICOLSON, M. & OSMAN, A. 2018. 'Environmental impacts of tourism in the Seychelles: A case study of tourism activities in the Sainte Anne Marine National Park'. *Sustainability* 10 (7), p. 2365.

PAYET, R. & AGRICOLE, W. 2006. 'Climate Change in the Seychelles: Implications for Water and Coral Reefs'. *A Journal of the Human Environment* 35 (4), pp. 182-189.

PAYET, R. 2017. 'Seychelles Blue Economy Strategy'. *Environmental Management* 63 (3), pp. 289-304.

PEETERS, P. 2007. <[The impact of tourism on climate change | Eldis](https://eldis.org/)>. Access: March 2023.

PEETERS, P., GOSSLING, S. & BECKEN, S. 2007. 'Innovation towards tourism sustainability: climate change and aviation'. *International Journal of Innovation and Sustainable Development* 1(3), pp. 184-200.

PETROVIC, J. & MILICEVIC, S. 2017. 'Consumer Protection as a Factor of Destination Competitiveness in the European Union'. *Amfiteatru Economic Journal* 19 (45), pp. 432-446.

PHADNIS, U. & LUITHUI, D. 1981. 'The Maldives Enter World Politics'. *Asian Affairs* 8 (3), pp. 166-179.

PHILPOT, D., GRAY, T. & STEAD, S. 2012. <[DDD607DB-3C8A-4994-B3F2-669F67B12F92.pdf \(ncl.ac.uk\)](https://ncl.ac.uk/ddd607db-3c8a-4994-b3f2-669f67b12f92.pdf)>. Access: 01 October 2023.

PIJPE, J., VOOGT, A., OVEN, M., HENNEMAN, P., GAAG, K., KAYSER, M. & KNIJFF. 2013. 'Indian Ocean Crossroads: human genetic origin and population structure in the Maldives'. *American Journal of Physical Anthropology* 151 (1), pp. 58-67.

PILBEAM, C. 1986. 'The Coconut Industry in the Seychelles'. *Economic Botany* 40 (3), pp. 334-342.

POOL, R. 2014. *The nexus of biofuels, climate change, and human health: workshop summery*. National Academies Press, Washington DC.

RAHMAN, M. 2023. <[Tourism multiplier effect - www.howandwhat.net](http://www.howandwhat.net)>. Access: 15 September 2023.

RAMESSUR, R. & SEETANAH, B. 2019. 'Does the tourism-led growth hypothesis hold for Mauritius? A bounds test cointegration approach'. *Journal of Travel Research* 58 (2), pp. 227-240.

RANJAN, A. 2023. 'Foreign Policy Choice or Domestic Compulsion? Maldives' Deep Ties With Saudi Arabia'. *Journal of Asian and African Studies* 58 (4), pp. 556-569.

RAPPENSPERGER, T. 2023. <[Tourism Marketing Strategies for 2021 and Beyond • Regiondo](#)>. Access: 15 September 2023.

RASHEED, A. 2019. <<https://www.e-ir.info/2019/06/16/small-island-climate-diplomacy-in-the-maldives-and-beyond/>>. Access: 06/07/2024.

RASHID, H. 2023. <[Empowerment and Participation in the Field of Travel and Tourism \(limbd.org\)](http://limbd.org)>. Access: 15 September 2023.

RASHID, H. 2023. <[Role of Tour Operators towards Development of Tourism | limbd.org](http://limbd.org)>. Access: 15 October 2023.

RAUBENHEIMER, K., MACIEJEWSKI, J. & TEUCHIES, J. 2017. 'Blue Bay Marine Park, Mauritius: A socio-economic valuation study.' *Ocean and Coastal Management* 144 (1), pp. 105-115.

REDD, D. 2023. <[Beyond the Resorts: The Rise of Responsible Travel in Mauritius \(muchbetteradventures.com\)](http://muchbetteradventures.com)>. Access: 06/07/2024.

REHAN, M. 2022. <[The history of Maldives achieving its Independence - The Edition](#)>. Access: 15 September 2023.

