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WADI EL-RAYAN PROTECTED AREA Business Plan

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ACRONYMS

EEAA	Egyptian Environmental Affairs Agency
EIECP	Egyptian Italian Environmental Cooperation Program
EPF	Environmental Protection Fund
IBA	Important Bird Area
IUCN	World Conservation Union
LIFP	Legal and Institutional Framework Project
NCS	Nature Conservation Sector
NCSCBP	Nature Conservation Sector Capacity Building Project
PA	Protected Area
UNESCO	United Nations for Education, Science and Culture Organization
WHS	World Heritage Site, Wadi El-Hitan
WRPA	Wadi El-Rayan Protected Area

EXECUTIVE SUMMARY

Wadi El-Rayan Protected Area (WRPA) is a large natural area of desert, lakes and oasis located in the Western Desert of Egypt, in the Fayoum Governorate. The protected area was established in 1989 by prime ministerial decree and enlarged in 1992 to include the rich whale fossils of Wadi El-Hitan. In 2005, the fossil site, known as Valley of the Whales, was designated by UNESCO as The first World Heritage Site of natural category in Egypt. Today, the protected area is 1,759 km² in size.

WRPA's natural landscapes are a popular attraction for national and international visitors. A growing number of people are attracted to the only waterfalls in Egypt, sand beaches, natural beauty, camping, bird watching, and the internationally important World Heritage Site.

The protected area also hosts a variety of economic activities that support local communities, such as fish farming, traditional fishing in the Rayan lakes, agriculture at the land reclamation area, oil extraction, and cafeterias that serve tourists.

The variety of resources and services in the protected area require sustainable sources of funding accompanied by wise and effective management. With these ingredients, WRPA staff can protect the natural values, thereby ensuring the provision of sustained benefits to local communities.

The purpose of this business plan is to examine the financial situation of the protected area and to establish a strategy for sustainable financing. The plan identifies the current sources of funding, revenues, and expenditures of the protected area, and relates these to future needs.

The protected area has two main funding sources, which are the governmental budget and donor support. The only continuous source is the governmental budget (LE 750,000 for salaries and operations in 2006/07) which is absolutely insufficient. The other sources of funding are time limited, such as the three year Egyptian-Italian Environmental Cooperation Programme (EIECP) which includes LE 9,400,000 (2005-2008). In addition, Wadi El-Ryan's twin park in Italy, Gran Sasso National Park, has allocated LE 600,000 for improving education and communications facilities. The total revenues from entrance fees, concessions and commercials in the year 2006/07 amounted to LE 417,000, however, these revenues are transferred to the Environmental Protection Fund (EPF) of the Egyptian Environmental Affairs Agency (EEAA) and not returned back to the WRPA.

Expenditures were analyzed for five key management programs to identify priority activities and needs to achieve a 'basic' and 'ideal' level of management. The key programs examined in this plan are (1) planning and management (2) monitoring (3) Wadi El-Hitan development (4) eco-tourism, and (5) public awareness.

For WRPA, the overall financial gap between the current 'actual' level of funding and the 'basic' level is estimated to be LE 5,105,557. The gap between the 'actual' and 'ideal' level is estimated to be LE 6,758,503.

The business plan shows that WRPA could not achieve self-sufficiency, even if the current revenues could be retained. Therefore, the protected area needs to increase its revenues and diversify its sources of funding.

In addition to the main two funding sources, WRPA has had a number of sponsors and partners in recent years, such as Grand Sasso National Park, Italy; University of Michigan, USA; US-Egypt Joint Technology Fund; The British Embassy in Cairo; The US Forest Service; EMECO travel, Cairo; Apache Oil; Palm Press, Cairo; and the Center for Documentation of Culture and Nature in Egypt. All of these have been important in enabling activities.

In this business plan, four strategies and associated opportunities to achieve sustainable financing are proposed. These are:

- Revenue generation (4 opportunities)
- Governmental funding (1 opportunity)
- Revenue retention (2 opportunities)
- Partnerships (3 opportunities)

The revenue generation opportunities include: (1) Entrance fees to the Open Air Museum, Wadi El-Hitan World Heritage Site (2) Redesign of the current concession system inside the protected area (3) New cafeteria concession at Wadi El-Hitan, and (4) Special events and guided trips.

Two revenue retention mechanisms are proposed to retain revenues to the protected area. The first is establishing of “the Friends of Valley of the Whales” non-governmental organization. The second mechanism is to establish a special services unit similar to the Nature Conservation Training Center as of the Nature Conservation Sector in Sharm El-Sheikh; this may enable the PA to gain money from renting the PA facilities, training courses and other services related to protected area management. These two mechanisms would be developed further in cooperation with the Nature Conservation Sector Capacity Building Project (NCSCB) and the Legal and Institutional Framework Project (LIFP) in order to address practical processes to achieve WRPA self financing and decentralization.

Three partnership opportunities include: (1) In-kind support and sponsorships (2) Agreements, and (3) Volunteer contributions. The existing examples of partnerships demonstrate the importance of the strategy for future sustainable financing.

The estimated amount of money from the potential revenue generation opportunities has reached LE 1,350,272. Based on that, the WRPA will overcome the financial gap to basic management level within about five years and within about six years to reach the ideal management status, if 100% of the generated revenues are retained.

This plan should be implemented by a team of people, including the protected area business planning specialist and senior staff, together with representatives from key stakeholders (e.g., concession holders, local tourism businesses, The Friends of Valley of the Whales). Significant benefits can be accrued through active cooperation with partners. The team should review the barrier analysis and available resources, and prioritize the steps to implement the strategies described in the plan.

The overall success of this business plan depends on several factors. These include:

1. Maintaining a strategic perspective: The business planning team should always know where it’s going and wants to end up, that is, what the long term goals are.
2. Ongoing evaluation and reporting: All opportunities should be evaluated and reports prepared to determine successes, failures and areas for improvement.
3. Enabling environment: All levels of the government need to strive to create an enabling environment for entrepreneurial activities.
4. Local community benefits: When benefits are realized by local communities and businesses, they are more likely to support protected area activities. This becomes a mutually reinforcing relationship.

Through the strategies and opportunities presented in this business plan, it is hoped that sustainable sources of financing can become available to support effective management of WRPA, and in turn, sustained benefits for local communities.

INTRODUCTION

The Fayoum is a wonderful area of Egypt with a rich and interesting history. It is an area where Egyptians often vacation and which is constantly growing more popular among Europeans. Fayoum was a lush paradise during prehistoric times.

Wadi El-Rayan Protected Area (WRPA) is one of Egypt's 27 protected areas. Natural features and landscapes, biodiversity and the World Heritage site in Wadi El-Hitan have drawn national and international attention to its value. It is located in the Fayoum Governorate on the Western Desert of Egypt about 120 Km from Cairo. The WRPA is a popular recreation area due its close proximity to Cairo. It is visited by over 150,000 visitors per year.

The main task of the WRPA is to ensure the protection of the natural resources parallel with promoting the eco-tourism as an economic value and supporting the local communities.

The specific objectives of WRPA as stated in its management plan (2002-2006) are:

1. Natural resource management
2. Human and economic activities management
3. Public awareness and environmental education programs

Effective management of the protected area needs better protection of the natural resources, sustainable services (tourism, educational, recreation), improved quality of economic development programs for the benefit of local communities.

This Plan

This document results from several steps with a variety of participants. The process included field visits, meetings with a varied group of local stakeholders; discussions with experienced PA staff, and finding better opportunities for maximizing the economic benefits from the PA unique resources.

The plan consists of 4 main parts:

1. General description of the PA
2. Financial Analysis
3. Financial Strategy
4. Implementation

The main objectives of the business plan are to 1) improve managerial capacities, effectiveness and control over PA activities, 2) attract, retain and increase investments by public, non governmental and private actors, 3) complement and facilitate the implementation of current management tools, such as management plans and effectiveness assessments, and finally 4) to guide investments and prioritize resource allocation to PA. It aims to achieve financial sustainability, through showing the needs of the protected area (human resources, management programs that should be coordinated with the PA management plan objectives and other physical needs such as equipment, infrastructure, etc). Analyzing these needs led us to identify our future financial requirements to achieve the management goals.

The process of business planning is identifying the costs of operating the park and the current and other possible sources for revenue which can help the PA to fulfill its management objectives. The possible/potential sources of revenues have been identified through several meetings with the key stakeholders (economic activities license holders, investors, tour operators, and the key governmental agencies operating inside or linked to WRPA).

PART I. PARK OVERVIEW

1.1. GENERAL DESCRIPTION AND FEATURES

Fayoum is a city with a quiet reputation yet much to offer particularly at the winter time of year. From October till April, Fayoum enjoys a warm climate (22-28 degrees Celsius), also offering the opportunity to escape the noise and crowd for a weekend. The list of activities available in Fayoum is long

Wadi El-Rayan has a special historical significance as a major crossroad that was used for many centuries by travelers between the Nile Valley and the oases of the Western Desert. Remains of human settlements from Egyptian and Roman-Greek eras are found in the area (Fakhry, 1957).

In the seventies two lakes were created in the lower portion of Wadi El Rayan sub-depression to channel out excess agricultural drainage water in order to slow-down the increase of the water-table in the Fayoum main depression and in the Qaroun lake. The creation of a large body of water in this hyper-arid area had a striking ecological impact: new species of plants, mammals, birds and invertebrates moved to Wadi El Rayan area (IUCN, 2000a).

The Wadi El Rayan depression is an important site for the deposition of Eolian sand in the Western Desert. Extensive dune fields run the length of WRPA oriented NNW to SSE and, probably, they are formed within the Holocene period as a result of disintegration and transportation of friable stones. The dunes vary in length from a few hundred meters to thirty km and may reach the height of 30 m.

Location	Fayoum Governorate
Climatic Zone	Hyper-Arid Saharan
Area	175.900 ha (1,759 km ²)
Declaration	Prime-Ministerial Decree 943/1989
Category	Type II & VI of IUCN categories

Main habitats (area in ha)

Oasis	1,935
Desert	160.949
Wetland	1,583
Lakes	11,434

Taxa (Number)

Plants	39
Mammals	24
Birds	174
Reptiles	14
Fish	29
Terrestrial Invertebrates	113
Aquatic Invertebrates	11 families

Human activities (area in feddans)

Land Reclamation	4,575
Fisheries	16,236 (2 lakes and channel)
Aquacultures	1,300
Oil Extraction	71
Salt Mining	Negligible
Eco-Tourist Services	24
Coptic Monastery	11

