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LIFE Red Sea Project

ENHANCING SUSTAINABLE TOURISM IN THE SOUTHERN
RED SEA REGION OF EGYPT

Part 2: Requirements to Define, Locate, and Deliver
Adventure Tourism Attractions in the Southern
Red Sea Region of Egypt

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Disclaimer

The Author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

TABLE OF CONTENTS

LIST OF FIGURES.....	ii
ACRONYMS AND ABBREVIATIONS	ii
SECTION I Defining the Adventure Tourism Product	I
Introduction.....	I
Characterizing the Southern Red Sea Region’s Tourism Experiences	2
Identifying Southern Red Sea Region Tourism Products.....	8
SECTION 2 Requirements for Delivering SRSR Tour Products.....	15
Introduction.....	15
Knowledge of SRSR Conditions and Resources	15
Support Services and Resources	21
SECTION 3 Tourism Development Program.....	33
Purpose.....	33
Define the Tourism Service Area	33
Contents of the Tourism Development Program	34
SECTION 4 Site Suitability Criteria.....	36
Introduction.....	36
Purpose of Site Suitability Criteria.....	36
“Gateways” to the Tour Products.....	42
SECTION 5 Suitable Sites for New Tour Products	44
Introduction.....	44
An Overview of the Four Sites.....	44
Access.....	44
Environmental Quality and Minimization of Impacts	45
Size of the Site	45
Compatible Adjacent Land Uses	45
Compatible with Local Communities	45
Compatible with Nomadic People	46
Seasonal Weather Conditions.....	46
Telecommunications.....	46
Gateways.....	46
Four Permanent Sites.....	46
Wadi Nakari Site.....	46
Wadi Ghadir Site	48
Wadi Sharm al Fokairi Site	49
Wadi Lahami Site	50

LIST OF FIGURES

Figure 1	4-Wheel Drive Vehicles are Suitable for the SRS' Rough Terrain	5
Figure 2	Tours by Vehicle Must be Properly Equipped for Emergencies.....	6
Figure 3	Shrines, Pottery Shards, and Petroglyphs Give Evidence of Early Human Settlements.....	7
Figure 4	Historic Treasures of the SRS Region.....	12
Figure 5	Map of SRS Region Attractions	14
Figure 6	Trees Native to the SRS Region.....	16
Figure 7	Indigenous Architecture of the Ababda	19
Figure 8	Map Showing Suitable Sites in the Southern Red Sea Region of Egypt.....	53

ACRONYMS AND ABBREVIATIONS

CDC	Community Design Collaborative
cm	Centimeter
EEAA	Egyptian Environmental Affairs Agency
km ²	square kilometers
KVA	Kilovolt Ampere
LIFE	Livelihood and Income from the Environment (project)
LRS	LIFE Red Sea Project
m	Meters
MW	Megawatt
NGO	Non-governmental Organization
PVC	Polyvinyl Chloride
RO	Reverse Osmosis
RSG	Red Sea Governorate
SFO	Single Family Occupancy
SRO	Single Resident Occupancy
SRS	Southern Red Sea (region)
SWM	Solid Waste Management
TDA	Tourism Development Authority
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USAID	United States Agency for International Development
WGNP	Wadi Gemal Nation Park

SECTION I DEFINING THE ADVENTURE TOURISM PRODUCT

INTRODUCTION

Adventure tourism products, such as heritage, cultural and nature based tours, are defined in terms of specific experiences and the ways that those experiences are delivered enjoyably and safely. These are the most important features that define a successful tourism product. The person who buys these tours wants a collection of experiences that are unique to a destination. The tourist also wants assurances that those experiences will be enjoyable, safe and located in an attractive area. And it is clearly in the best interests of the host region to not only provide those services, but to establish conservation management practices and development policies that will protect the resources and sustain this economic market. The world has numerous heritage and natural features that are promoted in a highly competitive market to attract tourists. In order to successfully compete in this valuable market, well designed products that offer very special experiences provide the host country with a significant competitive advantage.

Egypt enjoys a dominant presence in the heritage tourism market because of its world renowned antiquities. The Giza pyramids, Luxor, and the Abu Simbal monuments are obvious examples of this market advantage. Based on the growing popularity of the cultural and nature based tour market and the extraordinary resources Egypt possesses, considerable economic development potential exists. Sources of information demonstrating the growing strength of the culture and nature tourism markets include:

- Survey research conducted by the Smithsonian Institute and National Geographic Society between the years 2000 and 2007 reveals that heritage tourism is among the fastest growing, high value segments of the tourism industry.
- Surveys of the cultural and nature based tourism markets by the World Tourism Organization, The International Ecotourism Society, and others demonstrate that these are large, growing markets that attract high income persons.
- The HotelBenchmark Survey conducted by Deloitte & Touche shows that the Middle East hotel sector out performed both Asia and Europe during 2007. Egypt, most importantly, recorded the fastest growth. The Middle East recorded a 17 percent growth in revenue per available room. The authors of the report conclude: “This amazing hotel performance is bound to continue as analysts suggest that annual travel and tourism revenues could increase almost 90 percent over the next 10 years”.
- There is a large, economically valuable domestic market of Egyptian people seeking outdoor recreation. Excellent educational attainment and increasing personal income are contributing to this growing market. By example, the availability of GPS equipment, handheld radios, and the expansion of mobile phone service are facilitating the rapid growth and popularity of Egyptian safari clubs.

Based on the strength of culture and nature based demand and anticipated tourism growth, Egypt is well-positioned to capture a larger share of these tourism markets. This represents significant economic development opportunities. However, for Egypt to capture a larger market share of the cultural and nature based tourism markets it is necessary to:

- diversify its tourism products in order to attract new tourists

- understand that these are not mass market products.

In addition to profits, there are many benefits associated with a product diversification development strategy. Market differentiation leads to higher consumer satisfaction, higher return rates, and a mature business climate. Much of sustainable tourism is characterized by specialized businesses that serve niche markets. It is wiser to target the market segments that are now underserved than it is to tackle larger segments that are difficult to handle and already have a great deal of competition.

The unique cultural and natural resources of the Southern Red Sea Region (SRSR) provide Egypt with an economic development opportunity to define tourism products that can capture specialized markets. To gain those benefits the following must be accomplished:

1. Define tourism experiences for each type of heritage, cultural, and nature based recreation activity to be offered.
2. Identify the most appropriate sites, resources, and support services needed to deliver those experiences.

In summary, a cultural or natural feature tourism product should be defined in terms of the visitor's experience of that attraction. The purpose of this report is to assist both the Egyptian government and private investors in the creation, delivery and location of these special recreation experiences in the Southern Red Sea Region. Knowledge of the requirements for successfully implementing these tourism products will help diversify Egypt's tourism market with high value products.

Characterizing the Southern Red Sea Region's Tourism Experiences

An enormous amount of historical, environmental, and cultural information for the Southern Red Sea Region has been obtained from many years of research. Although this information describes numerous potential attractions that may appeal to specialized tourism markets, there is a need to organize the information so that it "tells the story" about those features. The ways in which information about those attractions is shared creates tourism experiences and identifies the several resources and most suitable sites needed to deliver those tourism products.

This section provides a description of the information required to characterize the adventure tourism experience and create tourism products in the SRSR. There are three critical elements that must be defined for all tourism products. These elements are described with direct references to the conditions that uniquely characterize the SRSR. The three elements are:

1. the expectations of the tourist prior to departure;
2. the on site tourism experience; and
3. memories resulting from the tourism experience.

Expectations of the Tourist

Before traveling to Egypt's Southern Red Sea Region, tourists obtain information from publications and a variety of visual media. This information creates impressions that define their expectations and influences their travel planning. For remote and less known destinations such as the SRSR, it is especially important to create well designed and accurate information that will produce realistic tourism expectations. Visitor satisfaction, tourist revenues, and a willingness to recommend the destination to others all depend on delivering recreation experiences that reasonably match expectations.

The hinterland of the Southern Red Sea Region needs to be represented as a remote, un-crowded destination where the tourist can expect to view mountains and deserts that contain natural and cultural features of national and international significance. Because the attractions of the hinterland are remote and rarely visited most tourists will anticipate that significant wilderness qualities characterize the region. The natural and cultural significance of the region also conveys the expectation that the region enjoys the resource protection of the government. In fact, many significant regions within the SRSR are officially designated conservation zones.

In order to realize visitor expectations, tourism products regarding the SRSR need to provide the following information:

1. Print and visual media need to be created that accurately describes the region. These materials must include lists of attractions with brief descriptions of heritage sites, natural attractions, environmental conditions, accurate maps, transportation access, seasonal weather conditions, and cultural values that must be respected. Sources for additional information need to be included in these promotional materials. Excellent published materials that describe the region in terms of both their attractions and their potential dangers. These materials would include accurate maps, weather conditions, lists of species to be seen, descriptions of heritage sites, and descriptions of marine conditions.
2. A description of the qualifications of the guides is vital for creating accurate expectations of the tourism experience. Specialized heritage, cultural, and nature tours must demonstrate that their guides have expert knowledge. The person who selects this type of tour will demand to know that the guides are well qualified. They will expect that they will learn about attractions they visit and that the information they receive is both true and interesting. Specialized tourism products rely on the guides “to tell the story” and create the on-site tourism experience.
3. Trip preparation information should provide lists of appropriate clothing and equipment to insure both personal comfort and respect for local culture. The SRSR can be extremely hot during the day, especially in the summer. The desert in the winter can also be very cool at night. These climate conditions can be easily accommodated with pre-travel information. Islam has traditions regarding modest dress that must be respected.
4. Descriptions of the modes of transport to and from the region as well as travel times within the region should be readily available. Any special travel scheduling requirements constitutes essential information for the prospective tourist. Schedules of commercial air transportation to Marsa Alam and Hurghada should be well known to potential guests and their travel agents. The quality of the vehicles used to conduct land tours, the health of animals used for safari tours, and the quality of the vessels used to conduct marine tours will be important to tourists.
5. If Egypt allows independent travel in the hinterland then information regarding visas, security passes, or permits for entry to sites needs to be provided. If tourists are permitted to enter the hinterland with guides and tour operators, then the tourist needs to know that they have to hire a guide for allowable entry to the sites they expect to visit. For a variety of security and safety reasons entry to certain sites in the SRSR is now limited. For tourist satisfaction, it is essential that proper entry documents are secured in order to deliver the advertised tourism experiences. Special requirements, such as security passes, or permits for entry into archeological sites, are essential information to be provided in order to ensure that the ecotourist has allowable entry to the sites they expect to visit. For a variety of security and safety reasons entry to particular sites in the Deep Range may be limited. For guest satisfaction, it is essential to be certain that the

proper entry documents are secured in order to deliver the advertised ecotourism experience.

6. Medical precautions and identification of medical facilities in the vicinity of the tourism experience are especially valuable to both the traveler and the liability concerns of the organization sponsoring a tour. By example, the vulnerability of medicines to destruction because of heat in the SRSR is a message that needs to be communicated to persons reliant upon prescriptions. Medical precautions and identification of medical facilities in the immediate vicinity of the ecotourism experience are especially valuable to both the traveler and the liability concerns of the tour operator. By example, the vulnerability of medicines to destruction because of heat in the Deep Range is a message that needs to be conveyed to persons reliant upon prescriptions.
7. Finally, contact numbers for answering questions and providing supplementary information will help to ensure that the traveler is well prepared for their journey and that the operator is prepared in advance to respond to any special needs or concerns. Telecommunication infrastructure in the hinterland of the SRSR is currently limited. Therefore it is necessary to establish a reliable communication system with guests to answer their questions and notify them of conditions that might affect their visit. Finally, contact numbers for answering questions and providing supplementary information will help to ensure that the traveler is well prepared for their journey and that the operator is prepared in advance to respond to any special needs or concerns. Telecommunication infrastructure in the Deep Range is currently very limited, therefore it is necessary to establish a reliable communication system with guests in order to answer their questions and accurately apprise them of environmental conditions that may impact their visit to the Deep Range.

Examples of SRSR tourism experiences

The complete tourism experience includes travel to and from the site; the ways in which the attractions are experienced; the accommodations, food, and guest services; compatibility with the other guests met during the trip; involvement with the local people; and introduction to the cultural values of the host community. In response to the request of the Egyptian Tourism Development Authority (TDA), the specific focus of this report is to identify new tourism products in terms of the ways that they can be experienced, how they will be delivered, and where they may be located.

The key to using SRSR attractions as tourism products is to define them in terms of experiences. A useful method for understanding this approach is by examples that are relevant to the SRSR. Based on heritage, environmental, cultural, and economic research conducted in the Southern Red Sea Region, a collection of tourism experiences are briefly characterized in this section. Detailed discussion of specific products and the resources required to deliver the products are presented in future sections of this report.

Environmental experiences

The Southern Red Sea Region is a place characterized by extreme contrasts. An enormous mountain desert where water is very scarce is located directly adjacent to a major sea. The wadis and mountainous parts of the region offer tourists opportunities to explore places that contain scenic beauty and rare animals, but also represent one of the largest and most remote wilderness regions on earth. For persons seeking recreational opportunities in extremely remote wilderness areas, the SRSR provides some of the finest experiences any where in the world.

For naturalists seeking unique adaptations of land and wildlife to severe conditions, the wadis offer stunning examples of rare and unusual life forms. The inventory of wildlife that either resides or migrates through the area provides an array of viewing opportunities for wildlife enthusiasts. The rare wildlife species living in the desert contrast sharply with the environment of the coastal zone. For persons seeking a profusion of life, the offshore fringing reef systems and the mangrove ecological communities offer a diversity and abundance of marine species that are world class.

The SRSR will appeal to artists, photographers and other persons seeking aesthetic qualities in nature. The SRSR offers experiences of dramatic landscapes, pure light, a night sky with an unimpeded view of the stars, stunning sunsets and sunrises, and places where the tourist can find solitude. These experiences can be shared by Egyptian photographers and artists who know the region's most attractive locations. The experiences can be further enhanced by the rich literature, poetry, and history of Egypt. These are the types of experiences sought by people who love wilderness areas.

