

Is North Cyprus Ready to Overcome the Challenges of Climate Change: Implication for Tourism

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ABSTRACT

Climate change is one of the biggest threats to human livelihood. These threats are more serious for island nations, because they are at the forefront of rising sea and dependency on tourism. This research aims to focus on north Cyprus, which is highly dependent on tourism, to explore the island's policies and measures how to combat the hazards of climate change. Furthermore, to explore the precautions of tourism institutions about the threats of climate change. It is trying to determine whether measures have been taken to counter the impact of this phenomenon on the tourism industry of this country. For the purpose of this study, a qualitative method was utilized based on an in-depth interview with the sample of 12 respondents who are officials in public and private sectors and managers in tourism related firms. The result of this research revealed that minimal measures and policies are in place in the case of north Cyprus and the approach to this issue is insufficient. The study also revealed that officials in public sector and managers in private sector are aware of the catastrophic consequences of climate change, but have not been able to come up with means and measures to have readiness to deal with the impact of climate change. They are also reluctant to involve in a proactive approach to this phenomenon and take necessary action. Knowing that tourism sector is highly vulnerable to the impacts of climate change; unfortunately, the sector has also remained dormant pertaining this issue. The implications, limitations and pathway for future studies are also discussed.

Keywords: Climate change, Tourism, Sustainability, Climate change policies, North Cyprus.

ÖZ

İklim değışikliđi dünya yařamına en büyük tehditlerden biridir. Bu tehditler ada ülkeleri için, özellikle bu ülkelerdeki turizm endüstrisi için daha ciddidir. Bu araştırma, bir ada ülkesi olarak Kuzey Kıbrıs turizmüne odaklanmaktadır. Bu fenomenin bu ülkenin turizm endüstrisi üzerindeki etkisine karşı önlemler alıp almadığına karar vermeye çalışıyor. Bu çalışmada nitel bir yöntem kullanılmıştır. Bu nedenle, görüşme, bu alanda derinlemesine çalışan 10 uzmandan veri toplamak için kullanıldı. Bu araştırmanın sonucu, Kuzey Kıbrıs'ın ülkenin turizm endüstrisini iklim değışikliđine karşı koruma yönündeki eylemlerinin sınırlı durumlar dışında yetersiz olduğunu ortaya koymuştur. Bu çalışmanın sonuçları hem hizmet şirketleri hem de Kuzey Kıbrıs hükümeti için iki şekilde faydalı olacaktır. Birincisi, ulusal düzeyde atılan eylemlerin seviyesinin farkında olacaklar ve ikincisi, bu fenomenin turizm endüstrisi üzerindeki etkisini önlemek için iklim değışikliđine karşı hiçbir önlem almanın sonuçları ne olacaktır. Bu araştırma, bu alandaki daha fazla araştırmanın, iklim etkilerinin Kuzey Kıbrıs turizm endüstrisi üzerindeki etkisini azaltmak için önerilerde bulunmaya odaklanması gerektiğini göstermektedir.

Anahtar Kelimeler: Turizm, Sürdürülebilirlik, İklim değışikliđi, Kuzey Kıbrıs.

ACKNOWLEDGMENT

At the end of this research, I want to regard my father that I was in his arms just for a very short period. He was a father who was my pride in life. Although he was not with me, his honorable name always kept me proud. I also want to consider my sister who was kind to me but I did not appreciate her. Moreover, my grandmother and grandfather from my mother side who were very kind and supported me financially during my childhood. Furthermore, I want to remember my grandmother from my father side who liked me very much. At the end, I remember my kind mother who sacrificed herself and supported me in all aspects of my life. I want to thank her for all her sacrifices.

PREFACE

The world today is a dangerous world. Human activities to gain more and better opportunities have caused problems that have made our world dangerous. Today, humans have sacrificed nature and environmental resources for economic purposes no matter the consequences of these activities on human future life. Unfortunately, no groups, countries or organizations who have economic activities in the world do not accept responsibility for these problems and even in many cases they are unwilling to work together to eliminate the negative impacts of economic activity on the environment. As a result, today we are witnessing a phenomenon called climate change that threatens our world. It is interesting that currently many economic activities such as tourism and subsequently many jobs are at risk of being destroyed due to the effects of this phenomenon. However, international powers and multinational companies are still reluctant to make changes because they are concerned about their economic interests. Hence, urgent actions are needed to be done against the phenomenon of climate change to protect many industries such as tourism and jobs. Many countries have begun their work to this pursuit goal. However, at the same time, many other countries are reluctant to start making changes. Hence, there is no universal consensus to solve this problem. The country of Northern Cyprus is one of the countries affected by this phenomenon. This research hopes to take a step towards enhancing corrective action to save the tourist nature of Northern Cyprus.

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LIST OF ABBREVIATIONS

BBC	The British Broadcasting Corporation
C2ES	Center for Climate and Energy Solutions
CDC	Centers for Disease Control and Prevention
EU	European Union
EUROPA	European Union website, the official EU website
HSR	Health and Safety Representative
IC	International citizen
IUCN	International Union for Conservation of Nature
KTIMB	Kıbrıs Türk İnşaat Mütcaahhitleri Birliđi
MFA	Ministry of Foreign Affairs
NAP	National Academic Press
NSIDC	National Snow and Ice Data Center
SPO	State Planning Organization
TG	Travel Guideline
UN	United Nations
UNDESF	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programmed
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNWTO	United Nation world tourism organization
VOA	Voice of America
WHO	World Health Organization
WPR	World Population Review

Chapter 1

INTRODUCTION

In today's world, climate change is an important issue and humanity is at a critical moment in the history of its life because it continues to threaten industries that human beings need seriously. In other words, wide variations may occur in different parts of the world (Bitsura, 2019). As a result, today's urgent action is necessary to prevent the consequences of this phenomenon because of the overtime, the effects of this phenomenon become stronger and consequently, the control of the impacts of that become harder (UN,2019). All the harmful effects of this phenomenon are felt. Abnormal heat, increased natural disasters are examples of the effects of this phenomenon (UNDESF,2013). However, the world is not ready to deal with these events. In other words, many countries are unable to cope with this phenomenon because they do not have sufficient capacity (Bitsura, 2019). As a result, the world is witnessing the destruction of the natural resources that are needed to turn the economy (UNDESF,2013). The impact of climate change on various economic aspects, such as tourism, is undeniable because the weather is one of the most important criteria for tourists to choose a place to travel (harringtonwineandliquors, 2019) because the weather has an impact on showing the attractions of an area (Nastos, 2019). In fact, factors such as heat or rain in a region for a long time will destroy the balance of competition between the tourist attractions (Nastos, 2019). Hence, it can be claimed that climate change has a special effect on tourists' satisfaction with traveling to a specific place. (Friedrich, 2019). Therefore, can claim

that tourism derives the most impact from climate change (Siddiqui, 2019). Although tourism is affected by climate change in all countries, island countries see the most influence of climate change on their tourism industry (Devadason, 2019). The island nation refers to a country whose borders are surrounded by seawater on every side. In addition, an island nation may consist of one or more islands (Chepkemoui, 2017). Accordingly, there are 48 Island countries on the map of the world (worldpopulationreview, 2019). Island countries have many historical and cultural monuments. Also, natural beauty such as the beaches has made them unique in tourism (Chepkemoui, 2017) . However, From a geographical point of view, an island nation is at risk of climate change (Chepkemoui, 2017) in terms of extreme weather events that have a particularly detrimental impact on tourism in Islands (Giz, 2019). Reflecting abnormal reactions to climate change such as drought or excessive rainfall has a major impact on the continuation of tourism activities in island countries (Giz, 2019) which the disappearance of coral reefs along the tourist beaches is one example of the impact of climate change on tourism natural resources in Islands (Giz, 2019). Republic of Northern Cyprus is one of the Island countries (worldpopulationreview, 2019) which in the near future, like many island nations, will witness widespread changes in tourism market due to climate change (Hassan, 2019). To illustrate, service sector with about 69% of the total Northern Cyprus economy highly dependent on the tourism industry (CIA,2018). Hence, It has an important role in the development of the country's economy (market-width, 2018). In fact, uncertainty about the future of tourism industry activity in Northern Cyprus affects all aspects of the country's economic, and commercial development. For instance, From an economic point of view, tourism has a significant impacts on the GDP of this country (Taşiran, 2017). Consequently,

serious measures must be taken to prevent the consequences of this phenomenon on the Northern Cyprus' Tourism industry (Zachariadis, 2016).

1.1 Purpose of the Study

The purpose of this research is to investigate the extent to which Northern Cyprus is prepared to face the challenges of climate change. Based on this aim, this research is examined in two aspects. First of all, to investigate the possibilities and resources available in Northern Cyprus to tackle the phenomenon of climate change in the tourism industry. second of all, Review of actions taken in Northern Cyprus to prevent the negative impacts of climate change on the tourism industry.

1.2 Significant of the Study

This research used the inductive approach known as the qualitative research methodology. The interview administered to the university lecturers and experts who have experience in the tourism industry in Northern Cyprus. The interview have taken by asking 16 questions. Moreover, to analyze the data the Atlas program has been used.

1.3 Methodology of the Study

This research used the inductive approach known as the qualitative research methodology. The interview administered to the university lecturers and experts who have experience in the tourism industry in Northern Cyprus. The interview have taken by asking 16 questions. Moreover, to analyze the data the Atlas program has been used.

1.4 Outline of the Study

The research is including six chapters. Chapter one included of introduction about the thesis, and significance of the study plus methodology and a brief outline of the study itself. Chapter two is concentrating on the literature review which is focusing on

tourism and its various types, especially familiarity with the types of tourism that are directly affected by climate change. Chapter three addresses sustainability as the most significant aspect of innovation in tourism activities and also this chapter looks at climate change and its various aspects such as the impacts of this phenomenon which have on the world so far, as well as the actions that have been taken at the international level to control the influences of this phenomenon on the environment . Chapter four is focusing on the case of Northern Cyprus. This chapter introducing tourism resources of this country and examining the development of this industry over the past few years and the prospects of the future of the tourism industry in this country. Chapter five is discussing about the theoretical analysis of the methods applied to this study and finally chapter six is intent on conclusion which is including limitation, implication and future research.

Chapter 2

LITERATURE REVIEW

2.1 Tourism: An Overview

Generally, the World Tourism Organization (UNWTO, 2008) describe tourism as “a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which imply tourism expenditure”(p.1). Also, according to Juul (2015) European parliament defined tourism as “the activity of visitors taking a trip to a main destination outside the usual environment, for less than a year, for any main purpose, including business, leisure or other personal purpose, other than to be employed by a resident entity in the place visited”(p .3). Moreover, Peter Mason (2015) describes tourism as “The temporary movement of people to destinations outside their normal places of work and residence, the activities were undertaken during the stay in those destinations, and the facilities created to cater for their needs”(p.5) and also he mentioned that tourism is “a non-resident traveling to Alaska for pleasure or culture and for no other purpose”(p.15). Moreover, Peter Iaimer (2010) pointed out that “Tourism is, therefore, a subset of travel and visitors are a subset of travelers. These distinctions are crucial for the compilation of data on flows of travelers and visitors and for the credibility of tourism statistics”(p.2). Finally, tourism in terms of climate change is defined by UNWTO Annual Report (2010) as “the length and

quality of tourism seasons, affects tourism operations and influences the environmental conditions that have potential for attracting and deterring visitors”(p.27).

2.2 History of Tourism

2.2.1 Antiquity

Tourism dating back to 2000 years ago. It commenced on a business when people from ancient Rome became interested to travel to another destination during the summer (Watson, 2018). For many years traveling had boom among Romance people (Watson, 2018). Even, Roads were built in ancient Roman times to make travel easier for the Romans (Walton, 2019). However, by the falling of the Roman Empire, tourism got poor at that time. Although people stop traveling for many years, with the business booming, again they became interested to travel (Watson, 2018). Hence, some people started to have some business activities in the service industry by providing some services such as providing food and tour guides to travelers by the least possibilities at that time (Watson, 2018). Nonetheless, there is a believes that tourism and traveling was started by Egyptian people who needed to travel for medication and business to another destination (study.com,2018).

Many people cannot distinguish normal behavior from abnormal behavior (Downe, Cowell, & Morgan, 2016). Hence, the way which they behave with others in many cases may not be acceptable (Downe et al., 2016). However, they may not know that they are abusing others by their behavior (quora, 2019). To illustrate, in many cases managers, supervisors or other workers when they want to help a worker especially female workers, they touch the bodies of workers during their communication which they might not be comfortable with this kind of behavior. However, when they become aware that female workers are not comfortable, they stop doing it. Nevertheless, some

of them do not stop touching. Hence, it could be a kind of violence. Hence, violence has various dimensions which this research would consider then to make differentiate among different types of violence at the workplace (abc.net.au/news, 2018).

2.2.2 Middle Aged

During this time which was between 5th–14th centuries, trips were made to religious places and many traveled for treatment. Places like the Roman Catholic Church and Jerusalem were places where people from all over the world came. Moreover, on the way there were places that offered services such as accommodation, water and food to the passengers. Furthermore, Hence, the bourgeoisie industry flourished. It is noteworthy that travelers often traveled on horseback or on horseback and traveled with them as a guard and guide. (travelguideline, 2012).

2.2.3 Grand Tour and Modern Tourism

Grand Tour, dating from the 17th to the 18th centuries in which young people traveled to Europe to learn about cultures, languages and religions (Rosenberg, 2019). The first destination of this group was the major cultural cities of that time, such as Rome, Venice, and Paris (Rosenberg, 2019). By industrial revolution in the United Kingdom, this type of travel took a new form from 1660 until the founding of the railway and train in 1840 and provided a new opportunity to travel elsewhere (Rosenberg, 2019) and later, ships and aircraft accelerated the development of the tourism industry until the modern tourism era began with the establishment of the first tourism company, Cox & Kings Ltd, in 1758 in England (Essays, UK, 2018).