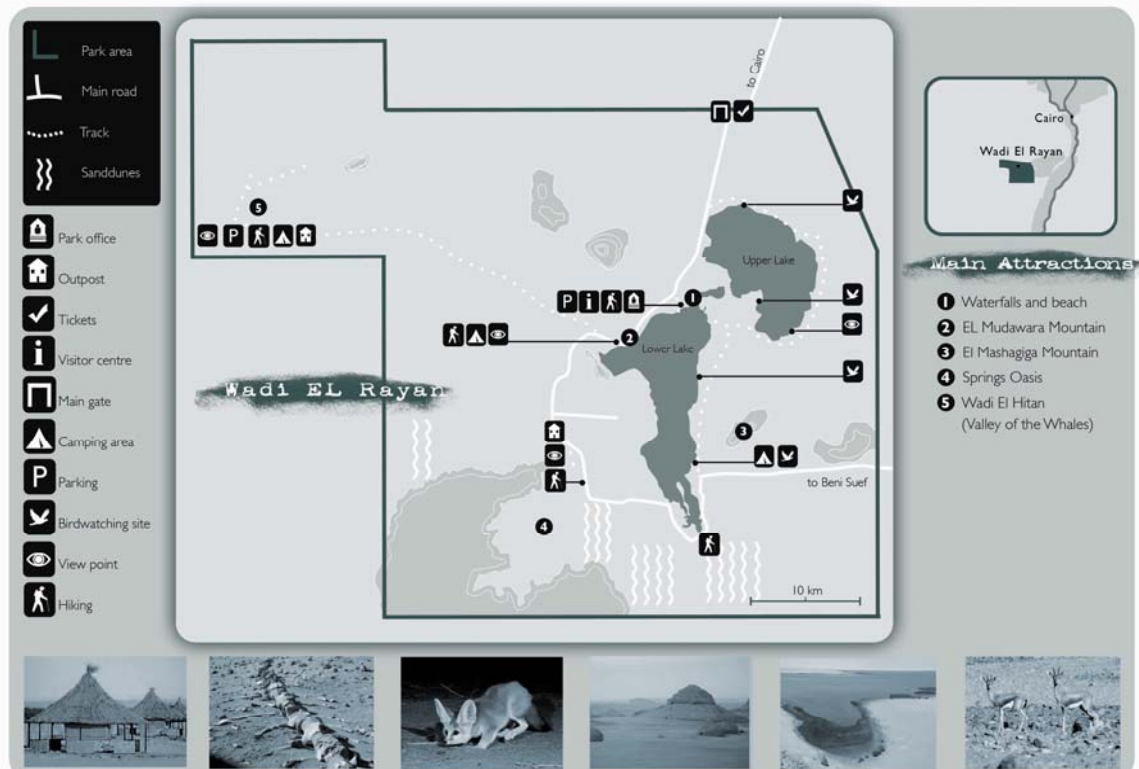
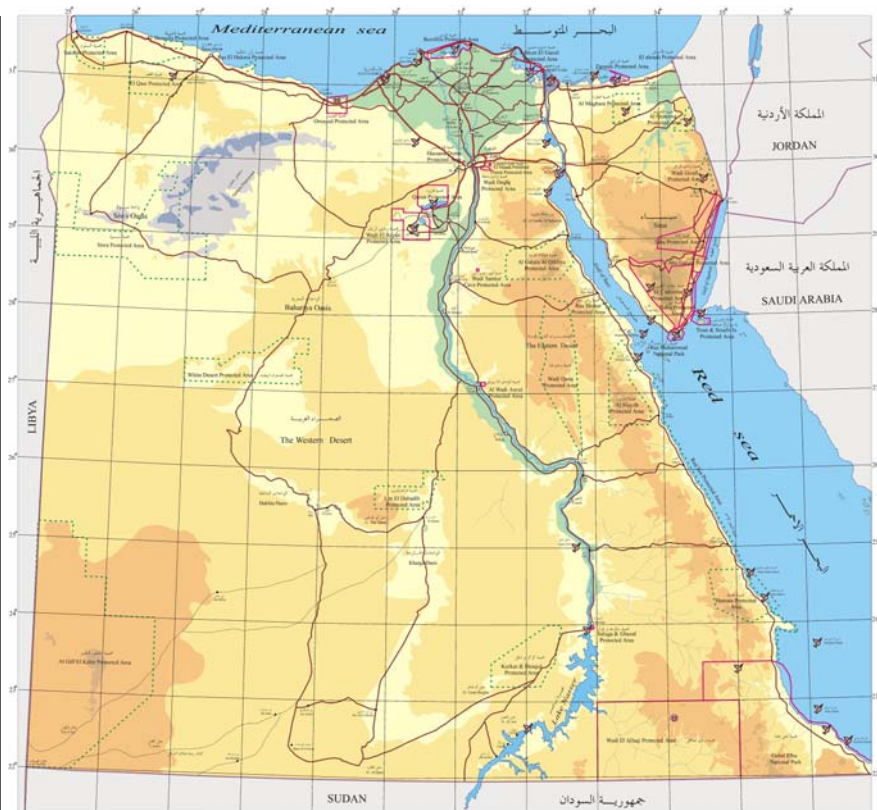
Number of operators of human activities

Land Reclamation	12,240 approx.
Aquacultures	129
Oil Extraction	23
Salt Mining	50 approx.
Eco-Tourist Services	11 operators and approx. 150,000 tourists
Coptic Monastery	30

1.2. PA MAPS

How to reach WRPA

To reach WRPA from Cairo, take the Fayoum desert road. Turn right on the Qaroun Lake road until you reach Tunis Village. On this road, watch for the blue directional signs erected by the Fayoum Tourism Authority. At Tunis, turn left and continue on that road until you reach the main gate of WRPA. From the main gate, the main visitor area is about a 15 minute drive south, and Wadi El-Hitan is about a 45 minute drive.



1.3. PA UNIQUENESS/RELEVANCE

The two lakes of Wadi El-Rayan began forming in 1973 when the Wadi El-Rayan depression was inundated with excess agricultural drainage water. Extensive reed beds have formed along the shoreline creating breeding habitat for fish and water birds. The waterfalls is one of the park's best known attraction; the only permanent falls in Egypt. WRPA also conserves large desert areas containing a variety of landscapes and formations. Rare and fascinating wildlife are found in the deserts of Wadi El-Rayan along with fossils of creatures of past eras and cultural heritage sites from ancient civilizations.



Valley of the Whales World Heritage Site

In 2005, Wadi El-Hitan (Valley of the Whales), located within the protected area, was designated by UNESCO as the first Egyptian Natural World Heritage Site, for its contents of the 40 million year-old whale skeletons, which is recording the story of whales evolution (from land to ocean based animals). According to IUCN-The World Conservation Union, Valley of the Whales is the most significant site in

the world to demonstrate the evolution of whales.

Waterfalls at the Main Visitor Area

The waterfalls, located at the main visitor area, is one of the most popular attractions of WRPA, and it is the only waterfall of its kind in Egypt. In this area, cafeterias, boat trips, fishing, are available. Over 150,000 visitors come to this area annually; about 98% of that number from Egyptians and locals.



Springs Oasis

The area contains four brackish springs supporting the highest diversity of desert plant and animal life in the protected area. Several rare and globally threatened animals inhabit the springs area, including Dorcas Gazelle, Rüppell's Sand Fox and Fennec Fox. It is representing the last remains of Wadi El-Rayan depression's natural habitat as

excellent and uncommon example of an uninhabited Saharan oasis.

This area in historic times was the main gateway for Western Desert trade routes into El Fayoum. Settlements and artifacts from ancient Egyptian, Greek and Roman eras are found in the area. The springs area is located off the main road west of the Lower Lake.

Most of the area is restricted to visitors in order to protect the fragile habitats and vulnerable wildlife populations. A viewpoint has been established offering panoramic views of the depression. There is a hiking trail down to the first spring. Surrounding the spring are palm trees and salt marsh vegetation. Birds, reptiles and insects are the most commonly encountered animals. Tracks are all one usually sees of mammals, most of which are active at night.

Modawara area

This magnificent spot overlooks the beautiful landscape below where deep blue waters meet the golden yellow sands. The magnificent view is framed with rounded sand dunes and limestone escarpments. The mountain is about 18 kilometers from the main gate of WRPA. Plans are being made to establish a camping site on the lakeshore in this area.



Sand Dunes

The dunes offer a calm and clear environment. During the winter, the temperature is cooler making hiking very nice, with dramatic cloud formations. In summer, its hot and a swim in the lake after is recommended! Nice dunes can be found beside the main visitor area and also on the south end of the Lower Lake.

Birds of Wadi El-Rayan

Wadi El-Rayan has 174 species known to occur here. Birds are the most visible wildlife in the protected area and can be seen in the lakes, desert and farmlands. Bird watching is possible throughout the year, but the greatest numbers and diversity of birds occur in winter when the lakes are teeming with migrant water birds. Due to Wadi El-Rayan importance for wintering water birds, it has been designated by BirdLife International as an Important Bird Area (IBA).



Wadi El-Rayan Benefits Local Communities

Local Communities

The local communities of WRPA are represented in outside and inside communities. The inside ones are those settled within the sites of economic activities which are: 4575 feddans of reclamation areas which include about 12240 individuals living and working mainly with agriculture and very low scale local markets selling vegetables, fruits and groceries. About 129 individuals work in an area of about 1300 feddans of intensive and extensive fish farms. The PA also includes some of 1724 local fishermen using 182 traditional fish boats in both of the upper and lower Rayan lakes, all in addition to 253 fishermen without boats. 11 individuals in the main beach area work in cafeterias, about 50 individuals work in salt extraction, and about 30 monks in a Coptic monastery located in the core zone of the PA. The outside communities are represented in the inhabitants of the villages surrounding the protected area such as Youssef El-Seddik, El-Rayan, Tounis, El-Nasla, Hanna Habib. The inhabitants of these villages might be among the visitors to the PA, or doing some activities such as fishing, and some other services for the activities inside the PA.

The natural areas like the Rayan waterfalls and beaches attract about 150,000 visitors a year who enjoy swimming and relaxing in the quiet and beautiful outdoors. The visitors spend money on food, fuel, accommodation and souvenirs, and often hire guides, all of which provide jobs for local residents.

Now, with the opening of Wadi El- Hitan as a World Heritage Site, many more visitors are expected from all over the world. To increase the economic benefits, WRPA staff have created a new program called Eco-products for Local Benefit, which involves producing new products that local villagers can make and sell. These eco-products can be crafts and organic agricultural products like tea, olives, and fresh baking.

1.4. PA PROGRAMS AND ACTIVITIES

1.4.1. Economic Activities

A key management challenge of WRPA relates to the variety of activities belonging to different agencies and authorities.

The protected area contains 90 intensive (cement) fish ponds, 30 extensive (sludge) fish ponds (both aquacultures producing around 1,240 tons of fish generating around LE 12,400,000 annually), some of 1,724 local fishermen using 182 traditional fish boats and was yielding an annual total of about 400 tons of fish from WR Lakes, cage culture operation, and an operating oil field, small scale salt mining, tourism cafeterias, private tour boat owners, two land reclamation villages (about 4,500 feddans), a Coptic Monastery and 2 cellular phone stations (Paying LE 7,000 annually for each). See appendix 2 for some details about economic activities.

1.4.2. Management activities

The protected area programs were listed in accordance with the objectives of the WRPA management plan 2002-2006. There were 3 main objectives: 1) natural resource management, 2) Human and economic activities management and 3) public awareness and environmental education. The programs were sorted under each of these objectives as follows: a) Planning and management, b) Monitoring, c) Wadi El-Hitan development, d) Eco-tourism and e) public awareness and environmental education.

Planning and Management. The key areas of activity have been the following: (i) updating of the WRPA management plan, (ii) the implementation of a management effectiveness and evaluation system identifying threats and tracking the main trends in biodiversity resources and their utilization and the effectiveness of management, (iii) implementation of the patrolling and law enforcement system, (iv) managing the park human and financial resource (administrative activities).

Monitoring. One of the main vocations of WRPA is the conservation of the biodiversity. Monitoring status and trends in biodiversity resources is increasingly recognized as an essential tool for planning and implementation of biodiversity conservation and sustainable development (WCMC, 1996; Prescott-Allen). A comprehensive monitoring system was established in the first phase of the Italian project support WRPA (1998-2001) as a crucial tool supporting the planning and the management of the protected area. The current monitoring programs includes:

Vegetation: to monitor the changes in plant communities and identify the different vegetation patterns of the area.

Large mammals: to track and estimate the abundance of existed large animals such as dorcas gazelle, fennec and sand foxes, wild cat, jackals.

Birds: to estimate the individual bird count and identifying the new species in addition to ringing activities to investigate some migration patterns.

Fish: to estimate the annual fish production from the fish farms and lakes and to identify the existed fish communities.