Given the remoteness of the hinterland and the potentially hazardous conditions that may be found there, it is important for tourists to travel in vehicles that are especially designed for rough travel. If the recreational venue is hiking, then it is necessary to have well qualified guides leading the tours. The guides need to be qualified based on their achievement in language skills, natural history, cultural heritage, hospitality, and emergency services. If the travel is by camel or horse then these animals must be trained to carry persons who probably will not be familiar with handling these animals.

Figure 1 4-Wheel Drive Vehicles are Suitable for the SRS' Rough Terrain



Well designed land navigating systems and interpretive signage are essential for describing routes and enabling people to benefit from a competent knowledge of the sites they are visiting. Signage must reflect the language of both the local people and prospective guests.

In all circumstances and for all locations of the SRSR where tours are conducted it is imperative to have emergency medical, communication, and evacuation services. In most instances the visitor will travel by vehicles and tour operators should have emergency response equipment, supplies and skills. In other instances, these resources need to be provided at strategically located sites (caches) throughout the region in which tours are conducted.

Cultural and local community experiences

A tourist visiting the SRSR has the opportunity to travel numerous routes that have been used for thousands of years. These ancient routes provide the tourist with the experiences of visiting

ancient town sites, fortresses, roadways, sentry posts, tombs, shrines, mines, and other antiquities. They can see an amazing abundance of pottery, artwork, and stone sculpture that provide vivid evidence of the communities that existed in this region during the past 5,000 years. By viewing the ground in the mining areas a person can find small gems shining in the sun. Successfully delivering these heritage experiences requires sharing knowledge about the history and culture of those sites. These experiences will appeal to the huge tourism market interested in the ancient history of Egypt; the empires that competed for its wealth; and of the vast amount of knowledge that is continuously being discovered in the SRSR.

Figure 2 Tours by Vehicle Must be Properly Equipped for Emergencies



Similar to the natural history of the SRSR, the human history of the region also presents dramatic contrasts. The most obvious contrast is that following thousands of years of human use, the SRSR now has virtually no permanent human settlements. The very few people who now inhabit the hinterlands of the SRSR are nomadic people who sustain themselves by means of their herds of goats, sheep and camels, some trade goods, and training camels for sale along the ancient caravan routes.

The Ababda Bedouin people of the SRSR people can enrich the tourist experience with their sincere hospitality, their generosity, and their customs. By example, the practices of roasting coffee on coal fires, or baking bread in an oven buried in the ground describe how people have adapted to the severe conditions of the desert. Local art and crafts such as textiles, leatherwork, ornate silver jewelry may be purchased from local artisans. Local fishermen take pride in displaying skills with their nets and boats that enable them to harvest a bounty of diverse marine life. But it is most important that people: (1) obtain permission from the Ababda to visit; (2) respect local customs; and (3) do not further stress the scarce resources of this region. For all of

these reasons the visitor experience must be delivered by tour operators who have earned the trust of the Ababda and can communicate well with foreigners.

Figure 3 Shrines, Pottery Shards, and Petroglyphs Give Evidence of Early Human Settlements



There are many different foods in the SRSR that can provide eating experiences for tourists. A variety of meats, sea food, and an assortment of fruits and vegetables provide ample opportunities to experience unique food preparation techniques and local recipes. The availability of these depends on seasons and resource conditions.

In summary, there is a great opportunity to create heritage and cultural tourism products that allow tourists to view numerous ancient heritage sites and experience the traditions of tribes that have inhabited the SRSR for thousands of years. These products should be delivered to small numbers of persons willing to pay premium prices for the opportunity to experience antiquities and cultures that are rarely seen.

Memories of the tourism experience

For all tourist destinations the most important indicator of the tourism experience is visitor satisfaction. Tourists often express their satisfaction in terms of their memories of the tourism experience. If the memories of their travel are positive this will result in economic benefits to the host region. Visitor with positive memories of their experiences will also be motivated to recommend the destination to others and reinforce the market attraction of the region. Consideration of this fact is a vital part of creating a successful tourism product. Establishing and sustaining an excellent reputation depends upon visitor satisfaction.

There are several ways in which the tourism product can be designed to achieve the best possible memories of the tourist experience. Tourists use photographs, videos, books, publications, souvenirs, and friendships acquired during their holiday to evaluate their experiences. These can be supplemented by correspondence and consumer surveys that are forwarded to the guest after their departure. For the heritage and nature based tourist markets, guests appreciate newsletters that provide updates regarding environmental conditions or heritage site preservation. These updates can produce economic benefits for the destination. They also provide good reasons for the tourist to visit the destination again.

The availability of well written books that are richly illustrated provides guests with both a keepsake and something they can share with others. The sharing of these types of publications provides a potentially significant marketing advantage to tour operators in remote locations.

Another method for sustaining both the memory and the environmental integrity of the SRSR is to establish a conservation organization dedicated to sustaining the quality of the region. The creation of this type of mutually beneficial organization should be supported by tour operators in order to demonstrate their commitment to the conservation of the resources of the SRSR. Surveys of the heritage and nature based markets show that visitors prefer to use tour operators endorsed by reputable organizations.

In summary, there are significant advantages to Egypt, its tourism investors, and tour operators who accurately define tourism products in terms of experiences. The tourism product, defined in this way, identifies the tourism markets that should be targeted. This information will enable Egypt and its investors to identify specialized heritage, nature based, outdoor recreational, and educational markets that would be attracted to the region. Defining the tourism product as experiences provides the information needed to identify the facilities, operational, and support services required to deliver quality recreation services and accommodations.

Identification of the essential operational and facility needs required to deliver quality recreation services and accommodations.

Identifying Southern Red Sea Region Tourism Products

It is useful to identify SRSR heritage and nature based tourism products based on three major criteria. The tourism products should be: (1) relevant to the specific conditions and features of the SRSR; (2) they should be relevant to the tourism market; and (3) they should be relevant to the agencies responsible for the delivery of those products and the management of the region's resources. An extremely valuable method for accomplishing this selection process is to use the United Nations definitions for categorizing heritage. The categories briefly described below can be directly related to the unique features of the SRSR; they are well understood and targeted by the tourism market; and they are recognized and have the full support of the Egyptian government.

The United Nations Educational, Scientific and Cultural Organization, UNESCO, has devoted a substantial amount of research to determine acceptable definitions of heritage resources. In summary, they have classified three major heritage resources that include cultural, and natural, and archival. Cultural heritage resources are defined as man-made, natural heritage resources are exemplified by unique environmental conditions, and archival resources are documents.

Cultural resources are further defined in terms of both tangible and intangible features. By example, tangible heritage resources include all sorts of physical objects, such as structures, artwork, and diverse artifacts. These objects are defined as tangible cultural heritage resources. The intangible heritage resources consist of oral histories, customs, food, ceremonial practices,

song, reciting stories and poetry, and other human activities that demonstrate what is often called “living histories”.

Natural resource heritage is defined in terms of the environmental characteristics that make a place very unique. These features can include rare and unusual animals, plants, ecological zones, critical habitats, rock formations, wild rivers and waterfalls, natural landscapes, and other naturally occurring phenomenon. These special areas attract tourists who want to view, explore and learn about these sites.

The SRSR has many natural heritage attractions to share with tourists. Based on extensive research in the SRSR the location of wildlife habitats, vegetative zones, and geologic features that characterize the region are known. These attractions can be found throughout the entire SRSR. In some instances the Egyptian government has designated specific areas as national parks, wildlife refuges, or conservation zones.

Archival heritage resources are the documents contained in libraries and research centers. Archival resources are not normally mentioned in terms of tourism, but Egypt is a very special exception to that rule. Egypt possesses priceless archives that attract people from all over the world. There are also special Egyptian institutions, such as the Library of Alexandria, that can attract many visitors to Egypt. The creation of special exhibits, the promotion of research services, and Egypt’s current endeavors to make more of their archival information on the internet could create a high value tourism market. In terms of the heritage resource tourists who visit the SRSR, they may extend their stay in Egypt if they knew that had access to relevant archival resources.

World governments have dedicated huge amounts of money, time and talent to protect both their cultural and natural resources. Egypt has been a world leader in this regards. The Egyptian government is fully committed to the conservation of its heritage resources for the benefit of both the Egyptian people and visitors. This is a great strength that should be recognized in the identification of SRSR tourism products.

Tour operators, hotel investors, and recreation developers are very well acquainted with UNESCO’s heritage resource categories and the increased economic value associated with these types of resources. They realize that the identification of heritage resources by governments using the UNESCO criteria provides strong endorsement for these attractions. In this way tour markets are not only identified, they are given enormous credibility. Tourists are also familiar with the distinct categories of the heritage resource market. They may, or may not, know much about UNESCO, but they definitely know which type of tourism product they want to purchase. The economic value resulting from this method for identifying heritage resource products is significant.

Specific SRSR tourism products

The hinterland of the Southern Red Sea is an enormous region that can feasibly host a large number of heritage resource tourism products. With the support of the Egyptian Ministry of Tourism the author conducted many years of field research in the SRSR. Results of that research provide both the critical information needed to create tourism products and the critical environmental and heritage site conditions that need to be managed.

The hinterland of the SRSR has coastal plains, wadis, and mountains that contain over 150 cultural heritage sites, 40 significant geological features, 10 of which are best revealed in ancient mines, 1 spring, 36 wells, 33 tomb and shrine sites, rare vegetative zones, seasonal pastures and camps of the Ababda people, hundreds of species of birds that either reside or migrate through

the region, and numerous wildlife species, three of which are endangered species. Based on that field research it is known that, at a minimum, the following types of tourism products can successfully be implemented in the SRSR:

Cultural Heritage Tours - Tangible

1. Guided tours of the ancient caravan routes and sharing the “Roman Road” Story. At a minimum this includes viewing the actual location of ancient caravans, the sources of the wealth of empires, sentry posts and fortifications, warehouses, hydremas (water storage structures), and ancient human settlements.
2. Antiquity Tours. Numerous guided tour products can be created to view some or all of the following Egyptian, Ptolemaic, and Roman heritage sites:
 - Vetus Hydruma
 - Cabalsi
 - Appollonia
 - Zabarra
 - Sakit
 - Nuqrus
 - Gelia
 - Ankari
 - Hangelia
 - Bokari
 - Sukkari
 - Berenice
 - Nakari
 - Wadi el Anboat
 - Petroglyphs

These tours can be conducted by means of off road vehicles suited to the region, trail systems in temperate seasons, or horseback in cool seasons.

Specific markets for these products include:

- Museum Associations
- High end cultural tour operators
- History Associations
- Archeological Associations
- Egypt Study Societies
- Educational Research Groups
- Archeological Study Groups
- Alumni Associations

Cultural Heritage Tours - Intangible

Tourism products can be created from the unique cultural experiences found in the SRSR. Specific examples of these are:

1. Medicinal and subsistence use of plants and animals

2. Production of local crafts and art
3. Preparation of food by traditional methods
4. Camel herding and training
5. Shalateen Camel Market
6. Islamic Shrines
7. Sheik el Shazley
8. Traditional festivals and ceremonies
9. Poetry recitation
10. Traditional storytelling
11. Falconry exhibitions
12. Navigating by use of the stars
13. Astrology
14. Night camps that combine several of these experiences

Delivery of these tourism products must result from a partnership between the local people and tour operators.

There are many target markets for this product and they can be easily found on the internet. The companies now offering cultural tours in Egypt would obviously be the best targets because of their economic interest and first hand knowledge.

Natural Heritage Tours

1. Naturalist guided tours to view and learn about wildlife and the SRSR environment including:
 - Birding**Error! Bookmark not defined.**
 - Wildlife viewing and photography
 - Desert ecology
 - Medicinal, cosmetic and utilitarian use of plants
 - Botanical studies
 - Geology
 - Hydrology – hyper-aridity and flood events

These tours may be conducted by means of off road vehicles suited to the region, trail systems in temperate seasons, camel trekking for botanical tours, and horseback in cool seasons.

There are literally thousands of tour operators that specialize in these type of tours. Their target markets include:

- Specialized clubs and societies such as The Audubon Society
 - Natural History Institutions
 - Natural Habitat Adventures
 - National Geographic Tours
 - Environmental Conservation organizations
 - Educational institutions
 - Zoo membership
2. Wilderness backcountry experiences that include:

- Hiking and backpacking with qualified guides in temperate seasons.
- Camping with qualified guides in temperate seasons
- Mountaineering with qualified guides

The market for these products include:

- Wilderness tourism tour operators
 - The adventure tourism market
 - Mountain and Alpine Clubs
 - Environmental Conservation organizations
3. Nature Photography Tours – these must be led by both a qualified guide and nature photographer. These tours may be conducted by means of off road vehicles suited to the region or trail systems in temperate seasons. The markets for these products are photographic organizations such as Photography Clubs and Schools.

Archival Heritage Tours

One of the most effective methods for obtaining additional revenues from tourists is to extend their visit. Exhibiting interesting documents at a visitor center located in the SRSR and inviting the tourist to view similar information in Cairo or Alexandria might help achieve this. This approach to diversifying tourism products is especially appealing to the research, study, and educational markets.