2.3 Significance of Tourism

Primarily, Tourism increases the needs in various aspects including products and services. In fact, tourism is increasing demand and consequently, the market thrives. Due to the boom in the market, the need for labor increases and, as a result many jobs

will be created in different sectors such as production and services (Thakur , 2018) because tourism has the potential to create a diverse market as many people of all nationalities travel to other destinations. Hence, this offering the opportunity to offer products (UNWTO, 2014). Another positive aspect of tourism is the exchange of positive points among communities (Kraus, 2016). In other words, travelers from different nationalities and people from the host community make interaction to each other in various aspects which can be useful to learn new things in terms of social, cultural (Kraus, 2016).

2.4 Domestic Tourism

Since the advent of tourism, the industry has started with the interest of people in domestic travel and to this day, domestic tourism is of great importance to people.

According to available evidence, of the 4.8 million tourists who travel annually, 4 billion people travel around inside of their border (UNWTO, 2012). Moreover, statistics released in 2017 show that domestic tourism investment accounts for up to 73% (US\$3,971 billion) of total tourism investment over a ten year period from 2008 to 2017 and this is indicating the importance of domestic travel in the tourism industry (WTTC, 2019).

Accordingly, the income from domestic tourism between 2008 and 2017, USA, Germany, and Japan with averaged \$ 751.8, \$ 297.4, and \$ 227.6 were in the top-third highest earnings among the top 10 countries and Mexico was in the last place with \$ 93.9. However, nine years later, in 2017, China came in first with \$ 840.9 income and the US and Germany ranked second and third with \$ 802.8 and 339.7. Also, Mexico moved to 9th place with \$ 115.9 in annual revenue and Brazil to 10th with \$ 99.9. Moreover, by comparing the two tables, although the US and Germany had higher

incomes in 2017, they couldn't save their place in the competition with China and has fallen to second and third and Japan which ranked third in 2008, It has fallen to 5th place in the table of 2017 (WTTC, 2019).

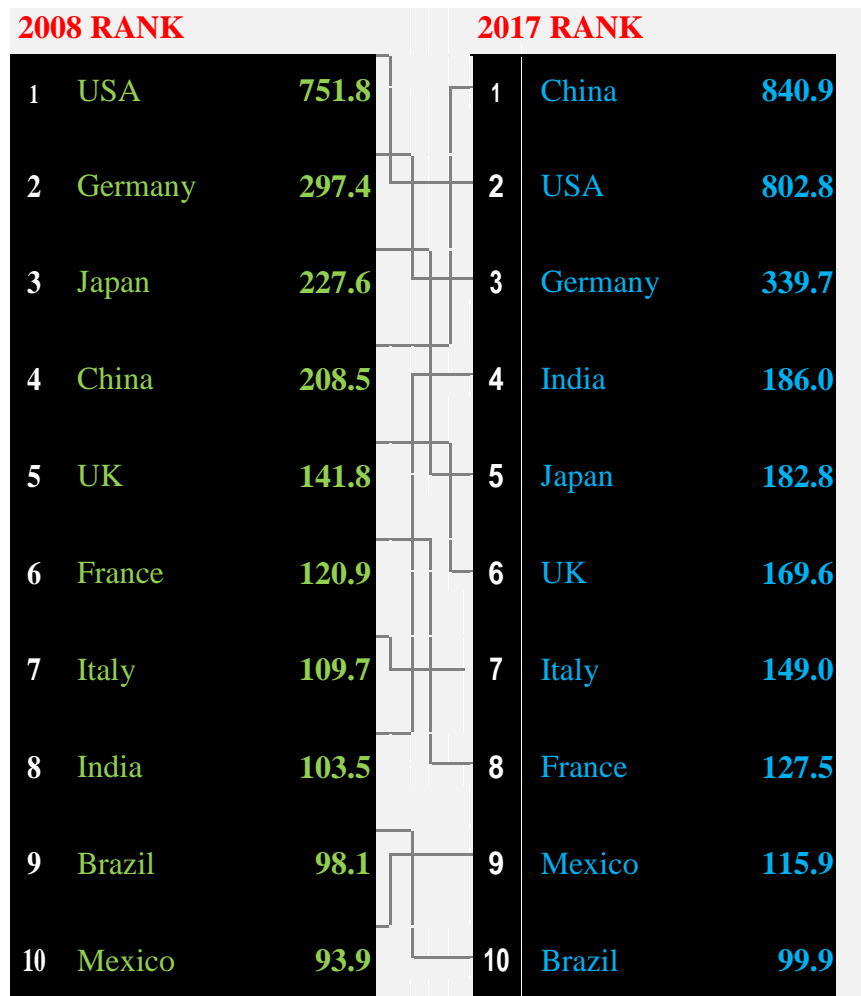


Figure 1: Countries' positions in domestic visitor spending (2008 and 2017)
 (Travel & Tourism Domestic Spending, in 2017 US\$bn real prices)
 Source: <https://www.wttc.org/-/media/files/reports/2018/domestic-tourism--importance--economic-impact-dec-18.pdf>

Three specifications make people interested to travel domestically. Firstly, domestic tourists are familiar with the characteristics such as the language, culture and economic conditions of their country and therefore, domestic tourism is important in two specifics (UNWTO, 2012). Primarily, people in each country are fully acquainted with their products and services, Furthermore, they are close to the rules and regulations of

their country and that makes it easier for them to travel around (UNWTO, 2012). A second feature of domestic travel is the closeness of travelers to their home as well as the short journeys from place to place (UNWTO, 2012). Based on this feature, passengers have the opportunity to travel all the time because of because of enough economic power to pay for their expenses such as transportation and residence location, food and medical services (UNWTO, 2012). As a result of this type of travel, social interactions between different segments of society will increase and everyone will be able to travel at any level of income. In addition, this type of tourism has an influence on the economy of countries. In fact, the demand for people would increase in terms of different types of products, services, and transportation (UNWTO, 2012).

2.5 International Mass Tourism

International tourism refers to traveling overseas. (Santana, 2016) which brings an opportunity to get to know different languages, customs, and cultures, religions and beliefs (IC, 2018). Alongside business trips, experience new leisure activities are also another reason to travel to overseas (Liu, 2019). Hence, the creation of facilities and investments in tourism will arouse the interest of tourists in travel (UNWTO, 2019). This is the reason that the population of visitors to countries is different. In other words, leading countries in attracting tourists with investment, strong planning to provide more services have been able to attract the most visitors (UNWTO, 2019). Accordingly, Spain, France, and Germany are three countries that attracted the most visitors in 2019 (Bruce, 2019) moreover, Japan, United States, United Kingdom, Australia, Italy, Canada, and Swimland are the next in line (Bruce, 2019). In general, in 2019, the total population of travelers around the world was 1,401 billion and the income that comes from it was \$ 1,451 billion (UNWTO, 2019). UNWTO divided the

number of visitors and the income of tourism for 2019, among countries on five parts of the world (UNWTO, 2019).

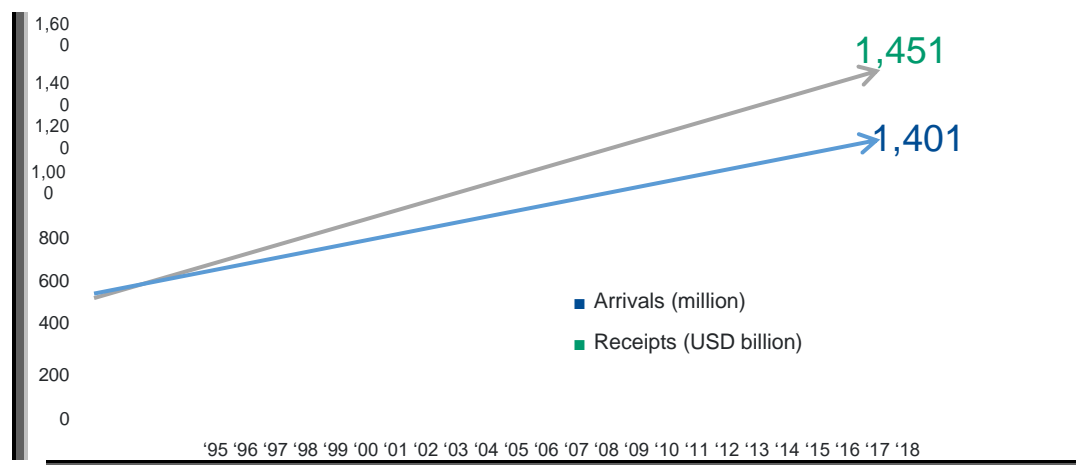


Figure 2: International tourist arrivals and tourism receipts
 Source: <https://www.e-unwto.org/doi/pdf/10.18111/9789284421152>

According to a report published by the UNWTO, The Middle East with 60 million visitors and \$38 billion income and Europe with 710 million visitors and \$570 billion income, respectively rank lowest and highest among other parts of the world (UNWTO, 2019). Moreover, jointly Asia-Pacific with 348 million and \$435 billion, American continent with 216 million and \$334 billion and finally Australia with 67 million and \$73 billion are in the next lines (UNWTO, 2019). It is noteworthy that travelers visit different parts of the world for many reasons such as business, medical treatment and Leisure. According to the figure from 2018, about the main purpose of traveling by people, Leisure with 56%, medical treatment with 27% , business with 13% was the most important reason for traveling overseas (UNWTO, 2019). Travelers have also traveled in various ways. Accordingly, in 2018, 58% traveled by air, 37% by car, 2% by train and 4% by sea (UNWTO, 2019). However, it is estimated that the Chinese have the largest population of travelers abroad. Accordingly, 10% of China's 1.4 billion population in 2018 traveled outside China and they spent about \$

227 billion overseas. Furthermore, after Chinese travelers, Americans, Germans, and United Kingdom citizens have spent the most on traveling abroad.



Figure 3: Map of international tourist arrivals (million) and tourism receipts (USD Billions)

Source: <https://www.e-unwto.org/doi/pdf/10.18111/9789284421152>

2.6 Tourism Typology

Communication between tourists and the people of the host community is a kind of constructive interaction (Fan, 2019). As a result, both sides become close to each other's desires and needs which leads to some kind of experience and this experience helps tourists and locals to have reasonable expectations of each other (Fan, 2019). Local people as service providers have a direct relationship with the tourist as a

customer (Fan, 2019). As a result of these experiences, the way of offering services, as well as the type of service, makes the tourist satisfied with their choice or on the contrary, make the tourist unsatisfied (Fan, 2019). In the meantime, service providers have an important role to play in consumer culture (Nemeth, 2019). In other words, providers can change customer demands (Nemeth, 2019) by offering new sustainability-based products (Jiang, 2019). Nonetheless, this is a very sensitive job because it is related to customer experience (Bacal, 2019). Previous customer experiences create a kind of comparative attitude between previous and current maritime services. Indeed, customer's judgment of current services is based on comparisons with previous services. As a result of these experiences, customer expectations for current and future services will rise because the customer expects to receive better service than in the past (Willott, 2019).

Expectations can be set with the right design in service (Prendeville, 2017) by knowing the customers' needs (Business Queensland, 2019). Meeting these needs in marketing sustainable services is the best opportunity to promote sustainable products (Tuten, 2013). Hence, by providing these products, service organizations can change the tourist's interest in using Educational tourism (Mak, 2019).

2.7 Types of Tourism

2.7.1 Educational Tourism

Is a type of education that people acquire knowledge in the environment (Lowry, 2016). In this type of education, people have the opportunity to expand their knowledge in all historical, cultural and social contexts (curacaochronicle, 2018). The reason is that environment is the best teacher for transferring experiences and information because of its capabilities (Johnathan, 2019). Indeed, it activates the mind

of travelers, Hence, it makes the traveler interested in learning and seeing new things (curacaochronicle, 2018). In fact, it is a kind of self-improvement (atlantisresearch, 2019). However, one of the benefits of educational tourism is learning by the interaction of people with each other through sharing ideas and opinions (atlantisresearch, 2019). With this kind of connection, people can add positives to their culture and also promote other cultures as well. In fact, educational tourism creates a kind of constructive interaction among people of different nationalities with various culture, religions and beliefs (trekeffect, 2019).

2.7.2 Ecotourism

Eco-tourism is the responsible behavior of tourists towards the place they traveled. This means that everyone is responsible for preserving the existing environmental resources in the host country. The hosts are also responsible for providing services to tourists in a way that does not harm the environment (The International Ecotourism Society, 2019). On the other hand, knowing the natural places that are subject to extinction is an advantage of ecotourism. By Traveling to these areas travelers and local people become more familiar with the problems in these areas and thus work to preserve them by investing and supporting the organizations to protect these areas (Briney, 2019). Moving towards sustainable tourism started in 1970. However, one decade after in 1980, environmental issues were taken seriously in the form of ecotourism (Briney, 2019). Since then, several different organizations specializing in ecotourism such as the international ecotourism society and responsible travel established to protect the natural environment by making all aware of the actions needed to protect the environment (Briney, 2019). According to these organizations, there are some several important points about visiting natural resources such as minimize the impact of visiting the location, build respect and awareness for the

environment and cultural practices, ensure that the tourism provides positive experiences for both the visitors and the hosts, Provide direct financial aid for conservation, provide financial aid, empowerment and other benefits for local peoples and raise the traveler's awareness of the host country's political, environmental and social climate (Briney, 2019). Hence, by focusing on these points, the significance of ecotourism is expected to rise to a higher degree in the future (Briney, 2019).