Water quality: to stand on the water quality of the Rayan lakes and springs and tracking the salinity increase of the lower lake and its effect on the surrounding biodiversity.

Paleontology: to excavate new fossil sites and maintain the current exposed sites presented to visitors.

Visitor estimates: to identify numbers, categories and classification of the visitors to WRPA.

Wadi El-Hitan development. This program is part of the Egyptian Italian project support to WRPA. The project supported the nomination of the valley of the whales as a World Heritage Site, then to promote the site as the eco-tourism destination of Fayoum on the national/international site. Visitor facilities (WCs, cafeteria, shade structure, information panels, guides, roads and trails) have been recently established, while other

infrastructures are urgently needed for better management of the site such as rangers' outpost.

Eco-tourism. This program is aiming to promote WRPA as an eco-tourism site. It works to improve the existing eco-tourism facilities inside WRPA and to initiate new services to support the promotion strategy of the protect area. Facilities such as WCs and tracks were maintained while others were newly established such as new signposting system of natural materials, new bird watching site, new camping site. The program is currently coordinating with the Fayoum Tourism Authority Eco-tourism project for promoting Fayoum as eco-tourism.

Public awareness and environmental education. It is an important component for WRPA considering the recreational potential of the WRPA, that improving the overall "experience" of visitors is a cost-effective way of stimulating public support for the park resources protection . Also the stakeholder communities represent an important target of the public awareness activities that should have more consideration in WRPA.

Mission Statement

WRPA was declared to manage and protect its important ecosystems and their integrity; conserve the valuable biodiversity, natural features and ancient fossils; enhance eco-tourism and recreation in the area, keep sustainable use of natural resources, improve environmental awareness and education, and support local communities.

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Legislation

WRPA was declared a protected area in 1989 according to Prime Ministerial Decree 943 and modified by Prime Minister's Decree 2954 in 1997. The overall management goal of the protected area is the protection of natural resources, in accordance with the declaration decree.

WRPA has strong legal protection under Egyptian Law No. 102 of 1983 for protected areas, which provides the legal framework for the establishment of protected areas throughout Egypt and forbids actions that would lead to destruction or deterioration of the natural environment.

Prime Minister's Decree N.264/1994, emerged from law 102/1983, establishes conditions to carry out activities in protected areas and assigns full responsibility to EEAA for releasing licenses concerning such activities.

Law No. 4 of 1994, is the first basic law containing a comprehensive set of rules on the environment. It is complemented by the Executive Regulations issued by Prime Minister's Decree N.338 of 1995, updated by decree No. 1741 of 2005. This Law provides for the restructuring of EEAA and the redefinition of the Environmental Protection Fund. The first part of the law addresses land pollution, specifying rules on hazardous materials and wastes including the issue of licenses and permits for activities requiring an environmental impact assessment (EIA). The second and third part of the law deal with the protection of air and water from pollution. The final part covers administrative and judicial procedures and penalties. The Executive Regulations provide more details on the subjects covered by the Law, including the licensing system, and sets specific standards, parameters, concentration limits etc.

PART II. FINANCIAL ANALYSIS

This part relates expenditures and financial needs to conservation activities and programs, showing the additional value of increasing investments in the PA.

2.1. FUNDING SOURCES HISTORY (2002-2006)

Wadi El-Rayan protected area has two main sources of funding: a budget from the Government of Egypt and funding from international donors, which has mainly been Italian Cooperation through the Egyptian Italian Environmental Cooperation Program and the Dept-Swap Program.

Total expenditures for WRPA in 2006/07 were LE 2,522,435 up from LE 522,319 in 2002/03, which is due to the presence of Donor support funds.

All the PA revenues (returns of entrance tickets, commercials and concessions) go directly to the administrative body of EEAA (Environmental Protection Fund EPF) **without any deduction for WRPA.**

The historical funding sources and their time frame in WRPA are as follows: (see figure 1)

- *Governmental fund:* (EEAA). The governmental budget was about LE 522,819 In the year 2002/03, increased to LE 948,965 in 03/04, then jumped to LE 4,095,739 in the year 2004/05, then LE 1,796,500 in 2005/06 and reduced to 750,000 in 2006/07. It is important to emphasize that. The governmental budget had increased its allocated amount of money for urgently needed special facilities such as LE 38,500 for purchasing of 3 trailers in 2002/03; LE 360,000 in the year 2003/04 to build a WC in the main visitor area; and provided with LE 4,5 millions to construct a road to Wadi El-Hitan World Heritage Site divided by the years 2004/05 and 2005/06.
- *Donor Contribution:*
 - The Italian Cooperation Project, has allocated U\$ 1,57 million for the period (2005-2008). The Italian cooperation program had been started its support in 2004/5 by spending LE 60,000 for operations; increased to LE 2,289,457 for the different expenditure categories in 2005/06 and LE 1,772,435 in 2006/07. (For details, please see appendix 3).
 - Twinning Program with the Italian park Grand Sasso allocated € 100,000 (about LE 675.000) for education and communication services beginning in the year 2005. About LE 288,000 has been used and the remaining amount is pending approval by Italy.
 - Other fund sources: Funding from Apache in 2005 LE 40,000 was one-time expenditure that improved the signposting of the PA at the main gate and Wadi El-Hitan.

Table and figure (1) shows the total received budgets from both governmental and donor sources from 2002 to 2006.

Table (1): Historical Fund sources (2002-2006)

Budget sources LE	2002-03	2003-04	2004-05	2005-06	2006-07
<u>Government budget</u>	522.319 ¹	948.965 ²	4,095,739 ³	1,796,500 ⁴	750,000
<u>Donors (Ital coop)</u>	0	0	60,000	1,433,119	3,800,236
<u>Donors (Gran Sasso)</u>	0	0	0	0	288,000
Total	522.319	948.965	4,155,739	3,229,619	4,838,236

1. Included LE 38,500 for purchasing of 3 tractor trailers.
2. Included LE 360,000 for constructing of public WCs in the main visitor area in 2003/04
3. Included LE 3,375,000 for constructing of Wadi El-Hitan road and LE 108,889 for purchasing of a 5 meters boat.
4. Included LE 1,125,000 for constructing of Wadi El-Hitan road

Figure 1. Historical fund sources of WRPA

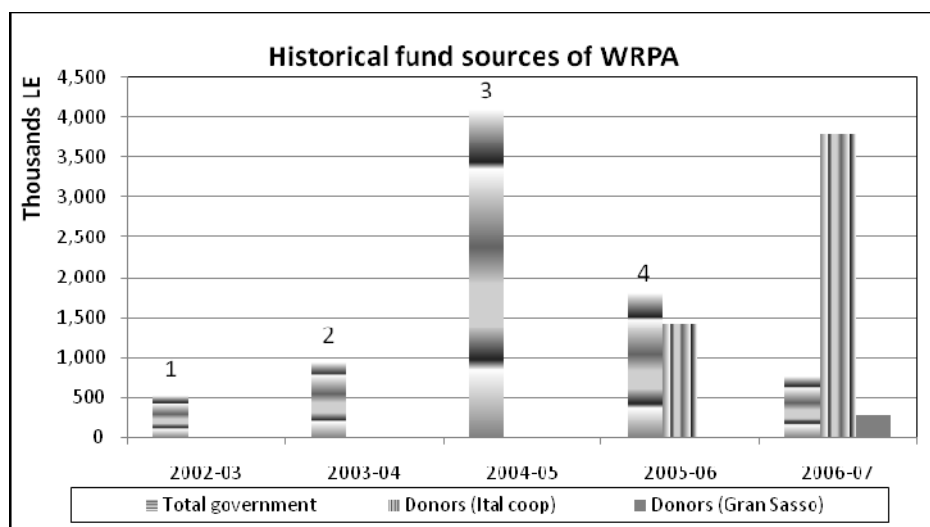


Figure (2a) shows the absolute increase in the governmental fund due to the staff salaries which regularly increase by 10% per annum. Figure (2b) shows the trend of irregular governmental funding for providing the WRPA with special facilities, such as infrastructure and vehicles.

Figure (2a): the annual governmental fund for operation and salaries

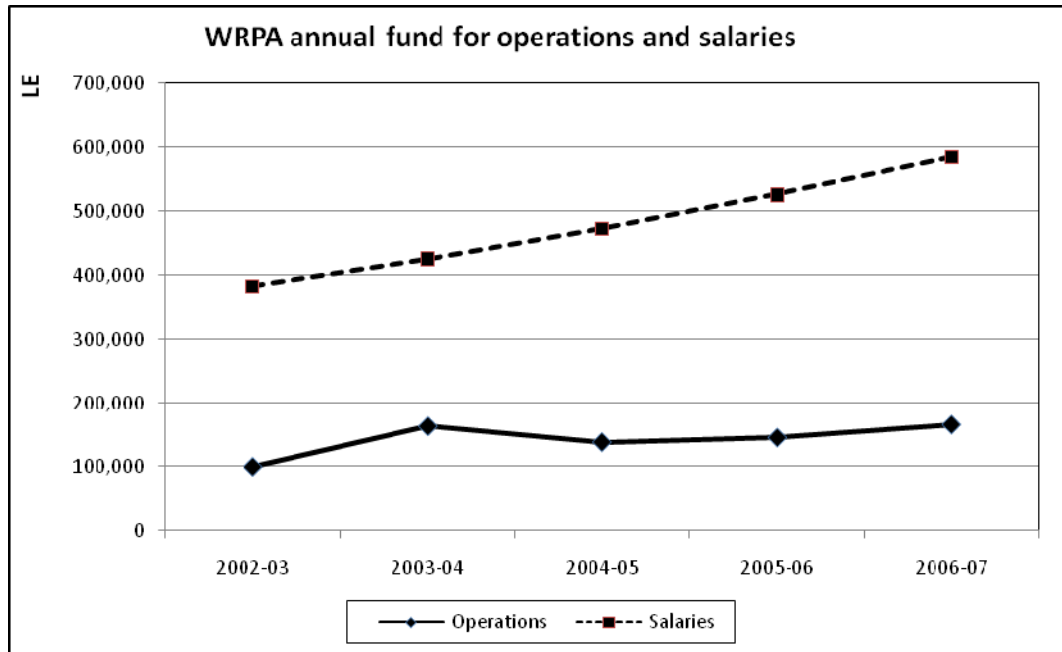
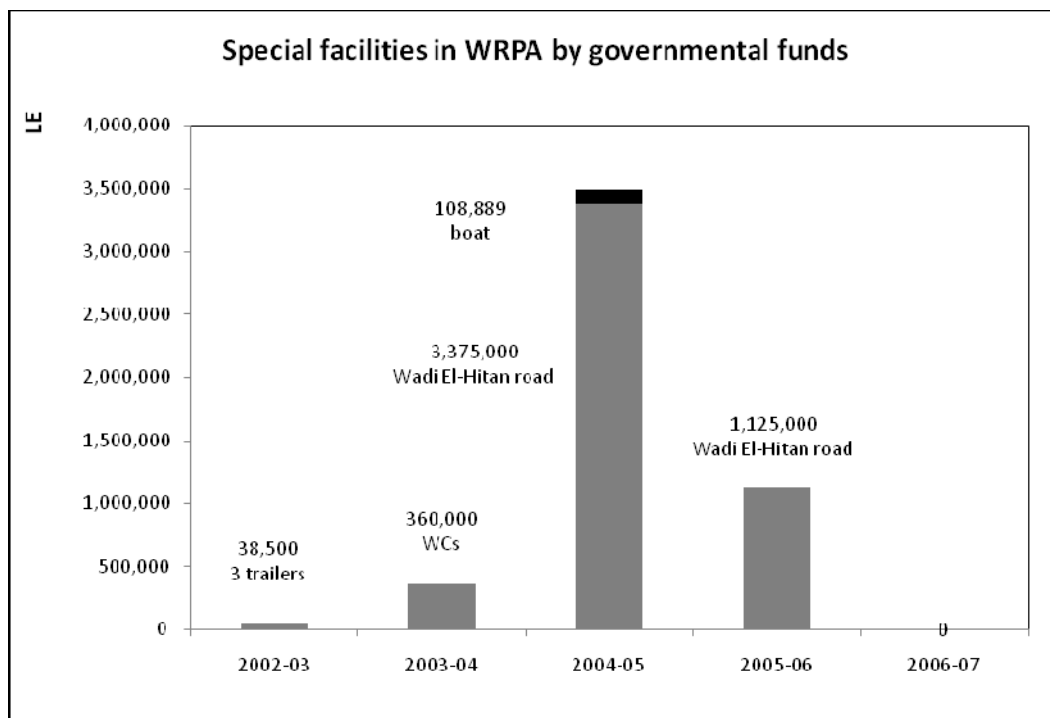


Figure (2b): Special facilities in WRPA 2002-2006



2.2. TOTAL EXPENDITURE HISTORY

The identified expenditure categories included staff salaries; operations and maintenance; Infrastructure; vehicles and boats and finally equipment and furniture. Fuel and car maintenance are directly spent through EEAA central budget shared with the Italian project since the year 2004/05. Salaries are paid through EEAA and staff allowances are paid by the Italian project. (Please refer to appendix 3 for more details).