Figure 4 Historic Treasures of the SRS Region



Nuqrus



Gelia



Nakari



Lahi

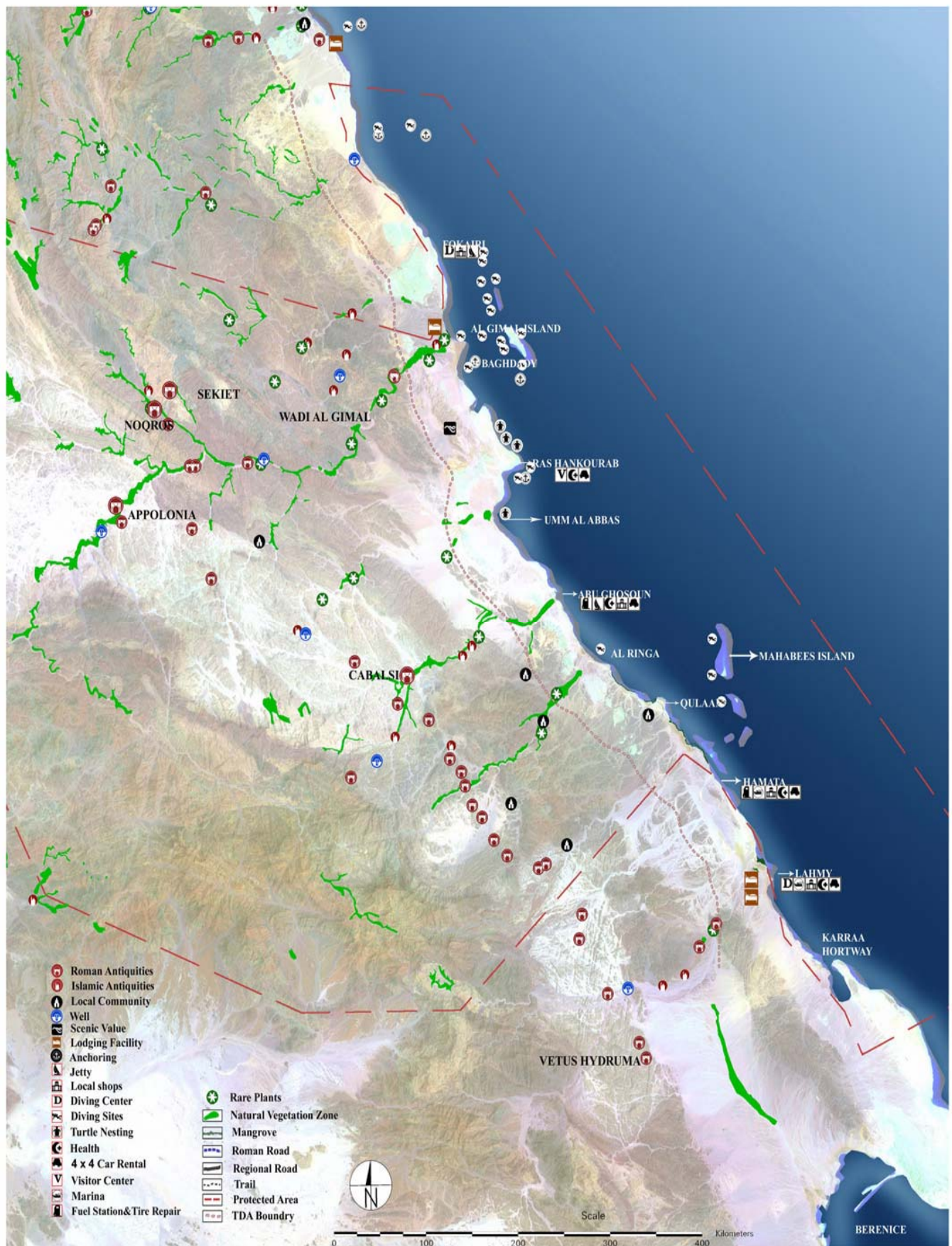


Phylacon



Zabarra

Figure 5 Map of SRS Region Attractions



SECTION 2 REQUIREMENTS FOR DELIVERING SRSR TOUR PRODUCTS

INTRODUCTION

Effective delivery of SRSR tourism products requires knowledge of the regional conditions that uniquely define the SRSR; the development of support services and resources; the construction of appropriate facilities; and the selection of suitable sites. All of this information is equally important. By example, the construction of attractive facilities on suitable sites must be supported by well trained guides, excellent communications, and emergency preparedness in order to guarantee tourist satisfaction and safety. The economic feasibility of the tour product depends on providing every part of the delivery system.

The major elements for effectively implementing natural and cultural heritage resource tour products are described in the remainder of this chapter.

Knowledge of SRSR Conditions and Resources

Environmental Resources

The SRSR is an immense, mountainous desert where heat and the scarcity of water affect everything. The extreme lack of water produces a climatic condition called hyper aridity. On average, rainfall occurs only once every seven years. Perhaps the most dramatic characteristic of this type of climate is that all moisture dries instantly.

For most of the year, the Deep Range is exposed to intense sunlight and, during certain seasons, intense heat. During the period November through April the temperatures of the Deep Range and Wadi al Gimal are sufficiently temperate that human activity can be safely conducted. During the May through October time period the temperatures can range between approximately 35° and 55° C (130° to 145° F). The most dramatic impacts of these extremely high temperatures on environmental conditions is the temperature of the rocks that often exceed 77° C (170° F) and all moisture, including perspiration, dries instantly.

These severe climatic conditions dominate the ways in which both nature and humans have adapted to life in the SRSR. The animals and plants that live in this region and the traditions and values of the Bedouin people who subsist on those scarce resources are unique. Identifying how tourism products will be delivered in this region demands a competent understanding of the SRSR's environmental resources, the singular importance of water, and the need for conservation.

Tourism developers in the SRSR must know the environmental character of the region in order to plan and provide safety for their guests, minimize adverse impacts on indigenous people, and assure the Egyptian Government that sustainable environmental management practices are established. The information in this section of the report briefly describes some of the environmental resources that make the SRSR unique. This suggests that the ecotourism developer must acquire a competent understanding of the environmental character of the region in order to provide uniquely enjoyable guest experiences, plan and provide safety for their guests, and assure the Egyptian Government that best environmental management practices are established.

Based on years of research, the author and team of Egyptians identified and mapped the ecological zones of the SRSR. The relevance of this research for tourism planning and management is that each zone has distinct wildlife habitat, vegetation, and geologic characteristics that represent potential attractions to tourists seeking to experience the natural heritage of Egypt. The boundaries of watersheds were defined and it was determined that seven distinct ecological zones exist. The seven ecological zones include the high mountains, wadi floor, coastal plain, mangroves, fringe reef, offshore marine, and offshore islands. The animals, plants, geologic structure, and climate conditions of each of these zones was examined for all seasons of the year to identify potential nature-based tourist attractions.

In the TDA lands west of the coastal road, wadis and coastal plains are the most prominent ecological zones. In many locations along the coast the mountain ecological zone is within the TDA boundaries. Each of these zones has very different environmental conditions that will directly impact tourism planning, development, and operations.

The word 'wadi' refers to a canyon, valley or dry streambed that conveys water at irregular intervals down the slope from the mountains to the shore. During infrequent times of rainfall they also carry alluvial deposits ranging from rubble to silt into the coastal plains, and precious supplies of water. The center channels of the wadis usually have limited vegetation while their edges or the terraces created by flood events can have substantial biodiversity. The coastal plains are wide areas that connect the wadis to the coast. The extreme conditions of persistent drought and brief but intense floods have resulted in the amazing adaptation of animals and plants living in the wadis and coastal plains.

Vegetation plays a vital role in sustaining life in the wadi by providing important food, cover, nesting sites for animals, and medicines and utilitarian supplies for humans. The vegetation provides critical habitat for birds seeking sites for nesting and cover. It provides a source of food for mammals such as camels, gazelle and wild donkeys that inhabit the wadi. The dominant vegetative species of the wadi are the Acacia and Tamarisk trees. There are five species of Acacia trees found in the SRSR. The acacia are large, drought resistant trees that play a vital role in the ecosystems of the wadis. They provide leaves for the animals to eat and shade for all forms of life. Local people use the resin (sap) of the tree as a hard candy. The hard wood is valuable for both construction material and a source of charcoal. The pods and bark are used for tanning and the flowers are used in the manufacture of cosmetics.

Figure 6 Trees Native to the SRS Region



Other woody plants found in the wadis include bushes that provide critical habitat for nesting birds, a date-like fruit that is used for the treatment of diabetes, and a small succulent shrub that is used for soap. As its name implies, the branches of the toothbrush bush, *Salvadora persica*, are used by the local tribes for that purpose. The large thorns on various trees are used as needles and leather punches. And, most importantly, the location and condition of the vegetation provides essential information to locate sources of water.

The animals inhabiting the wadis of the SRSR include many rare species of mammals and birds that are unique to the Eastern Desert. By example, the region provides habitat for the rare Dorcas Gazelle, Nubian Ibex, Striped Hyena, and Hydrax. As a result of their unique adaptation to this habitat and their isolation from human contact, the populations for each of these species are currently sustainable in this region. Wild donkeys and camels are abundant and rare camel species are frequently sighted in the SRSR.

Numerous, colorful lizards can be seen running about the area. The study of reptiles in the SRSR currently reveals a total of forty species. The only dangerous animals that inhabit the SRSR are the Lesser Sand Viper, *Cerastes viparis*, The Honed Viper, *Cerastes cerastes*, and the scorpion. The snakes prefer to run from humans and local tribes of the Eastern Desert rarely kill the snakes. Local tribes of the Eastern Desert region rarely kill the snakes. The scorpion whose venom is neurotoxic is probably the most dangerous animal in the Deep Range. The Bedouin will kill scorpions because they represent a severe threat to children and the elderly.

During the spring and autumn a numerous species of birds migrate along the Red Sea. Aided by thermal uplifts, abundant food and sufficient cover located along the Red Sea coastal environment, large numbers of birds migrate between the northern and southern hemispheres. International recognition of the importance of this flyway was certified by Birdlife International (formerly The International Council for Bird Preservation) which defined 34 Important Bird Areas in Egypt. Among these 34 critical habitats, seven are located in the SRSR.

The SRSR is an extremely valuable nature tourism site for viewing rare wildlife, witnessing land, shore, and sea birds in a single location, and learning how animals and people adapt to a desert environment. Fortunately for the potential SRSR tourism investor interested in developing nature tour products a substantial amount of information is readily available. Distinguished naturalists and scientists have published bird, mammal, plant, geology, herpetology, and natural history field guides for the Eastern Desert. All of these field guides are well written and have excellent photos and illustrations. This wealth of information should be used by potential tour operators to provide the vital information needed to understand the SRSR and create nature based tours. The publications also contain information needed to create effective guide training programs, and, of course, they can be sold to tourists.

Cultural Resources

For thousands of years the Eastern Desert has witnessed diverse human uses. The greatest extent of human settlement in the SRSR occurred during its ancient history from between 2,500 BC and 100 AD. Extensive occupation resulted from the discovery and excavation of the region's enormous mineral wealth and because of the trade routes that connected South Asia and Egypt to the empires of the Mediterranean. The precious metals and stones mined in the SRSR provided wealth and power for the ancient Egyptian, Nubian, Ptolemaic, Roman, and Abyssinian empires and kingdoms. Those empires and the region's local tribes frequently fought for the control of the mineral wealth and trade routes located in this region.

Numerous emerald, gold, chromium, and semi precious gems were mined throughout the SRSR. Construction stones such as granite and gypsum were also quarried in this region. Large populations were required to support and protect these economic endeavors and the trade routes that connected them. Fortified towns were built at mine sites, at key water resource locations, and along supply routes. Examples of these major SRSR cultural heritage sites are located at Zabarra, Nuqrus, Sakit, Sukkari, Gelia, Hangelia, and Ankari.

At least four major caravan routes transported goods and served as communication networks between Red Sea ports and the Nile River. Ancient ports such as Nakari and Berenice were connected to ancient Nile cities such as Thebes. These ancient ports were once thriving transport centers that imported supplies to Thebes, Coptis, and other cities in the Nile Valley and exported precious minerals and gem stones. The remnants of the many fortified towns located along the caravan routes are still visible today. Heritage sites such as Phylacon, Sabbarah, Appollonia, Novum, Vetus Hydreuma, Lahami, and Cabalsi are located in the SRSR.

Perhaps the most distinctive caravan route was the legendary Elephant Route of the Ptolemies. This route crosses the entire length of the SRSR and then proceeds to the largest fortress trading center located along the route. This fortress city was named Appollonos by Alexander the Great and then later named Appollonia by the Romans. Water storage sites called hyduemas were strategically located along the routes and evidence of the actual caravans can be seen in petroglyphs carved centuries ago. The structural remains of numerous sentry posts further demonstrate that a significant military population was garrisoned in the SRSR. An incredible abundance of ancient pottery, stone sculptures, tools, and other artifacts provide compelling evidence that large human settlements once thrived in this region.

The greatest extent of human settlement in the Deep Range and in the Wadi al Gimal area occurred between 2,500 BC and 100 AD. Extensive occupation resulted from the discovery and excavation of enormous mineral wealth. Numerous emerald and gold mines were established in the Wadi Al Gimal and surrounding wadis. The precious metals and stones mined in the Wadi al Gimal region of the Deep Range provided wealth and power for the ancient Egyptian, Nubian, Ptolemaic, Roman, and Abyssinian kingdoms and empires. The empires and the nomadic tribes frequently fought for the control of the mineral wealth and trade routes located in this region.

The Wadi al Gimal, Wadi Nuqrus, and Wadi Sakit areas developed permanent populations of several hundred persons during this era. Camel and elephant caravan trade routes augmented the permanent mining population. Based on the structural remains of numerous sentry posts and fortresses in the region, a significant military population was also garrisoned in these wadis.

Tribal groups were probably the first inhabitants of the Deep Range region and a few of their descendants still practice camel herding and fishing in the area today. These nomadic people have occupied all parts of the Eastern Desert. The tribes, identified from south to north in the Deep Range, included the Cohala, Abadoahe, Bicharis Arabs, Atouni, Beny Wassel, and Mazzy. They competed with one another for control of the water wells and grazing areas from ancient times until the middle of the 1800s when the British implemented a peace agreement. Today the Ababda and Bishari are the primary Bedouin inhabitants of the SRSR. Cultural resources of these people that may be seen to day include remnant structures and Islamic shrines.

The extraordinary number of cultural heritage resource sites and artifacts are evidence of ancient times. They provide an extraordinary glimpse of the ways of life during those times, and the wealth of empires now long gone. These resources and the stories associated with them now represent very valuable tour products.