REID, C. 202. <[What Are the Benefits and Features of Eco-Friendly Buildings? \(blueandgreentomorrow.com\)](http://blueandgreentomorrow.com)>. Access: 15 September 2023.

REID, H. & PODVIN, K. 2018. <[17621IIED.pdf](#)>. Access: 15 November 2023.

RIDLEY, M. 2013. <[Why climate change is good for the world | The Spectator](#)>. Access: 23 March 2023.

RITCHIE, H. 2020. <[Cars, planes, trains: where do CO2 emissions from transport come from? - Our World in Data](#)>. Access: 15 September 2023.

ROBERTSON, C. 1930. 'The Sugar Industry of Mauritius'. *Economic Geography* 6 (4), pp. 338-351. ROOPUN, A. 2016. 'Challenges and prospects of sustainable tourism in Mauritius'. *Universal Journal of Educational Research* 4 (8), pp. 1805-1812.

ROBINSON, A. 2019. <[Seychelles: life after the boss | Lowy Institute](#)>. Access: 01 October 2023.

ROGERS, C. 1974. 'Fishing Methods in Seychelles'. *Traditional Fishing Boats of the World* 1 (3), pp. 223-245.

ROGERS, M. 2016. 'The Creole Heritage of the Seychelles: Its Historical and Contemporary Significance'. *African and Black Diaspora: An International Journal* 9 (1), pp. 19-31.

ROLLS, L. 2023. <[New framework launched to track progress on coral reef biodiversity \(unep.org\)](#)>. Access: 06/07/2024.

ROSE, E. 2021. <[PM Davis Heralds The Bahamas' Course to a 'Rapid' Tourism Arrivals Rebound - Government - News](#)>. Access: 15 September 2023.

ROSE, E. <[Historic Day for Environmental Legislation says Minister Ferreira - Government - News \(bahamas.gov.bs\)](#)>. Access: 06/07/2024.

ROTH, J. 2023. <[Overfishing Harms the Environment. Here's How to Stop It. \(sentientmedia.org\)](#)>. Access: 15 November 2023.

ROTHKOPF, D. & CASEY, C. 2014. <[Impacts of Climate Change, Resource Scarcity and Foreign Policy | Magazine Articles | WWF \(worldwildlife.org\)](#)>. Access: 11 November 2023.

RYAN, C. 2002. *The Tourist Experience*. Continuum, London.

SALM, R. 1978. <[1978-Salm-001.pdf \(iucn.org\)](#)>. Access: 15 October 2023.

SANCHEZ, R. & WILMSMEIER, G. 2009. <[Maritime sector and ports in the Caribbean: the case of CARICOM countries \(unctad.org\)](#)>. Access: 15 September 2023.

SANKARI, R. 2017. <[Beneath the beauty, Mauritius is an archive of human struggle and triumph | Mint \(livemint.com\)](#)>. Access: 15 September 2023.

SANTOS, B. 2022. <[Masdar switches on 5 MW solar plant in Seychelles – pv magazine International \(pv-magazine.com\)](#)>. Access: 15 November 2023.

SANTOS, CA. 2004. 'Perception and Interpretation of Leisure Travel Articles'. *Leisure Sciences* 26 (4), pp. 393-410.

SATHIENDRAKUMAR, R. & TISDELL, C. 1989. 'Tourism and the economic development of Maldives'. *Annals of Tourism Research* 16 (2), pp. 254-269.

SCHEYBENS, R. 1999. 'Ecotourism and the empowerment of local communities'. *Tourism Management* 20 (2), pp. 245-249.

SCHONHERR, S., PETERS, M. & KUSCER, K. 2023. 'Sustainable tourism policies: from crisis-related awareness to agendas towards measures'. *Journal of Destination Marketing and Management* 27 (1), pp. 1-9.

SERVANSINGH, R. 2017. <[Independence, Economic Miracle & Nation Building – Mauritius Times](#)>. Access: 15 September 2023.

SEYCHELLES. 2022. <[Experience Seychelles | The Seychelles Islands](#)>. Access: 23 March 2023.