Looking to the history of governmental fund from 2002 to 2007, one can easily identify the irregular trend (see figure 2a) for operations, while the total governmental fund has reached its maximum, LE 4,095,000, in 2004/05 and decreased to reach LE 750,000 in 2006/07.

The donor support has started its financial support to WRPA in its second phase in 2004/05 with LE 60,000 for operations increased to LE 2,289,457 in 2005/06 and LE 1,772,435 in 2006/2007 spent on all five identified expenditure categories but mostly on operations; infrastructure; and vehicles.

Table (2) the history of expenditure for WRPA 2002-2007

Category	2002-03		2003-04		2004-05		2005-06		2006-07	
	Government	Donor	Government	Donor	Government	Donor	Government	Donor	Government	Donor
Staff	383,819	0.000	426,465	0.000	473,850	0.000	526,500	318,333	585,000	370,000
Operations	100,000	0.000	162,500	0.000	138,000	60,000	145,000	277,633	165,000	876,133
Infrastructure	0.000	0.000	360,000	0.000	3,375,000	0.000	1,125,000	1,000,000	0,000	300,000
Vehicles and boats	0.000	0.000	0.000	0.000	108,889	0.000	0,000	342,000	0,000	160,000
Equipment & Furniture	38,500	0.000	0.000	0.000	0.000	0.000	0,000	351,491	0,000	66,302
Total (Gov - Don)	522,319	0.0	948,965	0.0	4,095,000	60,000	1,796,500	2,289,457	750,000	1,772,435
Grand Total	522,319		948,965		4,155,739		4,085,957		2,522,435	

Figure (3). Expenditure analysis of WRPA

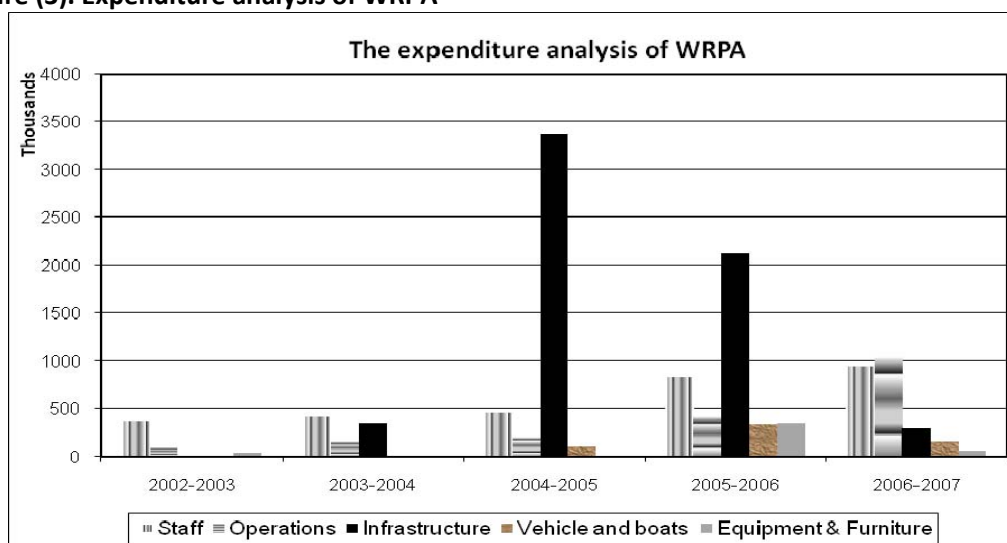


Figure (3) shows that the PA expenditures grew from the year 2002 to 2004 steadily, then jumped to its maximum in the years 2004/05 and 2005/06. The main reason was for the steady increase in the salaries, while the noticeable jump was for the additional governmental allocates of LE 4,5 millions for constructing the road to Wadi El-Hitan.

The cost of operations jumped from the year 2004/05 up to its maximum in the year 2006/07. This was due to the additional donor fund from the Italian cooperation project which will cease by the middle of 2008.

2.3. REVENUES

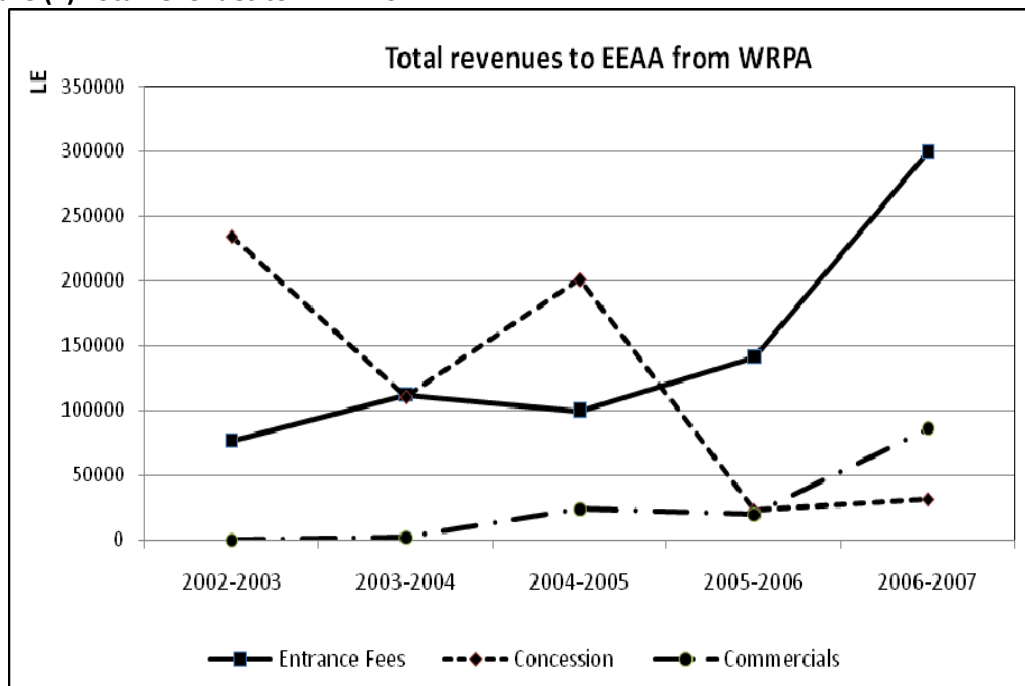
The revenues to WRPA come from: Entrance fees of the park visitation, concessions of economic activities and commercials. The average revenue in 2002/03 was LE 311,428 and about LE 417,000 in 2006/07 (see table 3 and figure 4).

Table (3) The history of revenues from WRPA to EEAA EPF 2002-2007

Revenues	2002-03	2003-04	2004-05	2005-06	2006-07
Entrance Fees	76,950	112,000	100,250	141,450	299,415
Concession	234,478	110,777	201,335	23,461	*31,857
Commercials	0	2,000	24,000	19,572	86,000
Total	311,428	224,777	325,585	184,483	417,272

* Fish farms have not paid their concessions due to administrative & legal complexities.

Figure (4) Total revenues to EEAA from WRPA



Entrance Fees

The entrance fees are the most important source of revenue. The total entrance fees reached LE 299,415 in 2006/07, while in 2005/06 it was LE 141,450 and LE 76,950 in 2002/03. This increase is a reflection of the increase in entrance fees to Wadi El-Rayan. WRPA hosted over 140,000 visitors annually as a mean value from 2002 to the middle of 2006, The visitations increased to 187,209 visitors and the park entrance fees reached its maximum LE 299,415 in 2007, due to the new fee structure in LE and U\$.

Gate fees (History)

Up to June 2006

LE 1/person for all visitors, whether foreigners (residents) or nationals.
LE 5/person for foreigners
LE 5/car

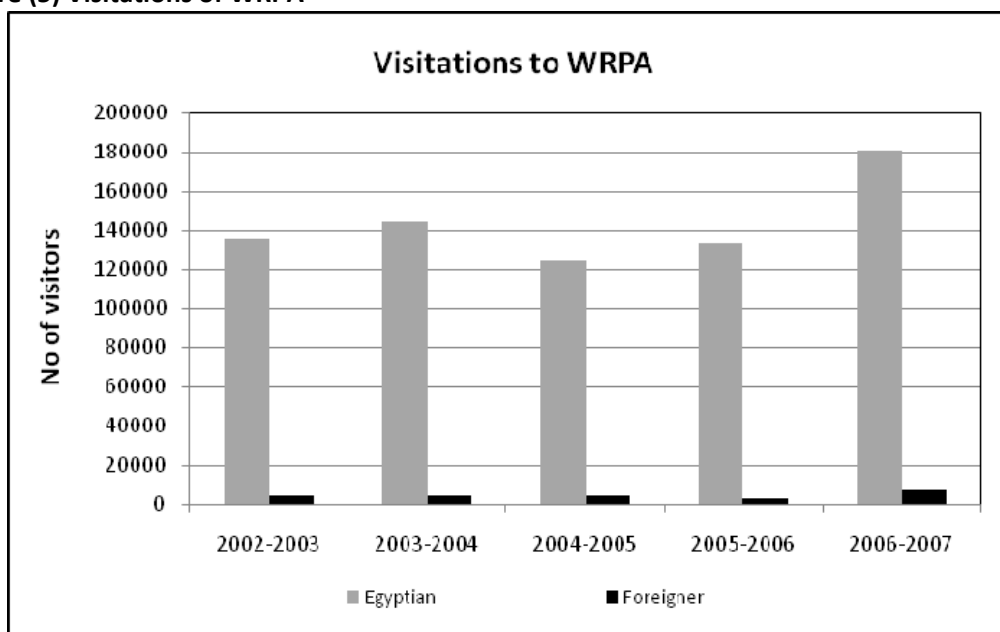
From July 2006 up to date

The fee structures were:
LE 2/person for Egyptians,
\$3/person for foreigners,
LE 10/person for camping
LE 5/car

Table (4) Visitations to WRPA 2002-2007

Visitor	2002-03	2003-04	2004-05	2005-06	2006-07
Egyptian	135,994	144,433	124,459	133,258	180,366
Foreigner	4,206	4,467	4,195	2,695	6,843
Total	140,200	148,900	128,654	135,953	187,209

Figure (5) Visitations of WRPA



The majority of visitors are Egyptians on day visits. In 2006/07 the park hosted over 186,000 visitors of which Egyptians accounted for around (180,000), and around 6000 were foreigners on day visits (figure 5).

