

## THE RED SEA AS TOURIST DESTINATION

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**Abstract.** Attracted by the rich marine life and favorable climate, tourism has become important for many Red Sea countries, with over 1 million tourists per year expected in the future. Extensive areas of the coastline have been developed to accommodate the increasing flux of tourists, especially in Aqaba of Jordan, the Jeddah coastline of Saudi Arabia and various areas along the Egyptian coastline. Many researchers have described the development of tourism on the Red Sea coast. But there are few publications about the possibilities of tourism development on the basis of water resources of the Red Sea. It is therefore very important to explore the possibilities of development of water tourism in the Red Sea. Through recent decades, significant advances in technology and the increase in international travel have made marine environments more accessible both in real and economic terms. Coastal and marine tourism has become a huge business that forms a significant component of the growing global tourism industry. The number of tourists attractions is not only determined by the capacity of the attractions themselves, but also by four other components: natural resources and environment; socially-economic environment; transportation; cultural resources. It discusses the concept of sustainable tourism development in the area, which leads to management of all resources in such a way that economic, social and natural needs can be fulfilled while maintaining culture integrity, essential ecological processes, biological diversity and life support systems. Travel and Tourism has less impact on natural resources and the environment than most other industry. The article contains the main Strengths, Weaknesses, Opportunities and Threats (SWOT) for water tourism in Red Sea. The SWOT approach is

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used to synthesize the results of the discussions and analysis of materials obtained in the study. SWOT analysis shows that the strengths outweigh the weaknesses and the opportunities outweigh the threats. There are three basic reasons why marine tourism, and tourism in general will continue to grow. Primarily, there is still a large potential for growth in the tourism sector, and the marine tourism sector as a key tourism component will naturally benefit from this growth. Secondly, the tourism sector will also benefit from improved communication and transportation technologies.

### 1. Introduction

A tourist destination is a city, town, or other area that is dependent to a significant extent on the revenues accruing from tourism. It may contain one or more tourist attractions and possibly some «tourist traps». Attractions are the key of tourism destination. Tourism attractions are varied in type, but can generally be classified into three main categories:

1. Primary natural attractions.
2. Primary human-made attractions.
3. Purpose-built attractions.

Primary natural attractions are naturally existent and are mainly comprised of nature attractions. Primary human-made attractions are not built for the purpose of tourism, but attract tourists. Examples of these can vary from historical monuments such as the pyramids, to ethnic groups such as Sahara Bedouin tribes. Purpose-built attractions are the only type of attractions that have been constructed to attract tourists, thus increasing supply.

The object of study is the Red Sea – an attractive tourist destination. The Red Sea is a semi-enclosed tropical body of water located between the Mediterranean Sea and the Indian Ocean, and is bordered by Egypt, Sudan, Eritrea and Djibouti on the west, and Yemen and Saudi Arabia on the east. Although the Red Sea is known for its natural beauty, with extensive corals reefs, it is also an important shipping route for the oil tankers and other ships traveling through the Suez Canal [1; 2].

Purpose of the study – the possibilities of tourism development based on the use of water resources of the sea.

The Red Sea is one of the world's top mass tourism destinations and tourist flows to this region are constantly increasing. The tourism trade

benefits from the quality and variety of the region's natural heritage and landscapes. The Red Sea is known throughout the world for the excellence of its coral reefs and associated marine life [1]. Their beauty and rich diversity is a principal reason for the Red Sea region's expansion as a major international tourism destination.

However, the development of water tourism in this region not described in scientific publications. The collection of data has become a necessity.

The aim of the study was to describe the features of various types of water-based tourism in the Red Sea. Its objectives are:

- to identify the characteristics of the Red Sea as tourist destinations;
- to describe the natural, historical and cultural, socio-economic conditions of the development of different types of water tourism in the Red Sea.

The list of many research methods: statistical, cartographic, SWOT-analysis.

## **2. Tourism resources of the Red Sea and coastal countries**

The Red Sea is a semi-enclosed tropical body of water located between the Mediterranean Sea and the Indian Ocean, and is bordered by Egypt, Sudan, Eritrea and Djibouti on the west, and Yemen and Saudi Arabia on the east (Figure 1). Although the Red Sea is known for its natural beauty, with extensive coral reefs, it is also an important shipping route for the oil tankers and other ships traveling through the Suez Canal.

The Red Sea has a surface area of roughly 438,000 km<sup>2</sup> (169,100 mi<sup>2</sup>). It is about 2250 km (1398 mi) long and, at its widest point, 355 km (220.6 mi) wide. It is the world's northernmost tropical sea.

The Red Sea is located in an arid region with extremely hot weather in the summer. The southern region is considered to be among the hottest regions in the world. The air temperature in the northern region is slightly lower than the southern region. The average surface water temperature of the Red Sea during the summer is about 26 °C (79 °F) in the north and 30 °C (86 °F) in the south, with only about 2 °C (3.6 °F) variation during the winter months. The overall average water temperature is 22 °C (72 °F). Today surface water temperatures remain relatively constant at 21–25 °C (70–77 °F). Rainfall in the Red Sea region is extremely sparse and is usually localized in the form of short showers. The annual rainfall is around 110 mm.

Sandwiched between the narrow continental shelves runs a deep trench that stretches from north to south for almost the entire sea area. The deepest region lies between 14° N and 28° N, with a maximum depth of 2,920 m. (Figure 1) These deep areas are still geologically active and have numerous volcanic vents, emitting hot, salty and metal-rich sea water.

Surface water temperature in the Red Sea vary seasonally between about 22 and 32 °C. The surface temperature generally declines towards the Bab-al-Mandeb, due to the influx of cool water from the Gulf of Aden, and also gradually decreases towards the northern region.

Salinity in the Red Sea is generally high due to high evaporation, low precipitation and the lack of a major river inflow. Salinity is usually lower in the southern region due to the inflowing waters from the Gulf of Aden.

Water renewal in the Red Sea is slow, and exchange with the ocean takes approximately 200 years for the entire sea.

With the exception of the northern part of the Red Sea, which is dominated by persistent north-west winds, with speeds ranging between 7 km/h (4.3 mph) and 12 km/h (7.5 mph), the rest of the Red Sea and the Gulf of Aden are subjected to the influence of regular and seasonally reversible winds. The wind regime is characterized by both seasonal and regional variations in speed and direction with average speed generally increasing northward.