SEYCHELLES NATION. 2021. <[Seychelles surpasses 2020 visitor arrivals - Seychelles Nation](#)>. Access: 20 April 2023.

SEYCHELLES TOURISM ACADEMY. 2023. <[Seychelles Tourism Academy - History \(sta.edu.sc\)](#)>. Access: 28 April 2023.

Seychelles Heritage Foundation. 2023. <[About | Seychelles Heritage Foundation \(seyheritage.sc\)](#)>. Access: 15 October 2023.

Seychelles Ministry of Finance. 2018. Seychelles - Economy. Retrieved from: [Ministry of Finance, National Planning and Trade](#).

Seychelles National Climate Change Committee. 2021. Seychelles Climate Action Plan 2020-2030. Government of Seychelles.

Seychelles Tourism Board Act 2005. Available at: [EMPLOYMENT \(AMENDMENT\) BILL, 2002 \(seylli.org\)](#) (Accessed on: 15 October 2023).

Seychelles Tourism Board Act 2012. Available on: [EMPLOYMENT \(AMENDMENT\) BILL, 2002 \(fao.org\)](#) (Accessed: 15 October 2023).

SEYCHELLES NATION. 2021. <[Let us revisit Seychelles from 1811 to 1976 - Seychelles Nation](#)>. Access: 01 October 2023.

SEYVILLAS, 2022. <[Seychelles History | Timeline of the Seychelles | Seychelles Travel Guide \(seyvillas.com\)](#)>. Access: 23 July 2022.

SHAH, N. 2022. <[Seychelles is the perfect antidote to all the biodiversity doom and gloom | Africa Renewal \(un.org\)](#)>. Access: 15 August 2023.

SHAHID, A., NOOR, E. & CUELLAR, M. 2023. <[How Small States Influence Global Politics: The Case of Maldives - Carnegie Endowment for International Peace](#)>. Access: 15 September 2023.

SHARPLEY, R. & STONE, P. 2012. *Contemporary Tourist Experience*. Taylor & Francis Group, United Kingdom.

SHAW, J. 2018. <[Why is biodiversity important? \(conservation.org\)](#)>. Access: 15 November 2023.

SHELLER, M. 2021. 'Reconstructing tourism in the Caribbean: Connecting pandemic recovery, climate resilience and sustainable tourism through mobility justice'. *Journal of Sustainable Tourism* 29 (9), pp. 1436-1449.

SHEN, S. & BLEICH, W. 2022. <[To protect nature, put local communities at the center of climate action \(worldbank.org\)](#)>. Access: 15 October 2023.

SHEPHERD, G. 2018. 'The role of environmental education in climate change adaptation: a case study from the Pacific Islands'. *Journal of Environmental Education* 49 (3), pp. 221-233.

SHEPHERD, S., DELGADO, R., SHERWOOD, S. & PARADIES, Y. 2018. 'The impact of indigenous cultural identity and cultural engagement on violent offending'. *BMC Public Health* 18 (50), pp. 1-7.

SHEPPARD, C. 2002. 'Marine and Island Biodiversity in the Western Indian Ocean'. *Conservation Science* 56 (3), pp. 321-335.

SHERWOOD, SC., DIXIT, V. & SALOMEZ, C. 2018. 'The global warming potential of near-surface emitted water vapour'. *Environmental Research Letters* 13 (10), pp. 2-8.

SIDIQUI, S. 2018. *Impact of Climate Change on Tourism*. IGI Global, Oregon.

SIEBEN E., KOTZE, D. & NOFFKE, M. 2007. <[Erosion control in wetlands \(journals.co.za\)](#)>. Access: 11 November 2023.

SIGALA, M. 2008. 'A supply chain management approach for investigating the role of tour operators on sustainable tourism: the case of TUI'. *Journal of Cleaner Production* 16 (15), pp. 1589-1599.

SIMEON, M. 2022. <[Seychelles International Airport is 50 years old -Seychelles Nation](#)>. Access: 15 October 2023.

