# Red Sea Ecotourism: A Case Study on Sustainable Development

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# RED SEA ECOTOURISM
# A CASE STUDY

by

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## Abstract

Ecological tourism is one of the major expanding types of tourism worldwide. An ecotourist is a traveler interested in nature's beauty and life diversity while guaranteeing minimal impact on natural and cultural endowments and is willing to pay an economic value to satisfy those needs. Hence, ecotourism generates value added economic benefits to society while at the same time guarantees the sustainability of environmental resources for future tourism receipts. The Egyptian ecotourism industry constitutes a critical element of the country's path to sustainable development. The element of sustainability as a cornerstone of ecotourism is essentially important for the survival and well-being of environmental resources in Egyptian ecological resorts. To incorporate the notion of sustainability, this paper primarily conducts an environmental industry analysis on Egypt's ecological tourism as a case study to the implementation of clean environmental elements coupled with strong economic competitiveness. The approach undertaken supports the formulation of strategies to maximize economic returns, capture environmental market opportunities, and reduce negative environmental impacts especially on Egyptian coastal zones. Important elements for the enhancement of the Egyptian ecotourism industry are reached in terms of industry competitiveness and environmental conservation. Such elements are necessary towards the target of sustainable tourism development in Egypt.

***Keywords:***
Ecology, Tourism, Egypt, Environmental Policy, Sustainable Development

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## 1. Introduction

The development of ecotourism in Egypt has enormous economic gains coupled with immense environmental responsibilities. In a document published by the Egyptian TDA (Tourism Development Authority), the following important statement was mentioned:

> *"the dramatic natural features (of Egypt's ecology) – the pristine coral reef ecosystem, the rare ... marsas, sharms, and beaches, the powerful seafront, the ... coastal landscapes, the landforms carved out by wadis – are the principal attraction for visitors and provide the basis on which resort profitability depends. To some extent, damaging these features are inevitable impacts of human development. However, many negative impacts can be avoided…, through the application of sound planning and (efficient) operations measures".*

There is good potential to enhance Egyptian ecotourism and to expand Egypt's ecological tourism industry in the future. This paper discusses the global tourism trend and analyzes the international ecotourism market characteristics. Then, the main focus lies on the Egyptian ecotourism industry: its structure, characteristics, strengths and weaknesses, opportunities and threats, and future outlook. Finally, an outline of key elements for the enhancement of the Egyptian ecotourism industry is reached in terms of competitiveness and environmental conservation.

## 2. The Global Tourism Trend

Tourism is considered a key export opportunity across the globe. Tourism receipts account for $578 billion worldwide equivalent to 7% of global exports and 30% of world service exports. In the last quarter century, the average annual growth rate of ITA (*International Tourist Arrivals*) was 5% which outpaced the world's GDP growth rate of 3%. Hence, growth of tourism outpaces the average growth of the world economy. This does not mean that world tourism has reached its full potential. On the contrary, tight economic conditions in some major tourism generating markets, effects of the 9/11 attack with subsequent wars in Afghanistan and Iraq, the general perception of insecurity following a series of global terrorist attacks, and the outbreak of SARS and Bird Flu epidemics have no doubt put an economic break on the global tourism market.

It is important to note that there is a structural shift in the general purpose of tourists on a global scale. In the past, the main purposes of tourism were for recreation, leisure, and holiday traveling. The current trend, however, increasingly points towards psychological tourism including travel for religious, therapeutic, and health treatments. Consequently, there is a global trend moving away from traditional tourism encompassing historical and monument visitation towards more psychological and stress-relief visitations of which ecological tourism is a part. In particular, world travel trends have been discussed annually in *World Travel Monitor Pisa Conferences* which is a partnership between major international tourism associations including World Tourism Organization (WTO), IPK International, TIAA (Travel Industry Association of America), ETA (European Travel Commission), and PATA (Pacific Asia Travel Association). The recent Ninth Pisa Conference issued a "Global Travel Trends" report. Among the trends identified, the most important are:

- A shift towards domestic and intra-regional travel
- Shorter and more frequent holidays
- An increasing trend towards quick late booking and increased use of the Internet to buy/market travel
- Increased demand for customized travel at the expense of traditional tour packages
- Greater interest for travel involving an experience rather than a preferred travel destination
- Future demand for authentic experiences including local culture and closeness to nature

Such global travel trends have important economic implications: (1) willingness to pay for transportation is declining towards least cost alternatives, (2) demand is becoming more highly differentiated by customization of individual utility, (3) there is a time lag in the supply response to that demand, (4) learning experience and closeness to the environment are new necessary market components for the tourism industry, and (5) expenditure levels on travel are significantly lower but at higher frequencies.

On the other hand, regional outlooks differ according to destination. Table 1 represents the International Tourist Arrival (ITA) Estimation Rates (*Global Tourism Navigator*) for different regions including the Middle East. On average, Middle East tourism is expected to grow until 2012 by an annual rate of 5.8% with its share of World's ITA estimated to be 4% on average (from 3.8% in 2005 to 4.2% in 2012). Thus, Middle East tourism demand is estimated to be rather stagnant relative to world tourism activity in the near future, but such stagnancy is expected to be followed by a regional tourism boom if political stability is achieved.

According to *HVS International Survey*, Middle East tourism is currently stable, resilient, and absorptive to external shocks. Middle East tourism has a region wide occupancy rate of 66%, average room rates for quality hotels is $81, and revenue per available room (RevPAR) is $54, but the survey also cautioned that the region will be facing increased competition from other destinations such as Asia. In general, the tourism outlook in the Middle East is mixed and uncertain. Potential gainers are Dubai (Emirates) and Jordan, while Egypt and Saudi Arabia will most likely remain exposed to political instabilities in the region more than other countries.

**3. International Ecotourism Market**

Ecotourism is a nature based specialty form of travel defined by the *International Ecotourism Society* as "responsible travel to natural areas which conserves the environment and sustains the well being of local people". The World Tourism Organization (WTO) estimates that ecotourism generates 7% of all international tourism expenditures, and whereas tourism overall has been growing at an annual rate of 4%, ecotourism is increasing at an annual rate of 20%. The size of the international ecotourism market is estimated with a lower bound estimate at $40 billion (2004).

In addition, the International Ecotourism Society has constructed, based on surveys, a typical profile for an ecotourist traveler, summarized as follows:

- Age and Gender: 35-54 years old, 50% female and 50% male.
- Education: 82% college/university graduate
- Party Composition: 60% as a couple, 15% with family, 13% single.
- Trip Duration: 8-14 days
- Expenditure: willing to spend up to $1,500 per trip
- Necessary elements of trip: (1) environmental/nature setting, (2) wildlife viewing, (3) hiking or trekking.
- Motivations for taking next trip: (1) enjoy scenery, (2) new experiences.

Hence, the general pattern of a typical ecotourist is a person of middle age, university educated, does not prefer to travel with family but only as a couple, willing to invest in an elongated trip, active hiking/trekking is important for him, and likes to have a new experience in every trip.

The ecotourism market is a sub-component of sustainable tourism. Wood (2002) asserts that the ecotourism market "is primarily a sustainable version of nature tourism, while including cultural elements." Ecotourism as an industry aspires to achieve sustainable development results to the local community in which it serves. Table 2 demonstrates the relationship between the ecotourism market and sustainable development with economic impacts. As a summary, the economic impact of the ecotourism market on sustainable development is basically saving resources for future generations without comprising current economic opportunities such that cultural supply and local welfare demand constraints serve the purpose of local economic development.