The number of visitors is expected to increase as the park's attractions become more widely known and with the improvement in facilities and infrastructure especially in the World Heritage Site in Wadi El-Hitan. The road to Wadi El-Hitan, one the most important park investments, will facilitate visitation to this important site. In the first year with the road, about 4000 visitors came to the valley (prior to the road, it is estimated that about 1000/year came). Now, in the second year of the road, 8000 visitors have come to Wadi El-Hitan. Visits to the site are expected to increase for the next years, and then level off.

Concessions

The park currently has several concessions: 2 fish farms, 6 cafeterias, 1 safari camp (stopped since 2004), 2 mobile stations and oil extraction company (produces about 900-1000/daily and pay no concessions). Another cafeteria is planned in Wadi El-Hitan. The approved concession values were as follows: 2 fish farms produced around 1,240 tons of fish per year, which generating about LE 12,400,000 annually, paying a concession value of about LE 184,000 per annum. 3 cafeterias established by EEAA paying a concession value of LE 7,000 annually for the land and infrastructure. Another 2 cafeterias are paying LE 5,700 as a concession for the lands. The remaining cafeteria is not paying any concession for EEAA due to their authorization by fish authority. The 2 mobile stations are paying about LE 7,000 for each, increased by 10% annually.

The concession values collected from Wadi El-Rayan have declined in value between 2002/03 to 2006/07, see figure (4). In the year 2002/03 the total collected values were LE 234,478 then decreased in 2003/04 to LE 110,777 then increased again to LE 201,335 in 2004/05 then dropped to LE 23,461 and LE 31,857 in 2005/06 and 2006/07.

The reason for this drop in value is the irregularity and lack of follow up from the EEAA concession committee towards these activities, as the fish farms did not pay their concession fees since 2005 due to some contract changes.

Commercials

The WRPA attracts the commercial and movie making agencies to make shots in the protected area. The revenues from commercials increased from LE 24,000 in the year 2004/05 to LE 86,000 in the year 2006/07.

All park revenues from entrance fees, concessions, and commercials are deposited into the Environmental Protection Fund (EPF). Resources of this fund are used to support activities of EEAA, including protected areas, however all the generated revenues never returned to WRPA.

2.4. FINANCIAL NEEDS ASSESSMENT

This part deals with 1) estimating the financial needs to run the PA programs and activities scheduled in the PA management plan and management effectiveness evaluation, 2) presenting three scenarios for financial needs, based on actual, basic and ideal management, 3) determining the financial gap between future needs and current funding available and 4) providing financial information for each management program, based on key activities presented in the Management Plan.

The basic scenario is defined as the level of operations and the amount of resources that the PA management unit has identified as a fundamental need to meet the management plan objectives of the PA. The basic scenario includes those activities that: are required by law, provide the basic level of protection of the Park's natural resources and provide a safe and satisfactory recreational experience for visitors. The ideal scenario is defined as the level of operations and the amount of resources that the PA management unit has identified as necessary to fully meet the goals and objectives of the Park's management plan and implemented programs. This is not the pie-in-the-sky level of operations, but a realistic goal that should be reached if the PA seeks additional funds and achieve high performance with limited resources. The ideal scenario includes those activities that meet all management, conservation and legal mandated requirements, provide an exceptional visitor experience, and improve the conditions of the natural resources.

The management objectives of WRPA as described in the management plan are: Natural resource management; human and economic activities management and Public awareness and environmental education (communication). Several programs are currently applied under these objectives, which are: Planning and management; Monitoring; Wadi El-Hitan development; Eco-tourism; and Public awareness and environmental education.

The next table shows the activities that are currently applied in the actual management state and the actions should be undertaken in the basic and ideal management scenarios of WRPA.

ACTUAL SCENARIO
Patrolling and law enforcement
Management plan review
Management effectiveness evaluation
Park operation and day to day management
Survey and monitoring of wildlife elements (Plants, Birds, Large mammals, Fishes)
Monitoring the PA non-biotic resources (Water Quality monitoring, paleontology, visitor surveys,...)
Patrolling & monitoring regime re-established and implemented
Training plan was written and reviewed; currently, on the job training is taking place
Renovation and refurbishing of park infrastructure and eco-tourism facilities.

"Developing Eco-products for local benefits"; a program is currently under implementation
Negotiating with the relevant authorities to solve the water declining problems in the Rayan lakes
Establishing closer communications with the visitor area and other economic activities stakeholders
Implementing of park signposting plan
Production of communications materials: new poster for WRPA, stickers, Hitan newsletter, notepads, vehicle stickers, project brochure and visitor discovery guide, birding publications for WRPA
Plans to increase number of visitors to Visitor Centre and to improve interpretive programs
Enhancing the public awareness and education program for the visitors, stakeholders, local communities
maintaining and exhibiting new whale and other fossil sites
Closing the valley of the whales against the vehicular access and providing a uni-access way
Establishing of necessary visitors infrastructure (shades, info. panels, WCs, cafeteria, track network)
Establishing of staff management outpost is currently undergoing
Developing the main and sub-tracks inside the Valley of the whales
UNESCO 1st evaluation report prepared with positive response from UNESCO and IUCN for the WHS
Work on the open air museum of the valley of the whales
Basic infrastructure of the valley of the whales (shade structures, police station, camel stall and housing, ticket collection station, WCs, Cafeteria and PA outpost)
BASIC SCENARIO
Redesign and implement a new survey and monitoring program for wildlife elements and re-initiating the missing ones (mammals, reptiles, fish, insects)
Adequately maintain and operate the constructed visitor facilities in Wadi El-Hitan
Implementing a diverse research program
Establish and operate "the friends of Wadi El-Hitan" NGO
Design and implement a program for eco-guiding skills
Increase patrolling and law enforcement
Improving and maintaining the park services to the visitors (WCs, tracks, signposts...)
Intensive collaboration strategy with relevant governmental and non-gov authorities to solve the issues relating to the conservation programs of WRPA such as the control of water demands for aquaculture and land reclamation activities
Develop "memorandums of understanding" for each individual economic community to outline key problems and agreements on solutions, including a code of conduct for all parties.
develop involvement and participatory rules of the local communities and stakeholders of WRPA
Enhance the operation of the visitor center with well-developed schedule and follow up program
Enhancing the public awareness and education program for the visitors and stakeholders
Diverse awareness items (Posters, Broch, booklets,etc)
IDEAL SCENARIO

Monitoring and survey of the park natural resources and biodiversity
Extension of the World Heritage Site to include the north of Qatrani site in a connected management unit
Conduct a contingency plan for environmental emergencies (vegetation fires...etc)
Establishing a well developed mechanism to regularly maintained the tourist facilities (WCs, tracks, signs,.....) in collaboration with relevant well-equipped stakeholders
Market alternative days (increase visitation at other times) and alternative opportunities (other locations) to reduce the impact on feast days and to enhance benefits in other periods.
Enhancing a program of communications for behavioral change
Seek agreement with Ministry of Agriculture to stop any further land reclamation inside WRPA, controlling the fish farms, and promoting the prevention of the introduction of invasive species.
Seek agreement with Ministry of Irrigation to increase the water pumped into the lake.
Scheduling the visitor center operation and promoting the programs through the staff
Enhancing the effectiveness of each program through tracking, evaluation and reporting by raising up the staff capacity
resolve the security police issue and to determine through a business plan if there is a reasonable degree of assurance that such a facility can be profitable
Enhance, diverse and support the research programs inside WRPA

The three scenarios have considered the management objectives and the implemented programs. The actual, basic and ideal status of WRPA were outlined for each management program (i.e. the resources available and needed for each scenario in terms of human resources, operation costs, maintenance, equipment, professional services (studies), infrastructure, vehicles and boats). (Please refer to appendix 4 for more details)

2.5. GAP ANALYSIS

The summary financial statement shows, for each program, the actual expenditure in 06/07, the required funding at the basic and ideal state levels and the funding gaps.

For ease of presentation of results, all figures are illustrated in LE and do not distinguish between the different sources of allocation.

Generally, the total amount of money required for WRPA in its current situation to cover the gap to reach the basic management status was estimated to be LE **5,842,027**. While, the required amount to cover the gap to reach the ideal management status was estimated to be LE **7,421,272**.

The highest gaps to the basic and ideal scenario were found to be in the Planning and management; Wadi El-Hitan development and monitoring followed by eco-tourism and public awareness programs. The gaps to basic were estimated as follows in LE: 2,811,750; 1,731,404; 721,288; 379,581; 198,004 respectively while the gaps to ideal were 3,505,657; 1,968,105; 848,691; 717,083; 381,737 respectively.

The figures from (6) to (12) show the trends of the different expenditure items against each of the management programs. See also appendix 4 for available resources, needs and their cost for each of the management programs in details.

Planning and Management.....

This unit represents the administrative entity of WRPA in addition to patrolling and law enforcement and daily operating activities. Implementation of management planning, management effectiveness evaluation and work plans are of the main duties in this program.

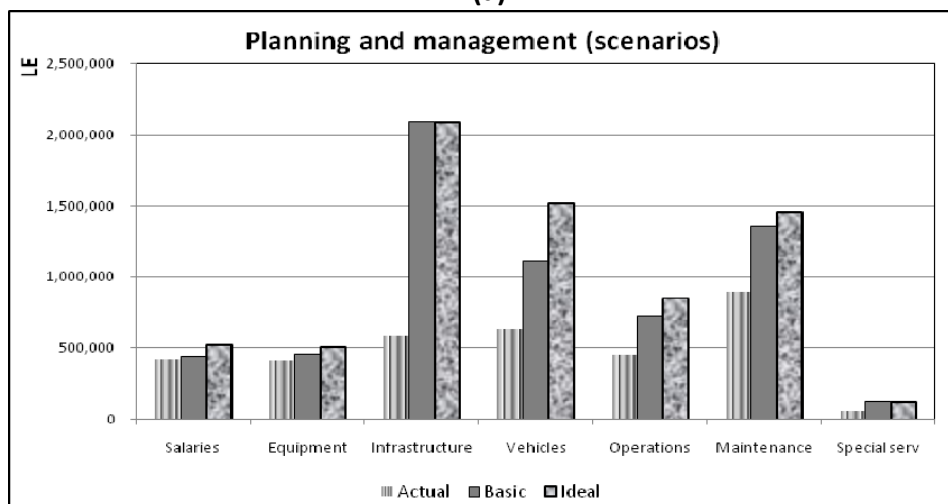
The expected amount of money to reach the basic management state for the planning and management unit was estimated as LE 2,825,280, while the expected amount to reach the ideal management state was LE 3,592,887.

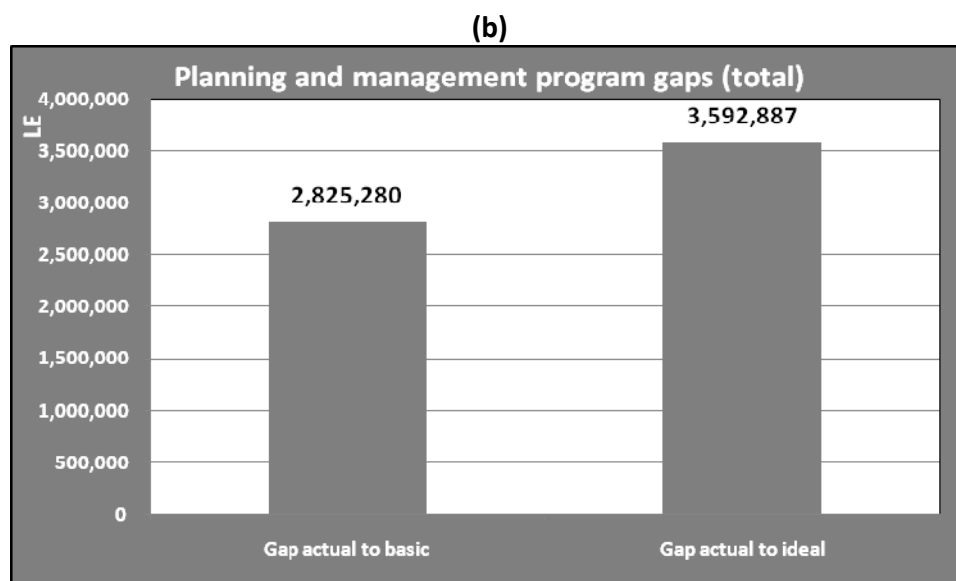
Table (5) and figures (6a&b) show the scenarios and gaps for this management program.