SIMPSON, M., GOSSLING, S., SCOTT, D., HALL, M. & GLADIN, E. 2008. *Climate Change Adaption and Mitigation in the Tourism Sector: Frameworks, Tools, and Practices*. United Nations Environment Programme, Paris.

SINGGALEN, Y., WILOSO, P. & SASONGKO, O. 2017. 'Evaluation of the Implementation of Tourism Policies'. *Jurnal Kebijakan dan Administrassi publik* 21 (1), pp. 76-98.

SINGH, S., DWIVEDI, Y., RANA, N. & KUMAR, R. 2018. 'An empirical analysis of the key determinants of sustainable tourism: A case study of Mauritius'. *Sustainability* 10 (9), p. 3283.

SITEK, M. 2022. 'Using art and artists as a tool to promote tourism'. *Regional Formation and Development Studies* 2 (37), pp. 167-174.

SINAY. 2022. <[What is Blue Economy? \(sinay.ai\)](#)>. Access: 18 April 2023.

SINGH, O., KHAN, T., AKTAR, F. & SARKER, M. 2001. 'Recent Sea Level and Sea Surface Temperature Changes Along the Maldives Coast'. *Marine Geodesy* 24 (4), pp. 209-218.

SIXT, G. 2020. <[Food Systems and Agriculture | MIT Climate Portal](#)>. Access: 15 March 2023.

SKIFT, R. 2014. <[How Climate Change Is Threatening Coastal Tourism and Recreation \(skift.com\)](#)>. Access: 10 November 2023.

SMAILES, J. 2022. <[Sustainable Tourism in Maldives – Hotelier Maldives](#)>. Access: 15 September 2023.

SMITH, A., MATTHEWS, J. & ROOP, H. 2018. 'The role of higher elevations in climate change mitigation: A case study of the US ski industry'. *Climatic Change* 146 (3-4), pp. 401-413.

SMITH, J. 2016. 'Resilience and Identity: The Impact of Historical Struggles on Bahamian Society'. *Journal of Caribbean History* 18 (1), pp. 76-94.

SMITH, K. 2019. <[thebahamasweekly.com - Tourism Development Corporation Launches Community Based Tourism Workshop](#)>. Access: 15 September 2023.

SMITH, M., AARNINKHOF, S., DIJKSTRA, J. & LUIJENDIJK, A. 2019. 'Coastal protection in the Anthropocene: Socio-technical strategies for hard structures'. *Anthropocene* 25 (1), p. 100199.

SMITH, P. 2001. 'Historical Overview of the Seychelles'. *Journal of Island History* 17 (1), pp. 45-63.

SMITH, R. 2017. 'Environmental Conservation in the Seychelles: Current Challenges and Future Prospects'. *Environmental Conservation* 43 (2), pp. 134-149.

SMITH, R. 2013. <[Blending of cultures in Mauritius - BBC Travel](#)>. Access: 15 September 2023.

SMITH, T. 2022. <[Seychelles upping its renewable energy electricity capacity - \(esi-africa.com\)](#)>. Access: 15 November 2023.

SMITH, W., STEINBERG, D., BRANK, D. & TANG, K. 2008. <[estuary-food-pyramid-climate-change-white-paper.pdf \(noaa.gov\)](#)>. Access: 18 July 2023.

SMITHSONIAN. 2023. <[What Are Fossil Fuels? | Smithsonian Ocean](#)>. Access: 01 February 2023.

SOBHEE, S. 2009. 'The economic success of Mauritius: lessons and policy options for Africa'. *Journal of Economic Policy Reform* 12 (1), pp. 29-42.

SOFRONOV, B. 2018. 'The Development of the Travel and Tourism Industry in the World'. *Annals of Spiru Haret University* 18 (4), pp. 123-137.

SOJA, I. 2022. <[10% of Jobs are Worldwide Connected to the Tourism Industry – What Does That Mean? - Solimar International](#)>. Access: 15 October 2023.

SOKEN-HUBERTY, E. 2023. <[10 Reasons Why Tourism Is Important - Open Education Online](#)>. Access: 15 September 2023.