The ecotourism market mechanism includes an active learning experience, conserves nature, generates local employment, is conducted by small businesses to serve customized small demand groups, and relies on infrastructure that has been developed in harmony with the environment. A successful ecotour, in general, must provide detailed information prior to the trip, offer environmentally sensitive guidelines during the trip, engage ecotourists with local people and active communication with nature, and provide a memorable experience after the trip. Table 3 demonstrates a comparison between a traditional tourist facility and an ecotourist facility.

## 4. The Ecotourism Industry in Egypt: Structure and Characteristics

Egypt has a tourism market share of approximately 25% in the Middle East and only 1% of the global tourism market. Tourism is the highest single export earner in the Egyptian economy reaching $5 billion which accounts for 22% of Egypt's total exports of goods and services. Its share in economic value-added, investment, and employment is 11.5%, 17%, and 15% respectively. This shows that Egypt has low factor productivity in this sector. The Egyptian tourism market is ranked 45$^{th}$ globally in terms of receipts and 14$^{th}$ in terms of potential demand.

We have to note that recent development in the Egyptian tourism market in terms of size and segmentation were actually heavily affected by many exogenous variables in terms of international events more than local trends. Besides the Luxor incident in 1997 and the 9/11 impact in 2001, there was the airplane crash in Sharm El Sheikh in the beginning of 2003 and the bombings in Taba and Nuweiba in October 2004. Recently, international events had more impact on Egyptian tourism than local events.

On the other hand, Egypt has faced a huge growth on the supply side with respect to the number of hotels. Egypt has a good climate in all seasons with a few days exception therefore there is guaranteed demand for hotel rooms all year round. Egypt has a considerable share of accommodation in relation to the Middle East region accounting for 32% and reaching a lower bound estimate of 238,974 room capacity.

Table 4 shows the top generating tourism markets by country of origin. Italians, Germans, and Russians have the highest share, followed by UK, France and Israel. Hence, Europeans constitute more than 50% of incoming tourists to Egypt. On the other hand, Saudi Arabians constitute only 6% while Americans hold a minor 3%.

The tourism market can also be segmented by domestic destination which shows segmented demand. The old traditional cities are losing ground for newly developed areas (PA Consulting 2003). These new areas include Matrouh, the Red Sea, South Sinai, of which Taba experienced the highest positive annual rate of growth of 28% followed by Sharm El Sheikh (18%) and Dahab (17%). Of these areas, South Sinai is considered the area of the highest demand. Cairo's performance has declined by 7%, Alexandria also declined by 6%, Aswan declined by 13.5% and finally Luxor by 15.6%. Hence, ecological areas are taking the lead in place of traditional monument-carrying areas. This is also reinforced on the supply side (TDA 2004). In particular, the highest share of tourism accommodation capacity has been South Sinai followed by the Red Sea. In those areas, tourism accommodation capacity has grown at an average annual rate of 7% post-2000 which outpaces the rate of growth in current demand which is 4%. Thus, suppliers see an increasing demand potential in those areas. This means that the market push factor of ecological tourism has developed and expanded itself on both demand and supply sides more than the market pull factor in traditional historic areas.

In addition, recent steps were taken to enhance environmental tourism conservation including the following:

- Eliminating delivery by the motorcycle.
- Allocating non smoking areas in restaurants.
- Increasing the establishment of green hotels.
- Increasing protected areas and sanctuaries from 14% to 20% of the total country area.
- New protectorates were declared (Wadi El Gemal/ Hamata, Siwa, Samaday Dolphin Sanctuary, and the White desert).
- Egypt joined an international agreement to protect human heritage.

A complete SWOT analysis (Strengths-Weaknesses-Opportunities-Threats) for Egypt's ecotourism industry is given in Table 5.