Figure 7 **Indigenous Architecture of the Ababda**



The ancient history of the SRSR contrasts sharply with the number of present-day Egyptian human settlements. There are no permanent human settlements anywhere in the hinterland of the SRSR and very few Bedouin families now live in the SRSR. The largest concentrations of Egyptians in the SRSR are located at the towns of Marsa Alam in the north and Shalateen in the south. A few local fishing communities are located in between those two towns. It is ironic that this once thriving center of human activity now has virtually no permanent population.

In summary, the benefits to TDA and tour investors of having a competent knowledge of the region's natural and cultural resources include:

1. Distinctly different natural attractions are seasonally present in each ecological zone. These attractions appeal to very diverse tourism markets defined by their consumer preferences. Diversifying Egyptian tourism products requires this kind of information.
2. Different environmental conditions in each zone require specially designed tourism services and facilities in order to safely and effectively deliver quality recreation experiences.
3. A remarkable collection of ancient and Islamic cultural heritage sites are located in the SRSR and these sites and information about them can provide unique tourism experiences.
4. Guide training and other human resource requirements must be relevant to both the natural and cultural resources of the SRSR.
5. The availability and quality of infrastructure and emergency response capabilities are distinctly different among the zones and therefore planning and investment for delivering these tourism products will vary considerably.

6. Transportation access and modes of transport to attractions in the SRSR presents different challenges to the tourism operator and will create different experiences for the tourist.
7. Environmental management and cultural preservation is critically important. Wildlife habitat conservation and the cultural resource preservation are essential to sustain both the resources and the quality of the tourism product.

Outside the immediate Wadi al Gimal region lie a number of larger communities. In some instances the communities are towns such as Al Quseir and Marsa Alam to the north and Berenice to the south. In other instances the largest human settlements are associated with resort and recreation development occurring along the Red Sea coast. Examples of these facilities within the vicinity of the proposed Wadi al Gimal Protectorate Area include the Shams Alam Resort

Seasons of Use

Climate is the most dominant environmental feature of the Southern Red Sea Region. For most of the year, the SRSR is exposed to intense sunlight and, during certain seasons, intense heat. Given these conditions, the climate of the SRSR plays a critical role in defining when and where tourism products can be delivered. Temperatures are extremely hot in the summer. Entry to the hinterland during the summer months can be very uncomfortable and potentially dangerous. In the winter cool temperatures prevail and the nights can actually be cold. Given these weather extremes, it is necessary to accurately define when tourism can occur.

Tourism seasons are normally defined as a high, low, and shoulder seasons. The high season consists of the months that are most attractive to visitors. The low season is the least attractive time for visitation. The shoulder seasons are defined as transitional weather time periods that can be attractive to select tourism markets. The duration of the seasons has a direct effect upon the ability of tourism activities to occur, the willingness of tour operators to conduct tours, and the extent to which tourism development is economically feasible.

High Season in the Southern Red Sea Region

The high season in the hinterland of the SRSR extends from approximately November to the first week of April. During this time period the temperatures are generally warm in the day and cool at night. Consequently, tourists can access all regions of the hinterland. The most popular month for tourism in the hinterland has historically been November because of the favorable weather conditions and the greatest abundance of wildlife.

The high season for recreation activities in the hinterland does NOT compete with the high season for the diving market. This is a vital piece of information to be communicated to tour operators and investors. The most popular dive season is the summer months.

Low Season in the Southern Red Sea Region

As a result of the extreme heat and hyper-aridity during the late spring and throughout the summer months, mid-May through mid-September, it would be extremely dangerous to conduct tours through the mountains and upland regions of the SRSR hinterland. The high mountain zone is a particularly dangerous location to conduct tours during the summer months.

The average temperatures in the mountains and upland regions of the SRSR average 50 to 60 C (130 to 150 F) during the late May through August time period. The sand and rocks absorb heat and this increases their temperature by as much as another 30 F. It is unreasonable to believe that tourists to this region during that time would be able to successfully endure these harsh

conditions. From a logistical point of view, the supply of water and medicines is another significant concern. The vast quantity of water and ice required to maintain visitor safety for even short excursions is prohibitive. Virtually all medicines will perish and become useless when temperatures exceed 95 F. for sustained time.

A variety of tourism products can be offered along the coastal plain and in the lower parts of the wadis during the low season. Tourism products to offer in these locations include most of the Intangible Cultural Heritage tours previously described.

Shoulder Season in the Southern Red Sea Region

The brief shoulder seasons are springtime, defined as approximately mid- April through mid-May, and early autumn, defined as late-September through October. During both of these time periods there are significant bird migrations that will be attractive to many nature-based tourism markets. In addition, many heritage attractions located in the wadis can be experienced at these times. The shoulder season will be particularly attractive to landscape and nature photographers who wish to take advantage of the extraordinarily pure light, tolerable temperatures, and the absence of other people in the area.

Evenings and Nights

Throughout the entire year many tourism products can be delivered during the evening or night. Well planned evening and night tours represent excellent opportunities for guests to enjoy the SRSR and for tour operators to increase their market.

Criteria for Defining Seasons

A useful planning tool for defining tourism products is a calendar that includes useful information and schedules recreation activities for specific seasons. Season defining criteria includes:

- Climate assessment with monthly averages for the following:
 - Temperature
 - Hours of daylight
 - Precipitation (it is rare, but when it occurs flash floods often result)
 - Climate hazards, especially probability of flash floods and sand storms.
- Environmental attractions by type and abundance of the following:
 - Wildlife migration events by species - land, bird, marine
 - Botanical changes, e.g. Foliage, blossoms, crops, etc.
- National and religious holidays
- Traditional festivals, art, and cultural events

Support Services and Resources

The delivery of well designed cultural and nature tours requires the use of specialized support services and resources that include guides, operational guidelines, equipment suited to the SRSR, and support services that will provide safety to the tourist. These services and resources are discussed at this time because the information is needed to design appropriate facilities and select suitable sites. By example, emergency medical response capabilities needed to deliver hinterland tours must be known when planning and developing tourism facilities and sites.

Guide Training

Guides play a central role in the delivery of tourism experiences. They provide the information that tourists want to know about the attractions, the setting, and the local communities. They support safe tour operations and are immediately available to respond to the needs of the tourists. The guide's friendliness and sense of humor often produce lasting impressions on the tourist. In addition, they are on site to protect Egypt's resources and to insure that visitors respect cultural values.

Well trained guides encourage visitors to learn about the cultural and natural features of the tour. Good guiding practices contribute to making a visitor's stay more enjoyable. They not only inform visitors about the prime attractions, but also encourage them to return and enhance the reputation of the destination and its attractions. The guide's knowledge and the way that he or she delivers it to the tourist is a major factor in visitor satisfaction.

The need to preserve the resources of the SRSR and provide for the safety of tourists requires well trained guides. In order to accomplish that, a substantial amount of knowledge should be provided. This knowledge includes:

- Competent knowledge of the region.
- Understanding the tourism product.
- Communication skills and language training.
- First responder emergency service training
- Resource protection.
- Introduction to cultural practices.
- Hospitality and guest service training
- Knowledge of communication technologies and protocols.

The following guide training criteria are recommended.

- Hire local people as tour guides and support personnel to conduct the tours. This provides both employment opportunities for local residents. It also promotes an improved understanding between the tourists and local people.
- Guides must have the following skills: multiple language fluency skills, relevant subject matter expertise, emergency response, communication equipment, vehicle and equipment operator competency, and hospitality skills.
- Guide licenses, permits, and any other governmental certification requirements for conducting tours or operating land transport equipment for touring purposes.
- To attract the up market tourists, guides must be properly insured.

It is acknowledged that the successful accomplishment of guide training for the SRSR is exceedingly challenging for the reasons described below. Clearly, any opportunity to resolve these issues will improve the design and delivery of the new tourism products.

With the notable exception of the Ababda people, there are very few Egyptians with a first hand knowledge of the SRSR and the survival skills required to travel in that region.

The educational resources in the SRSR are scarce and currently do not emphasize the natural and cultural resources of the region. However, as previously mentioned several nature field guides are now available and these represent positive educational resources.

Many guide operations will occur only seasonally, therefore people who wish to be guides may not have year-round employment from this occupation.

Driver and Support Personnel Training

Driving and equipment operation in the SRSR requires special skills. The terrain is rugged. The slopes are steep. Areas with deep sand prevent traction. Sharp rocks and the thorns of the Acacia tree puncture tires. Because of these conditions, excellent off road driving skills are essential to conduct tours in the SRSR. Selecting the best tracks and going at reasonable speeds are essential for delivering both safe and comfortable tours. In addition to driving skills, the driver needs some basic vehicle repair skills, such as changing a flat tire.

Personnel conducting tours in the hinterland also need to know how to use communication and way-finding equipment. Two way radio and Global Positioning System equipment skills are required to keep the vehicles in a mutual support situation.

Sand invades all types of equipment. The constant northern wind of the SRSR insures that this condition exists. This circumstance requires that field personnel have the basic maintenance and repair skills required to keep vehicles and field equipment operational.

Visitor Management Ratios for Tour Operations in the SRSR

Visitor management ratios are defined as the number of qualified guide personnel required per number of visitors. This ratio identifies the way in which a particular tour product can be delivered in both a safe and informative manner. The major factors that determine visitor management ratios are:

- mode of transport,
- severity of the terrain,
- weather conditions, and
- behavior characteristics of the tourists.

By example, tours conducted in the SRSR will use either off-road vehicles or hiking as the mode of transport. Vehicle passenger capacity and the off road driving skills of the guide will directly affect the ratio. Travel across extremely severe terrain in potentially extreme weather conditions will require support personnel and a support vehicle. This information should be used to determine an appropriate ratio. Tourists who buy SRSR tours will have high educational attainment and curiosity about the area. This means that the guide will have to share a lot of information. The numbers of tourists will clearly affect the ability of the guide to successfully communicate.

Tours requiring very long days, several days to view several features, or overnight tours in the SRSR require additional support personnel such as drivers, cooks, outfitters, and perhaps herdsmen. Although the additional personnel may increase the host to visitor ratio, it is important to note that all of the people will rely upon the guides for direction, education, and assistance.

Numbers of Tour Groups in the Hinterland

Preservation of the wilderness experience in the hinterland of the SRSR, defined as the lack of tourist congestion and noise, requires the physical and visual separation of tour groups. Various operational approaches can be used to accomplish this, but all of those will require that host facilities and tour operators know where their guests are located in a large wilderness region. This

requires reliable telecommunications, reasonably accessible emergency medical response capabilities, and search and rescue capabilities.

Telecommunications Systems

The Southern Red Sea Region presents several obstacles for accomplishing reliable telecommunications. The terrain itself is the greatest challenge. The height of the mountains and steepness of the slopes represent significant physical barriers to communication transmissions. The absence of permanent human settlements means that the region has historically not had telecommunication infrastructure.

The creation and implementation of a reliable telecommunication system in the SRSR is critically important for the efficient and safe delivery of cultural and nature tour products. Communication functions that improve the recreation experiences include: distribution of tour groups to prevent congestion; communicating the location of wildlife; reporting trail and site conditions; and notification of hazards.

Reliable telecommunications are critical for performing emergency medical response, back-country assistance for vehicle repair, relief and re-supply. For these and other reasons, dependable telecommunications are critically important for safely conducting touring operations. In most instances, reliable telecommunications and operator skills will prevent a small problem from becoming a much larger and more dangerous situation.

Fortunately, the five kilometer zone of TDA lands along the Red Sea coast are well served by mobile phone service. This is a very important telecommunication resource that will facilitate tour operations.

As previously stated the mountainous region of the SRSR presents many telecommunication obstacles. For this region of the SRSR a system of satellite phones, two way radios, and a backup radio system need to be combined to provide adequate communication coverage. This approach is required until mobile telephone service is expanded and signal strength is entirely reliable. Criteria for implementing a satellite phone and radio communications system in the SRSR include:

- Equipment
 - Satellite phones provide the very best technology for communication in the remote areas of the SRSR. The use of these phones is strongly recommended.
 - A base station radio with at least a 16 watt transmitter, designated emergency frequencies, and high gain antenna.
 - VHF handheld radios for field personnel. The limitation of these devices is that they are “line of sight systems” that are limited in the SRSR by the height of the mountains.
 - Radios that monitor weather conditions and notices. Temperature and wind conditions are the most important weather conditions to monitor.
 - Radio repeater towers strategically located at the top of ridges in the Deep Range in order to transmit communications between wadis and canyons
- Communication Protocols
 - Regularly monitored emergency channels
 - Designated operational frequencies
 - Designated primary and secondary languages

- Appropriate language training
- Training in the use of radio protocols

In summary, telecommunication equipment and protocols are essential for safely and effectively delivering tour products in the hinterland of the SRSR. A high powered VHF radio system must be established between ecotour operators and a regularly monitored base facility - most probably the visitor center. Because VHF is a line of sight communication system and because the Deep Range is a maze of steep canyons, it will undoubtedly be necessary to build radio repeater towers at strategic locations in order to safely conduct communications in the backcountry. In order for tour operators to reduce their operational risks, it is strongly advisable to establish a reliable communication system for all field operations. Given the fact that air evacuation is not permitted in this region, it is imperative to establish an excellent ground communication system.

Emergency Medical Services

Emergency medical response capability is an essential part of tours conducted in wilderness regions. The adventure tourism market is appealing to many people because of the opportunity to experience wilderness. However, the tourism developer needs to recognize that the vastness of the region, its severe terrain and extreme climate are natural hazards that require emergency planning and management. This planning involves the use of existing facilities and the creation of new capabilities to meet the needs of wilderness tour operations.

Currently, emergency medical services are scarce in the SRSR. The Egyptian Government recently constructed an excellent hospital facility in the town of Marsa Alam. This facility is fully equipped and furnished. It can provide emergency medical services, limited surgical services, and convalescent care.

The Marsa Alam Hospital is a fine facility, but getting the patient there in a timely manner is a challenge. Access to the hospital is by road only. Emergency medical air transport is currently not allowed in the SRSR by the Egyptian Government. Consequently, the extreme distance between the hospital and tours conducted in remote regions of the Eastern Desert is a serious concern.