Table (5): Scenarios and gaps for planning and management program of WRPA

Categories	Actual	Basic	Ideal	Gap actual to basic	Gap actual to ideal
Salaries	425,040	439,800	520,200	14,760	95,160
Equipment	416,400	456,900	504,600	40,500	88,200
Infrastructure	586,272	2,086,272	2,086,272	1,500,000	1,500,000
Vehicles & Boats	635,000	1,110,000	1,515,000	475,000	880,000
Operations	452,001	729,008	854,777	277,008	402,777
Maintenance	894,170	1,352,183	1,460,920	458,013	566,750
Special services	60,000	120,000	120,000	60,000	60,000
<u>Total</u>	<u>3,468,883</u>	<u>6,294,163</u>	<u>7,061,769</u>	<u>2,825,280</u>	<u>3,592,887</u>

Figure (6 a, b): Scenarios for the planning and management program
(a)





Monitoring.....

All the sources of environmental and resource monitoring are run under this program. Biodiversity, water quality, paleontology as well as visitors and economic activities were monitored for their status. This program is currently using about 20 % of the vehicles and equipment and about 30% of the protected area human resources.

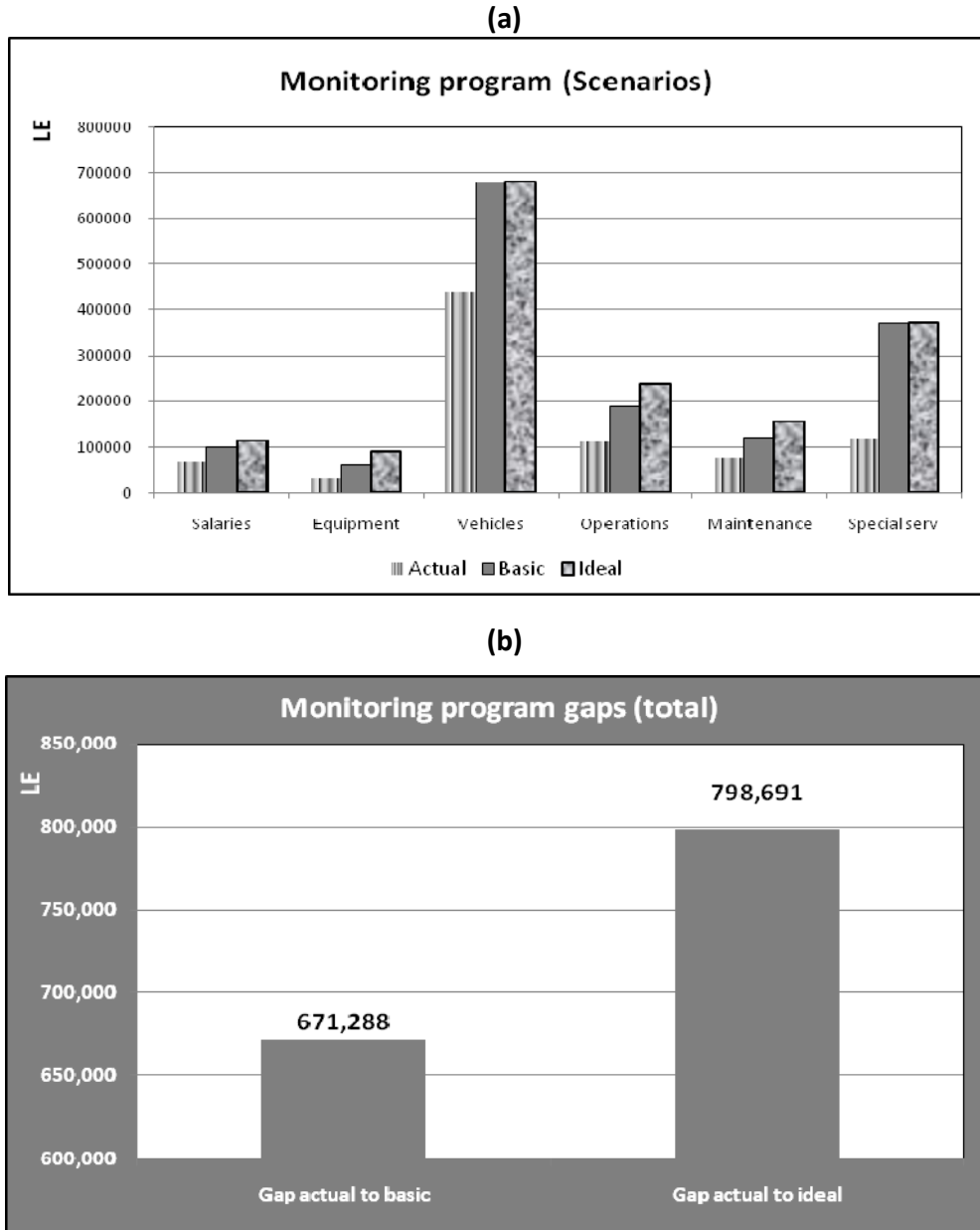
The expected amount of money to reach the basic state for the monitoring program was estimated as LE 671,288, while that expected to reach the ideal state was LE 798,691.

Table (6) and figures (7a & b) show the scenarios and gaps for this management program.

Table (6): Scenarios and gaps for monitoring program of WRPA

Categories	Actual	Basic	Ideal	Gap actual to basic	Gap actual to ideal
Salaries	66,120	100,800	114,000	34,680	47,880
Equipment	33,500	59,300	90,500	25,800	57,000
Vehicles & Boats	440,000	680,000	680,000	240,000	240,000
Operations	111,157	187,960	236,108	76,803	124,951
Maintenance	76,195	120,200	155,055	44,005	78,860
Special services	120,000	370,000	370,000	250,000	250,000
<u>Total</u>	846,972	1,518,260	1,645,663	671,288	798,691

Figure (7 a, b): Scenarios for the Monitoring program



Wadi El-Hitan development.....

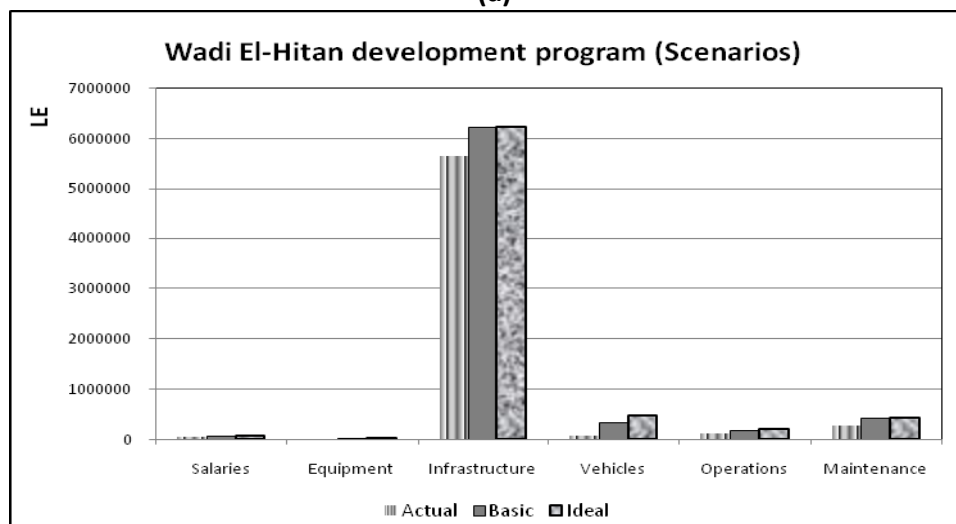
This program is aiming to promote the valley of the whales, the World Heritage Site as an eco-tourism destination of Fayoum on the national and international levels.

The expected amount of money to reach the basic state for Wadi El-Hitan developing program was estimated as LE 1,031,404, while that expected to reach the ideal state was LE 1,268,105. Table (7) and figures (8a&b) show the scenarios and gaps for this management program.

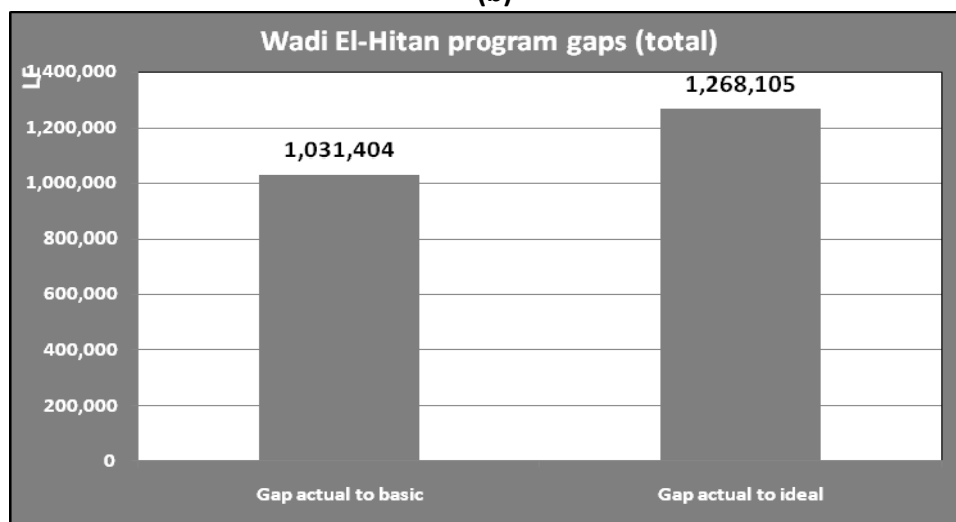
Table (7): Scenarios and gaps for Wadi El-Hitan development program of WRPA

Categories	Actual	Basic	Ideal	Gap actual to basic	Gap actual to ideal
Salaries	45,600	55,200	68,400	9,600	22,800
Equipment	11,000	17,800	30,800	6,800	19,800
Infrastructure	5,660,000	6,230,000	6,230,000	570,000	570,000
Vehicles	80,000	320,000	480,000	240,000	400,000
Operations	113,781	180,783	206,657	67,002	92,875
Maintenance	272,658	410,661	435,288	138,003	162,630
Total	6,183,040	7,214,444	7,451,145	1,031,404	1,268,105

Figures (8 a, b): Scenarios for the developing program of Wadi El-Hitan
(a)



(b)



Eco-tourism.....