2.7.3 Sport Tourism

Travelers travel to a specific place with the aim of participating in a competition or watching it from around the world. Currently, sports tourism is the most important factor for traveling to different places (Advisory, 2019). Different types of sports tourism can be classified into three categories. Sports Event Tourism (Duglio, 2017), Celebrity and Nostalgia Sport Tourism (Cho, 2017) and Active Sport Tourism (Hodeck, 2016). Sports events are particularly important (Palrão, 2017) because in a short time it gathers a large population in one place from all over the world (Palrão, 2017). Generally, sport tourism is divided to hard and soft tourism (Advisory, 2019). Many sporting events are particularly important because of their sensitivity as they gather thousands to watch or play at a sporting event for a specific period of time. For example, the Olympics and the FIFA World Cup are two major sporting events due to the breadth of these so-called hard events (Advisory, 2019). However, Soft sport tourism is the opposite of hard sport tourism (Advisory, 2019) since people travel to attend a fun event. Especially for sports such as running, skiing and swimming are included in this type of tourism (Khangawal, 2016). Moreover, many people are interested in seeing a particular sports venue or want to meet their favorite athletes. Trying to travel elsewhere with these goals are particularly called celebrity and nostalgia sport tourism (Cho, 2017). Active sports tourism is a great event that covers

important events such as cycling, running, and car racing. These fields of interest are popular because always held. That's why it's called active sports (Routledge, 2019).

2.7.4 Event Tourism

Event tourism is a prominent type of tourism (Todd, 2017) because it is considered as an important factor in the development of the tourism industry (Todd, 2017). From a management perspective, a tourism event is based on producing attractive programs to encourage tourists to travel (Todd, 2017). Hence, event management plays an important role in attracting tourists (Yaroshenko, 2019). An important event is held for a short time. Also, in most cases, it is held only once a year. Consequently, it attracts many tourists (Todd, 2017) which is the main purpose of the tourism event. In fact, the tourism event is an opportunity to introduce an area to travelers (localist,2017) because by traveling to a particular region, tourists are generating capital for development as well as a boom in that region (Yaroshenko, 2019). Although it is necessary to properly plan the conditions of that environment, it is necessary to provide the conditions for the attraction of tourists that these programs must have the social and recreational infrastructure in order to attract tourists by joining the specific event (Yaroshenko, 2019).

2.7.5 Medical Tourism

The goal is to use medical facilities for treatment in which people move from one place to another for a specific period of time (CDC, 2016). Indeed, Medical tourism provides applicants with the opportunity to achieve their goal at the least cost and in the shortest possible time (MHTC, 2019). Although communication is one of the problems of medical tourism, the reliability of the host country's medical system is also an important issue to consider (CDC, 2016). Outside the problems of this type of tourism, it has many benefits from an economic point of view. With the increasing demand for

medical services, more workforce is needed to meet the demands of applicants. In addition, revenues from the provision of medical services to tourists can boost the host country's medical industry (HSR, 2018).

2.7.6 Cultural Tourism

In this type of tourism, the tourist tries to get acquainted with the customs and traditions of the host country (UNWTO, 2017). In other words, the tourist strives to become aware of lesser-known cultural laws and customs and thereby gain new experiences from different cultures (UNWTO, 2017) because the role of culture of a country is strong in all its social and economic dimensions. For example, it has a direct impact on the way it trades, as well as on the art and artwork and even the architecture of the host country (UNWTO, 2017). Hence, in cultural tourism, the tourist acquainted with the impact of culture on the economic and social issues of the host country and it gives merchants and people with other cultures the knowledge that they can have economic ties and social communication with the host community while respecting the host nation's cultural beliefs (Quora,2017).

2.7.7 Religious Tourism

Religious tourism is a type of tourism that introduces tourists to religious sites including places, works of art and religious ceremonies (Jude, 2018). Religious tourism has a long history as it has been the goal of many people to visit religious sites from many years ago (Wiltshier, 2019) and to this day, this type of tourism has maintained its importance as one of the most important tourism goals for travelers (Griffin, 2017). On the other hand, Religion has a great role in the culture, society, and economy of the people of a country. In fact, many communities linked these aspects with their religious beliefs (Kim, 20g 19). Hence it has a great impact on the formation of tourist relations with the host community (Jude, 2018). From the perspective of the

benefits of religious tourism, it promotes spiritual growth and promotes human values. Also, the income from it can be spent on developing the host country (Griffin, 2017).

2.7.8 Music Tourism

Music is part of the culture which represents part of the interests and artistic vision of the people of a community (Strong, 2017). Music tourism is one of the main reasons for traveling (Desk, 2018) because it attracts people who are interested to attend concerts and music festivals (Zaleska, 2019). This type of tourism brings people from different nationalities together in one place (Zaleska, 2019). Hence, it is one of the important tools in investing in culture building (Strong, 2017). The reason for this idea is that people from different cultures interact to have a chance to make a cultural relationship on the pretext of participating in a music event (Krajnović, 2018). From an economic point of view, music festivals contribute to the economic development of different cities because the direct and indirect revenue generated from these events can be spent on urban infrastructure. On the other hand, it introduces cities to the world (Pavluković, 2019).

2.7.9 Food Tourism

Food tourism is an opportunity to try new foods with new tastes (Sengel, 2015). Passengers' perceptions of food as part of the journey are different. Some travelers consider the main reason for their trip to a particular region to try the food of other nations (Sengel, 2015) which is called gastric tourism. More clearly, tourism planning for travel is based on seeing places to eat (Herrera, 2012). However, some others see seeing and tasting new food as just part of their target of journey (Sengel, 2015). Hence, the food industry is very important in the tourism industry as food tour companies are growing and competing closely in providing food to travelers (worldfoodtravel, 2018). in fact, Food tourism in many ways attracts tourists. From

introducing foods on social networks to testing different foods on the streets and holding food festivals in different countries. All of these ways are effective for introducing and absorbing fresh and new foods to tourists (worldfoodtravel, 2018). Therefore, it can be concluded that the cuisine of the host countries plays a major role in the satisfaction of the tourists (Herrera, 2012) because tourists do not like to have repeated experiences of eating. That is why it is important to diversify food tourism (Herrera, 2012). This has led to the rapid growth of the food tourism industry worldwide and continues to be one of the most important drivers of tourism growth (Herrera, 2012).

Chapter 3

TOURISM, ENVIRONMENT AND SUSTAINABILITY

3.1 Concept of Sustainability

To manage sustainable development activities, the World Commission on Environment and Development was established in 1983 by the United Nations. The Commission, with 36 members and 60 years of experience, is working to help build a healthy world by formulating useful strategies in economic, social and environmental programs (Thomsen, 1970). According to this Commission, the concept of sustainability is capable of responding to today's human needs without compromising the needs of the next generation (OECD Observer, 2019). Hence, according to this concept, sustainability has influence on the economy, environment and social life of the current and the next generation (Kenton, 2019). Furthermore, designing the bottom model is well illustrated by the stable relationship with these three factors:



Figure 4: The Western Australian State Sustainability Model.
 Source: <https://www.witpress.com/Secure/ejournals/papers/SDP030306f.pdf>

3.1.1 Social Sustainability

The concept of social sustainability has become a discourse as it was realized that communities were not benefiting from development projects in the past three decades (Dangi & Jamal, 2016). It was also realized that in many developing countries many residents did not have access to proper health care and education (Kenton, 2019). While, developed countries are trying to take advantage of the benefits of sustainable development to move existing facilities from generation to generation. Hence, there is a criticism that not only are poor countries unable to deliver sustainable development services to the next generation because of scarce resources, but they are not even able to deliver them to the current generation (OECD Observer, 2019). Consequently, developed countries are expected to help poor and developing countries to be able to reap the benefits of sustainable development (OECD Observer, 2019). Today, developing and poor countries are most affected by climate change. These damages reflect the industrial activities of developed countries (OECD Observer, 2019). Moreover, currently, industrialized nations with the financial resources and

technology are able to take advantage of sustainable development in their own countries, while developing countries that are the main victims of these problems cannot benefit from sustainable development due to lack of financial resources and technology. Consequently, the developed countries have a duty to assist them in compensating for the damage suffered by these drawers (OECD Observer, 2019). Tourism is considered one of the main resources of developing countries and it is recognized as a factor for increasing the income level of low-income groups. At the same time, due to the increase of tourists in these countries, they need to take care of natural and tourist resources. Hence, these countries are interested in sustainable tourism as one of the most important items for creating different jobs and thus raising the level of people's welfare (Sustainabletourism2030, 2019). Since the climate change has been effective in tourism, tourism services resources such as hotels become interested in sustainability tourisms. Hence, since 2015, they are trying to move towards sustainable tourism by changing their schedules. It can therefore be argued that tourism is one of the leading industries in sustainable development programs (Sustainabletourism2030, 2019). In addition, service providers can promote employment creation and poverty alleviation by promoting sustainable tourism based on community culture and values, while ensuring sustainable tourism productivity (Negruşa, 2015).

3.1.2 Environmental Sustainability

Is using those resources that do not pollute the environment and prevent the destruction of natural resources (Evans, 2019). By this definition, consumption and production patterns change. In other words, manufacturers have to adapt to new ways of production (Evans, 2019) and even encourage people to make some changes in their communities based on the needs of the environment (Weidenfeld, 2018). However,

this target cannot be achieved if the way of planning expansion in the level of management in various sectors, especially in tourism would not be changed. In other words, implementing strategies for using natural resources should be matched with sustainable policies (Dangi & Jamal, 2016) which means fulfill the demands of society so as not to damage natural resources and ensure the transfer of these resources to the next generation (Field, 2015). Although, the level of safety of the environment has been decreased by developing the destinations of tourism since 60 years ago, communities became interested in sustainable tourism and ecotourism. Hence, it shows that people are anxious about the influence of human activities in the tourism sector on the natural environment. (Spenceley & Snyman, 2017). Furthermore, the leading of the sustainable tourism program is focusing on two targets (Spenceley & Snyman, 2017) firstly, protecting the natural resources in the environment and secondly, awareness of the public of the serious consequences of the destruction of these resources (Spenceley & Snyman, 2017) because now certified that people need the ecosystem to be sure of the safety of lives in the future and be protected against the natural damages (Gössling, 2018). Since the effect of the negative human activities is clear on the global environment, it is compulsory to change the way of doing these activities based on sustainable development (Gössling, 2018). These activities are including, the way of using natural energies such as water, jungles, and stop of using some underground resources such as coal which has a strong negative effect on the environment (Gössling, 2018).

3.1.3 Economic Sustainability

One of the most essential activities for all of the communities in the world is to change attitudes towards achieving economic goals (Robina, 2018). Hence, sustainable economics supports economic development by ensuring that economic activities do

not negatively impact on culture, society and the environment of a community (The University of Mary Washington, 2019). Economic activities are broadly linked to environmental and social issues. All products and services must be environmentally friendly and must also conform to the culture and beliefs of the community. These sustainability-based economic programs, though possible but difficult (Wanamaker, 2018). service providers are very significant to improve the tourism sustainably (Verma, 2018). Service organizations such as hotel which have business activities in the tourism services sector are able to reduce the environmental problems because this sector uses natural resources such as energy and water to provide services to the customers (Verma, 2018). Recently, governments are encouraging service organizations to provide green services to customers to prevent excessive use of natural resources (Verma, 2018) because the improper use of natural resources could destroys these resources in the future (Verma, 2018). Hence, by recycling and reducing using water energy and use solar and wind energy, this goal could be touchable to protect the environment (Verma, 2018). However, managing of producing green products and providing green services is very important to implements the policies of using Clean energy in In a wide range of services (Verma, 2018) and this goal cannot be fulfilled except by educational sustainability tourism (Dangi, 2016). According to Gössling (2018) “Considerable attention has been paid to tourism as a knowledge system” (p.292). However, fundamentally less is known about the complexities of tourist learning in the context of sustainability; that is the knowledge acquired during travel and its influence on personal values and norms of consumption, as well as its repercussions for the sustainability of lifestyles after returning home (Gössling, 2018). Consequently, sustainable tourism could be introduced by service providers as a group of leaders of the processing of developing sustainable tourism by implementing plans

for providing sustainable services. Hence, supervising the service providers to learn the way of providing this kind of services can absorb and encourage travelers to use these services (Gössling, 2018). As a result, it is clear that to have a safe world of natural threatening factors, changes in consumption and production behavior must be made. Continued use of extravagant resources not only reduces these resources rapidly but also increases the number of natural disasters that can threaten the continuity of the human yard. So changing consumption and production behaviors based on sustainability principles is the only way to prevent climate change (Gössling, 2018). Therefore, the ways in which income should be changed because companies and sectors of production and services are looking for the cheapest and fastest way to make more and faster profits. Ultimately, these economic gains are the result of environmental degradation (Negruşa, 2015). However, changes in consumption and production need to be cultured and in line with society's cultural values. Otherwise service providers and manufacturers would not be able to make the change because they are afraid of negative reaction of the market (Negruşa, 2015). This concern is due to the inability to compete with other competitors in terms of service and profitability (Negruşa, 2015). As a result, to address this concern, governments and banks are encouraging companies and service sectors to pursue sustainable innovation by providing credits and loans (Smith, 2019).