One method for providing timely emergency medical care in the hinterland of the SRSR is the establishment of adequately supplied and strategically located medical aid stations. Some of these stations can be permanently located in either existing or new tourism facilities. Another solution is to locate seasonal stations at rest stops along the most popular hinterland tour routes. In all instances, emergency medical services should be in the vicinity of tour operations so that response times are effective.

If the construction of aid stations is not feasible, then an effective technique for providing this service is by means of a mobile emergency vehicle. Personnel assigned to this vehicle would have to be trained as First Responders and Emergency Medical Technicians. The Red Crescent organization and the excellent training hospital facilities in Egypt have the ability to provide this training. The medical supplies loaded on this vehicle would benefit from both security and temperature control. Again, excellent telecommunication equipment is needed for these emergency vehicles to be effective.

In order to minimize medical emergencies, hinterland tour products should provide tourists the following information:

- Allow time to acclimate to hot desert conditions. The tour product should allow the tourist to conserve energy during the beginning of the tour and avoid strenuous activities. Some visitors accurately compare the desert conditions of the SRSR to high altitude

mountaineering. Be patient in the desert climate because it drains energy at an amazing rate. A person's energy can be rapidly dissipated by aridity, heat, and physical activity.

- Extended exposure to direct sunlight is very harmful. It affects mental functions, the skin, and a person's stamina.
- Wear clothes to protect the skin from the sun and from insects. It is especially important to protect the head and neck. Use a high Sun Protect Factor (SPA) cream, preferably as high as 45 to minimize the effects of Ultraviolet B. Modest attire is also very important to respect Islamic culture.
- Footwear should be strong and support the ankles in order to walk or hike safely over the rough and uneven terrain. A thick soled boot that is well ventilated will offer the most protection and comfort. A boot that slips off an on is advisable for Arab encampments where shoes are not worn.
- Drink large quantities of good quality water on a very regular schedule. Drinking water at regular intervals helps the body to remain cool. Thirst is not a reliable guide for your body's need for water. The hyper-aridity of the SRSR instantly dries perspiration, thus it is definitely not a valid sign of the body's real need for water. The amount of water needed by a person for desert conditions has been variously measured. The following guidelines are the accepted measures: one pint of water every hour for temperatures under a 100 F and one gallon of water per hour for temperatures over 100 F, or 10 to 15 liters per day.
- Prepare for cold nights by having warm clothing.
- During a sand storm remain in some type of shelter or vehicle. If you are caught outside it is important to shield your eyes, ideally with goggles, and to protect your breathing with either a cloth or surgical type mask.
- Salts and electrolytes need to be replenished on a regular basis. This can be achieved with salt tablets or special drinks.
- Poisonous scorpions and venomous snakes live in the SRSR. Encounters with these animals are very rare, but tourists who desire to hike or camp must be warned about the presence and habits of these animals.

Search and Rescue Services

Search and rescue (SAR) services are needed in the SRSR. The territory is vast and the terrain is a complex series of wadis and mountainous canyons. It is easy to get lost in this region. If independent recreation travel is allowed, then search and rescue response capabilities must be established. And because of the severe climatic and terrain conditions in the Eastern Desert, they will have to be provided in a timely manner.

Search and rescue personnel and equipment also perform the valuable function of assisting emergency medical evacuations. Most of the threats to humans result in medical emergencies complicated by the remoteness of the Deep Range. The evacuation of injured persons is complicated by the ruggedness of the terrain, the inability of vehicles to travel safely at high speeds across that terrain, and the considerable distances to medical facilities. These challenges can be mitigated by the application of SAR techniques.

Reliable telecommunications, the use of GPS equipment, and the deployment of roving patrols discussed in prior sections of this report need to be coordinated within a regional SAR plan. This report strongly recommends:

- Creating search and rescue plans
- Training search and rescue personnel

- Establishing SAR communication protocols
- Locating essential supplies and equipment at strategic locations.
- Monitoring tour operations
- Require Trail Registrations, when possible
- Require Backcountry Use Registrations, when possible
- Advise the use of trained guides

Tour Equipment

All of the cultural and nature tour products identified in this report require equipment. Some of this equipment is very specialized, such as high powered binoculars for viewing birds and wildlife. The purpose of the information presented in this section is to briefly identify only the basic equipment needed for delivering SRSR tour products in order that it is considered when developing facilities and selecting sites. By example, vehicles and the fuel and the spare parts needed for them are important considerations when designing tour facilities. Most notable equipment needs are as follows:

- Off-road, four wheel drive vehicles are essential. Their selection should be based on reputation for reliability, ruggedness, and readily obtainable spare parts and service.
- Vehicle emergency equipment should include a full tool kit with specialty tools such as shovels, sand channels for traction, clamps, hammers, axes, files, wire, vehicle maintenance handbook, spare parts kit supplied by the manufacturer, jump leads, spare tires, battery driven tire pump, tire levers, hydraulic jack, jack handle extensions, tire repair kit, spare fuel can, and power winch.
- A Second Off-road Vehicle equipped identically as the first. The vehicles should travel together and remain in visual contact with each other.
- Personal equipment should include lots of water, spare water containers, cool bags, comprehensive first aid kit, maps, compass, GPS, emergency ration kits, emergency tent shelter, long term weather forecast, stove, matches, fire starter, binoculars, clothing, sunblock, and food.

Tourism Facilities and their Functions

Information contained in this section describes several types of facilities required to effectively provide tours in the SRSR. Given the remoteness of certain tourism operations and the seasonal character of the businesses, it is probable that permanent facilities will be located on TDA lands and that seasonal support services will be located in more remote areas of the hinterland. Flexible scheduling for these facilities will diversify tourism experiences and strengthen their economic value.

It is acknowledged that during the past several years a lot of information has been prepared regarding tourist facility criteria for the SRSR. The author of this report has produced much of this information and very capable people are currently continuing that work. The information contained in this section of the report is compatible with the work currently being produced.

Visitor Center Facilities

A visitor center is currently planned for the SRSR, but given the size of the region and diversity of tourism experience more than one is required. It is also noted that emergency medical aid and search and rescue capabilities are not included in the current facility. The information presented in this section describes the functions of this type of a visitor center.

Visitor centers should be located near the entry to major attractions. The purposes of this facility are to provide information and visitor services that will enhance the visitor experience; provide safety and telecommunication support services, and contribute to the conservation of the region's resources. Performance of those functions will increase the economic value of the tourism product. Visitor centers can achieve those purposes in the following ways:

- Provide visitors with an enjoyable and informative introduction to Deep Range areas such as Wadi al Gimal.
- Describe the unique environmental and cultural attractions of the region
- Describe appropriate and safe methods for touring the region.
- Provide visitors with information about local guide services to provide them knowledgeable and safe access to the attractions
- Provide emergency services to respond to medical, search and rescue, repair, and re-supply incidents.
- Sell field guides, brochures, maps, books, video, and other information.
- Sell or lease field equipment and supplies.
- Display and sell artwork and locally created products.
- Provide food and beverage services. These include traditional foods.
- Provide lodge and hotel referral services.
- Promote an extended visitation by describing numerous attractions
- Promote a return visit to view the attractions that were previously unknown.
- Provide ecolodge referral services
- Organizations dedicated to the conservation of the SRSR's heritage resources may be represented at the Visitor Center.
- A Visitor Center may serve as a base for coordinating radio communications throughout the SRSR.
- If well coordinated communication functions are established at the Visitor Center, then it will also facilitate Search and Rescue functions, and any emergency medical response services that are required.

In summary, the visitor center facility serves many important roles in the delivery of enjoyable and safe tourism experiences. It performs numerous informative, safety, and environmental management functions from which a variety of profitable economic opportunities can be realized.

Visitor Center Facility Requirements

Visitor center facility requirements for providing visitor and recreation services are presented below. This information describes the basic, functional requirements for a visitor center near the entry to attractions. The actual dimensions of the functional spaces are determined by estimates of tourism demand.

- Exhibit Space for approximately 30 minute experience
- Exhibit Storage/Preparation Area
- Audio/Visual Program Area
- Lobby with brochure stand
- Reception & Information Desk - kiosk type desk/counter
- Archives with counter and display cabinets

- Emergency aid station
- Telecommunication center
- Dining area
- Kitchen
- Retail Sales with display shelves
- Restrooms
- Administrative / Support Spaces
 - Manager
 - Asst. Manager
 - Seasonal / Volunteer Work Area
 - Employee Dining - Break Area
 - Kitchen
- Library and Research Area
- General Storage
- Janitorial
- Mechanical
- Recreation Equipment Storage, Maintenance, and Repair
- Electrical / Fire Alarm / Communications
- Maintenance Facility
 - Vehicle Parking and Storage
 - Security Fencing
 - Parts storage
 - Maintenance and Repair Area
- Exterior Site Furnishings
 - Shade / Picnic Structures
 - Benches
 - Boardwalks
 - Viewing Decks
 - Trail heads
- Signage near the visitor center (Informational Signage - presented in multiple languages to welcome and introduce the tourist to the facility and the region)
 - Kiosk
 - Trash receptacles
 - Lighting for pedestrian and parking
 - Parking
 - Outdoor Group Seating Area
 - Regulatory - enumeration of the rules and required tourist behavior
 - Way finding directions for travel

Support Facilities

- **Restrooms** (Toilets)—Nearly all of the restroom (toilet) facilities now in the SRSR are located at the seaside resorts. These are not available for public use, but more importantly,

they are not located near the SRSR's cultural and nature attractions. Sanitary toilet facilities need to be located at strategic locations throughout the entire SRSR to serve the tourist and protect the environment. From the human perspective sanitary conditions need to be maintained to promote health and preserve privacy. From the environmental perspective, the Eastern Desert should not be polluted by waste. These sanitary facilities need to be developed in order to deliver new tour products in the hinterland of the SRSR.

- **Fuel Storage and Distribution**—Nearly all of the new tourism products previously described requires the use of vehicles traveling over long distances. And, of course, vehicles require fuel. Unfortunately, there are neither enough fuel storage and distribution facilities in the SRSR, nor are they conveniently located to make these vehicular tours economically efficient. Vehicles used for touring have to go long distances to re-fuel and this costs money, loses time, and contributes to vehicle maintenance costs. More stations need to be constructed in order to diversify the tour product.

The generation of electrical energy for the SRSR is frequently accomplished by means of generators. Complete dependence on this type of generation requires large amounts of fuel. Developing new facilities to provide new tourism products will inevitably add to the already growing quantity of fuel consumed along the Red Sea coast.

Given the growing demand for larger quantities of petroleum products, fuel storage and transfer facilities in the SRSR should be designed and constructed for the prevention of environmental pollution. This needs to be a high priority. Most importantly, any petroleum product spilled on the ground can potentially damage already scarce water resources.

- **Vehicle Storage and Maintenance**—Facilities for the storage and repair of equipment are needed. These facilities may contain workshops, limited fuel storage, spare parts, and a variety of supplies and tools. Storage space is also needed for seasonally used equipment. Space for the various supplies and equipment that the tourist might forget, lose, or damage can also be located in this facility. In summary, this type of facility will make a valuable contribution to both efficient tour operations and visitor satisfaction.
- **Temporary Rest Stations**—Temporary rest stations provide places where people can find shade, rest, drink water, eat food, and receive any medical attention they might need. They simultaneously serve as places for the storage of water and emergency supplies. Escaping the heat can add immeasurably the enjoyment of a tour in the hinterland of the SRSR. Designing tours that use rest stations enable tourists to spend longer periods of time in the SRSR and contribute substantially to their enjoyment of those tours. Temporary facilities such as these play an important role in delivering tourism products in the remote parts of the SRSR.

Portable equipment such as canopies, collapsible platforms, and tent shelters can be used on a temporary, seasonal basis to create rest stations in remote locations of the SRSR. They can be carried in vehicles and quickly constructed and then removed upon departure from a site. If rest stations are regularly needed along popular routes, then temporary structures may be established on a seasonal basis. When not in use this equipment can be stored at facilities located on TDA lands.

- **Patrols – Mobile Aid and Repair Services**—One method for assuring that support services and emergency aid are available is by means of roving patrols. These patrols consist of well equipped 4 wheel drive vehicles that travel a variety of pre-arranged routes during times when tours are being conducted. There are several reasons for establishing this type of support service. Compelling reasons include immediacy of response, security of emergency

supplies; qualified emergency response and repair personnel; and ability to evacuate persons at risk. Proper training and equipment are required to perform all of those support functions.

Guest Accommodations

Guest accommodations play a vital role in the delivery of heritage resource tourism experiences. Facility design and guest services that are compatible with and supportive of the environmental and cultural heritage of the SRSR define a significant part of the tourism experience. Given the importance of this issue, the TDA has produced many detailed reports that describe the design criteria for the guest accommodations of this type. The most recent of these reports, September 2007, is entitled the Life Red Sea Project Ecolodge Design, Construction Operations Manual, by Dr. Assem El-Gazzar and Mr. James MacGregor. These documents and reports for the TDA should be consulted to obtain detailed information.

Infrastructure Facilities

The TDA has published numerous documents that describe appropriate methods for providing infrastructure to tourism facilities developed in the SRSR. By example, the TDA's publication entitled Environmental Management Guidelines for Coastal Hotels and Resorts is a two volume description of preferred and regulated methods for effectively providing water, wastewater disposal, solid waste collection and disposal, mechanical, and electrical infrastructure systems.

The most recent tourism development criteria are also being produced for the TDA by Mr. James MacGregor. Tour developers should review these documents to acquaint themselves with TDA requirements and accurately determine the types of equipment and operational procedures are that are most efficient and cost effective.

There are two infrastructure facilities that deserve special mention for the delivery of heritage resource tour products to a high value market. Those are waste disposal and energy production.