The Egyptian ecotourism industry's potential is evident in Egypt's nice weather in environmentally sensitive locations nearly all year round. Egypt's endowment of natural resources especially along the Red Sea and Sinai constitute a major natural supply waiting to be effectively utilized. Even though there is huge demand for ecolodges along the Red Sea, such demand is faced by a limited supply. This comes from lack of social awareness of the importance of the environment to the economy, and to lack of sufficient risk-taking environmental entrepreneurs. The ecotourism industry in Egypt is monopolistically competitive as there exists a variety of supply with demand exercised by willingness to pay.

Differentiation between ecolodges must become a reality if the industry is to boom in the future. In addition, this industry can be a leading economic sector if management practices and good governance are applied. Yet, even if these conditions prevail, the industry is sure on a continuous competitive threat alert from Turkey and Asia.

## 5. Key Elements for Sustainable Development

Ecological tourism can be Egypt's leading sector. However, in order for this to be attained, competitive measures coupled with strict environmental policy guidelines must be implemented. These are summarized as follows:

A. Competitive Measures:

  a. *Pricing*: according to maximum willingness to pay (up to $1,500 per trip)
  b. *Differentiation*: highest degree but in clusters (customization)
  c. *Segmentation*: according to income and age (target: couples in mid age)
  d. *Positioning*: mostly along Red Sea coastal zone (see Figures 1 and 2)
  e. *Marketing*: more Internet and visual communication (pre-trip information)
  f. *Factor inputs (labor)*: need training and certification
  g. *Factor inputs (land)*: need environmental assessment
  h. *Factor inputs (capital)*: lower capital per ecotourism facility (ecolodges)
  i. *Entrepreneurship*: more risk-taking

B. Environmental Conservation Measures:

  a. *Coral Reefs*: water temperatures 22 to 29 degrees Celsius, low sedimentation
  b. *Marsas*: dredging and flood protection is necessary
  c. *Wadis*: assure that infrastructure does not eat up wadi space because wadis can generate yearly groundwater in dry weather
  d. *Heritage*: Bedouin and village people's culture should be respected and they should be a lively target for employment and mixing with ecotourists
  e. *Protectorates*: almost 20 protectorates in Egypt (these are fully protected areas from any man made activity)
  f. *Tourists*: must be visually informed on the beach, inside the resort, etc. about specific environmental conservation measures (Hurghada can be taken as the lead)
  g. *Ecolodges*: use energy saving mechanisms including insulation, low flow showers, avoid ocean disposal, use covered waste containers, and use occupancy sensors. In addition, activities and design for typical ecotourist profile must be addressed.
  h. *Land*: utilize uplands behind the narrow strip of coastal zones, protect wildlife habitats especially birds, pedestrian and vehicle traffic must be functionally separated.
  i. *Audits*: conduct environmental audits based on eco-efficiency measures.

## 6. Conclusion

The global tourism trend is moving away from historical/monument tourism towards psychological/environmental tourism. The Egyptian tourism market is ranked 45$^{th}$ globally in terms of expenditures and 14$^{th}$ in terms of potential demand. Hence, ecotourism can become Egypt's leading economic sector contingent on good governance, sound management practices, more social awareness for protecting the environment, in addition to the formation of a group of risk-taking environmental entrepreneurs. Ecological tourism in Egypt is a virgin market that does not fully adhere to international ecotourism standards. Several key measures must be undertaken. Competitive measures include offering a new learning experience for every ecotour trip, building low capital ecolodges, supplying detailed pre-trip information particularly through visual communication, and targeting middle aged couples based on demand customization. Conservation measures include protecting coral reefs, marsas, and wadis based on strict environmental best practices, performing regular environmental audits on ecotourism facilities, better utilization of Bedouin and village heritage by mixing them with tourists or using them for employment, visually remind tourists of environmental conservation measures, and building energy efficient ecolodges.