3.2 Climate Change

3.2.1 History of Climate Change

A glance at the history of climate change can reveal how this global problem arises (Morgan, 2019). The first step in the industrial revolution that paved the way for climate change was taken by British ironmonger Thomas in 1712 with the invention of a steam engine that required the use of fossil fuels such as coal (BBC, 2013). After

that, with the population rising to one billion in 1800, there was a greater need to use fossil fuels to spin vehicles such as trains to transport passengers and to use these fuels for factories (BBC, 2013) but the first warning about the negative effects of greenhouse gases was given by a French physicist, Joseph Fourier, in 1824. The French scientist stated in his research that it could be involved in boosting global warming. Greenhouse gas emissions increase the temperature by producing heat in the Earth's atmosphere (BBC, 2013). As this process progressed in the use of non-renewable energy, the first car engine to work with non-renewable energy was built in 1861 by Carl Benz (BBC, 2013). As the world's population increased from one billion in 1800 to two billion in 1900, the need for energy became more apparent (BBC, 2013). Hence, as an impact of using fossil fuels to produce energy for 100 years ; In 1938, an English engineer by evaluating the data of 147 weather stations, concluded that the universe is going to getting warmer (BBC, 2013). He found in his findings that CO₂ concentration which is a colorless gas with a density of about 60% higher than that of dry air is increasing and as a result, the air temperature rises abnormally (BBC, 2013). In 1995 another researcher found new results by using new tools. By examining the amount of infrared power in various gases, he found that as the infrared power increased, the CO₂ concentration doubled, resulting in an increase in temperature to 4C-3 (BBC, 2013). In 1957, scientists found that the oceans did not absorb excess CO₂ in the atmosphere (BBC, 2013). Additionally, In 1958, scientists investigated the impact of excess CO₂ on Antarctica (BBC, 2013). The world's population rose from two billion in 1930 to three billion in 1960 (BBC, 2013). The first UN meeting on climate change took place in Stockholm in 1972 (BBC, 2013). The world population rose from two billion in 1930 to three billion in 1960 and then reached to four billion in 1975 and five billion in 1976 (BBC, 2013). In 1988, it was concluded that El Nino combined with the heat

of the air and by 1990 the temperature would be reached above 0.52C (BBC, 2013). In 1999, the world's population reached six billion (BBC, 2013). In 2011, an increase in the rate of global warming was announced (BBC, 2013). In 2011, the world's population reached seven billion (BBC, 2013). A research has shown that the concentration of greenhouse gases has increased (BBC, 2013). Air temperatures hit a record high of 0.07 degrees in 2016 (Dennis, 2019). However, The global mean temperature in May 2019 was more than 0.5°C warmer compare with a few years past (EU, 2019). Although it may threaten human destiny in the future because of changing conditions, it has become one of the top priorities in global policy making because human nature is in trouble when the order of nature disappears. (WHO, 2019).

3.2.2 Measures Taken to Combat Climate Change

Many efforts have also been made regarding how to combat climate change (UN, 2019). Initially, the basis of all programs and activities to combat climate change was from United Nations Framework Convention on Climate Change (UNFCCC). It is a preliminary agreement against climate change that was established in 1992 and the key protocol signed in 1997 among many countries (Fpfis, 2019). Each year this organization holds a global conference on climate change to investigate the latest changes of weather in different parts of the world. There have been 27 conferences since the first conference in 1995 in Berlin, Germany. The conference raised concerns about the ability of nations to make fundamental changes to prevent climate change (Fpfis, 2019). Also, the conference was concerned regarding the countries' promises to changes their activities to protect the world against climate change (Fpfis, 2019). Another conference is the World Climate Conference (UNFCCC, 2000). According to this International institution (UNFCCC), The first formal global action on climate change took place in the year 1979 with the World Climate conference meeting in

Geneva (UNFCCC, 2000). The conference addresses the role of climate change on human activities. The conference also issued a statement warning of the negative effects of human activities on climate change. Hence, an executive program called world climate program (WCP) was established and this was confirmed by the joint participation of the Meteorological Organization (WMO), the United Nations Environment Program (UNEP) and the International Council of Scientific Unions (ICSU) (UNFCCC, 2000). Also, There were conferences in late 1980 and early 1990. With the passage of time and access to scientific documentary evidence, these conferences mentioned that they are concerned about the consequences of continued climate change. Different groups participated in these conferences. Including specialists, government officials. The key events were the Villach Conference (October 1985), the Toronto Conference (June 1988), the Ottawa Conference (February 1989), the Tata Conference (February 1989), the Hague Conference and Declaration (March 1989), the Noordwijk Ministerial Conference (November 1989), the Cairo Compact (December 1989), and the Bergen Conference (May 1990) (UNFCCC, 2000). Also, the first report on the assessment of the weather condition issued by delegation of different governments was in the year 1990. This delegation is named the Intergovernmental Panel on Climate Change (IPCC). This delegation was founded in 1985 and its task was to scientifically study on the impacts of climate change on the economy and social life of people. The results of these investigations are reviewed in various sessions and the results of these investigations were reviewed at various meetings and the destructive effects of these changes were confirmed. As these scientific activities continue, policymakers have become aware of the consequences of climate change and that has led to changes in the economic plans of countries to make them compatible with climate change programs (UNFCCC, 2000).

Additionally, at the second global climate change in 1990, members were asked to come to a firm agreement on climate change. The conference was held with the support of two major organizations, WMO, UNEP. Although no agreement was reached at the summit, concerns were expressed about the impact of climate change on humans, and in the end, supported several implementing programs to combat climate change and eventually, the begun of the debate of global climate change was approved in December 1990 by UN members. Then a committee of UN members was formed to discuss about a framework for climate change at five meetings from February 1991 to May 1992 and eventually, the Framework was signed in the year 1992 among 154 members at Rio de Janeiro (UNFCCC, 2000) and in a meeting in 1994 all members were required to abide by this convention. After that, In 1995, a meeting between the parties was held in Berlin. The meeting brought together 177 parties from 54 countries. It was stated at the meeting that the provisions of the 1992 Rio de Janeir Agreement were not enough and that more needed to be done to combat climate change (UNFCCC, 2000). In the next step, In 1997, the Tokyo Protocol obliged countries to comply with the provisions of the UN Framework Convention. Under the protocol, countries began to reduce greenhouse gas emissions. The Protocol entered into force in 2005 (UNFCCC, 2020). According to The United Nations Framework Convention on Climate Change (UNFCCC), After that many meeting such as Nusa Dua, Bali climate change conference in 2007 (Fuller, 2007) , Copenhagen climate change conferences in 2008 and 2009 (Telegraph, 2009) , Cancun climate change conferences in 2010 (Telegraph, 2010) , Durban climate change conferences in 2011(Gray, 2011), Doha climate change conferences in 2012 (UNESCO, 2012), Warsaw climate change conference in 2013 (Harvey,2013), Lima Climate Change Conference in 2014 (UNFCCC, 2014) were held to monitor and supplement the agreements reached at

previous meetings (UNFCCC, 2000). However, perhaps the Paris World Conference held on November 4, 2015, with 195 countries, marks the start of a new chapter in human action in the fight against climate change (EUROPA, 2017). Basically, the conference adopted the first legal treaty to struggle with climate change (EUROPA, 2017). According to this, the Paris Agreement outlines a plan to change human activities to prevent global warming to more than 2 degrees Celsius and to reduce it to 1.5 degrees Celsius (EUROPA, 2017). It should be noted that the Paris Agreement is a link between today's activities and the goals of anti-climate action until the end of the present century (EUROPA, 2017). Consequently, at the end of the conference, the agreement signed among governments which according to that they agreed that in a long-term plan, the Earth's temperature should not exceed two degrees. Also, the air temperature should be kept below 1.5 degrees. It is also hoped that developed countries will help developing countries to achieve these goals because they need more advanced technology, time and more capital to run anti-climate programs (EUROPA, 2017). Furthermore, this agreement is recognized and practiced by all parties and companies which belong to these 195 members (EUROPA, 2017). Finally, The European Union and non-EU developed countries, as well as other countries around the world, are strongly supporting the program in order to prevent and reduce greenhouse gas emissions and once the current targets are met, new goals will be reviewed and set in the future conferences (EUROPA, 2017). According to the text of the agreement, from the beginning of 2016, the implementation of the provisions of this agreement became mandatory (EUROPA, 2017). Perhaps this is the greatest achievement of the Paris summit that currently, the Paris Agreement signatories can make their own decisions individually and voluntarily on how to implement their programs in accordance with the rules of the Agreement (Streck, 2016). Hence, following the Paris Agreement, this

agreement became the focus of subsequent conferences (Streck, 2016). The first international conference after the Paris Agreement was held in Morocco (UNFCCC, 2020). The convention was the sixteen met of a series of UN climate change meetings and it was held to examine the rules and provisions of the Paris Conference (UNFCCC 2020). However, after the US withdrawal from the Paris Agreement, the prospects for implementation of the agreement were questioned. Nonetheless, other member states agreed in Morocco to fully implement all the provisions of the Paris Agreement by 2016 (C2ES,2017). Although the members were agreed on the implementation of the Paris Agreement from 2020, they tried to refine it and as a result, it was implemented from 2016 (C2ES,2017). Also in support of this agreement, a fund of \$ 100 billion will be raised annually by 2020, and the program will continue until 2025. In fact, the purpose of this funding program was to assist developing countries in implementing anti-climate change programs in accordance with the Paris Agreement (C2ES,2017). In Conference 2016, Developing and Monitoring the Implementation of Paris Agreement decisions were entrusted with a number of entities, including Ad Hoc (C2ES,2017) which is the group of certain Noteholders that was constituted prior to the Petition Date and which are signatories to the Plan Support Agreement other than Plainfield (UNFCCC, 2019). Moreover, In the year 2017, the UN climate change summit was held from 6 to 17 November in Bonn with the aim of examining the status of enabling the Paris Agreement's programs and policies (UNFCCC, 2017). The conference emphasized the use of clean energy in rotating grains as well as preserving natural areas such as islands and forests and invited members to pursue these goals (UNFCCC, 2017). Following this trend a year later in 2018, the UN Annual Conference was held in Katowice from December 2, 2018, to December 15, 2018 (UNFCCC, 2018). At the conference, they agreed to implement the rules set out at last

year's conference to advance the Paris Agreement (UNFCCC, 2018). The meeting also introduced laws to support the implementation of the Paris Conference Protocol by 2020. Accordingly, members are monitored for enforcing laws enacted to ensure that their obligations are fully implemented (UNFCCC, 2018). And finally, in 2019, another UN summit on climate change climate was held from December 2 to December 13, 2019, in Santiago (CABUZEL, 2019). It should be noted that all these meetings were held in cooperation with the COP. Conference of parties (COP). The most prominent group in creating rules to combat climate change (UNFCCC, 2019).

3.2.3 Public Reactions to Climate Change

Alongside these international activities, the reactions around the world have shown the awareness of people concerning the changing situation. (Louisville, 2019). One of the first reactions is naming a day called World Earth Day. It was first celebrated in the world on April 22, 1970 and to this day, it has been Commemorating every year as a sign of protest against human activities that destroy the earth's environment (Alina, 2017). Moreover, the people's activities around the world is holding protest camps. These camps are held peacefully with planning and man-made donations around the world. The purpose of these camps is to warn policymakers in different countries about the consequences of economic policy that threatens the environment. The camps were first held in 2005 after the 2005 G8 convention in Strasbourg, England (Zee, 2011). The camp organizers and participants are also trying to persuade everyone to live a sustainable life and encourage people to join the climate change protests (climateaction, 2018). Furthermore, reactions to climate change have taken the form of street protests in various parts of the world (Campaigncc, 2019). In 2015, before the Paris World Conference, a population of more than 600,000 people around the world held large demonstrations. Hence, this march was very important because it

coincided with the Paris World Conference (Phipps, 2015). In another example of a popular demonstration, in 2018, French people across the country protested climate change in various parts of the country (france24, 2018). Also in another demonstration in Canada, in 2019, thousands took part in a demonstration led by Greta Thunberg (Murphy, 2019) but perhaps one of the most significant and recent spontaneous public protests against climate change is the London protests that began in October 2019. In these gatherings, demonstrators block roads and congregate at key locations such as the airport and disrupt the activities of important city centers. Although it is unacceptable to create irregularities and violations in any situation, it is a form of strong protest by the protesters to make their voices heard (BBC, 2019). During the last popular demonstration on October 12, 2019, a mass of people in the United States organized an illegal gathering. In response to these protests, police arrested some of the prominent actors, including Jane Seymour Fonda who is one of the popular actresses (VOANEWS, 2019). All of this research, global action, and grassroots movements show the serious impact of climate change on environmental degradation and the health of the people (WHO, 2018).

3.2.4 Impacts of Climate Change

In terms of economic activity, the tourism industry is one of the sectors affected by climate change (Siddiqui, 2019). Always choose the place and time of travel is based on a number of factors and one of the most important factors is climate (Siddiqui, 2019). Therefore, assessing the climate in tourism is widely reviewed (Siddiqui, 2019). In fact, climate change in a geographic area has a direct impact on tourism activities in that region (Siddiqui, 2019) and this could have serious economic consequences for a particular geographic region that benefits from this industry (Siddiqui, 2019). Indeed, climate change has an impact on tourism demand (Torres, 2019) because tourist

attractions that attract tourists are lost over time due to the phenomenon of climate change and eventually the demand for travel to a tourist destination is reduced (Torres, 2019). For example, in areas where ski resorts are a tourist attraction, they can be vulnerable to climate change as the ski slopes disappear as temperatures rise or by the sea surface rise, coastal recreation areas are at risk of destroying (Torres, 2019). According to scientists, the cause of the most severe storms around the world has been climate change over the past few decades (C2ES,2019), Based on the findings of scientists the heat caused by climate change increases storm speeds by up to 11%. In the meantime, these storms increase the precipitation level and, as a result, increase the sea level of the oceans (C2ES,2019). According to the findings of two geologists, these storms put the coasts at risk of extinction (Vidal, 2014). And this is a serious alarm for the tourism industry because the beaches are a natural tourist resource and their destruction has a direct impact on this industry (Toubes, 2017). Another effect of climate change is the disappearance of snow cover at high altitudes Deutsche (Deutsche, 2018). To illustrate , According to a report by the Alps, which is one of the world's winter and recreational venues, it may not be the place for these activities by 2100 because 70% of the snow cover in this area has been reduced due to the abnormal heat of the air (Deutsche, 2018). For this reason, tourism activities in the cold regions may be reduced in the near future (Deutsche, 2018). Even, increased insecurity in tourist areas due to events such as a tornado, floods, and hurricanes could reduce demand for travel (tourism-embassy, 2014). Meanwhile, a scientist named Parsons divides the crises that threaten the tourism industry into three categories. First, there are phenomena such as cavities in the ground that are sudden and there are no preparations to prevent their consequences. Second, predictable events such as excessive rainfall and flooding that can minimize their impact on the tourism industry

by making many plans to protect travelers and finally, long-lasting crises such as air pollution that have long-lasting effects on the tourism industry (Rindrasih, 2019). Hence, governments and corporations should have preventive and emergency plans in place to attract tourists to tourism areas (Rindrasih, 2019). Northern Cyprus is one of the tourist destinations with many attractions (DAILY NEWS, 2017) But due to its specific geographical conditions, the tourism industry in this country is highly vulnerable to climate change (Relytech, 2019). In the next chapter, tourism attractions and the potential impacts of climate change on this country's tourism industry will be explored.