The Red Sea coast of Egypt are the most attractive for tourists (Figure 2).

The total length of the Egyptian Red Sea coast is about 1705 km. Of this, 760 km is Red Sea coast and 945 km is the coastline of the gulfs of Suez and Aqaba. Some industries are located along the Red Sea coast, in Hurghada, Safaga and Quseir. Several urban centres have also been developed along the coast, including Suez, Hurghada and Sharm el Sheikh. Tourism in the Red Sea is a flourishing industry with ever increasing capacity, as the Red Sea lures tourists with its fascinating nature and climatic conditions.

The most extensive tourism development in the Red Sea coastal area has taken place in Egypt. Large sectors of the Egyptian coasts of the Red Sea, the Gulf of Aqaba and the Gulf of Suez have been developed into beach resorts.

It is estimated that the Red Sea coast and the Gulf of Aqaba will attract over one million tourists during the next few years. Hence, tourism development may lead to a serious threat to both the marine environment and the tourism

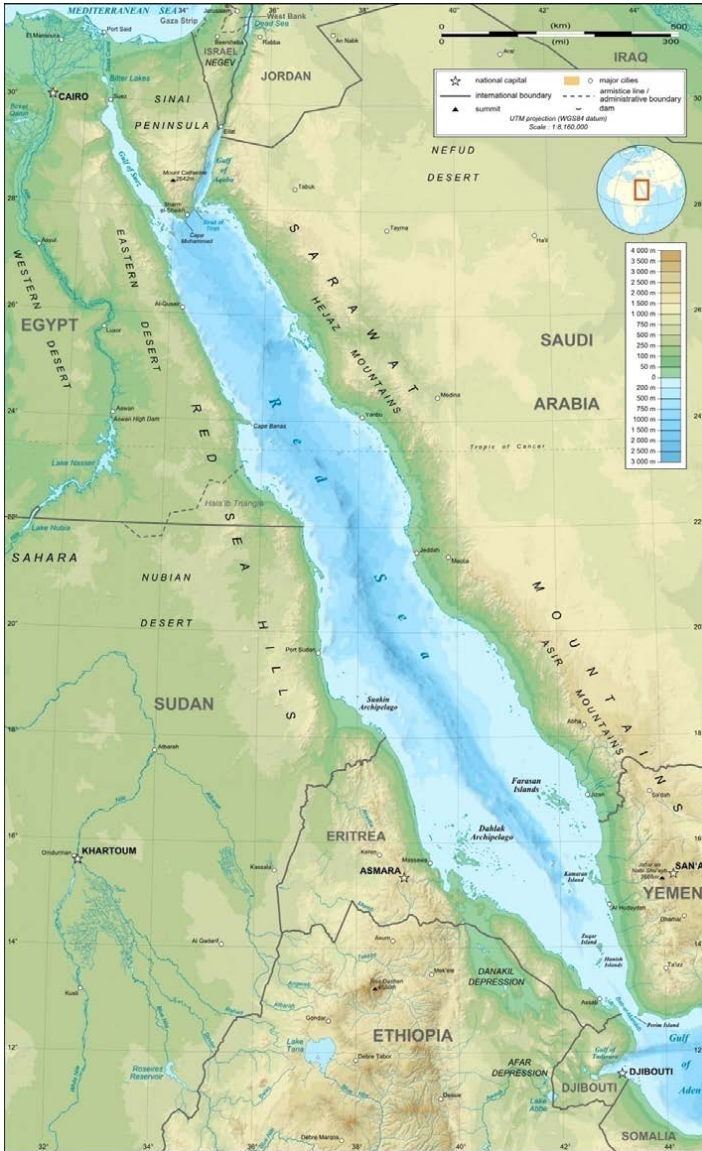


Figure 1. Bathymetric map of the Red Sea [13]



**Figure 2. The Egyptian coastline along the Gulf of Suez and the Red Sea [4]**

industry itself, if not planned and developed on a sound environmental basis with the effective enforcement of environmental regulations.

The mainland Egyptian coastline along the Gulf of Suez and the Red Sea is one continuous stretch of mostly beaches, but very different in many ways. Obviously, there are differences in the water within a confined gulf as opposed to the open Red Sea, but there are considerable differences in the facilities and some difference in the types of activities available. We can actually define three of the most popular regions as Ain Sukhna at the northern end of the Gulf of Suez, the Region around Hurghada and El-Gouna just about where the Gulf of Suez opens up into the Red Sea, and Marsa Alam, which is becoming very popular considerably south of Hurghada, but still some distance from the southern Egyptian border. However, all sorts of resorts, camps and other facilities, some of which are very important, can be found all along the coast, including such places as Safaga and Quseir. [4].

What is making the upper Red Sea coast so popular is its proximity to Greater Cairo, one of the largest cities in the world. The region of coastline

referred to as Ain Sukhna is, simply put, the closest beach area to this city. Many of the facilities along the coast at Ain Sukhna are residential compounds that mostly cater to Egyptian beach goers. Some of them do have hotels, though even many of these are more suitable to Egyptians. Nevertheless, this region has some specific advantages for foreigners as well, and so we can expect to see a growing trend of nice hotels. While most of the resorts at Ain Sukhna attract Egyptian tourists, there are at least several that are finding more and more favor among foreign tourists. Stella di Mare, a large resort compound with both family vacation units and two nice hotels, including the five star Swiss Inn and the four star PlanHotel, both of which are surprisingly reasonable in price. This resort has traditionally attracted a large contingency of upper class Italian tourists [4].

The resorts that begin at Ain Sukhna today stretch along the beach all the way to Zafarana, which is a small village most notable as a staging point for visiting the monasteries of the Eastern Desert. After Zafarana, there is not much until one reaches the region around Hurghada. The region around Hurghada, including the more upscale village of El-Gouna just to the north, and the fine resorts in the resort compound of Soma Bay to the south, is by far the most popular tourist beach area along Egypt's mainland coast, particularly among foreign tourists. Unlike many of the compound resorts along all of Egypt's coasts, Hurghada is a true, though small city with all the trappings and entertainment facilities one might expect of a beach resort anywhere in the world. More than 35,000 people now live in Hurghada, and there are over 100 resorts and hotels, making it Egypt's most popular resort town. One need not be limited to only the entertainment provided by a specific resort. Within Hurghada, there are any number of bars and restaurants, shops, including small malls and other tourist facilities. It also clearly has a small boat manufacturing industry.