SOSHKIN, M. 2019. <[If you build it, they will come: Why infrastructure is crucial to tourism growth and competitiveness | World Economic Forum \(weforum.org\)](#)>. Access: 15 October 2023.

SOTKA, C. 2022. <[United to Protect Sustainable Fisheries and Marine Resources in The Bahamas – WildAid Marine](#)>. Access: 15 September 2023.

SPARKS, D. 2021. <[Seychelles | Culture, History, & People | Britannica](#)>. Access: 23 March 2023.

SRINIVAS, H. 2022. <[Defining Sustainable Tourism \(gdrc.org\)](#)>. Access: 22 April 2022.

STACEY, J. 2020. <[Rebuilding tourism for the future: COVID-19 policy responses and recovery \(oecd.org\)](#)>. Access: 03 February 2023.

STAINTON, H. 2020a. <[What is a tourist? Tourist definition - Tourism Teacher](#)>. Access: 24 March 2023.

STAINTON, H. 2023b. <[What is outbound tourism and why is it important? - Tourism Teacher](#)>. Access: 01 February 2023.

STAINTON, H. 2023c. <[13 Social impacts of tourism + explanations + examples | Tourism Teacher](#)>. Access: 28 March 2023.

STANLEY, M. 2023. <[Marine Ecosystems \(nationalgeographic.org\)](#)>. Access: 15 September 2023.

STANLEY, M. 2023. <[Deforestation \(nationalgeographic.org\)](#)>. Access: 15 November 2023.

STATISTA. 2023. <[Global tourism industry - statistics & facts | Statista](#)>. Access: 03 February 2023.

STATISA. 2022. <[Seychelles: contribution of tourism to employment 2020 | Statista](#)>. Access: 01 October 2023.

ST. ANGE, A. 2019. <[Seychelles Sustainable Tourism Foundation collaborates under Pristine Seychelles campaign \(eturbonews.com\)](#)>. Access: 01 October 2023.

STEINBERG, S. & PAXTON, J. 1969. *Mauritius*. Palgrave Macmillan, London.

STEPHEN, F. 2022. <[All You Need to Know About the Maldivian Dhoni | The Maldives Travel](#)>. Access: 15 September 2023. \

STERN, D. 2004. 'The rise and fall of the Environmental Kuznets Curve'. *World Development* 32 (8), pp. 1419-1439.

STOFFLE, R. & MINNIS, J. 2007. 'Marine protected areas and the coral reefs of traditional settlements in the Exumas, Bahamas'. *Coral Reefs* 26 (4), pp. 1023-1032.

STONES, L. 2021. <[The Seychelles is a destination worth adding to your bucket list \(businesslive.co.za\)](https://businesslive.co.za)>. Access: 01 October 2023.

SUGATHAN, P. & RANJAN, K. 2019. 'Co-creating the tourism experience'. *Journal of Business Research* 100 (1), pp. 207-217.

TAMAKI, K. & ICHINASE, T. 2019. 'Sustainable tourism industry and rural revitalization based on experienced nature and culture tourism: Case study of international regional tourism by SDGs linking urban and rural areas'. *Journal of Global Tourism Research* 4 (2), pp. 1-6.

THECOMMONWEALTH. 2023. <[Sustainable Blue Economy | Commonwealth \(thecommonwealth.org\)](https://thecommonwealth.org)>. Access: 18 April 2023.

THE SEYCHELLES GOVERNMENT. 2017. <[strategy2017.pdf \(egov.sc\)](https://egov.sc/strategy2017.pdf)>. Access: 28 April 2023.

THOMAS, M. 2022. <[The Stunning Flora & Fauna Of The Seychelles Islands | Global Travel Media \(eglobaltravelmedia.com.au\)](https://eglobaltravelmedia.com.au)>. Access: 15 August 2023.

THOMPSON, K. 2017. <[The Steps of Quantitative Research – ReviseSociology](https://www.revise sociology.com)>. Access: 05 May 2023.