3.2.5 Climate Change in the Mediterranean

According to the latest reports, countries in the Mediterranean are at high risk of climate change (IUCN, 2020). The beautiful beaches are valuable tourist resources for these countries, and the damage to them will cause great damage to the tourism industry of Mediterranean countries because as the water rises, many beaches might be flooded or completely destroyed. Clearly, climate change is only a factor to make this problem occur (Enríquez, 2019).



Figure 5: Map of Mediterranean countries
 Source: www.worldatlas.com/atlas/infopage/medsea.htm

This graph shows the favorable or unfavorable air temperature for the Mediterranean coast which can be reduced or increased the number of travelers during the vacation. According to this graph 22 C is a cold temperature and 37 C is very hot. However, between 27 and 32 is suitable for tourism. What this chart shows is that the favorable air temperature is shorter than the cold and hot periods, which means that reception and visitor conditions are getting tougher and on the other hand, travelers will not feel satisfied (Dick, 2017).

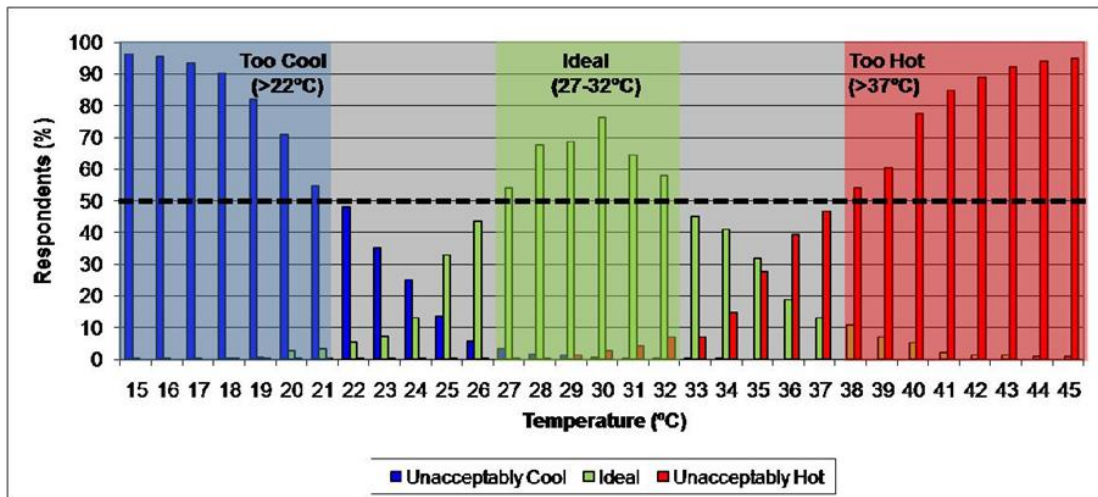


Figure 6. Rating of Temperatures for Beach Holidays
 Source: www.worldatlas.com/atlas/infopage/medsea.htm

The below map shows how the air humidity is rising due to overheating in Mediterranean waters. This is because as the air temperature rises, the water vapor increases, thereby increasing the moisture content. In the Mediterranean region This map shows that rainfall drops to 20 mm / K or - 4 %/ K. , while the temperature will increase by 20 % with approximately 50% greater than global warming. Hence, that means prolonging the heat season in the Mediterranean (Lionello, 2018).



Figure 7: Climate Change in the Mediterranean Region and Global Warming.
 source:<https://www.medecc.org/the-relation-between-climate-change-in-the-mediterranean-region-and-global-warming-scientific-paper/>

Chapter 4

CASE OF NORTH CYPRUS

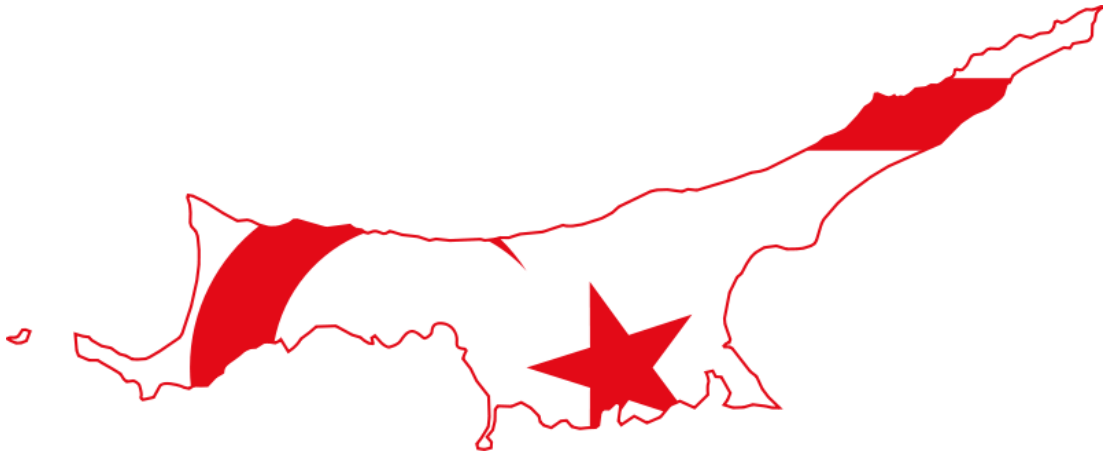


Figure 8: The Map of North Cyprus

Source: <https://www.shutterstock.com/search/north+cyprus+map>

4.1 General Background

The Turkish Republic of Cyprus which known as Northern Cyprus is an island country in the northern Mediterranean which with the declaration of independence of Cyprus unit was founded on 15 November 1983 (MFA, 2011). According to the latest census of 2017, the population of this country is approximately 320000 people who are living in a size of 3,355 km² (WPR, 2019) which is part of the whole area of the island of Cyprus and also with the south part is the third largest island after Sicily and Sardinia (KTIMB, 2016). This country is divided into six regions, including Lefkoşa, Gazimağusa, Girne, Güzelyurt, İskele, Lefke (SPO, 2018). Moreover, among these cities, Lefkosia is the capital of this country, which is the largest city and also is the most significant area in terms of political and economic (SPO, 2018). Furthermore, the

language of the people of Northern Cyprus is Turkish (KTIMB, 2016). The majority of people in Northern Cyprus are Sunni Muslims. However, there is a minority of Christian in the country (Yeşilada, 2009). The country's economy is based on services, which operate in four sectors including public services, trade, education, and tourism (studyinnorthcyprus, 2017) which supported by the Turkish Lira as the country's official currency (KTIMB, 2016). According to data for 2017, the total annual income of this country approximately was 3.685 billion (Besim, 2017). Northern Cyprus has a warm climate during the summer. It also experiences up to 500mm of rainfall in a short time of year with winter rainfall. But the average air temperature in most months of the year is 19°C (66°F), although it rises to 40°F (105°F) in the summer and drops to 21°C (75°F) in winter (KTIMB, 2016). It is noteworthy that service activities are increasing during the summer as many tourists travel to this country in this period of the year to enjoy the pristine nature and its beautiful beaches. On the contrary, during the winter, economic activity, especially services, declines as fewer travelers enter this country (KTIMB, 2016).

The below chart shows climate change between the years 1955 to 2017. This chart shows the amount of night and day air temperature changes. This chart shows how much the night air temperature has changed between 1955 and 2017. It also increases the rate of daytime air temperature for the same period. According to the chart in 1955, the freezing degree of water was 0 °Celsius to 32 °Fahrenheit. However, in 2017, these numbers of this chart represent a significant increase in indicates the degree of water temperature. Based on this, in 2017, the freezing degree of water was 30 °Celsius to 86 °Fahrenheit. This dramatic difference reflects the abnormal increase in climate in northern Cyprus (Hikersbay.com, 2018).

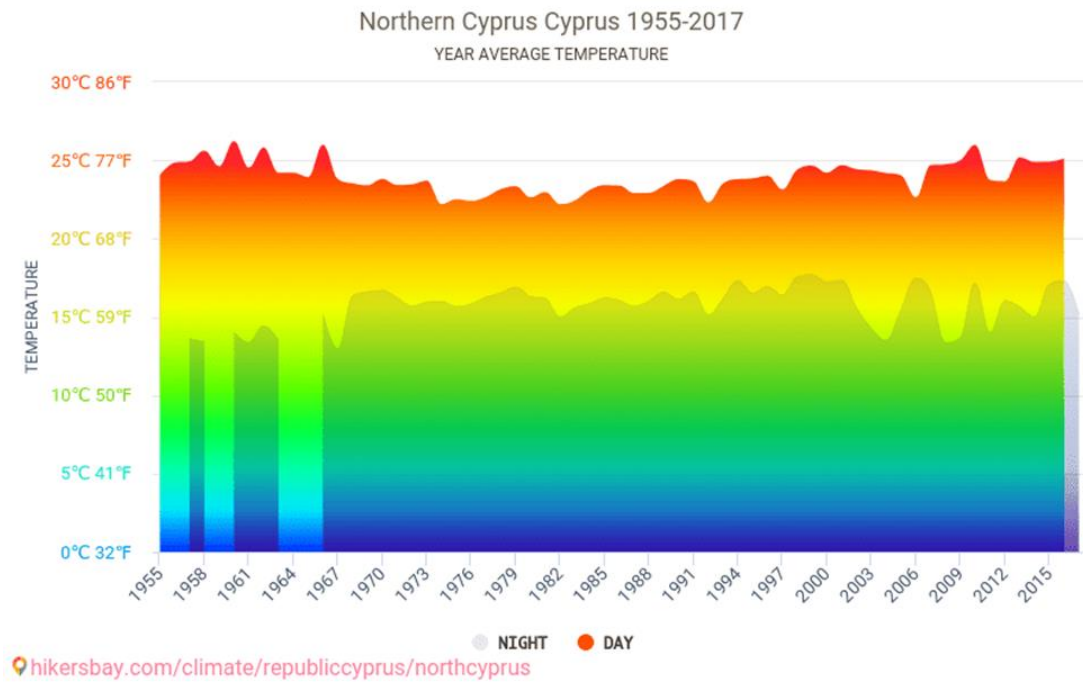


Figure 9: North Cyprus average temperature (1955-2017)
 Source: Hikersbay.com/climate/republic Cyprus/ north Cyprus

4.2 Tourism in North Cyprus

The impact of tourism on economic development is undeniable (Olya, 2019). North Cyprus is one of the interesting countries with many attractions that benefit from them to attract tourists (North Cyprus, 2019). Hence, it has helped modernize and improve the country (Ekici, 2018). These attractions have attracted much attention since the separation of Northern Cyprus because, after the separation of Northern Cyprus from united Cyprus, the tourism sector flourished as it is cheaper and travelers did not require a visa (Ekici, 2018). According to the report published in 2018 by the government of the Turkish Republic of Northern Cyprus regarding the economic situation of this country for a period of years from 2013 to 2017, the tourism industry of Northern Cyprus developed and improved (State Planning Organization , 2018). Primarily, the income from the tourism industry for 5 years from 2013 to 2017 has been increased every year. Accordingly, in 2013, the income of this country from

tourism was \$ 316 million. while in 2017, this income reached up to \$ 865 million (SPO, 2018). Also, as claimed by TRNC, in this period of time from 2013 to 2017, significant revenue has been generated from trading, wholesaling, retailing and food and beverage due to boom out the tourism industry in Northern Cyprus (SPO, 2018). According to official data, the value of business activities related to the tourism industry in 2013 was more than 1.5 billion lire. This means 1.4% of the real growth rate of value-added of the country's economy was belong to the tourism trade and by 2017, this number has risen to more than 2.9 billion lire which means 9.0 % of the real growth rate of value-added of the country's economy was belong to this sector (SPO, 2018). For this reason, a considerable labor force is needed to run this sector. Hence, The total labor force which was active in different sectors in northern Cyprus was more than 92 thousand in 2013, while this number reached more than 1200,000 million in 2017 which of these numbers, 12,814 were employed in the tourism sector in 2013 and this number increased to 16,699 in 2017 (SPO, 2018) which worked in various parts of the tourism sector such as hotels, restaurants, casinos, bars and travel agencies. (SPO, 2018). It is also worth noting that the total number of tourist accommodation facilities by 2013, was 130, up to 138 in 2017 (SPO, 2018).

The bottom table also shows a comparison of tourist trips to Northern Cyprus over the twelve months between 2017 and 2018 and between 2018 and 2019. According to this table, the total number of TC during the twelve months of 2017 exceeded 1300,000 while this number is slightly higher in 2018 to over 1500,000. However, the other foreigners who arrived to North Cyprus was more than 410.082. While, this number reduced in 2018 to 410.028. Consequently, in total 1734330 travelers visited North Cyprus. while, the total number of visitors in 2018 was increased to 1759625.