Of course, as one of the primary beach destinations for foreign vacationers, there are hardly any activities found elsewhere in the world's beach resorts that cannot be found at Hurghada, with the possible exception of surfing. Along with jet skiing, skiing, parasailing, windsurfing, snorkeling, sailing and swimming, it is also one of the main scuba diving hubs for the Red Sea.

El-Gouna is very different [9]. It must be one of the most orderly and planned beach towns in Egypt, and while it offers a range of hotel accommodations, it is mostly considered to be very upscale. As a planned

resort village, most of the hotels are convenient to the downtown region, where there are independent bars and restaurants. And like Hurghada, there is also every imaginable beach activity, but there is also a fine golf course.

In reality, El-Gouna is not unlike a beach resort compound, only with many more hotels and a wide range of facilities. It is a very secure area which is also popular among upper class Egyptians. In fact, it is considered a playground for Egypt's rich and famous, and often hosts concerts and sporting events. Like other resort compounds, there are also privately owned villas. Unlike many other resort compounds, there is a complete infrastructure, including an airport, a marina, a good hospital and even a fine school. They even have their own TV and radio station. All said, El-Gouna is one of Egypt's classiest beach destinations [4; 9].

South of Hurghada is a resort strip with hotels and resorts crammed along a stretch of beach for at least 20 kilometers. About halfway between Hurghada and Safaga is a small, low key beach resort used mainly by divers, though those with their own tent can also camp. This is Sharm al-Naga, and just a bit further south is Soma Bay which, in recent years, has probably become known for its golf course more than its fine beaches. It is a common getaway for Cairo's dedicated golfers, but at the same time, the Sheraton here has to be one of that chain's most beautiful hotels in Egypt. Soma Bay is really one of Egypt's early beach resort compounds, which includes private villas along with a new Hyatt hotel. Other hotels include the Robinson and as of now, a La Residence, though other hotels are expected to be built here. Like at Stella di Mare further up the coast, there is also a Thalasso Spa here as well. Soma Bay offers all the normal activities, including scuba diving, and also has its own small marina.

From this area south along the coast there are a number of «camps», usually with only rudimentary accommodations, which sometimes offer quaint beach vacations or are at times dedicated to scuba divers, mixed in with some very specific larger resorts areas, the most notable of which is Marsa Alam [5].

The first vacation destination of any size south of Soma Bay is Safaga, which is more of a port than anything else, though it attracts a substantial number of scuba divers. Safaga does have some nice accommodations, though not particularly world class, including one of the few Holiday Inns in Egypt. While many of the visitors to Safaga are mostly interested in



scuba diving, it is an excellent region for windsurfing and was, in fact, the venue for the 1993 World Windsurfing Championships.

South of Safaga, the next notable city is Al-Quseir, which has become more and more of a beach resort village, mostly specializing in scuba diving, but at the same time, has considerable historic significance. Located about 140 kilometers south of Hurghada, during ancient times it was known as «White Harbor», and it was from here that Queen Hatshepsut's expeditions to Punt set out for the Red Sea segment of their journey. The old port town of Myos Hormos, a Ptolemaic and Roman port engaged in trade with India is also here, about eight miles north adjacent to the Movenpick Hotel.

Al-Quseir, perhaps because of its history and the fact that it is not a modern invention of tourism, has a certain charm that is not present in many of Egypt's other Red Sea towns. It is dominated by an Ottoman fortress and old coral-block buildings with wooden balconies that surround the waterfront in the center of town. Here, the beaches are a bit less crowded than they are further north.

Again, while one may find some small tourist camps south of Al-Quseir, mostly completely dedicated to scuba diving, the next major tourist destination on the mainland Red Sea, and by far the most thriving one south of Hurghada, is Marsa Alam. Many of Egypt's Red Sea Coast vacations areas were only small fishing villages only a few years ago, and though Marsa Alam remained only a quaint tourist destination, only very recently it has taken off as an exceptional destination, probably due to its new airport [5].

Isolated though it may be on Egypt's southern coastline, its warm climate, particularly during the winter months, will likely see this area flourish in future years. Still further south is Shams Alam, which in recent years has been the southernmost tourist outpost along the Red Sea. This is really a very small village, with rudimentary but very acceptable accommodations and a nice beach. It is almost exclusively the domain of scuba divers looking to visit some of Egypt's less-frequented southern reefs. While Egypt's mainland Red Sea coast extends further south, not only are there no real accommodations, a special permit is needed to visit these areas mostly because of military installations.

So to a large extent, the eastern mainland coast of Egypt can be broken down into three parts. These include the upper region within the the Gulf of Suez, mostly around Ain Sukhna, which is currently dominated by domestic

tourists, but a growing number of foreign tourists, the main beach region around Hurghada, and the southern region which also caters to foreign tourists, but where the resorts are largely dominated by scuba diving enthusiasts (Figure 2).

Next, we briefly describe the tourist destinations in other countries of the Red Sea basin.

**Jordan.** The Gulf of Aqaba, access of the Hashemite Kingdom of Jordan to the Red Sea, is 180 km long and 5-26 km wide, with an average water depth of 800 m. The climate in the Gulf region is arid with an average annual rainfall of 25-30 mm and mean daily air temperatures from 14 to 32° C (January-August).

The hydraulic detention time of the water in the Gulf is very long, about two years. Hence, the pollutants that enter the Gulf will remain, with little dispersion, for a long time and consequently will have detrimental effect on the marine life and habitats. The Gulf is characterized by low siltation, high temperature, and high dissolved oxygen content, and a highly complex coral reef ecosystem. The coastline of the Gulf of Aqaba, Jordan, is 26.5 km long. Within this small stretch are the nation's only port, industrial facilities vital to the national economy, a growing tourist industry and a delicate marine ecosystem, which is increasingly threatened.

The town of Aqaba is at the northeastern tip of the Gulf with a population of 65,000 which is expected to increase to about 150,000 by the year 2020. Aqaba is the residential and commercial centre of the area and it is here that the hotels and tourist accommodations are located. Extensive tourist and urban development is planned for the next 20 years, that which will result in the significant destruction of key habitats and marine life and, consequently, will adversely impact on the tourism industry, if not planned and developed on an environmental basis with the effective enforcement of environmental regulations.