High value markets attracted to new SRSR products expect clean sites. Waste disposal must be effectively accomplished in order to preserve clean sites and regions where tours are conducted. The economic feasibility of these tour products in the SRSR depends entirely on clean sites. This means that rubbish, wastewater, and potential contaminants will have to be removed and properly disposed.

Renewable energy should be a major part of this type of tourism development. The abundance of sunlight and the prevalence of wind create this opportunity. The elimination of petroleum based fuels reduces the risk of site contamination, air pollution from generator exhaust, noise pollution from generators, the cost of operations, and the transport of fuel supplies that adversely impacts the environmental quality of the SRSR.

Clean sites also include minimizing air pollution caused by exhaust emissions and dust. As previously discussed generator emissions can be offset by the use of renewable energy technologies. Vehicles cause exhaust emissions and contribute to air pollution. Obviously, some emissions will occur because of a dependence on vehicles for transporting tourists, supplies, and employees. To the extent possible, the number of vehicles and trips should be minimized. Another source of air pollution is the dust that vehicles cause when traveling along unpaved roads in the SRSR. A single vehicle can create a great cloud of dust that can be seen for many kilometers. Consequently, the scenic quality of a region can be diminished by this form of pollution.

Environmental Education Facilities

The SRSR has the potential to offer cultural and environmental education opportunities to diverse markets. These markets include numerous educational institutions, special interest organizations, faculty and university students who are conducting research, and the Egyptian people interested to learn more about their country.

Environmental education facility requirements are similar to the functional area requirements for the visitor center. Classroom, auditoriums, and laboratories, and library functions are the distinguishing characteristics. The decision to build a separate educational facility should be based on evidence of a strong market demand for this facility. If this demand exists then the actual dimensions of the functional spaces are determined by the results of that market research.

Continuing Education Market

Virtually all major colleges and universities throughout the world have alumni travel programs that encourage travel to unique destinations. Additional special interest tour markets include museums, outdoor oriented clubs and organizations, wildlife societies, and similar organizations. These organizations sponsor and promote study tours to destinations such as the SRSR with its rare environmental and cultural resources. All of these institutions seek excursions that emphasize learning as part of their experience. These institutions represent a large and profitable tourism markets. The availability of educational facilities would be an attractive enticement to these organizations.

Funded Scientific Research

The many significant environmental and cultural resources located in the SRSR can attract scientific research. Examples of potential research opportunities include studies of endangered species, hydrology, vegetation restorations, climatology, geology, history, and archaeology. This research, when conducted by faculty and students from respected educational institutions, can substantially contribute to both the national economy and prestige of Egypt.

SECTION 3 TOURISM DEVELOPMENT PROGRAM

PURPOSE

The purposes of the Tourism Development Program are to:

1. Define the tour product experiences that will be provided in a specific tourism service area, and
2. Specify the delivery systems needed to provide those experiences.

As stated in previous sections, tourism seeks to provide high quality recreational, cultural nature based, and educational experiences. The guide services, visitor centers, accommodations, emergency services, diverse support services, and appropriate infrastructure are the vital elements required to deliver those tourism experiences. The ability to provide those unique experiences and appropriate services and facilities is based on the creation of a comprehensive Tourism Development Program.

The Tourism Development Program contains a detailed description of what tour products will be offered; where they will be located, how they will be provided, and when (the season) they will be offered. Based on this information new tourism products can actually be implemented. The Tourism Development Program is a comprehensive plan that incorporates specific descriptions of the recreational experiences, support services, equipment, tour facilities, accommodations and guest services, and human resources needed to develop new tourism products. The actual size, design, support systems, and guest amenities are calculated to identify the specific tour products that will be offered. All of the information produced in the previous sections of this report is needed to produce the Tourism Development Program.

The Tourism Development Program provides the essential information needed to accomplish site selection and site planning. Specifically, the site must be suitable for the delivery of the tour products, and the most economically and environmentally feasible way to know that is to create the Tourism Development Program.

An equally important goal of the Tourism Development Program is to conserve the environmental and cultural resources of the region in which tours operate and facilities are located. The economic feasibility and sustainability of heritage resource based tourism development depends on this. Consequently, program design and its associated facilities and services need to be consistent in size and design with the environmental setting and cultural values.

Define the Tourism Service Area

The first step in designing a Tourism Development Program is to identify recreation activity areas based upon the cultural and natural heritage resource products described previously in this report. It should be immediately apparent to the tourism investor that selecting well defined tour service areas identifies:

- Distinctly different environmental and cultural heritage based attractions are present in each ecological zone of the SRSR. These attractions appeal to very distinct tourism markets with varying consumer preferences.

- Different environmental conditions in each service area require specially designed accommodations and tourism services in order to safely and effectively deliver quality tourism experiences.
- Guide training and other human resource requirements must be relevant to the conditions and attractions that occur in each of the service areas.
- The availability and quality of infrastructure and emergency response capabilities are distinctly different among the service areas and therefore planning and investment for these tourism development needs varies considerably.
- Transportation access to each of the service areas varies substantially and thus represents different challenges to both the tourism investor and the tourist.
- Environmental management and cultural conservation issues are very different among the various zones. Wildlife habitat conservation in the wadi involves different management practices than the preservation of heritage sites, conservation of the fringe reef coral systems, or maintenance of nomadic subsistence sites

In summary, the distinctions among tour service areas define the type of tourism products that are offered and the major investment considerations required to develop facilities and services to meet the needs of those markets and the sustainability of the region.

Contents of the Tourism Development Program

The contents of the Tourism Development Program results from combining a very competent knowledge of the SRSR with the tour product and delivery system information described in Sections 1 and 2 of this report. When this information is produced it should be economically and developmentally evaluated. Target market studies and the application of development criteria officially authorized by TDA are needed to evaluate the economic feasibility of the Tourism Development Program.

The remainder of this section summarizes the types of information needed to produce a Tourism Development Program.

- Inventory of the potential environmental, cultural, and historical attractions and recreation activities in specific tourism service areas. This includes consideration of the tolerance of the local environmental and cultural conditions to determine the tolerance of the service area to host the tourist experience.
- Define seasons of use for activities and attractions in terms of high, shoulder, and low.
- Calculate the time required to deliver the tour product.
- Estimate the numbers of visitors per season.
- Identify the tourist's anticipated behavioral characteristics
- Identify the experience and skill levels of the tourists. The physical condition, age, and recreational skills of the potential guest should be evaluated to determine the appropriateness of a recreation activity.
- Based on the previous information, design the actual visitor experiences. It is important to note that a single activity can be experienced in a variety of ways. They can also be classified in terms ranging from passive to very active. By example, a nature heritage tour product can be categorized as naturalist guided, self guided, vehicular, hiking, photographic, mountaineering, etc.
- Compatibility among ecotourism tourism experiences should be evaluated.

- Visitor management ratios - define a reasonable relationship between the number of guides and support staff and the number of guests.
- Types and numbers of transportation and recreational equipment required.
- Specialized supplies and logistical support required - by example, everything from water and meal preparation supplies to sunscreen.
- Published field guides, relevant brochures, trail maps, way finding signs, and interpretive signs should be available to the guests.
- Required human resource skills and associated training for guides should include multiple language fluency, hospitality, subject matter expertise, emergency response, communication equipment, and land equipment operator skills.
- For educational venues, be sure to design appropriate curriculum, have text books, and qualified teachers.
- Permits and licenses, when required, must be obtained.
- Insurance must be obtained, e.g., liability, vehicular and property.
- Emergency services capacities must be established. These can be supplied by means of some combination of permanent, seasonal, or roving patrol services and by mutual aid agreements.
- Maintenance and repair of equipment and facilities essential for delivery of tourism services.
- Costs and revenues for the program plan should be calculated.
- Determine best management practices for SRSR environmental resource conservation.
- Determine best management practices for SRSR cultural resource conservation.

SECTION 4 SITE SUITABILITY CRITERIA

INTRODUCTION

Selecting the best locations for heritage tour facilities is based on criteria that support the most feasible delivery of high quality tourism experiences. Decisions regarding the suitability of a site to accomplish that goal are based on a combination of information such as proximity to the tourist attractions, economics, the environmental characteristics of the site, existing land uses, aesthetic characteristics, and compatibility with surrounding lands and communities. Fortunately, an enormous amount of environmental, cultural resource, community, and land planning information exists for both TDA lands and the SRSR.

PURPOSE OF SITE SUITABILITY CRITERIA

The purpose of site suitability criteria is to select the most appropriate locations for the development of new tourism products on TDA lands. They are used to achieve the following objectives:

- **Best access to tour attractions.** The timely delivery of tourism experiences affects visitor satisfaction, their willingness to pay, the frequency of conducting tours, and the costs of providing the product.
- **Most economically feasible.** This means identifying the largest collection of tour products that can be cost effectively provided. The highest valued products that will realize the best return on investment are offered at sites that are attractive, have reasonable development costs, and are reasonably close to support services in order to control operational and maintenance costs.
- **Authentically and attractively represent SRSR's natural and cultural features:** The physical, aesthetic, and cultural features of the site need to be environmentally clean, attractive, and authentically represent the natural character of the Eastern Desert.
- **Avoid or minimize impacts:** The natural and cultural heritage tour products rely on conserving the environmental quality and cultural integrity of the SRSR. Site selection and its use must be compatible with sustaining those resources.

Site selection criteria relevant to the decision-making needs of the TDA and the conditions of the SRSR are identified below.

1. Proximity and Transport Access to Heritage Resource Attractions

The most valuable sites for adventure tour products are located near cultural and nature attractions that have the best transportation access. As previously described, the new heritage resource tour products are identified in terms of experiences shared with tourists who visit the SRSR. Close proximity and reasonably good transport access to those attractions provides a competitive advantage measured in terms of numbers of features offered, visitor satisfaction, duration of the tour, and equipment and fuel costs.

Actual implementation of this site selection criterion requires detailed knowledge of the heritage tourism product. This knowledge is derived from the Tourism Development Program that includes identification of attractions to be experienced, most efficient routes to travel, type of transport equipment used, calculations of travel times, and

availability of support resources required to deliver the product. Again, the facilities that will be located on TDA lands are not the tourism product itself, but one part of a hinterland tourism experience delivery system.

Site suitability determined by:

- Number of attractions within one day travel time
- Type of cultural heritage attractions
- Type of natural heritage attractions
- Quality of attractions
- Actual distance to attractions
- Condition of the tracks
- Condition of trails
- Average travel times from Coastal Road
- Length of tourist season based on weather conditions

2. Environmental Quality

Tourists who purchase high value cultural and nature tour products want settings that exhibit environmental quality. Entrances to sites, the sites themselves, and the land that surrounds them have to be attractive and possess environmental integrity in order to be suitable.

Unfortunately, vast areas of land along both sides of the Red Sea coastal road and in the expanses of the wadis near this road are badly contaminated. Specifically:

- There is a huge amount of rubbish that is discarded and then distributed throughout the region by the constant winds. Most of these contaminants are plastic bags and bottles. A host of pollutants such as oils and chemicals are discarded in these containers also. The extent of contamination is a serious concern because it affects the environmental integrity of the wadis, coastal plains, mangroves, fringe reef, and marine ecosystems.
- Many thousands of tons of construction waste is dumped along the roadside or dumped inside the wadis. The construction waste consists primarily of dirt, stone, old coral, brick, concrete and other materials. The waste buries and kills scarce vegetation, alters wildlife habitat, and changes the topography which then impacts the flow of water. The aesthetic aspects are equally severe. In many instances high construction waste piles prevent views of the Red Sea and eliminate reduce views of the mountains and wadis.

Criteria used in the site selection process includes:

- Landscapes that are clean and unpolluted
- Landscapes that accurately represent the natural environment
- Indigenous plants and animals
- Interpretation potential of the site
- Visually attractive landscapes
- Excellent views from the site
- No environmental hazards, such a flood zones

Site suitability determined by:

- Topography
- Hydrology
- Soils
- Geophysical character
- Habitat characteristics
- Vegetation

3. Proximity to Tour Support Facilities

Enjoyable and safe tour experiences require the type of support facilities and services described in previous sections of this report. The location of visitor centers, toilets, and emergency services, by example, will contribute substantially to delivering the tourism products sought by this market. Commercial tourism developments on TDA lands will enjoy economic benefits from locations that are near tour support facilities.

Use of this site selection criterion requires knowledge of the location of both existing and proposed support facilities and services described in previous sections of this report. It also requires knowledge of the capacities of these facilities. Close proximity to these facilities and services is preferable to long distances.

Site suitability determined by proximity:

- Distance from visitor center
- Distance from emergency services
- Distance from fuel
- Distance from toilets
- Distance from rest stations
- Vehicle storage and repair services

4. Size of the Site

The site serves many purposes in the delivery of the tourism product. Guest facilities, support services, employee housing, infrastructure, attractive landscapes that offer interpretive services, parking, and open spaces all require land. The site needs to be large enough to accommodate these uses.

When calculating the size of the site it is valuable to consider both the destination and the day use tourism market. An important tourism market is the day use market comprised of persons who want to take tours, purchase local crafts, equipment, supplies, food, and beverage services. Land use planning for this market is advisable.

Site suitability determined by:

- Number of hectares of proposed site
- Potential to purchase sufficient land

5. Compatible Adjacent Land Uses

The uses of the lands surrounding the potential tourism site should contribute to a quality tourism experience. Conflicting land uses such as incompatible development, rubbish, odors, or visual intrusions that reduce the quality of the tourism experience will also diminish the quality of the tourism product and thus reduce its economic value.

Vast areas of the Red Sea coast are being used for large scale resort developments. These resorts play an important role in Egypt's economic development strategy, but they are incompatible with the demands of a high end tour market. The resorts attract a mass market and this is inconsistent with the small scale, un-congested setting that heritage tours require. Consequently, both actual proximity and visual dominance of the large scale resorts are to be avoided when selecting cultural and nature heritage tour sites.