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## Tables and Figures

**Table 1: World Regional Tourism (ITA: International Tourist Arrivals) Outlook, 2005-2012**

| | *2005* | *2006* | *2007* | *2008* | *2009* | *2010* | *2011* | *2012* |
|---|---|---|---|---|---|---|---|---|
| *Western Europe* | 356,051 | 374,940 | 392,914 | 410,760 | 429,192 | 447,402 | 465,612 | 483,822 |
| *Eastern Europe* | 92,038 | 97,957 | 103,533 | 109,491 | 115,239 | 121,032 | 126,826 | 132,619 |
| *North America* | 99,932 | 105,274 | 109,413 | 114,184 | 118,925 | 123,614 | 128,304 | 132,993 |
| *Caribbean* | 17,576 | 18,231 | 18,871 | 19,614 | 20,262 | 20,937 | 21,612 | 22,288 |
| *Latin America* | 19,820 | 20,690 | 21,559 | 22,472 | 23,342 | 24,224 | 25,107 | 25,989 |
| *Middle East* | 25,911 | 27,476 | 29,261 | 31,358 | 33,033 | 34,846 | 36,658 | 38,471 |
| *Sub-Saharan Africa* | 19,877 | 20,895 | 22,005 | 23,250 | 24,314 | 25,437 | 26,560 | 27,683 |
| *South East Asia* | 47,104 | 50,035 | 52,944 | 55,904 | 58,824 | 61,755 | 64,686 | 67,617 |

*Source: Global Tourism Navigator*

**Table 2: Components of Sustainable Ecotourism**

| *Item* | *Sustainability Impact* | *Economic Impact* |
|---|---|---|
| *1. Contributes to environmental conservation* | *Resources* | *Savings for Future Generations* |
| *2. Sustains the well being of local people* | *Social* | *Local Economic Development and Poverty Alleviation* |
| *3. Includes a learning experience* | *Education* | *Utility of Customers* |
| *4. Involves value-added activities in the tourism industry* | *Industry* | *Profits and Employment* |
| *5. Delivered to small groups by small scale businesses* | *Management* | *Market Structure and Industrial Organization* |
| *6. Requires lowest possible consumption of non-renewable resources* | *Welfare* | *Demand Constraint* |
| *7. Stresses local culture and participation* | *Culture* | *Supply* |

*Source: United Nations Environment Programme*

**Table 3: Similarities and Differences between Traditional Tourism Facility and Ecotourism Facility**

| *Categories of Comparison* | *Traditional Tourism Facility* | *Ecotourism Facility* |
|---|---|---|
| *Lodging style* | Luxury based on international standards | Luxury based on local customs |
| *Tourism focus* | Relaxation focus | Activity focus (active learning with nature) |
| *Type of ownership* | Group/consortium ownership | Mainly individual ownership |
| *Investment strategy* | High investment based on high guest capacity | Low/moderate investment based on customized guest capacity |
| *Pricing strategy* | Seasonal based on demand and ratings-based | Willingness to pay for enjoyment of a strategic location and related environmental activities |
| *Key attraction* | Facility and location near shopping malls, museums, etc. | Surrounding natural environment |
| *Food and Meals* | International cuisines including local produce and styles | Local produce and styles |
| *Marketing* | Usually marketing within a "chain" | Usually marketed independently |
| *Information* | Area or city information | Information on environmental activities close to nature |

*Source: Red Sea Sustainable Tourism Initiative (RSSTI)*

**Table 4: Egypt's Top Generating Markets by Country**

| *Country* | *Share %* |
|---|---|
| *Italy* | 16% |
| *Germany* | 14% |
| *Russia* | 13% |
| *UK* | 8% |
| *France* | 7% |
| *Israel* | 7% |
| *Libya* | 7% |
| *Saudi Arabia* | 6% |
| *Benelux* | 5% |
| *Palestine* | 4% |
| *Scandinavia* | 3% |
| *USA* | 3% |
| *Poland* | 3% |
| *Austria* | 2% |
| *Spain* | 2% |