**Saudi Arabia.** The coastline of the Kingdom of Saudi Arabia is about 1840 km in length, accounting for 79% of the eastern seaboard of the Red Sea. Average rainfall in the coastal area is very low, less than 70 mm/yr along the broad coastal Tihama, 16 mm/yr at Al Wejh, 63 mm/yr at Jeddah and 63 mm/yr at Jizan. As the climate is extremely arid, much of Saudi Arabia's biological productivity is confined to a narrow coastal strip and originates mostly from habitats such as coral reefs, mangrove and seagrass

communities found in shallow embayments. An extensive survey on Saudi Arabian coastal resources has been conducted by MEPA, in collaboration with IUCN – The World Conservation Union and the results are published in a seven-volume series.

Significant development has taken place in the Red Sea coastal area, where, according to the 1992 census, 15.2% of the country's population of nearly 17 million live. Jeddah, the «Bride of the Red Sea», is a well-developed modern city of ancient lineage. The city, the main coastal city along the eastern side of the Red Sea, has a population of more than two million. Several recreational cities and centres have been developed along the coast that required intensive dredging and filling operations.

**Sudan.** The coastline of the Sudan on the Red Sea is about 750 km long, including embayments and inlets.

The average rainfall is generally low, about 36 mm/yr at Halaib and 164 mm/yr at Suakin. The Sudanese Red Sea coast is famous for its attractive, and mostly pristine, habitats, especially coral reefs. Three distinct depth zones have been recognized: the shallow reef-studded shelves of less than 50 m, the deep shelves of 500-1000 m, and the central trench of more than 1000 m, reaching a maximum depth of 3000 m, measured off Port Sudan city.

Sea surface temperatures of Port Sudan range from 26.2° to 30.5°C. In shallow and enclosed coastal waters, they may be higher. At a 150 m of depth the range is still 23.9°-25.9°C, and the minimum temperature is 21.6°C.

For the people of Port Sudan, the sea offers the main source of recreation: swimming, fishing and boating are popular. Because of lack of equipment, snorkeling and diving are limited.

**Yemen.** The Republic of Yemen coastline is about 2000 km long, extending from the borders with Saudi Arabia along the southern part of the Red Sea to the Bab El Mandab Straits, and then extending northeast along the Gulf of Aden to the borders with Oman.

The plain of Tihama is composed mainly of soft sediments, forming dunes. Only 1% of the coastline supports emergent reef structures. The marine environment in the Yemeni Red Sea coast is characterized by its wide diversity and rich coastal and marine habitats and ecosystems. About 130 species of coral reef have been reported in the southern Red Sea and Gulf of Aden. Mangroves and nine species of seagrass are considered to be important biological features of the Yemeni Red Sea coast.

The Yemeni coastline bordering the Gulf of Aden is dominated by rocky cliffs alternating with long stretches of littoral and sub-littoral sand along coastal plains. Some of the sandy beaches, notably Ras Sharma and Dhobbah (Ash Shihr) of Yemen, form major nesting sites for green turtles in the Region.

Because of cool upwelling currents, only 5% of the coast is lined with fringing reefs. Since reunification, Yemen now borders on both the Red Sea as well.

**Djibouti.** Djibouti, which lies, at the junction of the Red Sea and the Gulf of Aden, has an area of 23,000 km<sup>2</sup> and a coastline of about 370 km in length. The northern coast between the Eritrean border and Ras-Bir faces the narrow Strait of Bab al Mandab.

Most of the coastline of Djibouti lies along the narrow Gulf of Tadjourah, an east-west oriented trench with a maximum depth of 883 m. A shallow, but narrow opening separates it from the semi-enclosed basin of the Goubet al-Kharab, which has increased salinity and coral reefs of low species diversity.

The relatively high turbidity generally limits coral growth to the upper 15 to 25 m, although corals have been reported from depths below 35 m.

At the entrance to the Gulf of Tadjourah, north of the town of Djibouti, a large reef plateau forms the base of the islands of Musha and Maskali, which are surrounded by extensive coral reefs. The south-eastern coast between the capital and Loyada at the Somali border is rather shallow and sandy with several estuaries. This area lies in a zone of upwelling nutrient-rich water where coral reefs are poorly developed.

The coral reefs are mostly fringing. The reef edge presents variable width. Morphologically, around Musha and Maskali, the actual coral formations are ended by an active cliff, completely alive, reaching 15 m. Beyond this formation, the reef slope is covered by sand and mud.

The estimated population of the Republic of Djibouti in 2019 was about 973,560. There are three coastal towns in Djibouti, namely, Djibouti, Tagora and Obek. The population of Djibouti, the main coastal city, is about 603,900.

With similar conditions to those prevailing in the southern reefs of the Red Sea, the reef of Djibouti is very turbid. [10] On the south coast, close to the border with Somalia, the effects of upwelling nutrient-rich water begin

to be discernible in fish assemblages. Water there is very turbid and the reefs poorly developed. They support fewer species and lower abundances of reef-associated fish than reefs further north. Non-reef species are more abundant, however, and this area represents the main artisanal fishing ground in Djibouti.

### **3. Factors of tourism in the Red Sea destination**

The number of tourists these attractions can serve is not only determined by the capacity of the attractions themselves, but also by four other supply components: natural resources and environment; socially-economic environment; transportation; cultural resources.

*Natural conditions and resources* were partially described in the previous section. The best time to visit the Red Sea is March to May and September to November. In these periods, you enjoy warm days and your fellow tourists are mercifully away. The summer months are uncomfortably hot and humid, while winter days can be chilly especially in the evenings.

The thermal winds that once sped clippers to the East still bring thousands of migrating birds to the shores of the Red Sea, making it a paradise for bird-watchers. Today, the ancient ports are better known as some of the best diving and fishing resorts in the world. Here, you will find over 800 fish species, including the deadly stone-fish, the equally dangerous butterfly-fish, as well as surgeon fish, jellyfish such as the cassiopei, crabs that sometimes overrun the shore in the evening and some species of shark. Sunbathers relax on white sand beaches, or find shade in the mangrove lagoons that line the coast, while snorkellers explore the reefs. And the underwater wonder of the Red Sea remains a living tapestry of vibrant corals and exotic fish, waiting for you to discover its secrets.

Due to the physical circumstances described below, there is a small percentage of Red Sea near-shore waters that can be used and enjoyed—except for strolling along and viewing. Those few beaches, marsas or sharms that enable beach diving, swimming and moorage of pleasure craft must be treated as rare jewels and protected accordingly. Tourism centers and individual resorts must plan recreation options for visitors that respect these physical circumstances. Similarly, marina development in location not suitable for such uses should be protected [16].