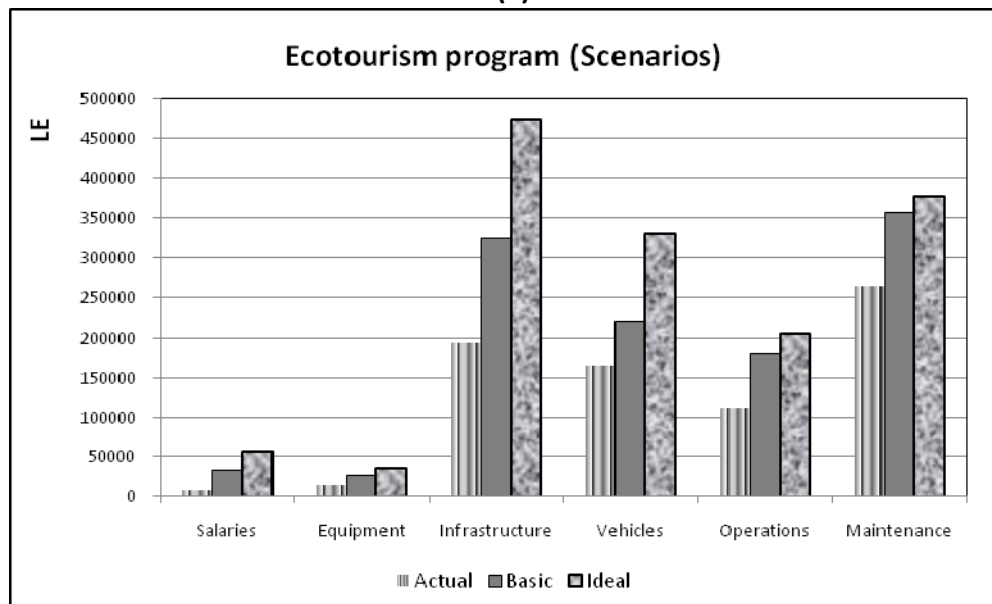
This program is dealing with promoting WRPA as an eco-tourism area on the national and international levels. About 10% of the vehicles and equipment and 20% of the park infrastructure (signs, tracks,...etc) were found in this sector.

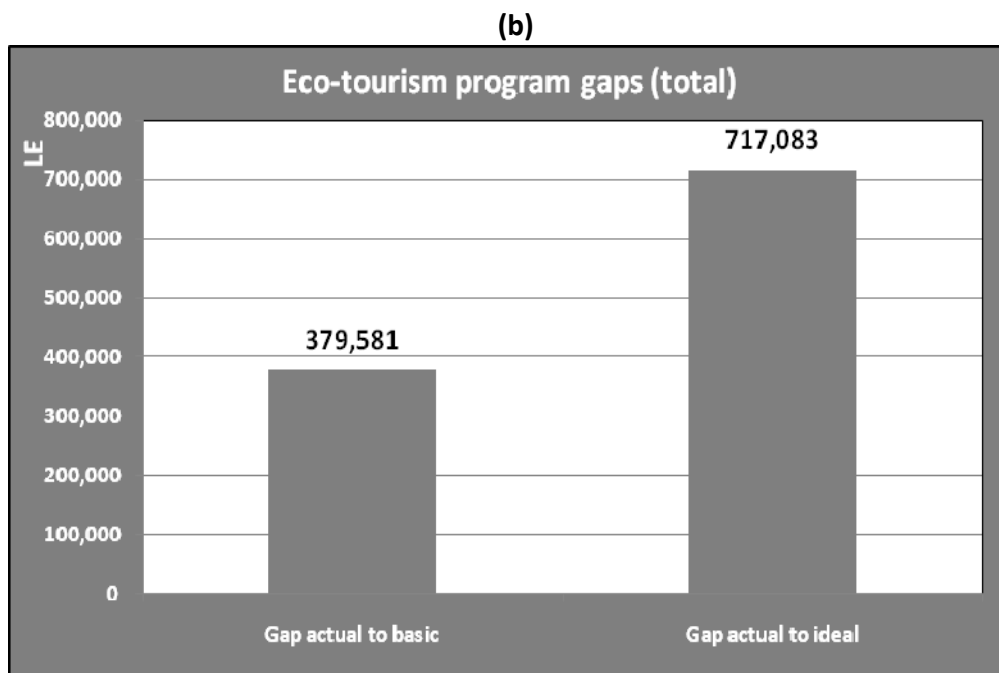
The expected amount of money to reach the basic state for eco-tourism program was estimated as LE 379,581, while that expected to reach the ideal state was LE 717,083. Table (8) and figures (9 a & b) show the scenarios and gaps for this management program.

Table (8): Scenarios and gaps for eco-tourism program of WRPA

Categories	Actual	Basic	Ideal	Gab actual to basic	Gab actual to ideal
Salaries	7,920	32,400	55,200	24,480	47,280
Equipment	14,000	25,000	34,000	11,000	20,000
Infrastructure	194,000	324,000	474,000	130,000	280,000
Vehicles	165,000	220,000	330,000	55,000	165,000
Operations	112,281	179,283	205,157	67,002	92,875
Maintenance	265,158	357,258	377,086	92,100	111,927
Total	758,360	1,137,941	1,475,442	379,581	717,083

Figure (9 a, b): Scenarios for the Eco-tourism program
(a)





Public Awareness.....

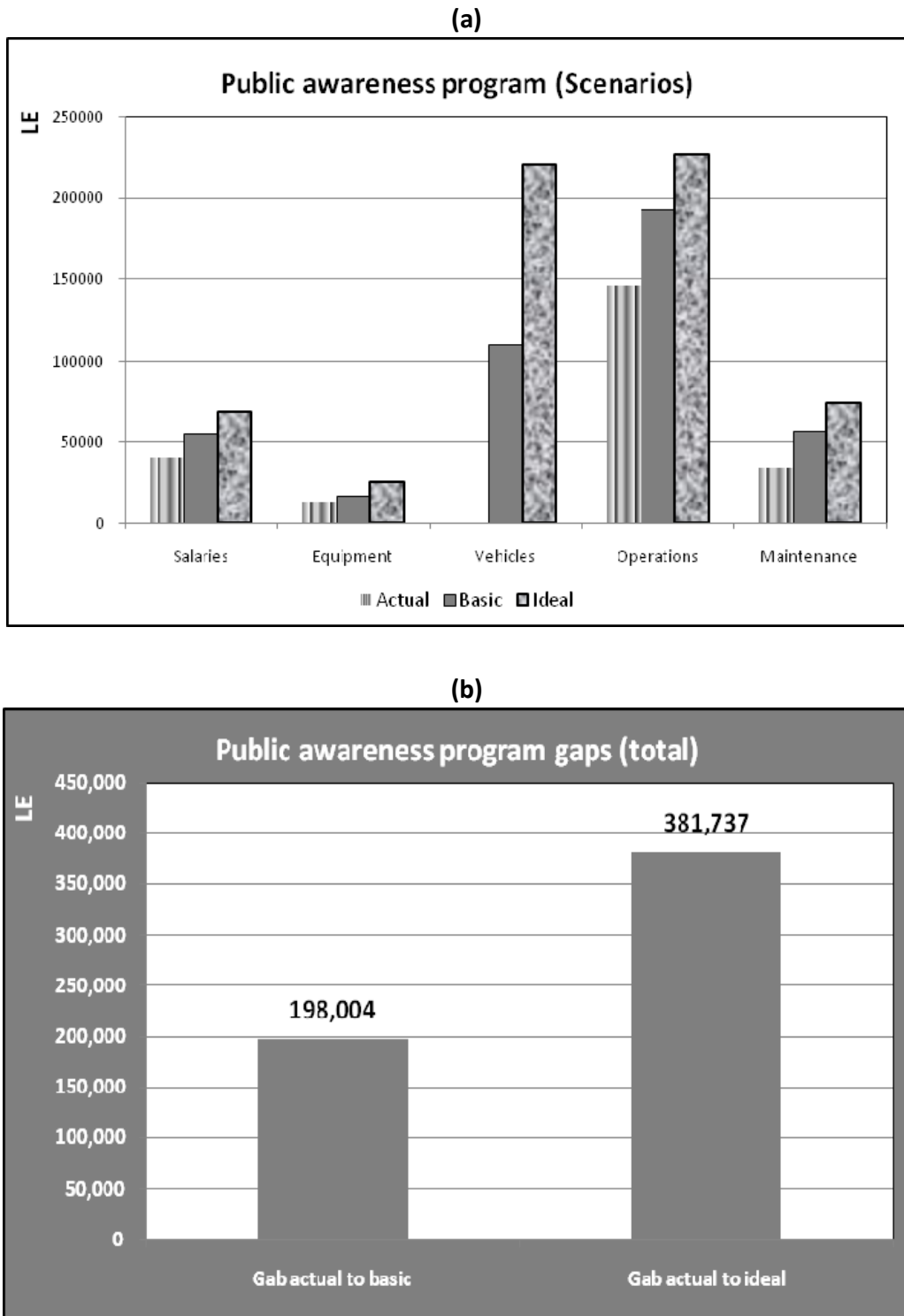
The aim of such program is to stimulate the public support to improve the protection of park's natural resources. Visitors to the PA, stakeholders and local communities are the main target of this program. The program is using about 10% of the park's vehicles and equipment.

The expected amount of money to reach the basic state for public awareness program was estimated as LE 198,004, while that expected to reach the ideal state was LE 381,737. Table (9) and figures (10 a & b) show the scenarios and gaps for this management program

Table (9): Scenarios and gaps for public awareness program of WRPA

Categories	Actual	Basic	Ideal	Gap actual to basic	Gap actual to ideal
Salaries	40,320	55,200	68,400	14,880	28,080
Equipment	13,000	17,000	26,000	4,000	13,000
Vehicles	0	110,000	220,000	110,000	220,000
Operations	145,779	192,900	227,006	47,122	81,227
Maintenance	34,348	56,350	73,778	22,003	39,430
<u>Total</u>	<u>233,447</u>	<u>431,450</u>	<u>615,184</u>	<u>198,004</u>	<u>381,737</u>

Figure (10 a, b): Scenarios for the Public Awareness Program



The Protected Area Management Programs:

The WRPA gap analysis shows LE 5,105,557 as a difference between the actual and basic levels of management, while the gap between actual and ideal management levels is about LE 6,758,503. The presence of donor funds to WRPA improves the status of infrastructure, vehicles and equipment, operation and maintenance and human resources. Visitor center, out posts, tracks, signs, vehicles and educational materials have been established and produced through the donor support and other sources, while other needs are still required such as staff accommodation, outpost in Wadi El-Hitan, eco-tourism facilities, more signposts, monitoring equipment, vehicles and more operation and maintenance costs. Some of these will be realized in the final year of the Italian project.

It is expected that after ceasing of donor support from the Italian cooperation, a drop will take place in the different expenditure categories. In 2006/07, the expenditures for operation were LE 165,000 from the government and LE 876,133 from the donor support, which will stop its funding reducing the amount of money spend in operation to those received from the government (a maximum of LE 165,000 in 2006/07) for WRPA and Qaroun PA, unless other funding sources are available or unless finding a mechanism to refund the protected area with its generated revenues.

The major shortfalls are in planning and management and Wadi El-Hitan programs (LE 2,825,280 and 1,031,404 to basic and LE 3,592,887 and 1,268,105 to ideal management states respectively). The other programs of WRPA showed fewer shortfalls to the basic and ideal states as follows: monitoring, eco-tourism and public awareness respectively. The required amounts of money as gaps to the basic and ideal scenarios were estimated as follows: LE 671,288; 379,581 and 198,004 to the basic state and LE 798,691; 717,083 and 381,737 to the ideal management state respectively. (See table 10).

Table (10): Gaps from actual to basic and ideal scenarios for WRPA management programs

Management programs	Gaps actual to basic	Gaps actual to ideal
Planning and Management	2,825,280	3,592,887
Monitoring	671,288	798,691
Wadi El-Hitan Development	1,031,404	1,268,105
Eco-tourism	379,581	717,083
Public Awareness	198,004	381,737
Total	5,105,557	6,758,503

Figures 11 and 12 show the gaps to basic and ideal scenarios for each management program of the PA, and the total financial shortfall respectively.