THOMPSON, A. 2019. 'Culinary Syncretism in The Bahamas: A Study of Cultural Fusion'. *Journal of Gastronomy Studies* 8 (4), pp. 112-129.

THUNIN, D. 2023. <[Community Based Tourism and It's Benefits \(communityhomestay.com\)](https://communityhomestay.com)>. Access: 15 October 2023.

TIRANT-GHERARDI, N. 2023. <[Message of the Ombudsman on the occasion of Public Service Day 2023 -Seychelles Nation](https://www.seychelles.gov.sc)>. Access: 15 October 2023.

TORKELESON, J. 2022. <[Phytoplankton Fighting Against Climate Change – oceanbites](https://oceanbites.com)>. Access: 18 July 2023.

TOURISM AUTHORITY. 2023. <[Home - Mauritius Tourism Authority](https://mauritius-tourism.gov.mu)>. Access: 15 September 2023.

'Tourist'. 2023. *Collins*. Available at: [TOURIST definition and meaning | Collins English Dictionary \(collinsdictionary.com\)](https://www.collinsdictionary.com) (Accessed on 15 October 2023).

Tourism Development Act 2019. Available on: [Act 8 - Tourism Development Act - 23rd August 2019 \(seylli.org\)](https://www.seylli.org) (Accessed on: 15 October 2023).

Tourism Development (Accommodation Establishment) 2020. Available on: [SI 102 2020 - Tourism Development \(Accommodation Establishments\) Regulations](https://www.seylli.org) (Accessed on: 15 October 2023).

Tourism (Incentives) Act 2003. Available at: [Act 7 of 2003 Tourism \(Incentives\) Act.docx \(live.com\)](#) (Accessed on: 15 October 2023).

Tourism Development Act 2019. Available on: [Tourism-Development-Act 2019.pdf](#) (Accessed: 15 October 2023).

TRINAJSTIĆ, M., MARINELA, N. & NADA, B. 2022. 'Business Incentives for Local Economic Development'. *Economies* 10 (6), p. 135

TURNER, G. 2021. 'Tourism Development, Governance and Sustainability in The Bahamas.' *New West Indian Guide* 95 (3-4), pp. 399-400.

TURRENTINE, J. 2021. [What Is Climate Change? \(nrdc.org\)](#)>. Access: 17 July 2023.

TUTORIALSPPOINT. 2023. [Tourism Management - Quick Guide \(tutorialspoint.com\)](#)>. Access: 01 February 2023.

TSO, K. 2021. [What is "sustainability"? Is it the same thing as taking action on climate change? | MIT Climate Portal](#)>. Access: 15 March 2023.

UNCTAD. 2017. [Contribution of Tourism to Economic Diversification and Poverty Reduction | UNCTAD](#)>. Access: 15 October 2023.

UNDP. 2007. Sustainable Tourism Development in Seychelles. United Nations Development Programme.

UNEP. 2017. Mauritius: Capacity building to support marine protected area planning and implementation. Retrieved from [UNEP - UN Environment Programme](#) .

UNITED NATIONS. 2022. [What Is Climate Change? | United Nations](#)>. Access: 15 March 2023.

UNITED NATIONS. 2023. [Culture | United Nations for Indigenous Peoples](#)>. Access: 03 March 2023.

UNITED NATIONS. N.d. [Protect 30% of Seychelles marine and coastal waters more than 400,000 square kilometers of improved protection and ocean management. | Department of Economic and Social Affairs \(un.org\)](#)>. Access: 12 April 2023.

UNWTO. 2015. Sustainable tourism development in Mauritius. Retrieved from: [UNWTO | World Tourism Organization a UN Specialized Agency](#) .

UNWTO. N.d. [Tourism and Culture | UNWTO](#)>. Access: 28 March 2023.

URRY, J. 2002. *The Tourist Gaze*. Sage Publications, London.

URRY, J. 'Climate Change and Society', in MICHIE, J. & COOPER, CL. 2015. *Why the Social Sciences Matter*. Palgrave Macmillan, London.