Most of the coastline outside the Sharm el Sheikh and Hurghada areas is directly exposed to strong, prevailing northerly winds. Little protection exists against the forces of winds, waves and currents. On many days, access to the sea may be unpleasant and hazardous with the result that boating, swimming and diving can be frequently dangerous. This shapes tourism center and individual resort planning by necessitating that attention be given to alternative recreation opportunities such as providing more extensive swimming pools, inland waterways, dry beaches, walking and bicycle trails, active sports courts, etc. In some exposed locations, the wind will also impact visitor enjoyment on land as well as at sea and resort siting must consider measures to reduce its impact [16].

Most of the Red Sea coastline is fringed by a wide reef flat (in many places more than 500 meters). This reef protects the shoreline and beaches which would otherwise be directly exposed to high wind and waves. The fore reef and, in some locations, portions of the reef flat offer recreational opportunities, including diving, snorkeling, swimming and wading. However, when affected by wind, waves and current, the reefs can be dangerous to visitors.

The construction of jetties across a reef flat should be considered only in relatively protected areas, especially if access to boats beyond the fore reef is desired. In many areas, the rough oceanographic conditions prevent building a structure that could provide access to vessels beyond the fore reef. In other areas, important sea grass beds and fish nurseries might be impacted. And in others, the sheer width of the reef flat renders such structures infeasible.

Marsas are small bays that enable access to and from the sea. They are formed at the end of water drainage channels (wadis). Reef growth is interrupted by periodic flooding and transport of sand through these channels. The resultant marsa provides an opening to the sea without the need of crossing a wide reef flat. There are often good beaches in these locations and good diving opportunities.

Marsas also provide safe anchorage for diving boats and can be used for small marinas. Large marinas with full facilities are often best situated in the low-lying areas adjacent to the marsa (dredging and flood protection is necessary).

Sharms are similar to marsas, but usually smaller, with unbroken fringing reef bordering most of the coastline. They are also situated at the

head of wadis. Sharms frequently offer spectacular diving and can serve as boat anchorages if sufficiently deep.

Facilities that can often be installed in both marsas and sharms include: mooring buoys; swimming & demarcation buoys; floating pools for swimming; underwater walkways.

Along the coastline from Hurghada to Ras Banas, marsas and sharms are the only areas that offer protection from high waves and currents, however, there are only few of these natural features. As a result, the marsas and sharms will come under heavy pressure for diving and other recreational uses as tourism expands along the coast. Carrying capacity analyses and management plans will have to be implemented to control the extent of use of these features [16].

Sharks are a threat to the development of water tourism in the Red Sea. Scientists are investigating the attacks. Was identified, but not verified, several possible causes including over-fishing which causes large sharks to hunt closer to shore. Was identified tourist boat operators who chum offshore for shark-photo opportunities, and reports of ships throwing dead livestock overboard. The sea's narrow width, significant depth all combine to form a geography where large deep-water sharks can roam in hundreds of meters of water, yet be within a hundred meters of swimming areas.

Many areas with large shark populations have found that live sharks will generally bring in more money than sharks hunted for food. Shark tourism is an increasingly popular type of ecotourism that involves tourists observing sharks without harming them. Tourists can observe sharks from a boat, or from the water. Relatively dangerous sharks, like great whites, are typically observed from shark cages, while other sharks can be observed while scuba diving.

Shark meat is considered a delicacy in many parts of the world, and hunting these animals was once very popular. Areas with large shark populations, however, now appreciate that live sharks often bring in more from tourists than sharks that are hunted for meat. Shark tourism involves visitors observing the animals rather than hunting them.

The safest type of shark tourism involves observing sharks from a boat. During these trips, a tourism company will take tourists to an area with many sharks. Sometimes the sharks may be baited with decoy seals. Lucky

tourists may get a glimpse of a shark breaching, or launching itself out of the water [6].

The Red Sea is known for its spectacular recreational diving sites, such as Ras Mohammed, SS Thistlegorm (shipwreck), Elphinstone, The Brothers, Dolphin Reef and Rocky Island in Egypt and less known sites in Sudan such as Sanganeb, Abington, Angarosh and Shaab Rumi.

The Red Sea became a sought-after diving destination after the expeditions of Hans Hass in the 1950s, and later by Jacques-Yves Cousteau. Popular tourist resorts include El Gouna, Hurghada, Safaga, Marsa Alam, on the western shore of the Red Sea, and Sharm-El-Sheikh, Dahab, and Taba on the Egyptian side of Sinai, as well as Aqaba in Jordan and Eilat in Israel in an area known as the Red Sea Riviera.

The great conditions of the Red Sea also include good visibility, due to calm waters and increased light penetration resulting from its close proximity to the Equator. These factors make the Red Sea great for both the growth of underwater wildlife, and also great for diving to see this wildlife.

The water conditions of the Red Sea have helped to nourish more than 1200 species of fish, of which about 10% are native only to the Red Sea. These fish are supported by about 2000 km (1240 mi) of coral reefs along the coast. Among these reefs can also be found dolphins, turtles, and approximately 44 species of sharks.

As in other countries, the environment is the main base for the natural and cultural resources for attracting tourists worldwide. Coral reefs are therefore an important component of nature-based tourism and sustainable tourism is a crucial component of tourism strategy in Egypt. Almost 75% of tourism activity in Egypt was leisure orientated and mostly concentrated on the Sinai and Red Sea. Red Sea is considered to be one of the best scuba diving locations. The web site «Scubatravel» classifies 13 Egyptian diving sites among the 100 best dive sites of the World.

Yet another beautiful attraction in the Northern Red Sea is the Ras Mohamed National Marine Park. This is truly a gem of the Red Sea. Located on the southern tip of the Sinai Peninsula, only 12 km from the resort town of Sharm El Sheikh, Ras Mohamed was declared a marine reserve in 1983 to protect the stunning wildlife from the ruin of fishing and overdevelopment. The park contains the islands of Tiran and Sanafir, Shark and Yolanda Reefs, and many more beautiful formations. The area



is so rich in nutrients brought in by currents from either side of the Sinai, that underwater life is abundant, with barracuda, unicorn fish, batfish, and sharks. Jacques-Yves Cousteau even ranked Shark Reef as one of his top 10 dives.