*Source: Egyptian Ministry of Tourism.*

**Table 5: SWOT Analysis for Egypt's Ecotourism Industry**

| STRENGTHS | WEAKNESSES | *Competitive Position* |
|---|---|---|
| 1. Endowment of natural resource areas<br>2. Reasonable weather all year round in environmentally sensitive areas<br>3. Local price competitiveness<br>4. Available labor<br>5. Proximity to Europe | 1. Lack of social environmental awareness<br>2. Few supply of ecolodges relative to demand<br>3. Shortage of reliable transportation network<br>4. Increased taxation<br>5. Lack of environmental entrepreneurs | *Competitive advantage based on potential demand and resource input endowments* |
| **OPPORTUNITIES** | **THREATS** | ***Future Outlook*** |
| 1. Investment expansion in selected ecotourism areas<br>2. Training of personnel<br>3. International accreditation<br>4. Environmental audits<br>5. IT/Internet marketing<br>6. Elimination of practices that degrade the environment | 1. Competition from Turkey and Asia<br>2. Government bureaucracy<br>3. Hidden transaction costs<br>4. Middle East political tension and instability<br>5. Short term profit gains depleting valuable environmental resources | *Leading economic sector if organizational efficiency and management practices are enhanced* |
| ***Future Potential***<br><br>*Ecotourism growth and investment expansion in Red Sea and non-traditional coastal zone areas* | ***Risk Position***<br><br>*Medium risk in the short term with lower risk levels in the long term contingent on local governance and regional stability* | |

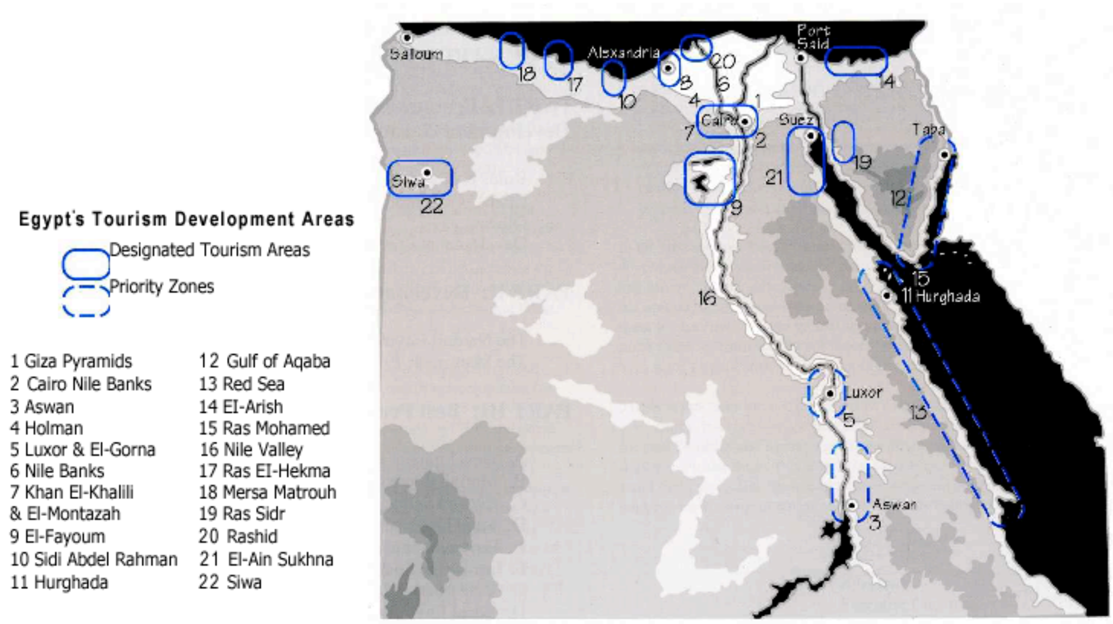


**Figure 1: "Egypt's Tourism Development  Areas", USAID**


**Figure 2: “Red Sea Ecotourism Development Map”, TDA (2004)**