Table 1: Number of Arrivals by Months (TRNC excluded)

MONTHS	T.C.			OTHER FOREIGNER			2017	TOTAL	2018	%
	2017	2018	%	2017	2018	%				
<i>JANUARY</i>	85.102	97.305	14,3	20.242	21.783	7,6	105.344	119.088	13,0	
<i>FEBRUARY</i>	101.113	108.195	7,0	31.737	33.105	4,3	132.850	141.300	6,4	
<i>MARCH</i>	101.949	108.825	6,7	40.252	36.534	-9,2	142.201	145.359	2,2	
<i>APRIL</i>	111.236	121.905	9,6	35.119	33.919	-3,4	146.355	155.824	6,5	
<i>MAY</i>	121.019	113.104	-6,5	29.421	31.320	6,5	150.440	144.424	-4,0	
<i>JUNE</i>	102.804	110.425	7,4	31.575	29.852	-5,5	134.379	140.277	4,4	
<i>JULY</i>	113.045	119.565	5,8	37.736	35.983	-4,6	150.781	155.548	3,2	
<i>AUGUST</i>	105.107	111.635	6,2	37.593	35.512	-5,5	142.700	147.147	3,1	
<i>SEPTEMBER</i>	145.894	146.028	0,1	43.733	44.702	2,2	189.627	190.730	0,6	
<i>OCTOBER</i>	117.996	115.111	-2,4	46.645	41.235	-11,6	164.641	156.346	-5,0	
<i>NOVEMBER</i>	105.986	104.610	-1,3	33.892	33.436	-1,3	139.878	138.046	-1,3	
<i>DECEMBER</i>	112.997	102.712	-9,1	22.137	22.824	3,1	135.134	125.536	-7,1	
TOTAL	1.324.248	1.359.420	2,7	410.082	400.205	-2,4	1.734.330	1.759.625	1,5	

Source: mof.gov.cy/mof/cystat/statistics.nsf/services

4.3 North Cyprus Museums & Antiquities

Northern Cyprus has unique museums and antiquities which in this section of chapter four, we introduce these spectacular resources. Northern Cyprus has many small and large museums in various eras of the country (Elliott, 2018). Six of these museums are located in Lefkosia which comprising of The Darwish Pasha Mansion, Lapidary Museum, Lusignan House, Mevlevi Tekke Museum, Museum of Barbarism and National Struggle Museum (lonelyplanet, 2017). Also, among this number of museums, 11 of them are located in Gazimagusa which consist of Archaeological Site of Enkomi, Ayios Yuannis Church, Canbulat Museum, Kantara Castle, Otello's Tower, Ruins of Salamis, Salamis Royal Tombs & Museum, Sipahi Ay Trias Bascilica, St. Barnabas Museum, Akkule Mosque and Dungeon and Museum of

Namik Kernal (lonelyplanet, 2017). Moreover, 8 of them are located in Krynica (Girne) which including of Kyrenia Shipwreck Museum, Monument and Museum of Freedom and Peace, St. Hilarion Castle, Fine Arts Museum, Girne Museum of Folk, Bellapais AbbeyArt and Girne Archangelos Icon Museum (lonelyplanet, 2017). Furthermore, In addition, 4 museums are located in Guzelyurt which contain of Palace of Vouni, Ruins of Soli, Guzelyurt Museum of Archeology & Natural History and St. Mamas Church & Icon Museum and finally, two museum are located in Iskele which including of Apendrika Castle and Iskele Icon Museum (lonelyplanet, 2017). Besides that Northern Cyprus has four castles which historically are very fascinating. In addition, each of them offers a unique historical background to visitors (Visitnorthcyprus , 2015). These castles are consist of Buffavento castle, Kantara Castle, Kyrenia Castle and St Hilarion castle (Riverside holiday village, 2017). Additionally, northern Cyprus has three historical mosques which are very old places and they built based on ancient architecture which are contain of Selimiye Mosque in Lefkosa which built-in 1326 (mcw.gov.cy, 2015), Haydar Pasha Mosque in Lefkosa which built-in 14th century (North Cyprus, 2019) and Lala Mustafa Pasha Mosque in Famagusta which built-in 1328 (cypnet, 2014). Moreover, the North Cyprus coast is one of the tourism resources in attracting tourists. Moreover, alongside these beaches health and entertainment services are available. Also, cafes and restaurants are providing services to people (Riverside, 2017). This beautiful beach attracts many tourists every year during the summer (ktimb, 2016). There are seven beaches in northern Cyprus which welcomes tourists every year. This beach includes Acapulco Beach , Lara Beach, Magic Island Beach, Alagadi Beach, Escape Beach, Deniz Kizi, Mare Monte (Riverside, 2017).

4.4 Northern Cyprus Tourism Industry and Climate Change

Clean energy is produced through natural resources such as wind and solar energy. These resources are always available, but since they are not economically viable, most companies and sources of production prefer not to use them for energy production (Kassem, 2019). Northern Cyprus needs more energy than ever before due to population growth (Alayat, 2018) and because of the increasing of the number of travelers which visited northern Cyprus a year (Bryant, 2017). However, in addition to polluting energy, renewable energy accounts for up to 5% of total annual energy consumption. (Kassim, 2019) Hence, this indicates that Northern Cyprus is dependent on renewable energy sources with 95% of total energy consumption (Kassim, 2019). In Northern Cyprus, non-renewable resources such as fossils are being used to generate energy and are projected to increase the use of non-renewable energy within the next few years (Alayat, 2018). However, there is hope for greater use of clean energy in Northern Cyprus (Kassim, 2019). According to existing studies, wind speeds around different parts of northern Cyprus such as, Lefko, Ercan, Girne, Güzelyurt, Gazimağusa, Dipkarpaz, YeniBoğaziçi, and Salamis, are sufficient to generate power (Gökçekuş, 2019). However, before taking any action, it is important to consider how to use clean energy in daily life in Northern Cyprus. The only answer to this question is sustainable development of using energy in daily life by people in northern Cyprus (UME, 2019). Modernization of production sources and buildings to reduce the need for non-renewable energy. Promoting the use of solar power to heat homes, restaurants, and hotels as well as saving on water resources and the use of electric vehicles are also factors that can greatly impact on preventing climate change and air pollution (Bryant, 2017). Although these can have many impacts on the cleanliness of the air in Northern Cyprus, the problem of climate change and global warming goes

far beyond preventing its negative effects on significant items such as tourism in the whole of Cyprus, especially in North (Zachariadis, 2016).

In general, one of the effects of climate change is the increase in rainfall which has an impact on rising sea levels (Ruso, 2019). On the other hand, the eastern Mediterranean region is getting warmer and drier as the effect of climate change which also causes the raises the water level in the Mediterranean sea (Bryant, 2017) which is a serious threat to the island of Cyprus as one of the Mediterranean countries (Bryant, 2017). As the Mediterranean Sea rises, the coasts of this sea are in danger of being destroyed (Nunez, 2019) and even residents around the beach are forced to evacuate (C40.org, 2019) . In fact, climate change is causing a change in the demographic mix (iom.int, 2019) . As a result, population density increase in an area (Sirisena, 2017) and the impact of this population density would be the inability of officials and organizations to provide public services and assurance of security to citizens and travelers (iom.int, 2019). Also, environmentally, Island countries are at risk of climate changes more than other countries (Betzold, 2016)). As the level of sea rise, the vegetation would be destroyed as well (Mukul, 2019). Climate change also affects the vegetation and aquatics of the seas because by increasing the underwater pressure they would die (Nationalgeographic, 2019). On the other hand, many northern Cyprus coasts are in danger of being destroyed. As mentioned before, one of the consequences of climate change is the rising sea level. North Cyprus is located in the Mediterranean Sea and attracts many tourists with beautiful beaches. The rising sea level in the Mediterranean sea concerns that these beaches would go underwater and destroy a natural tourist resource such as Monuments around these beaches (Reimann, 2018). In another case, softening the surface of the islands due to excessive rainfall may damage the

monuments. Northern Cyprus has a fascinating monuments and has significant direct and indirect income from this tourist source (Reimann, 2018).

Chapter 5

METHODOLOGY

5.1 Introduction

Each research has a general approach that determines how to gather, analyze, provide the result on a particular topic (Wits Libguides, 2019). This chapter will explain in detail how the research was shown. Primarily, in this section, qualitative research is described as the research method of this thesis. Afterward, the way information is collected is reviewed and lastly, how to analyze the information obtained would be discussed.

5.2 Research Methodology

The current research was experimental and use qualitative research to collect the data by interviewing experts and managers and in general, those people who have involved tourism and the environmental sector in Northern Cyprus. Presently, qualitative research was chosen for this paper because the scholar was required to know more detail of the cases. Hence, this method was the best way to be more close to the respondents to get more information from them.

5.3 Inductive Approach

Inductive method design research from low to aloft information-driven approach or it is the way of researching a specific topic which other scholars seldom have been worked on it (Woo, 2017). Moreover, the lack of inductive research limit to the point of reaching the reasonable answers for many questions which are existing (Woo, 2017). Additionally, inductive research is based on new opinions which may or may

not be correct (Jebb,2017). Nevertheless, the investigation of a point is led by many knowledgeable scholars and in this way, the implicit forecasts are frequently built about the results of specific points (Jebb,2017). In fact, research-based on the inductive method is managing an opinion that can be given by people and finally and led to general extraction results from specific experimental data. Hence, the inductive method supports qualitative research (McAbee, 2017).

5.4 Qualitative Research

Qualitative research is determined as examining the occurrences in the environment based on the experimental information (Moser,2017). Furthermore, it makes a specification of the most important dependent on expositor and realistic inquiry (Anderson, 2017). In fact, this method gives a chance to get information from many people regarding a particular issue (Maher, 2018) because the result of qualitative research is according to the opinions, the real cases and ideas of the respondents (Nielsen, 2007). Moreover, this method can explore the problem according to the real situations in the community. Additionally, it helps the scholar to have broad visibility about the problem and judge based on the real evidence in the environment (Nielsen, 2007). Hence, qualitative research penetrates the depth of a problem and analyzes the data on the basis of objective observations. Thus, in this method of research, the researcher can look at the documentation and conclude with a problem that has received little attention (Carol, 2016). Furthermore, this method provides many ways such as semi-structure to interview people and have a deeper view of individual situations (Nielsen, 2007).

5.4.1 Semi Structure Interview

In a semi-structured interview, the interviewer raises general questions and discusses it with the interviewee so that he or she can reach important points in the conversation

(Doyle, 2019). The interviewer also reminds the interviewee of key points to convey to the interviewee. Hence, the interviewees do not deviate from the topic of discussion (Doyle, 2019). The most important benefit of this approach is the open-ended interview. This means that the interviewee can give his or her own opinion without any restrictions (Doyle, 2019).

5.4.2 Why Choose Qualitative Research?

The topic of climate change is a controversial topic that has received much attention and is one of the important topics in research for researchers (Philander, 2003). Researchers have conducted various studies on the impact of this phenomenon in different countries (Leal, 2018). However , there is limited research on the impact of climate change on the tourism industry (Siddiqui, 2019). Due to its specific geographical location, Northern Cyprus is widely affected by the effects of this phenomenon and since tourism is one of the main sources of income for this country, climate change is an important topic for research. However, less attention has been paid to it. Consequently, observing and capturing information directly was the best way for the researcher to do because the researcher's subject matter required to seek the views of experts and executives who were active in the field of tourism and the environment in order to seek discussion.

5.5 Characteristics of Respondents

5.5.1 Demographic

Demographics defined by age, occupation, nationality, race, education, and religion which play a central role in the policies of governments and organizations because it is the basis for management to make and run the plans for the next few years (Chappelow, 2019). However, in demographics of scientific research participants are selected based on the research topic (DeFranzo, 2019). In the interview section, twelve

individuals were interviewed from private and public companies, universities and private institutions. According to this, among the twelve respondents, five of them were from the public sector, one of them from the Non-Government sector (NGO) and six interviewees were from the private sector including three respondents from travel agencies and two of them were from hotels. Moreover, among the twelve organizations, six of the organizations were in Famagusta, three of the organization were in Kyrenia and three of the organizations were in Lefkosa. Furthermore, Their average work experience ranged from seven to fifteen years.

Table 2: Characteristics of Respondent

	RESPONDENT	ORGANIZATION	MALE, FEMALE	WORK EXPERIENCE	City
PUBLIC GOVERNMENT	A	Highways Famagusta Asphalt Construction Site	Female	15	Famagusta
	B	Environment Office Famagusta	Male	10	Famagusta
	C	Famagusta Office of Antiquities and Museums	Female	8	Famagusta
	D	Kyrenia Tourism Information Office	Male	11	Kyrenia
	E	Eastern Mediterranean University	Male	8	Famagusta
PRIVATE SECTOR	E	Mediterranean karpasia university	Female	3	lefcosa
	F	Travel agency	Male	6	lefcosa
	G	Travel agency	Male	9	Kyrenia
	H	Travel agency	Female	10	Famagusta
	I	Hotel	Male	5	Kyrenia
	J	Hotel	Male	7	lefcosa
NON GOVERNMENTAL ORGANIZATION (NGO)	L	MAĞUSA SURIÇİ ASSOCIATION (MASDER)	Male	8	Famagusta

5.6 Sampling

Sampling is a process where the researcher collects information from a specific population of a larger population (Tuovila, 2019). The methodology used to sample from a larger population depends on the type of analysis being performed, but it may include simple random sampling or systematic sampling (Tuovila, 2019) Hence, Many pattern types of choosing the respondents are obtainable for qualitative research. However, should be noted that choosing the right types of sampling method for collecting the data specifically if the case of research would be based on the surrounding environment of the respondents has to be chosen carefully. Because the information received has a great impact on the researcher's judgment, especially if the sampling method would be based on purposive sampling.