A bit further south is Marsa Alam, a great diving destination. Marsa Alam enjoys pleasant water temperatures year round, with winter temperatures being about 24°C (75F), and summer water temperatures around 30°C (86F). Being located further south, Marsa Alam enjoys less pollution and crowds, making the water clearer, though in April and May visibility isn't at its best as a result of a seasonal boom in plankton. Overall, Marsa Alam is so wildlife friendly with its warm waters, its common to see bottlenose dolphins, spinner dolphins, sea turtles, sharks, and even a dugong. Life is so peaceful here, and so are the waters, it allows divers and snorkelers a great opportunity to experience the colorful coral and some its friendly inhabitants.

The coral reefs and their biodiversity in the Gulf of Aqaba (Nuweiba, Taba), South Sinai (Sharm el-Sheik within the Ras Mohammed National Park), the North (Hurghada, Safaga and Quseir) and South (Marsa Alam) Red Sea coast have made these two areas a world-privileged destination for diving tourists. Water temperatures lie from 20°C in winter to 27-32°C in summer. In a survey made in 2004 to determine the top motivations for foreigners to travel to South Sinai, the Support for Environmental Assessment and Management of Egypt, snorkelling and water sports came at the third place (with 33%) after Climate (82%) and Beaches (44%) and before good value for money (27%) and travel time (23%). Surprisingly diving came sixth and cultural and religious tourism (St. Katherine Monastery) and desert safaris all came down to the list. Interestingly however, tourists ranked coral reefs at the first place (73%) when asked about the most enjoyed aspects of their holidays, before climate (58%), beauty of landscape (35%), beaches (31%) and accommodation, services and food (26%) [10].

The Red Sea is blessed with natural beauty and astounding biological diversity. Coral reefs, mangrove forests, seagrass beds, salt marshes and salt-pans are distributed throughout the region. These unique habitats support a diverse range of marine life, including sea turtles, dugongs, dolphins, and many endemic fish species.

Coral reefs are mainly distributed along the northern and central coasts and decrease in abundance towards the southern region as the water becomes more turbid. The most extensive areas of coral reefs are found along the Saudi coast. While mangrove forests are scattered along much of the Red Sea coast, the main concentration is in the southern region, due to the soft bottomed substrate.

The Red Sea has several marine protected areas, the most well-known being the Ras Mohammed National Park at the southern tip of Sinai Peninsula, Hurghada and the adjacent islands in the Egyptian Red Sea coast, Sanganeb atoll in Sudan and the Farasan Islands in Saudi Arabia.

The Red Sea region is sparsely populated, and not more than 5 million people are estimated to live along the coast. The major industries in the Red Sea region include oil exploration, oil production, oil processing, manufacturing industries (fertilizers, chemicals, cement), tourism, fisheries and oil related maritime transport. The Red Sea is an important trade route.

Although the Red Sea region has remained relatively free of pollution, the environment is currently under increasing threat from a wide range of human activities. Also, in contrast to other regional seas around the world where most pollution comes from land-based activities, marine-based activities such as shipping and oil exploitation are becoming a significant source of marine pollution in the Red Sea. Major areas of concern are in the coastal industrial areas of the Gulf of Aqaba in Jordan, tourism areas on the Egyptian coast, industrial areas in the Gulf of Suez and in the industrial areas of Yanbu and Jeddah in Saudi Arabia.

Natural habitats, such as coral reefs, mangroves and seagrass beds, have been physically altered and destroyed through dredging and landfilling operations associated with urban expansion, industrial development and tourism, especially in Jordan, Saudi Arabia, Egypt, Sudan and Yemen.

On a minor scale, uncontrolled tourist activities have inflicted damage on coral reefs through boat anchors and insensitive divers.

Some living marine resources in the Red Sea are being over-exploited. For example, the catch of lobsters and strombids are rapidly declining and cuttlefish stocks in major fishing grounds have completely collapsed. Sharks are illegally exploited for the East Asian shark-fin market, especially in Sudan, Djibouti and Yemen. Internationally endangered sea turtles are

caught for their meat, oil and shells, and their eggs are taken from their nesting sites.

In the 1970's, the Arab League Educational, Cultural and Scientific Organization (ALECSO) brought together the countries bordering the Red Sea and Gulf of Aden to discuss shared marine environmental issues. The outcome of these meetings culminated in the signing of an international agreement in 1982, the Jeddah Convention, and formally entitled the «Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment». Subsequently, an official intergovernmental organization known as the «Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden (PERSGA)» was established in 1995 as an implementation body of the Jeddah Convention and is dedicated to the conservation of the coastal and marine environment. Since then PERSGA has prepared a Strategic Action Plan (SAP) for the Red Sea and Gulf of Aden, which was implemented as a major new environmental initiative in 1998 through cooperation from the Global Environment Facility and other international organizations.

The SAP mainly focuses on the following key issues, and progress will be constantly evaluated and monitored:

- Reduction of navigation risks and maritime pollution.
- Sustainable management of living marine resources.
- Conservation of habitats and biodiversity.
- Establishment of a regional network of marine protected areas.
- Support for integrated coastal zone management.
- Enhancing public awareness and participation.

***Socio-economic environment and transportation.*** Let us consider economic and social factors of water tourism in the Red Sea.

The Red Sea has since antiquity, been important for political and economic reasons. This long and narrow sea between Africa and the Arabian Peninsula acted as a link between China, India, Persia, the Arabian Gulf and Africa with the Mediterranean. The Red Sea contributed to the development of the Silk Road connecting China and Rome, through India. This road facilitated trade and cultural exchange between the west and China.

The Red Sea was key in the spreading of the Christian faith to Egypt and Ethiopia shortly after the death of Christ. St Mark brought the gospel to the Egyptians around AD. The isolation of the Red sea area in Egypt attracted

the first Christian hermits. St Anthony – a very devout Egyptian who sought spiritual salvation was attracted by the isolation and austere character of the region. He is credited with founding monasticism. The monastery built by his disciples in the fourth century AD lies at the foot of the plateau of Gebel al-Galala al-Qibliya.

Early routes usually were coastal in nature as navigators had to rely on the coastal landmarks. As the knowledge of navigation and mapmaking increased, shipping routes became less dependent on coastal landmarks and spanned to larger seas and ocean.