VELDWIJK, I. 2022. <Strolling up Mont Limon, the Highest Peak of Rodrigues • Mind of a Hitchhiker>. Access: 15 September 2023.

VOOSEN, P. 2022. <Global warming is speeding up ocean currents. Here's why | Science | AAAS>. Access: 01 February 2023.

WALKER, J. 2023. <How Maldives gained independence from the British empire | The National>. Access: 15 September 2023.

WANG, L., LAW, R., HUNG, K. & GUILLET, B. 2014. 'Consumer trust in tourism and hospitality: A review of the literature'. *Journal of Hospitality and Tourism Management* 21 (1), pp. 1-9.

WANG, Y. & TZIAMALIS, A. 2023. 'International tourism and income inequality: The tole of economic and financial development'. *Tourism Economics* 29 (7), pp. 1836-1864.

WARDLE, R. 2021. <What is sustainable tourism and why is it important? - FutureLearn>. Access: 13 July 2023.

WILDLIFE ACT. 2019. <Marine Conservation Projects – Seychelles - Wildlife ACT>. Access: 18 April 2023.

Wild Animals and Birds Protection Act 1991. Available at: [sey67840.pdf \(fao.org\)](#) (Accessed on: 15 October 2023).

WILKINS, E., STONE, S., WEISKITTEL, A. & GABE, T. 2017. 'Effects of Weather Conditions on Tourism Spending: Implications for Future Trends under Climate Change'. *Journal of Travel Research* 57 (8), pp. 1042-1053.

WILSON, A. 2008. 'The Social Integration of Ethnic Minorities in Mauritius'. *International Journal of Multicultural Societies* 10 (1), pp. 58-76.

WILSON, E. & HARRIS, C. 2006. 'Meaningful travel: Women, independent travel and the search for self-meaning'. *Tourism: An International Interdisciplinary Journal* 54 (2), pp. 161-172.

WILSON, D. 1994. 'Unique by a thousand miles: Seychelles tourism revisited'. *Annals of Tourism Research* 21 (1), pp. 20-45.

WOLLERSHEIM, L. 2022. <What is Climate Change and Global Heating and How Does it Work to Affect Us- Job One for Humanity>. Access: 01 February 2023.

WONG, KV. 2016. *Climate Change*. Momentum Press, New York.

WORDLE, R. 2021. <What is sustainable tourism and why is it important? - FutureLearn>. Access: 15 September 2023.

WORLDATLAS. 2023. <What Are the Biggest Industries in Seychelles? - WorldAtlas>. Access: 13 April 2023.

World Travel and Tourism Council. (2019). Travel & Tourism Economic Impact 2019 Seychelles. [Travel & Tourism Economic Impact | World Travel & Tourism Council \(WTTC\)](#) .

World Travel & Tourism Council. 2021. Economic Impact 2021. Retrieved from: [Travel & Tourism Economic Impact | World Travel & Tourism Council \(WTTC\)](#).

YOUMATTER. 2022. <[Climate Change: Meaning, Definition, Causes, Examples And Consequences - Youmatter](#)>. Access: 27 April 2022.

ZGOLLI, S. & ZAIEM, I. 2018. 'The responsible behaviour of tourist: The role of personnel factors and public power and effect on the choice of destination'. *Arab Economic and Business Journal* 13 (2), pp. 168-178.

ZHAO, J., YANG, D., ZHAO, X. & LEI, M. 2023. 'Tourism industry and employment generation in emerging seven economies: evidence from novel panel methods'. *Economic Research* 36 (3), pp. 1-18.

ZIVRALI, E. 2022. <[What is Community-Based Tourism and Why Does it Matter? - Solimar International](#)>. Access: 15 September 2023.

ZOLFANI, D., SEDAGHAT, M., MAKNOON, R. & ZAVADSKAS, E. 2015. 'Sustainable tourism: a comprehensive literature review on frameworks and applications'. *Economic Research* 28 (1), pp. 1-30.

ZUBER, D. 2022. <[James Richard Marie Mancham \(1939-2017\) • \(blackpast.org\)](#)>. Access: 01 October 2023.