5.7 Purposive Sampling

In this type of sampling researchers rely on their own judgment when choosing members of the population to participate in their study (Foley, 2019). In this way the researcher according to their own knowledge of the purpose of the research selects respondents who have sufficient and useful information (Foley, 2019). In fact, the researchers use a purposive sampling method when looking at a specific group of respondents (Foley, 2019). Therefore, in this way, the researcher is purposefully looking for people who have relevant information about the purpose of the research (Foley, 2019) to be ensure of clear and accurate information is received (Foley, 2019).

5.8 Data Collection

Data collection is a way to obtain data and analyze it to achieve research results (QuestionPro, 2019). In data collection, depending on the subject and purpose of the researcher, the type of data collection is different (QuestionPro, 2019). In this research information was collected by interviewing people. Accordingly, out of the twenty

emails sent to individuals from different departments, companies, and universities involved in tourism and the environment, twelve agreed to participate in the interview who were from three different cities in Northern Cyprus which are Famagusta, Kyrenia and Lefkosa. Seventeen questions were asked from each which took a whole month to collect data. Finally, the result of the content of analysis was done to help the researcher understand what the respondents emphasized more to get a more accurate result.

5.9 Data Analysis

Data analysis is perhaps the most important part of a research (Kenneth, 2019) because evaluating the data is done in this part. Hence, it has a direct effect on the final judgment of the researcher (Kenneth, 2019). In fact, the goal of data analysis is to focus on the main point of information which interviewees emphasize more on them regarding a specific point of research. In fact, the goal of data analysis is to focus on the main points of information that respondents emphasize more on them regarding a specific point of research. Also, measuring the level of importance of a point compared to other points is another benefit of data analysis (Kenneth, 2019).

5.10 Content Analysis of Respondents

Among many ways of analyzing the data, the table of content is one of the useful ways to evaluate the answers of the respondents (Kenneth, 2019). Hence, it is used to analyze documented information which is provided by interviewees (Kenneth, 2019). With this technique, the researcher realizes the importance of the points which are repeated by respondents. Hence, the researcher can prioritize and analyze data based on the importance points which are more emphasized by respondents (Coe, 2017).

Table 3: Result of Content Analysis

Result of content analysis		
Themes	Sub-themes	Frequency
Awareness	people of Northern Cyprus are aware of climate change	7
	People of Northern Cyprus are not aware of this issue	5
Well informed	people of Northern Cyprus are not well informed	5
	People of Northern are not informe	5
Knowledge	People of Northern Cyprus don't have enough knowledge of climate change	7
	Not enough knowledge to make policies	4
Financial support	lack of financial support to run policies	4
	Lack of financial support to run programs	8
Renovation	Not rebuilding the water channel system to control water	6
	Not rebuilding the reads to control water	6
Recourses	Destruction of the historic building and museum	11
	The government does not protect the environment	12
	The government does not protect the environment	10
Policy	Climate change is not serious issue among policy makers	10
	There is no policies to protect tourism against climate change	4
Management	lack of well management	4
Incentive	lack of encouragement to attract people and private sectors	7
	No taxes for using solar power for people and private sectors	10
Sustainability tourism	The private sector is not sure of the positive impact of sustainability	6
	Subsector use solar power to produce electricity	3
Sustainable approach	lack of financial support for sustainability approach	8
	No sustainability approach	4

According to the information obtained from the interviews with respondents, eleven key issues were considered by respondents to be the main factors neglecting the impact of climate change on tourism in Northern Cyprus.

Awareness

Due to numerous trips to other countries, they are able to keep up with the news and activities of other countries in the context of climate change. It has also been considered that the citizens of Northern Cyprus have sufficient literacy to understand the climate issue in order to access education.

“ In general the level of education is quite high in Northern Cyprus so people are generally aware of the effects of or changes the global world so I think they do actually know about this climate change (Respondent D)”.

Contrary to the allegation, there is an argument that the people of Northern Cyprus were unable to understand the problem of climate due to the lack of information. Moreover, there is this argument that Cypriots were spending their time in recreation and travel to other countries because of their high welfare and financial ability. Hence, they don't notice their surroundings. Also, according to the respondents, citizens of Northern Cyprus are leaving the country quickly if they feel the danger of the consequences of climate change.

“ All people should be aware of climate change but in case of Northern Cyprus, I don't think so that they have enough knowledge about this issue. So I don't think so they really know what is it so still they need more time to be close to this issue because they don't know and they don't want to know what is happening around them (Respondent E)”.

“You know people in Northern Cyprus are very sensitive on what ever happen at the moment in the current situation. For example if the level of sea rise and their homes

would be treat by water, then they would look for a solution. I Mean, they don't think that they can do something to prevent of happening something uncontrollable. Therefore, in the future for they might take it serous because they would see that their life is under the risk because of the damages of climate change. Another reason that that don't take it serious is that they are very reach people. they have money so if anything happen, they don't care they just leave Cyprus and chose another countries for their life. Now if you look at the population of people in Northern Cyprus during the summer time must of them leave it for a few month to turkey or European countries and when the weather becomes good they come back so this means they don't take so one day they maybe go and no come back (Respondent: F)''.

Well Informed

In the second case, the respondents complained about the lack of proper information to the citizens. Accordingly, five respondents believed that although newspapers and internet are effective in raising public awareness, this level of information is not enough and the government should take more important steps.

“Since climate change become a serious issue in the world I have never seen even one poster or nay picture of climate change in the cities in Northern Cyprus for people. government in the media even do not talk about that and newspaper as well. so how people should be aware of this problem. yes they can see the interment but how many of people are interested to read something about that. they are like to see the post in the Facebook and spend their time in the cafes and restaurants and enjoy their life. This is a serious duty of government to aware people in school, in universities , in Medea, make conferences and invite people to come for it but unfortunately as we see

there is no reaction against this problem by government to make Cypriot aware of this issue (Respondent G)”.

On the other hand, another seven respondents claimed that the phenomenon of climate change is not an important issue among Northern Cyprus authorities because they focus on gaining profit as much as they can. Moreover, they prefer not to focus on that because they know that if people become aware of the impacts on this issue, they would be forced to take actions that require cost, Therefore, they prefer to make people unaware of the impact of this phenomenon on their life.

“The government know this people very well. they know Cypriots have everything to know about climate change. Of course they have some general information but they don ‘now the level of risk on climate change for Cyprus. this is the point the government never aware people about that because they know that if people know about that they have to spend more to make people satisfied which they don’t want (Respondent: H)”.

Knowledge

In another matter, there is insufficient knowledge among the people of Northern Cyprus of the phenomenon of climate change. Accordingly, four of the respondents argued that people in Northern Cyprus do not care about anything except their private life. Hence, they are not interested in this phenomenon.

“Cypriot have black of mind about climate change but for sure they could have more knowledge about this issue they would change their mind and care about that but unfortunately in the current situation no”(Respondent: E).

Another point which five of the respondents were focus on that was about the lack of knowledge among policymakers and managers to make sufficient policies against climate change. Many respondents argued that policymakers do not know how to make plans and use recourse against climate change. In fact, there is a lack of knowledge of management among policymakers to run suffiest preventive programs to control the impacts of climate change on tourism industry of northern Cyprus.

“No policies because they have no knowledge of renovating and sustainability development. Even they don’t want to improve their knowledge in this area. So how policies could be implemented in this situation against climate change” (Respondent: E).

Financial Support

Among other issues, financial problems are one of the most important issues that have a major impact on preventing the implementation of precautionary measures to protect the Northern Cyprus tourism industry against climate change. Respondents claimed that the North Cyprus government is unable to invest in climate change prevention programs due to financial constraints and it is only sponsored by Turkey because it is not recognized as a country. Also, EU grants Northern Cyprus government financial aid to rebuild monuments. However, due to poor management, they are wasted and spent these budgets on other programs.

“We just try to give more services to tourists because we have no budgets to change we hope that we can get some financial support from Europe but we are not sure . if we get we can do many things (Respondent :J)”.

“Turkey support us so there is a question if later on turkey does not support use what would be happen so you can see that we are not able to support ourselves so future of people in northern Cyprus and as the effect on that tourism in Northern Cyprus might be at risk (Respondent : D)”.

Also, many respondents mentioned policy makers could not run the policies because they have no enough budget at the moment to run the policies because if they want to run policies to protect the tourism industry, they need money to make changes, nonetheless, in the current situation they have no enough financial support for that.

“I think because of lack of financial support nothing. The policies could not be successful because they should pay for changes and run the programs. Maybe in the future they make some policies but at present no (Respondent: J)”.

Renovation

Renovations were among the items that respondents emphasized. They believed that Northern Cyprus could not withstand heavy rains due to its ancient texture and should make a new water channel to be able to control the water during winter time. Accordingly, they claimed that because of having unmodern water channels to control the rain all of the building are at risk because water damages their poor texture and destroys them, or the walls of monuments might get dandruff in duration of time. Hence, the government needs to make some changes and the sub-sector needs to do some renovation in its resources. However, there is no interest on both sides.

“Subsector for sure are looking for profit. They do whatever that could make money for them. one of their activities is using solar power which they try to us for electricity

because it is not costly but about other things such as protecting the environment or making some budget for renovation based on sustainability development no. no because there is no profit for them. so if they get support from the government for sure they would like to be involve. So far just using solar power because there is no tax for that but in overall is not enough (Respondent: E) ”.

Recourses

Northern Cyprus has unparalleled terrorist resources that attract many tourists, but these resources are at risk because of climate change. In fact, historic buildings and beaches are vulnerable to heat and cold, and as the trend continues, the prospect of the tourism industry sinks into obscurity. This was one of the problems that a number of respondents mentioned.

“I want you one day, just one day when raining come, just look at around you. You couldn't move. Why because of too much water. Where this water should go. It should go in the water channel but because there is no big water channel here it go to buildings and make them destroyed before maybe we didn't have this problem but know because changing weather we have a new problem and we are not ready for that. so you can see that most of the buildings are at risk. For sure when the old buildings have problem tourists don't like to come because they come to see something new. When there is no something new why they should come here . another thing is about beaches that have a same situation (Respondent: H) ”.

In the following discussion, respondents complained that the government was not taking the necessary measures to conserve these resources.

“No involvement. People in the government don’t do anything. They have natural protection department is a couple of people are there in an office and spend the time without doing anything and one of our situation that we are suffering from is the fact that the environmental ministry is under tourism ministry because the tourism minister they don’t have any kind of priority for environments. This is our problem (Respondent: C)”.

“As I told you before infrastructure in Northern Cyprus are not strong and modern and if they want to make changes on that they need money and time. of course if they start now they can do some changes but the problem is they feel satisfied with this situation. Recourses such as hotels and accommodation could be support by turkey but natural resources such as beaches and building no. I mean cannot buy natural resources so if it destroyed we cannot take it back so it might be effected on tourism (Respondent: F)”.

Policy

One of the cases that respondents strongly emphasized is the lack of effective policies to address the effects of climate change on the tourism industry. According to ten respondents, government do not want to spend money on necessary policies. Therefore it is not possible to execute the required policies.

“When we are taking about policies It means there is some points that we need to look. I mean need to know a problem to make a policy for that. Cypriot know that there is a problem but they don’t know that how to solve the problem. Why because they don’t have investigation on that. we know energy is very expensive in Cyprus so this is a problem so solar power is one of the best way to procure cheap energy because sun is

very strong here but is that the only thing no. but financially organization need support. government should support people for example using solar power is free government font get money from people for that. this is a kind of encouragement but to invest of producing this kind of energy is government support private sector. The answer is no. I mean to attract organizations and industries to invest in clean energy cuprous government have to support them for example by giving them good loan but so far as we know there is no such this policies here (Respondent: G) ”.

Also, the lack of attention to the effects of this phenomenon on the tourism industry by the government is one of the most important factors in the lack of policies and their implementation “*This is very unfortunate to say that we have no policies because government does not take it serious at all but I am sure when something happen they will think to do something. For example, if they see their profit is reduce and they cannot catch money from tourist then they think of doing something. I mean even if they do something, it just because they want to save their own benefit and they don’t cate about climate change (Respondent: B) ”.*

Management

One of the weaknesses of executive agencies in government is the weakness of management. In Northern Cyprus, there is no reaction to the problem until that problem occurs. This is very dangerous for the tourism industry, especially for environmental problems. In Northern Cyprus the use of renewable resources is very poor. Therefore, despite the natural resources of power generation such as wind and water, the country is not capable of such resources.

“Policies means we have to do something before something happen. Unfortunately here is different something should happen then we make a policy for that. in tourism is same. We should loss many tourists later then when we lost many profits because of unsafe tourism because of problem that I said. Then we will think to make policy . why because we have lack of management we don ’t make policy now because we think that nothing would be happen but it is near too happen (Respondent : L)”

In fact there is no percussions against the impact of climate change on tourism of northern Cyprus because of lack of management .

“I have not seen any percussions because of lack of management (Respondent: G)”

Incentive

Encouraging the private sector and the public to become involved in the use of clean energy is one way to protect the environment. In this regard, the North Cypriot government has taken an important step in this field by not taxing companies, hotels and domestic energy production.

“one of the encouragement is solar power because it is free but I think government can make people involve more than this by making some other policies such as supporting organizations to invest on clean energy like wind to produce electricity for hotels (Respondent: G)”

“I mean obviously climate change is effecting like water supply, sun energy or solar energy but one significant change we can see at the moment is the lot of more investment in solar power now in North Cyprus specially in big investment by hotels and now having some cleating big solar energy area now to try to reduce the cost of

electricity energy so there is a lot of more solar energy power being used at the moment but we have so much sun in the year so we can reutilized energy of the sun as that resource in maximizing so this is the only think that at the moment I can see that make changes on people that they are interested to use solar energy so because it is not costly people are more infested too us it and because government do not get taxes for that so it is a kind of encouragement to attract people about the water supply turkey support us so there is a question if later on turkey does not support use what would be happen so you can see that we are not able to support ourselves so future of people in northern Cyprus and as the effect on that tourism in Northern Cyprus might be at risk (respondent : D) ”.