Pirates of Somalia – a threat for marine tourism (Figure 3). Piracy in Somalia occurs principally near the area of the Gulf of Adent south of the sea. Additionally, while the Oceans Beyond Piracy (OBP) paper alleged

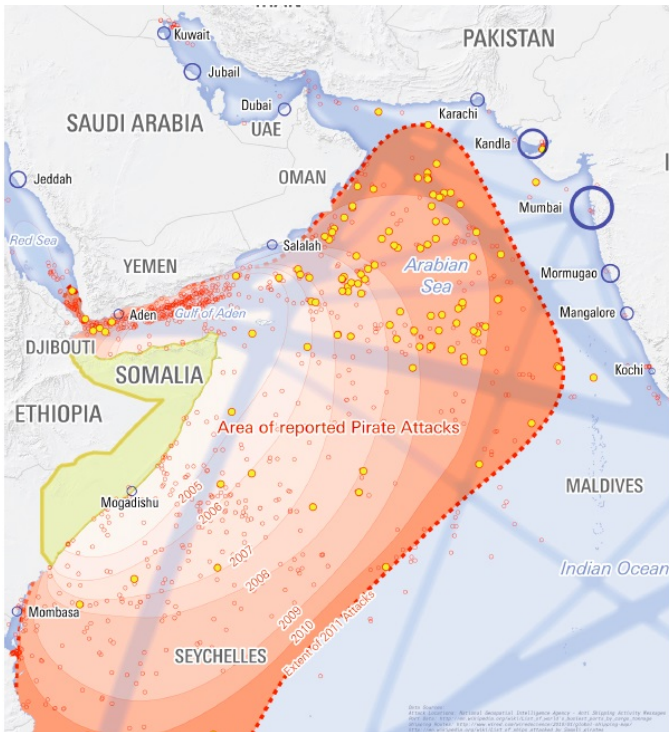


Figure 3. Map of areas under threat by pirates [11]

that pirate activity has had a significantly negative impact on regional economies, particularly the Kenyan tourism industry.

The Red Sea does not take significant place on the Mediterranean cruise shipping market [3]. The Mediterranean is the world's second largest cruise shipping market, representing over 23% of the annual cruise capacity. It can be broken down into four regions, the Western Med, the Eastern Med and the Adriatic, but the fourth region, the Southern Mediterranean, is sparsely serviced mainly due to political instability. Its adjacency to Europe provides the advantage of a large pool of customers with discretionary spending. It is a perennial cruise market with a summer peak season (several itineraries are not serviced in the winter) [14]. Winter cruises are usually moved to the Red Sea.

There are conditions for ferry tourism. El Salam Maritime Transport is an Egyptian ferry operator that operates a fleet of fifteen vessels on Red Sea routes between ports in Egypt, Saudi Arabia and Jordan. The company is the largest private shipping company in Egypt, and transports over one million passengers a year.

Routes operated by the Egyptian ferry:

- Suez, Egypt – Jeddah, Saudi Arabia;
- Safaga, Egypt – Duba and Jeddah, both in Saudi Arabia;
- Nuweiba, Egypt – Aqaba, Jordan;
- Hurghada, Egypt – Duba, Saudi Arabia.

There are special facilities for the development of varieties of tourism on the Red Sea coast. And it is not only traditional institutions for tourists. For example, in Sharm-el-Sheikh has special training base for divers – Red Sea Virtual Diving Center [8]

In the late eighties the number of divers coming to Sharm El Sheikh was growing as was the number of people coming over to learn to dive [12].

The 5 existing centres were geared to cater for the diver, but diving education was not really an issue. There was a gap that could be filled with a centre focused on people that would like to learn to dive. On August the 5th 1991 the idea became reality: the Red Sea Diving College opened as the first diving centre/school dedicated to the student diver. The Red Sea Diving College [7] was purpose built, starting with a blank piece of paper, enabling a design that would fit exactly to the needs of diving courses. Nowadays over 2000 PADI divers are trained each year, all the way up to instructor level. In the Red Sea there are many convenient places for diving [7; 15].

Diving the Red Sea also offers something for everyone. Not only is there plenty of nature to enjoy, but the further North you go, there are also many wrecks that are quite beautiful and worth a visit to. Among them are the Thistlegorm and the Kingston. Since the Red Sea has had ships traveling through it as an important trade route for centuries, some of these ships have gotten caught on rocks and sunk, and some have even been sunk during World Wars I & II. Needless to say, these wreckage sites offer sine stunning views, having been populated by some coral and fish in the years since their sinking.

***Way of life and socio-political situation.*** Cultural resources are an important attraction of the Red Sea coast. Way of life of local people influences the development of tourism.

Islam is the single most important influence on culture in region. And this applies even for non-adherents like Coptic Christians. Perhaps for this reason, crime is virtually nonexistent. The society is conservative, especially on issues related to women. Women are expected to be modest in dress and manner- no flimsy attire or loud talking and laughing, for example. The men are very happy with their position in this patriarchal society. The people are generally friendly, hospitable and very accommodating especially towards visitors. But visitors need to keep their religion to themselves – proselytizing is illegal here.

The Lingua Franca is Arabic. But there are two versions- classical Arabic, the language of the Koran and the colloquial Arabic used in the street. English and French are widely used for business and by educated urbanites. In terms of culture, is important in the Arab world. And books, movies, music and TV programs produced here are popular throughout the Arabic speaking nations of the Middle East.

The hotels in the tourist areas serve cosmopolitan fare. Though this is a Muslim country, imbibers of alcohol will not go thirsty. Beers, wines and other drinks are available in bars and restaurants, especially at hotels catering for tourists. But you should defer to local sensitivities and avoid drinking in daylight hours in the month of Ramadan.

Arguably the most significant event in 2011, from a historical perspective, was the socio-political upheaval seen in some countries of North Africa and the Middle East. This was the catalyst for what has become known as the Arab Spring, and which continues to cause concerns in 2012.

The spirit of social unrest, triggered by the Arab Spring, started to spread to other countries outside the Arab region in the second half of 2011. Negative public sentiment surrounding the financial sector spawned the ‘Occupy’ movement (initially in New York), while the UK experienced a frightening wave of rioting and street crime during August.

Images of social unrest, rioting, demonstrations and civil war were broadcast around the world, and almost instantly had a major negative impact on Travel & Tourism demand.

International arrivals fell by 32% in Egypt and 31% in Tunisia, with arrivals also down in neighbouring countries such as Jordan (-16%) and Lebanon (-24%).

Due to the impact of the Arab Spring, much tourism demand – especially from key northern European markets – switched back to southern Europe and, in particular, the western Mediterranean.