Mining and quarry activities occur throughout the SRSR. Gold is being mined aggressively at Sukari. Alamanite is mined in great quantities near Cabalsi. Phosphates are still being mined, gypsum is occasionally mined, and granite and talc are being quarried in many areas of the SRSR. Geological survey crews steadily examine the region to find new deposits. This continues a tradition of land use that has existed for thousands of years. Obviously, tourism site development should not be located near these active mining and quarry operations. Less obvious is the need to avoid roads used by mining trucks and employees. This large scale truck traffic is incompatible with both an entry experience and for tour routes.

Information regarding adjacent land uses ownership is required to select a site. Site inspections must be conducted to identify compatibility issues.

Site suitability determined by:

- Existing land uses of adjacent property
- Proposed land uses of adjacent property
- Land ownership of adjacent property
- Visual assessment of adjacent property
- Site inspections of adjacent property

6. Expansion Potential of the Site

The ability to expand tour capacity depends on combining the previous two criteria: site size and adjacent land uses. During the last 15 years the SRSR has experienced the geographic expansion of tour operations and the TDA wants to diversify tour products. It is probable that continuation of these trends will create opportunities for developers to expand their tourism markets. Obviously, the capability to expand tour operations should be considered when selecting a site.

Site suitability determined by:

- Existing land uses of adjacent property
- Proposed land uses of adjacent property
- Land ownership of adjacent property

7. Compatible with Local Communities

Tourism products, and the many activities needed to support those products, will affect local communities. Some communities, such as Marsa Alam and Hamata, may want reasonably close proximity to tourism sites in order to benefit from jobs and to create markets for their goods and services. Others may consider tourism an intrusion of their way of life and therefore want distance between themselves and the tourism site. Application of this criterion requires consultation with local communities.

The cultural values and traditions of local communities deserve respect. Communities want to continue their customs, religion, and social practices and the quality of cultural tourism experiences depends on the conservation of those practices. Criteria obtained from consultation with local communities should determine:

- The allowable involvement of "outsiders" in the host community.
- The involvement of local people to lead tours and participate economically.
- The strengthening or establishment of educational programs that promote indigenous language and cultural practices.
- The expansion and improvement of local infrastructure to meet the needs of both the local communities and the tourists.

A variety of techniques are available for applying these criteria, but all of those techniques involve some type of citizen participation process.

8. Compatible with Nomadic People

Nomadic people, by definition, use different lands through the entire year. Tourism site selection must be compatible with these people. This means that specific sites and access to those sites need to be preserved. By example, locations that are used for pastures, have wells, and are sources of subsistence should not be developed. Equally important, access to those sites must remain open. Sites should not be selected if they disrupt the lives of the indigenous, nomadic people.

While the number of traditional people in the SRSR environment is small, the subsistence uses they make of that environment, including herding, hunting, gathering materials for food and handicrafts, charcoal production, and fishing, are vital to their survival. The use of TDA lands should not disturb those subsistence uses.

Site suitability determined by:

- Are lands used by nomadic people for subsistence?
- Are lands the traditional paths or nomadic people?
- Are there Islamic shrines on the land?

9. Proximity to Labor Force

Egypt wants tourism products to provide economic benefits to its people. Local people know the SRSR and their knowledge of its conditions and cultural values would strengthen the tourism product. It is acknowledged that very few persons live in the SRSR, but any opportunity to provide them economic benefits should be considered in site selection.

The Ababda Bedouin people, with their intimate knowledge of the hinterland are the persons best suited to either become guides or obtain income from contributing information to guide training programs. Their knowledge of local conditions sharing is valuable for the delivery of tourism products, thus proximity to the Ababda, who want to participate in the delivery of tour products is a site advantage.

10. Proximity to Local Supplies and Services

Local towns and villages are potential sources of supplies and services. The people of these communities can provide maintenance and repair services; they have a variety of commodities for sale; can manufacture certain items; and seasonally they can supply

meat and produce. Efforts to deliver tour products that have local integrity and to achieve objectives of improving local economies will consider proximity to these supplies and services a site advantage.

The Marsa Alam and Hamata economies are changing to tourism. This provides both immediate and long term benefits for investors who locate within a reasonable travel distance from those towns.

11. Minimize Environmental Impacts

Tourism development should not put the environment at risk. The quality of the SRSR's environmental resources reflects the quality of the tourism product. It is the foundation of the tourism development opportunities. Given this fact, site selection must consider the impacts that development will create and determine if valuable resources would be endangered. Environmentally sensitive zones, such as rare plants, and critical wildlife habitat, should not be developed. Careful site analysis is required to identify the presence of these sensitive areas.

Threats to the ecosystem to be avoided include:

- Water pollution
- Air pollution
- Nesting bird colonies cannot be intruded upon
- Scarce vegetation in the wadis must be protected, and mangroves must be guarded from pollution caused by human activity
- Conservation of critical habitat areas in the wadis and mountains

During the last 10 years SRSR environmental information has been collected and mapped. Environmental reports and maps are useful tools that can be used by either TDA or potential tourism development investors to determine the environmental character of specific sites. These sources are useful tools for selecting environmentally suitable sites.

There are several TDA publications that describe requirements for comprehensive site assessments. The information contained in those assessments should identify the environmentally significant features of a site. This is the information needed to implement "minimization of environmental impacts" site selection criterion.

12. Seasonal Weather Conditions

As previously described, seasonal weather conditions play a major role in the definition and delivery of SRSR tourism products. Although the heat of the summer cannot be avoided, there are definitely sites where tourists can better tolerate SRSR weather conditions. Site characteristic information used to determine suitability includes

- the topography, particularly the geographic aspects of the slopes,
- prevailing winds,
- wind velocity,
- monthly average temperatures, and
- presence of vegetation.

Knowledge of local weather conditions will also benefit the location of facilities on site. Obviously guest facilities should be located in the most attractive and comfortable

locations on the site. But it is also important to apply weather condition information to locate support facilities. By example, knowledge of the prevailing wind directions is used to site water supply and wastewater treatment facilities in order to eliminate or reduce risks of unpleasant odors and noise.

“Gateways” to the Tour Products

The location of the SRSR tour facilities and support services becomes the “Gateway” to the regional attractions and its tourism experiences. **This is the significance of the location and the role of the site.**

The “Gateway” creates the tourist entry experience by means of its appearance, the information and support services it supplies, and the compatibility of its facilities with the environmental and cultural character of the region. By example, the tourist’s immediate experiences would include an introduction from a well trained guide who may be either (a) an employee of the guest facility, (b) a tour operator who has a concession authorization (c) a government naturalist or ranger, or (d) an educator affiliated with a college or university. The introduction explains the prominent attractions of the tours, the routes of travel and their distinguishing features along those routes, duration of the tours, amenities and special services that will be provided. These services include meals, specialized forms of transport, or supplying backcountry recreation equipment and clothing. Emphasis is placed on accommodating the needs of the tourists and responding to special safety and medical conditions. These activities represent the first impressions of the actual SRSR tour experience.

The appearance of the entrance to the site, the site itself and the landscape surrounding it must be clean and offer attractive views. Again, no rubbish, construction waste, or any other pollutants can be present. The views should be representative of the diverse ecologies of the region including mountains, wadis, and the sea. Views of all three of these elements are ideal.

The information and support services it supplies are those relevant to the tour product delivery system. In summary, this includes:

- essential visitor interpretive and safety information;
- diverse visitor services such as accommodations, food and beverage, and amenities that are culturally appropriate;
- emergency services, supplies, and telecommunications;
- recreation supplies and equipment required to deliver the tourism products.

The type and scale of tour development will affect the environmental quality of its setting. Market evaluations, by example, may show that demand exists for a 300 guest rooms and associated support development. From this perspective development is warranted. But if that size significantly diminishes the environmental integrity of the site then it is inappropriate. The use of multiple sites to achieve the 300 room market is a far more desirable solution.

The local communities of the SRSR consist of persons who reside in permanent residences and those who are nomadic. Both of these local populations deserve respect. The location of tourism products in the hinterland of the SRSR cannot endanger the subsistence existence of nomadic people. Tour sites located in the vicinity of existing settlements must respect local values and privacy, share scarce resources, and demonstrate benefits to local people.

In order to optimize the economic value of the “Gateway” it should be designed and developed to capture the destination, day use, and transient tourism markets. The destination market are persons seeking specialized cultural and nature heritage tours. They are willing to pay a premium

for an extended visit to unique destinations like the SRSR. The destination market generates the largest revenues. The day use market consists of persons who purchase day tours, food and beverage services, and local products. All of these markets are important sources of revenues.

Detailed criteria for the design and development of sites and their facilities are presented in the TDA Development Guidelines Report. Investors are advised to review the information contained in that Report.

SECTION 5 SUITABLE SITES FOR NEW TOUR PRODUCTS

INTRODUCTION

During the week of February 3, 2008 a professional team comprised of tourism, land and environmental planners from Chemonics and TDA investigated several potential sites on TDA lands to determine their suitability for the cultural and nature based heritage resource products described in this report. The team used the site criteria presented in Section 3 of this report to determine the suitability of all of the sites they inspected. The environmental quality of the sites, complete absence of rubbish, good access, and aesthetic qualities were deemed especially important by the team members. Most importantly, the decision to select a specific site resulted from the full consensus of the team members. Based on the criteria and this selection process a total of four sites were identified as very suitable for cultural and nature based tourism development.

TDA lands that were investigated are located within a five kilometer zone that extends inland from the edge of the Red Sea by that distance. The northern limit of the regional investigation was Wadi al Anbaut in the vicinity of the ancient port of Nakari to the junction of Wadi al Maalik and Wadi Lahami in the south. Based on the use of the site suitability criteria and site investigations of this region of the SRSR by the professional team, four suitable sites were selected by the team.

From a north to south direction the four sites are located in

- Wadi Nakari
- Wadi Ghadir,
- Wadi Sharm al Fokairi
- Wadi Lahami

This distribution extends from the north to the south of the Southern Red Sea Region. Each site is distinctly different from the others and is located near different tourist attractions. Consequently, they offer very different tourist experiences in different settings and these distinctions should create unique market identities.

AN OVERVIEW OF THE FOUR SITES

Access

All four sites have excellent access to tour product attractions to the west in the hinterland and to the coastal road in the east. Travel times by off road vehicles are approximately 15 minutes from the coastal road and 20 minutes to significant tour features.

Reasonably close access to the coastal road creates cost effective opportunities to provide supplies and capture a day use market. It is also essential for providing emergency services. The Wadi Nakari and Wadi Ghadir sites are approximately 30 minutes from the Marsa Alam Hospital. The Wadi Fokairi site is approximately 30 minutes from the hospital. The wadi Lahami site is reasonably close to emergency services in Hamata and Abu Ghouson.

In summary, the excellent access to the four sites satisfies several site suitability criteria. They have reasonable proximity to tour support facilities, proximity to labor force, and proximity to local supplies and services.

Environmental Quality and Minimization of Impacts

All four sites have superb environmental quality. The TDA and Chemonics site selection team was very focused on this site suitability criterion. The actual sites and their surrounding lands are completely natural, have no rubbish, and no contaminants of any sort have been introduced to the sites or their environs.

Each of the four sites is visually attractive with beautiful views of the mountains and wadis. Except for wadi Ghadir, the sites have excellent views of the Red Sea. The views of the Red Sea show no development and no development is planned for those viewsheds.

All of the sites are in the vicinity of wadis, but facilities that may be constructed would be located on plateaus along the edge of the wadis. This is very important. The environmental integrity of the wadis would not be impacted by construction activity and the visual quality of the wadis would not be negatively impacted.

There are no environmental hazards associated with the four sites. The geologic formations are ancient and stable. There are no rockslides areas in the vicinity of the sites. Winds are steady, but moderate. There is no evidence of scouring or wind built sand drifts near the sites. These would be evidence of severe winds carrying large amounts of sand.

Size of the Site

The size of each site varies substantially, but all are sufficient for providing the high quality tour products discussed in this report. The largest site is Wadi Fokairi located on an enormous plateau. The size of facilities and the area they consume have no site limitations. But the construction of exceptionally large facilities would most probably not be attractive to the high value market seeking exclusivity.

In contrast, the Wadi Nakari site is quite large, but the topographic features allow the developer to locate facilities in secluded areas and thus reduce visual impacts of development.

The wadi Ghadir site is in a very beautiful, but more enclosed canyon. Placing structures along the edges of the wadi creates many development opportunities. The size of the site is very suitable for a small to moderate scale development.

The Wadi Lahami site is a plateau overlooking the wadi, the mountain pass, and the Red Sea. There is no land size limit to the type of development that can occur there.

All four of the sites are large enough to accommodate tour development expansion.

Compatible Adjacent Land Uses

The natural features and environmental integrity of land surrounding the four sites is undisturbed. The development of high quality tourism facilities would be very appropriate at those sites.

Compatible with Local Communities

The three northern sites, Nakari, Ghadir, and Fokairi are close to Marsa Alam. The economic base of this community is being transformed from a traditional fishing and mining community to

a tourism economy. Consequently, it is anticipated that the three northern sites will be very compatible with Marsa Alam.

The Wadi Lahami site is located approximately between Hamata and Berenice. Hamata is the designated Wadi el Gimal National Park headquarters and this role is very positive for a tour development that might be located at the Lahami site. The community of Hamata is developing its schools, electrical capacities, and community services. It is also a place where local people produce crafts and have an economic interest in tour development. Thus it is desirable to locate a tour development operation near this community. Berenice is growing and will probably be a tourism center. Again, this would be compatible with a Lahami tour development project.

Compatible with Nomadic People

Wadi Ghadir is the only site where Bedouin people make their encampments. And most importantly, these people are very friendly with foreigners and welcome them. The other three sites are not used by the Bedouin and therefore there is certainly no conflict of use there.

Seasonal Weather Conditions

Weather conditions at the four sites vary considerably. This will directly impact the length of seasonal operations. The Wadi Nakari location is the most suitable for year round operations. It enjoys sea breezes and shade. The topography allows construction of facilities on slopes that are shielded from the afternoon sun. Wadi Ghadir is also a very desirable site in terms of weather conditions. Its setting within a relatively deep canyon and the availability of shade from vegetation will make it an enjoyable location site for much of the year. The Wadi Fokairi and Lahami sites are on large plateaus that cannot escape the intense sunlight. This fact may limit their use significantly during the summer months. Site planning and facility design will be the key to creating the longest possible season for all of the sites.