Sustainability Tourism

Sustainable tourism is one of the most important and effective conservation of natural resources that is directly related to the prevention of damage to the tourism industry. First of all, the private sector in tourism in north Cyprus cares about profitability, and because tourism is cost-effective, there is little interest in it.

“I don’t think so they would be interested on sustainability tourism because they just think about profit. They don’t care about other issues so I think this is one of the big problem that our sub sector are not involve in saving northern Cyprus against climate change (Respondent: B) ”.

Moreover, the private sector that is responsible for implementing tourism development programs should be financially supported by the government to promote sustainable tourism. Because one of the concerns of the private sector is the concern of the profitability of sustainable tourism-based programs because private sectors such as

hotels pay particular attention to customer satisfaction and are concerned about the services that customers receive on a sustainable tourism basis.

“No. they look at their customer. They provide what ever that customer want. If weather is hot they give better Ac, if they feel cold they make the rooms hotter. Travel agencies don't cate as well because this job here is a kind of second job here because most of the people that have travel agencies they have another job as well. so if they couldn't gave money from travel agency they get money from other job so they don't care. So they don't really focus on sustainability tourism because they have other financial recourses to be survived (Respondent: I)”

Sustainability Approach

The sustainability approach depends on several factors. One of the important factors that was considered by the respondents was the factor of capital and financial support. Respondents believed that because of other costs, there was no money left for the sustainability approach except solar power that is useful for producing electricity and government invest on the that.

“Sustainability approaches need money and because we don't have enough money we cannot invest on that because we have many expenses (Respondent: J)”

“Just solar power. They do it well but just this. Nothing more. I mean they use solar power but It is not enough action for sustainability approaches (Respondent: G)”

Chapter 6

FINDINGS AND RESULTS

This section examines the findings obtained through interviews with respondents. The results are also presented based on the findings. In fact, this section attempts to present the results of the research based on the overall goals of the research by reviewing the information received.

First of all, the people of Northern Cyprus are somewhat aware of the problem of climate change due to their many trips to other countries and hearing the news, but this information is general and cannot serve as a basis for their accurate assessment of the impact of this phenomenon on their country. On the other hand, there is criticism that the people of Northern Cyprus do not care about their surroundings because of their high potential for traveling to other countries. Hence, if they feel threatened by the effects of this phenomenon in the future, they might leave the country and choose another countries for their life. Consequently, it can be concluded that the people of Northern Cyprus have ample opportunities to understand the problem but do not care about it.

Second of all, according to the findings, the people of Northern Cyprus receive some information through newspapers and virtual networks but are not aware of the depth of the problem and its consequences for their country. Nevertheless, officials do not seem to care about people's awareness of climate change because they think that public

awareness makes them expect the government to take the necessary measures to prevent the consequences. As a result, they have to spend money to implement preventive programs, Therefore, they prefer to keep people unaware of the problems of this phenomenon.

Third of all, There is limited knowledge about climate change among the general public because they are not interested in knowing about it. On the other hand officials do not have enough knowledge in management to avoid the consequences of this and to adopt and implement the necessary policies. In fact, they do not have enough knowledge in crisis management. As a result, the problem of climate change is not addressed.

Fourth of all, According to the findings, Northern Cyprus faces funding problems because it is not recognized as a country due to political problems and it is only Turkey that finances Northern Cyprus, although assistance from the European Union for the restoration and restoration of the scary artifacts. However, due to the weakness of financial management, these small funds are also wasted. Therefore, it can be concluded that financial problems and poor financial management that lead to insufficient oversight are important factors in not implementing policies to run programs to protect tourism industry of the effects of climate change in the future.

Fifth of all, Northern Cyprus is an ancient country but has not been able to make the necessary changes to the day's needs. One of the changes that is needed is the reconstruction of wastewater to control excess water because it cannot control the flow of water due to increased rainfall, Roads also collect rain because their width is not high, and as a result, water can damage the texture of the historical buildings.

Consequently, According to the findings no steps have been taken to rebuild important sectors and this is one of the threats facing the tourism industry in Northern Cyprus. Hence , continuing this trend can cause irreparable damage to the tourism industry.

Also, Tourist resources in Northern Cyprus are valuable resources that are at risk due to officials' neglect. Unfortunately, officials are not interested in preserving tourist resources against natural phenomena. North Cyprus is currently attracting tourists. So they do not pay attention to the potential dangers of these resources and jeopardize the future of the tourism industry. These resources, including beaches, need care to always be attractive and ready to attract tourists, but research shows that special equipment is not provided to them.

Also, policies are needed to protect tourism industry against problems , especially in times of crisis. On the other hand, implementing these policies is very important. According to the findings, the tourism industry in Northern Cyprus needs to have important policies in place to safeguard tourist resources, but these policies are either not implemented or not implemented properly because the government does not have the necessary capital to implement these policies. On the other hand, research has shown that policy makers are not interested in spending to implement the necessary policy because they are concerned about the high cost of implementing preventive cysts in implementing major changes to conserve natural and ancient resources.

Moreover, Management is another factor that has destabilized the implementation of major projects to protect the tourism industry from the effects of climate change. According to the findings, government executives working in the tourism and environmental sectors do not take the necessary measures to prevent the occurrence of

the problem . They actually start their actions when the problem is listed. One of the problems that have not yet been resolved are the reconstruction of roads and widening roads. According to the findings, this problem has caused a great deal of damage to historical resources, and despite financial support from Turkey and the European Union, no harmful action has been taken, as another problem is the poor financial management that is wasting these small funds and Instead of being spent on important projects, they are wasted in various forms. It is also weak due to poor management of natural resources such as wind and sun. Because of the fierce winds that can be used to generate energy and are very cheap, fossil fuels such as petroleum, the largest and most expensive, are the main source of energy in northern Cyprus. It is therefore concluded that management in Northern Cyprus is weak in the use of clean resources and in the implementation of important programs to preserve historical and tourism resources.

Furthermore, relatively the government of Northern Cyprus has been successful in encouraging people to make changes in the fight against climate change. Government investment and the encouragement of the private sector and the public to use the sun's energy to produce the energy they need have been effective in eliminating taxes.

Also, Research has also shown that private companies, such as hotels that host tourist services, are concerned about the consequences of sustainability because they fear that services based on sustainability can cause customer dissatisfaction. On the other hand, they are skeptical of the lack of government support for implementing sustainable tourism programs. But one of the most successful sustainability plans run relatively by tourism service companies such as hotels is the use of solar energy to generate energy because they do not need to pay taxes to the government for using solar energy.

Furthermore, The sustainability approach in implementing preventive programs for the conservation of the natural environment and tourism resources in Northern Cyprus is weak because there are insufficient funds to implement robust policies to combat climate change impacts. Although there is scarce resources, it is not possible to implement effective programs based on a sustainable approach due to the weak management of financial resources.

Finally, as a whole, Northern Cyprus has natural resources such as water and water. It also can make significant strides in protecting the tourism industry from climate change with the funds it receives from Turkey and the European Union, but not enough has been done for various reasons.

Chapter 7

DISCUSSION AND CONCLUSION

7.1 Introduction

This part is clarifying the relationship between the findings and the past secondary data which have been found by other scholars and reviewing the viewpoints of activists and their opinion on saving the tourism industry of North Cyprus against the impacts of climate change. Moreover, this part is including some recommendation for the government of North Cyprus and executive authorities. The research also seeks to make recommendations to other researchers interested in research, relieve them of the difficulties and obstacles of research, and provide suggestions to have better results. Hence, based on the instruction, this chapter is including of three parts which are discussion, conclusion to summarize the research findings and providing recommendations for other researchers.

7.2 Discussion

This research was an attempt to examine the actions taken to protect the Northern Cyprus tourism industry against the phenomenon of climate change. It also has a look at the problems created and the challenges facing the industry in the future. In fact, this research has attempted to address the challenges and risks of climate phenomena for the Northern Cyprus tourism industry. According to the research, the phenomenon of climate change is one of the major problems for the tourism industry that Northern Cyprus as a tourist country is touching the effects of this global phenomenon. But due to some issues, special attention has not been paid to the threat posed by climate

change. In fact, there are barriers that have prevented North Cyprus from protecting against the threat of climate change. This study attempts to evaluate the level of action taken in this area based on key measures needed to safeguard the tourism industry.

The study found that insufficient measures were not taken to combat the effects of climate change on the tourism industry. According to the findings, for various reasons such as insufficient credibility and weak management in the government, Northern Cyprus has failed to take significant steps against climate change. Also, the uncertainty of reflecting the changes required in the form of sustainable tourism to the profitability of service companies has made these companies reluctant to adapt to climate change.

At the end of the study, the researcher concludes that insufficient attention has been paid to the impacts of climate change on the Northern Cyprus tourism industry and the continuation of this trend is causing the industry and its related businesses to disappear. Due to insufficient attention to conservation of natural resources such as beaches and monuments as tourism resources to the impacts of climate change will cause tourism activities to decline.

7.3 Conclusion

Climate problems can have devastating effects on any environmental context (He, 2019). Hence, in the future we will see a variety of environmental changes (He, 2019). At the present time, the crisis of climate change poses a major threat to societies as it affects society, executive policies, and the economy in many ways (Kamarck, 2019). In fact, Climate change programs and policies can be adapted to best suit environmental conditions (He, 2019) and this is possible if the human understanding of climate change is on the right track (He, 2019). The study showed that there is no

proper understanding of the effects of climate change on the tourism industry from different directions in Northern Cyprus. In this study, the problems arising from the rise in air temperature were investigated and its impact on the world in different dimensions was evaluated. In addition, the actions taken at the global level and the difficulties of implementing globally defined programs were highlighted. The focus of this research has been on the impact of this phenomenon on the tourism industry and in particular its impact on the tourism industry in Northern Cyprus. Based on this research, we look at the actions taken in Northern Cyprus to preserve the tourism industry against the effects of this global phenomenon. In the end, the study concludes that, except for limited measures and policies, serious action has been taken to combat the effects of climate change on the Northern Cyprus tourism industry.

7.4 limitations and Recommendation

7.4.1 Recommendations for North Cyprus Tourism

This research, based on its findings, offers suggestions for better planning, implementing and promoting the necessary and necessary programs to protect the Northern Cyprus tourism industry against climate change. Primarily, the country needs a climate change organization that can work in the fields of physical, social, biological, health, and engineering (NAP, 2010). In the second place, The goals of the organization should be three-fold: helping to identify and identify the problem, to assist in decision-making, and ultimately to assist in the proper implementation of the programs (NAP, 2010).

Moreover, It should also liaise with international organizations to get help to identify and make the necessary decisions for immediate and preventive action (NAP, 2010). Also, an independent financial entity must be formed to support the implementation of

the program because the establishment of this institution can help to meet the financial needs of the organization more quickly to avoid wasting time in implementing decisions (NAP, 2010) and finally, human resources specialists in the fields of climate change needs to be provided to address the challenges created in a timely manner and address these challenges (NAP, 2010).

7.4.2 Recommendation for Future Research

First of all, because the type of research was qualitative, the researcher needed to interview government experts and managers in order to obtain reliable information, but despite the great efforts of many government departments, the information was not shared because they mentioned that the information was confidential and they were not allowed to share this information. As a result, this study presents its findings based on existing findings. Therefore, in future research, the researcher should be asked more questions. However, the questions should be more general to push the interviewees to explain more to get more information needed. Another limitation of this study was the reluctance of some government agencies to interview. Several public and private sources, including professors, refused to cooperate despite repeated requests. Therefore, it is recommended that researchers in future research devote more time to meeting more people. Another problem was the spoken language. Many respondents were unable to express what they were saying because of poor English, and the researcher tried to gain more points by speaking more. Therefore, it is recommended that other researchers use translators for discussion.

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APPENDIX

Do you think the people of Northern Cyprus are aware of climate change?

Do you think the people of Northern Cyprus are well informed about climate change?

Do you think the phenomenon of climate change is perceived as a serious issue by the people in north Cyprus?

Do you think people in Northern Cyprus are ready to change their lifestyles to combat climate change?

Do you think the threat of climate change is a serious issue among the policy makers?

Do you think climate change is affecting the tourism industry in Northern Cyprus?

Do you think climate change is affecting the resources of the tourism industry in Northern Cyprus?

In your opinion, do you think that in northern Cyprus tourism sub-sectors such as hotels and travel agencies are interested in sustainable tourism to overcome the impact of climate change?

In your opinion, public and private sectors are involved in various projects to mitigate the possible impact of climate change in north Cyprus?

What types of measures/policies have been implemented in regard to climate change outcome?

What types of incentives have been applied to encourage the residents, tourism organizations, and industries to involve in overcoming the challenges of climate change?

Has there been any research and investigation to monitor the climatic variations and its impact?

To what extent the ministry of tourism is involved in matters relevant to climate change?

Is government collaborating with educational institutions in regard to climate change?

Nowadays, governments at different levels (local, regional, and national) are taking precautions and preparing themselves how to overcome the challenge of climate change; what types of precautions have been taken in the case of north Cyprus?

One of the means to combat the impact of climate change is to apply sustainable approaches to various activities; have you initiated any approach in this regard?

North Cyprus is highly dependent on sun, sea and sand tourism; climate change can negatively affect this form of tourism. What types of measures and development policies are in place? For instance, in regard to coastal zones.