This provided a welcome financial boost after several years of mixed performance.

International arrivals growth in the region in 2011 ranged from 6% for Italy, for example, to 7% for Portugal, 8% for Spain, 9% for Turkey and 10% in Cyprus – exceptional results in light of the economic situation in Europe.

#### **4. SWOT-analysis of the tourism in the Red Sea**

SWOT analysis is a structured planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats.

The following table 1 contains the main Strengths, Weaknesses, Opportunities and Threats (SWOT) for water tourism in Red Sea. The SWOT approach is used below to synthesize the results of the discussions and analysis of other materials obtained in the study.

#### **5. Conclusions**

The marine environment has long been one of the most attractive settings for tourism. The Red Sea offers many opportunities for recreation and tourism purposes.

Thanks to a whole host of attractive beach resorts such as Eilat in the south of Israel or Sharm el-Sheikh in Egypt as well as a relaxed, fun-filled atmosphere, this region is highly popular for vacations that cater to a large variety of tastes. Whether you fancy relaxing on the beautiful beaches,

going for a refreshing dip in the azure water, exploring the wonderfully scenic desert hinterland or prefer to engage in more adventurous water sports such as kite surfing, you will find the Red Sea has it all. Thanks to its amazingly rich marine wildlife, including a 2,000 km stretch of coral reefs, the Red Sea is also an ideal spot for scuba diving and snorkelling.

Table 1

**SWOT-analysis**

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>– Seaside location.</li> <li>– Location near centre of Muslim culture.</li> <li>– Good climate in winter.</li> <li>– Well-developed infrastructure.</li> <li>– Good direct access to foreign markets.</li> <li>– Good international links.</li> <li>– Good hotel and restaurant infrastructure.</li> <li>– Outstanding public places with extensive public art.</li> <li>– Old City with traditional buildings.</li> <li>– Good shopping facilities.</li> <li>– Excellent range of good quality restaurants with good variety.</li> <li>– High percentage of repeat visitors.</li> <li>– Good value for money.</li> <li>– Relatively exclusive compared to other destinations on the Red Sea Coast.</li> <li>– Demand for inland excursions and soft adventure.</li> <li>– Demand for products with strong local cultural component (excursions, handicrafts).</li> <li>– Highly environmentally sensitive market. Interest in spending time (overnight) outside of the resort.</li> <li>– High preference for accommodation with character and high quality.</li> <li>– Prices are low for international diving and soft adventure standards</li> </ul>	<ul style="list-style-type: none"> <li>– Lack of a wide range of tourism products.</li> <li>– Lack of marketing information and promotional materials.</li> <li>– Uncontrolled development of some parts of the shore zone.</li> <li>– Lack of strong integrated planning and management.</li> <li>– Weak site plan control, environmental review and enforcement for protection of natural assets.</li> <li>– Restrictions female-travelers in dress and mobility may deter female visitors.</li> <li>– Extreme seasonality of visits associated with the Hajj.</li> <li>– Low expenditure on locally produced services.</li> <li>– Marketing is controlled by international tour operators and resort management companies.</li> <li>– High percentage of packaged tours (85%).</li> <li>– Not attracting higher value customer with more money and higher education.</li> <li>– Lack of integrated marketing approach.</li> <li>– Marketing is narrowly focused on only two segments: divers and beachgoers (coastal based recreation).</li> <li>– Image of the region is not diversified, too much focus on the Red Sea.</li> <li>– Diving industry is segregated from the rest of the tourism supply chain, particularly in Egypt.</li> </ul>



(End of Table 1)

Opportunities	Threats
<ul style="list-style-type: none"> <li>– Increasing demand based on growing domestic holiday market and on interest of international tourists to visit exotic localities.</li> <li>– Packaging interest tourism to better utilize a broader range of natural and cultural assets.</li> <li>– Selective marketing of new products to attract tourists compatible with cultural sensitivities.</li> <li>– Interest from large-scale investors.</li> <li>– Soft-adventure market is higher-yielding than the beach-going or diving market.</li> <li>– The European soft-adventure markets prefer activities concentrate on enjoying the dessert and the environment (mountains, monuments and cultural sightseeing).</li> <li>– Soft adventure markets appreciate encounters with local populations.</li> <li>– For the soft-adventure market, nature observation is not the focus of their activities but rather experiencing a sense of “place”.</li> </ul>	<ul style="list-style-type: none"> <li>– Regional unrest which may affect the international market.</li> <li>– Risk of social conflict between tourist and local values.</li> <li>– The Red Sea are not seen as “eco-tourism” destinations.</li> <li>– The Red Sea does not have as exciting of an image as Sub-Saharan Africa.</li> <li>– Average length of stay of soft-adventure markets is low at specific sites.</li> <li>– Soft-adventure markets do not have a preference for organized entertainment.</li> <li>– Soft-adventurers and eco-tourists are not likely to be repeat visitors to a destination.</li> <li>– Divers pay more for destinations that do not rely on charter flights.</li> <li>– Environmental certification systems have little or no recognition in the market.</li> </ul>

The Red Sea’s tourist revolution started with a few scuba divers, mainly from the UK and Europe, who discovered the fantastic underwater life and conditions along these coasts. The Red Sea is one of the top diving destinations in the world.

Jacques Cousteau called the Red Sea “a corridor of marvels” referring to its clear water and pristine reefs. The underwater jewels of the Red Sea lie just off the shores of Egypt, Sudan and Jordan. In Egypt, the seaside ports of Sharm El Sheikh, Hurgahda, Marsa Alam and others provide gateways to some of the best diving in the world.

With political changes and extension of marketing to non-divers wanting sun and beaches, self-contained resorts and many more hotels have sprung up producing a near continuous strip of built land to cater for the influx. This has brought employment to many, prosperity to some but it has also changed the landscape and put pressures on the environment. That change

in the environment could ultimately be enough to push the interested visitor elsewhere.

SWOT-analysis showed that the strengths outweigh the weaknesses. And the opportunities outweigh the threats. There are three basic reasons why marine tourism, and tourism in general will continue to grow. Primarily, there is still a large potential for growth in the tourism sector, and the marine tourism sector as a key tourism component will naturally benefit from this growth. Secondly, the tourism sector will also benefit from improved communication and transportation technologies.

Rhetoric aside, the sustainable growth of the tourism industry will depend very much on pragmatic development policies, which take into account the relationship between the industry and the surrounding environment.

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