Telecommunications

Excellent mobile telephone service is available at all four sites. This is a valuable resource for accomplishing cost effective tour and facility operations. Functions such as tour reservations, travel arrangements, on site management, guest facility operations, supply acquisition, and emergency services are all improved by having excellent telecommunications.

Gateways

Based on all of the site suitability criteria and the professional judgment of the team that inspected the sites, all four are very appropriate for providing the functions of a gateway to the new tourism products.

FOUR PERMANENT SITES

Wadi Nakari Site

The location is: N 24 49 881
 E 34 57 502

Primary entry to this site is to travel southwest from the coastal road across the wide expanse of Wadi Nakari until reaching topographic features that form a much smaller entry to the remainder of the wadi. Travel time is only 10 minutes from the coastal road and approximately 20 minutes to Marsa Alam. A secondary entry is from the southwest and this track connects the Wadi Nakari

site to the Wadi Ghadir site. Potential operational advantages may be obtained from the relatively close proximity of the two sites.

The entire entry experience is environmentally clean. There was no rubbish or pollutants. The wide expanses quickly narrow to a more confined view of the upper canyon. Views to the north, south and west of the site show the front edge of the mountains. To the east is an open view of the Red Sea. A single promontory and the other topographic features located on the site provide excellent views of the Eastern Desert and the Red Sea. There are no existing or proposed development activities that compete with the scenic quality of the site. The surrounding lands and seashore are in a natural, undeveloped condition.

The site is slightly vegetated, but it is near the most highly vegetated wadis in the SRSR. Consequently, rare plants and animals are nearby, but their habitats would not be threatened by the use of the site.

Wind, as always, prevails, but there are many windbreaks to shelter the site from high velocity winds. In addition, there are no sand dunes to indicate that windborne sand is a problem.

The site is located very close to numerous cultural and natural heritage visitor attractions. All of these may be experienced on well established tracks and routes. A summary of notable attractions include:

Tangible Cultural Heritage Resources

- Petroglyphs of animals and boats
- Zabara, a huge ancient emerald mining settlement
- Several Islamic tomb sites
- Roman settlements located along the Edfu Road
- Bokari ancient gold mines
- Shazli Shrine and Village
- Sukari ancient, British and modern gold mine site
- Wadi Sukari numerous Islamic shrines on an ancient battlefield.
- Wadi Anboat ancient gold mining sites, millstones, and settlement
- Ancient Roman tombs
- Ancient Islamic tomb site
- Ancient Port Nakari
- Hangelia ancient and British colonial mining site

Intangible Cultural Heritage Resources

- Wadis Tundubah and Anboat have Bedouin camps.

Natural Heritage Resources

- Wadi Tundubah has extensive vegetation and is wildlife habitat
- Wadi Anboat vegetation is used mostly for grazing herds; but gazelle, wild donkeys, wild camels and birds may be seen
- Migratory birds in spring and fall
- Many geologic features
- Excellent terrain for hiking

Wadi Ghadir Site

The location is: N 24 48 143

E 34 57 516

An excellent track from the coastal road provides a very scenic entry through Wadi Ghadir. The wadi is named Ghadir because it has a steady supply of water. A well at the entry, Bir Ghadir, represents an immediate visitor attraction. The water from this well is plentiful but salty. It is a vital supply of water for animals. The entire length of the wadi is highly vegetated. Acacia and tamarisk dominate the botanical species, but several shrubs are also prevalent.

The narrow parts of the wadi have interesting geology and landforms. As the entry progresses through this passage the visitor sees extensive vegetation, dramatic examples of wind erosion, temporary Bedouin encampments, and animals. Dorcas gazelle and wild camels are commonly seen. It is a short distance from the coastal road to the Ghadir site but it is an entirely different experience.

The narrow wadi opens to a large area that would be the actual site of tourism facilities. This site is extensively vegetated with acacia which provide shade, food and utilitarian items for both wildlife and Bedouin. The openings to the north, south and west provide access to numerous attractions through this entire region of the SRSR. There is no need to travel back to the coastal road to experience those attractions.

The Wadi Ghadir site possesses all the characteristics of a remote, secluded site, and yet it has excellent access to both essential services and tourist attractions. This is the most distinct feature of this site. Marsa Alam is 30 minutes away, prominent wildlife and Bedouin attractions are immediately on site, and numerous natural and cultural attractions are nearby.

Development of the Ghadir site requires respect for the environmental quality and cultural uses of the area. Specifically, structures should be built on the plateaus along the edge of the wadi. No development of any type should occur on the wadi itself because it would disturb wildlife, injure the vegetation, and interfere with Bedouin use of the area.

Tangible Cultural Heritage Resources

- Excellent access to the Zabara emerald mining settlement
- Large ancient chrome mine and settlement site with many artifacts
- Excellent access to Hangelia ancient mining and settlement site
- Petroglyphs of ancient camel caravans
- Many Islamic tomb sites in the region.

Intangible Cultural Heritage Resources

- Bedouin in Wadi Ghadir use the wadi on a seasonal basis and are friendly to strangers.
- Bedouin camps in the nearby wadis.

Natural Heritage Resources

- Wadi Ghadir has many geologic, wildlife and vegetative attractions. This region is especially suitable for nature based tours.
- Many rare plant species. These have a variety of medicinal and utilitarian uses.
- Dorcas gazelle seen often and on this region. Wild and domestic camels, goats, birds throughout, ibex possible, and hydrax in caves in upper wadi.

- Many acacia and tamarisk
- Geology of the region internationally significant
- The landforms are scenic for both photography and hiking
- Drift sand dunes on canyon walls

Wadi Sharm al Fokairi Site

The location is: N 24 44 247

E 34 02 181

This site has excellent access from the coastal road and is located near the northeastern boundary of Wadi el Gimal National Park (WGNP). It is 30 minutes from Marsa Alam, 10 minutes from the coastal road, and directly adjacent to WGNP.

This is the largest and least vegetated site among the four that were selected. The land is an enormous plateau with excellent views of the mountains, wadi and Red Sea. But unlike the other three sites, there is virtually no vegetation or wildlife living on this site. The name of this wadi means scarce water and that accurately describes both the site and its setting. The only vegetation in the vicinity is one acacia tree and some shrubs located in the wadi. This sharply contrasts with the WGNP that has an abundance of both vegetation and wildlife. This vivid contrast is a distinct part of the tourist experience at this place.

The site provides two distinctly different entry points to access the WGNP. One is by means of the coastal road to the main entry to the park. Along this route the tourist can visit the new Visitor Center or the ranger station. But this route includes considerable volumes of traffic, a variety of commercial development, and increasing congestion.

The second route to the WGNP represents one of the economic values of the site. This route extends from the site directly to the interior of the park and avoids both congestion and the rubbish that so often is found on the roadway leading to the park. This is a far more pleasant entry experience and certainly will be more attractive to the high value tour market.

The closest tour products that can be offered from this site are located in the Wadi el Gimal National Park. A summary of notable attractions are listed below. A comprehensive listing can be found in the several documents produced for TDA and associated with the creation of the park.

Tangible Cultural Heritage Resources

- Gelia emerald mining town
- Roman sentry posts
- Roman fortifications
- Roman wells and hydrummas
- Sakit mining town site and Temple of Isis
- Nuqrus mining town
- The Roman Road
- Appollonia ancient caravan fort and warehouse
- Cabalsi ancient caravan fort and warehouse
- Phylocan ancient caravan fort and warehouse
- Roman tomb sites
- Islamic tomb sites

Intangible Cultural Heritage Resources

- Bedouin camel herding
- Bedouin food preparation

Natural Heritage Resources

- Rare or unique vegetation such as Anak, the Gordova bush, flowering shrubs that utilitarian value for Bedouin and provide nesting areas for birds, Acacia. Well illustrated field guides for native plants are published.
- Diverse species of birds in all seasons, but at different locations in WGNP. Comprehensive documentation for these are available in well illustrated field guides.
- Wildlife viewing for gazelle, ibex, hydrax, camels, donkeys. Wildlife habitat zones are well known to rangers.

Wadi Lahami Site

The location is: N 24 11 088
 E 34 23 250

The Wadi Lahami site is located along an ancient caravan road system that once connected the Red Sea to the inland Roman Road. The Roman Road trade route connected the wealth and trade goods of Africa and South Asia to the Nile River which then carried those commodities onward to the empires of the Mediterranean. Approximately 2000 years ago this site was a key intersection of that transport route. The site is located on a plateau at the entry of a narrow canyon. The wadi itself was part of the trade route and the canyon was protected by a fortress town located at the western edge of the canyon. The wadi is well vegetated and the plateau offers stunning views of the wadi, mountains and Red Sea.

As a result of its unique history, the Lahami site provides entry to a collection of tour attractions that are distinctly different from the other three sites. The cultural heritage attractions are dominated by the antiquities that mark the ancient Roman Road. The living culture is different from the more northern sites. The Bedouin tribal influences include both the Ababda and Bishari tribes.

The geographical orientation of the site is to the southeast. This is significant because the historical, cultural and natural orientation of the location is to the southeast also. Berenice and Vetus Hydruma, were the great ancient cities that this site was directly related to. The ancient Novum site was a critical source of water that the Lahami Roman Fortress relied upon. Today, Shalateen and its camel market is now the town where present day Bedouin conduct their trade.

The entry to this site from the coastal road is very attractive. However, the actual access road to a tour development should be built along a northern ridge in order to conserve the vegetation of the wadi. The site has sufficient land to construct tour facilities. They would be prominent and therefore the scale of development will be well planned.

A close relationship with the community of Hamata would probably benefit both the Lahami site and the town. Hamata is the headquarters of the Wadi el Gimal National Park and serves as a natural entry to the southern region of this protected area. It has a ranger station, desalinization plant, new school facilities, new electrical power generation, and refrigeration capacities. All of these developments are improving the quality of life and economic conditions of the people of Hamata. It is apparent that tourism plays a large role in Hamata and the creation of a quality tour facility in Wadi Lahami would potentially increase those benefits.

The nature based attractions of Wadi Lahami are not similar to the northern sites. There is less vegetation and less water in this region, consequently there is less wildlife to view. However, the true wilderness character of this region means that Nubian Ibex are more prevalent than in the north and that rare plant species and birds may be seen in the Lahami region. These rare species will attract high value markets.

The cultural traditions of the Bedouin thrive in this region. Tourists interested in cultural attractions will be amazed by the traditions that have been sustained for a thousand years.

Tangible Cultural Heritage Resources

- A Roman fort and settlement is at the west end of the narrow canyon
- Vetus Hydruma
- Novum Reservoir
- Berenice
- Ancient settlement site between Vetus Hydruma and Novum
- Roman well on the upper reaches of Wadi Lahami along Roman Road
- Hydrumas (water reservoirs)
- Cabalsi caravan fortress and warehouse
- Appollonia fortress and warehouse
- Gelia emerald mine and settlement
- Hartit well
- Raada well on track between Novum and Hamata
- Sabbarah ancient roman site in vegetated area and near Daort well

Intangible Cultural Heritage Resources

- Shalateen Camel Market - Visits to see the Camel Market in El-Shalateen are currently one of the most popular day excursions available in the South Red Sea. There is great potential to develop it into a higher-value product that provides local people the possibility to engage in the offer of tourism-related services.
- Bishari and Ababdatraditional practices.
- Bedouin settlement near Hartit well
- Cultural attractions located in Hamata

Natural Heritage Resources

- Vegetation is scarce, but there are several rare plants.
- Plants that are unique to this ecosystem are Mamees *Coccinia Diverifolia* and Mashta *Cleome Droddijera*
- Wildlife habitat to east of Vetus Hydruma
- The number of wells and reservoirs in this region are excellent locations to view wildlife.

Seasonal Camps

Seasonal camps serve many important functions in the delivery of tour products in the hinterland. Based on many years of extensive site investigations the locations of numerous seasonal SRSR camp sites have been identified. The location of a seasonal site depends equally

on the functions that it performs and its suitability, as described in Section 4. Those functions include:

- Extended visits to the SRSR
- Rest stops
- Aid stations
- Supply locations (caches)
- Resource conservation monitoring

For those tourists who wish to remain overnight in the hinterland of the SRSR, remote camp sites must be established at strategic locations. Several vivid experiences can be derived from spending a night in the wilderness of the Eastern Desert. One of the most memorable experiences is the exceptionally clear view of the stars. Constellations and galaxies can be readily identified and ancient methods of stellar navigation can be learned from this experience. Combining the mythical names of the constellations and Egypt's rich cultural history of literature and poetry might provide an opportunity to share a legacy of storytelling.

It is advisable to have Bedouin people lead camp experiences to the fullest extent possible. The Bedouin have a long tradition of sharing what they have with others. It is far more than merely demonstrating the use and cooking of local foods. By example, when Bedouin share a sheep or goat one third is given away to strangers, one third is shared, and one third is kept. In a land of extreme scarcity, the Bedouin demonstrate remarkable generosity.

The solitude and silence is another impressive experience derived from a night in the wadi. For those persons who have never experienced a true wilderness, the opportunity to “listen to the silence” is rare.

The purpose and functions of rest stops, aid stations, and supply locations have been discussed in detail in Section 2 of this report. Seasonal camps, when strategically located along popular tour routes, represent excellent sites for performing those functions.

Conservation of the SRSR's cultural and natural heritage resources should benefit from resource monitoring. The tour operators and their employees who use the seasonal camps should prevent resource damage and loss. Their presence helps to assure this, but resource monitoring should not be left to chance. The organization responsible for operating the seasonal camp should be required to perform this function.

The sites of seasonal SRSR camps suitable for accomplishing the necessary multiple functions are presented on the map that accompanies this report.

Figure 8 Map Showing Suitable Sites in the Southern Red Sea Region of Egypt