Figure (11) WRPA management programs against gaps

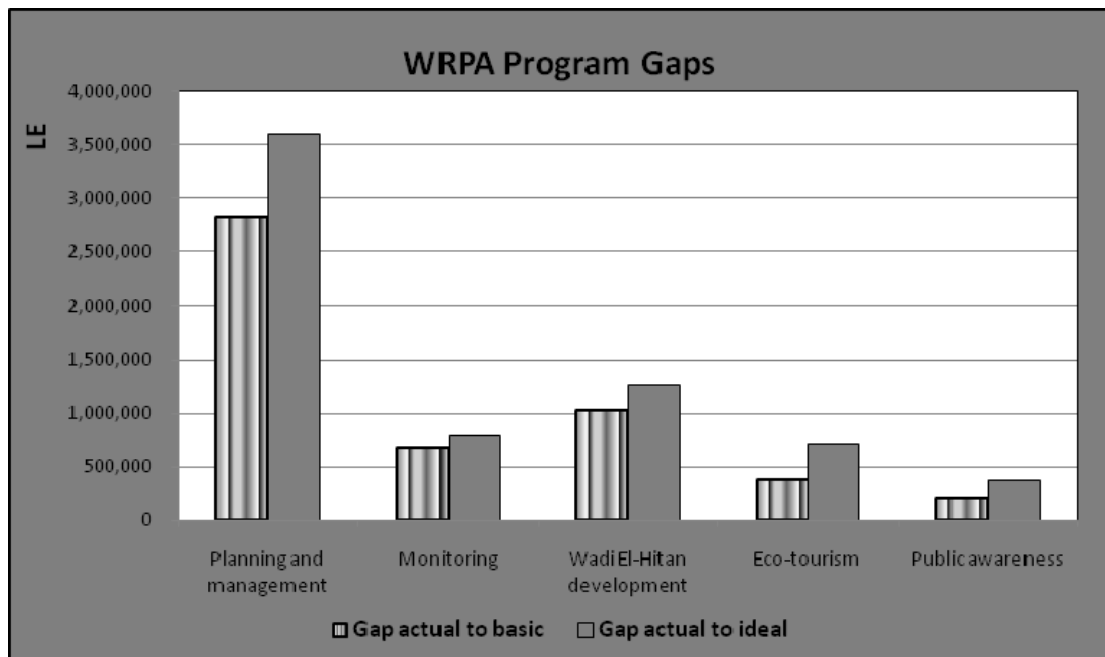
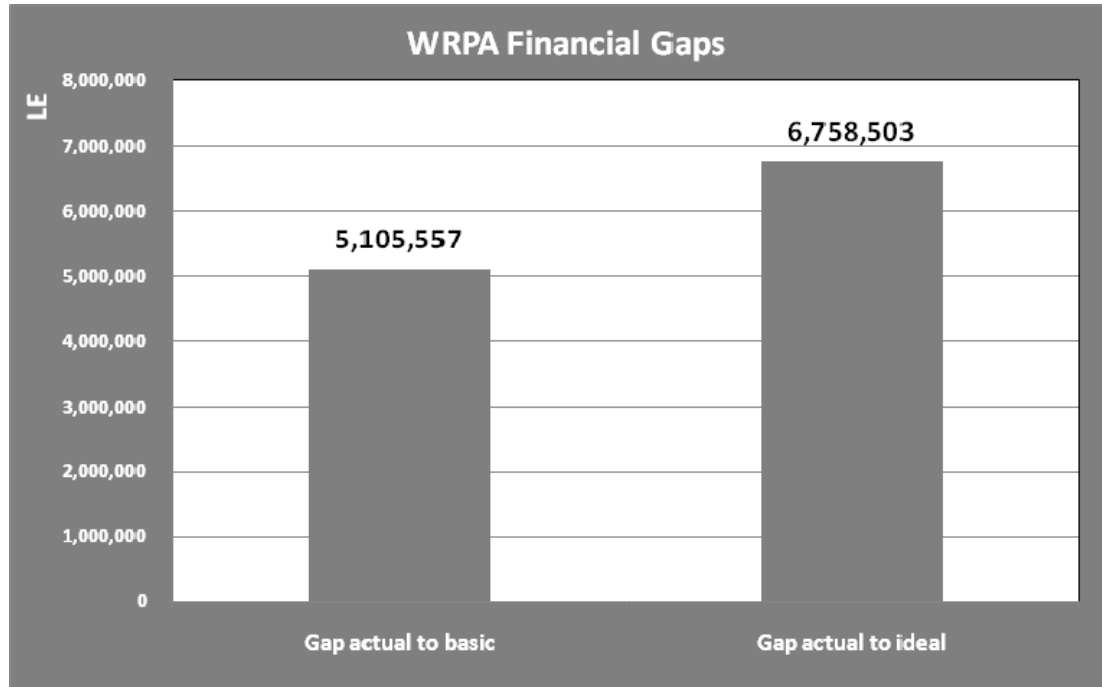


Figure (12) Wadi El-Rayan programs versus scenarios



Each of the management programs in WRPA are explained in appendix 4 to show the basic and ideal needs

2.6. CONCLUSION

Looking at the revenue generated by the WRPA and the expenditure categories tell us that WRPA can not be self financed even after retaining its revenues. The reason for that is the expenditure categories are much more than the generated park revenues, even if all revenues could be retained.

Fortunately, several activities which are running for the moment such as staff incentives, support to environmental unit in Fayoum governorate, heavy infrastructure are currently driven and financed by the Italian project, and expected not to continue after the project period end by June 2008. So, the annual operating budget would be much less than currently spend by the Italian project, which supports the idea that the PA can not be self operating unit even if it retains its revenues. i.e. the gaps to basic and ideal states estimated as LE 5,842,027 and 7,421,272 respectively, however, the maximum collected revenues at 2006/07 was LE 417,000.

The PA will need to increase its sources of funds. This might include better fee collection, alternative fee structures, sale of goods, increases in concessions, and improvement in penalty fee collection, corporate, national and international assistance to support PA efforts.

The revenue of WRPA can be enhanced, if given the attractiveness of Wadi El-Rayan as a recreational site, and the importance of Wadi Hitan and also if the park services to visitors are improved and maintained, and not let to be deteriorated after the project end.

The stakeholders who benefit from the natural resources and ecosystem services of WRPA should contribute by fund and in-kind support to enhance PA management and conservation and to support the role of PA in economic and social development.

International donor funding is an important source of funds, however this source should not be dependable, as by its nature, is not sustainable.

The PA will also has to start to manage its assets and resources in line with its needs; and based on a more business-like basis.

The government contribution to the park is essential for the sustainability of park operations.

The next part of this plan deals with revenue generating strategies proposed by the WRPA staff to improve the self financing mechanism of the PA.

PART III. FINANCIAL STRATEGY

3.1. BUSINESS OPPORTUNITIES OVERVIEW

This section presents the strategies and opportunities to be pursued to reach sustainable financing. It provides an overview of the market context and the barriers that need to be overcome.

A long-term, steady and diverse income stream is necessary for financial stability and good management of Wadi El-Rayan Protected Area. As the protected area receives an insufficient annual governmental budget, it relies totally on donor grants for operations and projects to grow the Park's infrastructure and develop programs. Too much reliance on any one income source can become unsustainable if that source becomes less available in the future.

The availability of funds has to be seriously considered after termination of the Italian project, especially for equipment, operations, and maintenance. The budget allocated for operation in 2006/07 is about LE 1,040,000 (considering the depreciation and inflation rates). The contribution of the Government was LE 165,000 in 2006/07 in addition to LE 585,000 of staff salaries.

The expected lack of financial resources after the end of the project will have a negative effect on the PA activities especially those of information, education and communication component, which is responsible for education, public awareness, community outreach services, as well as publicity activities in the PA. Lack of funds will also have a negative effect on the production of research and surveys essential for managing the Protected Area.

Thus, WRPA must develop and enhance other sources of income. As every type of funding strategy requires time and effort, it is imperative to strike a balance between meeting urgent needs, developing long-term streams of revenue, and setting aside some contingency funds for the future.

3.2. WRPA STAKEHOLDERS

Wadi El-Rayan Protected Areas has several direct and indirect stakeholders, collaborators and participants in the park's activities. In the following table, the governmental stakeholders are listed in the left column while non governmental actors that provide in kind and financial support are listed in the right column.

WRPA Stakeholders	
EEAA	Italian cooperation
Fayoum Governorate	Grand Sasso national park
City Council of Youssef El-Seddik	Tour operators
Fish authority (Ministry of Agric Land Reclamation)	Fish farmers societies
Fayoum Tourism Authority	Local communities (farmers, fishermen..)
Fayoum Irrigation Dept. (Ministry of Irrig)	Petroleum company
Police station (Youssef El-Seddik)	Cafeteria owners
Environmental Police (Ministry of Interior)	Boat owners
	Local/National NGOs

In support of the preparation of this business plan, several meetings were held with stakeholders to identify possible ways for them to support the protected area. These included the following:

- Most of the stakeholders (governmental and non-governmental) proposed a protected area operating committee comprised of staff and local stakeholders. From their point of view, this enhance cooperative and mutually-beneficial opportunities.
- The fish farming society indicated their willingness to improve the quality of tracks and to apply the environmental quality standards on their fish products.
- Some tour operators have already begun to support protected area activities. For example, EMECO travel has provided some tools and chemicals used for fossil preparation.
- Zad Al-Mosafer Guesthouse in the nearby village of Tunis has been a supportive partner. For example, they have indicated their willingness to provide office space for the Friends of Wadi El-Hitan, editorial review of written materials, and to sell protected area and local products.
- Cafeteria owners in Wadi El-Rayan have participated in discussions on the re-development of the Main Visitor Area, and have indicated their willingness to fund some of the costs related to improving their cafeterias and operations.

3.3. PORTFOLIO OF ALTERNATIVES AND PRIORITIES

3.3.1. Current Sources of Funding and In-kind Support

The Wadi El-Rayan protected area is one of 27 Egyptian protected areas that need money to achieve conservation goals and effective management. Presently, WRPA has two primary sources of funds and a number of sponsors and partners. The current funding sources are the governmental budget from EEAA and substantial donor support through the Egyptian Italian Environmental Cooperation Programme focused mainly on capacity building, equipment, eco-tourism development, environmental education and Wadi El-Hitan development.

The annual governmental operational budget has ranged from LE 100,000 in 2002/03 (for Wadi El-Rayan and Qaroun protected areas) to about LE 165,000 in 2006/07, while other governmental budget items are explained in table (2) and appendix (3). The Italian funds have been projected over the years according to the work plan. Likewise, the Gran Sasso grant has been projected to be expended over three years, beginning in 2005/06. Details of these sources are summarized in the appendix (3).

In recent years, support has come from a variety of partners, such as:

- Grand Sasso National Park, Italy through the twinning agreement with WRPA. Thus far, Gran Sasso has provided technical expertise and funds toward the development of the Open Air Museum.

-
- The University of Michigan (through the tri-partite agreement with EEAA and EMRA) and the US-Egypt Joint Technology Fund that has provided support and funding for research at Wadi El-Hitan and training for Wadi El-Rayan staff in the USA.
 - The British Embassy for support towards the DVD.
 - The US Forest Service for technical support in designing a landscape plan for the redevelopment of the Rayan Lakes main visitor area.
 - EMECO travel for providing equipment.
 - Apache Oil for sponsoring production of signs.
 - Palm Press for providing translation of brochures and cooperation in the dissemination of products in Egypt.
 - The Centre for Documentation of Culture and Nature in Egypt for sharing in the printing of brochures, including retaining revenues for future educational work at Rayan.

Such support has been important in undertaking projects that otherwise would not have been possible, and in enhancing activities. As such, partnerships are a key part of the future strategy for sustainable financing.

3.3.2. Strategies for Sustainable Financing

The value of economic activities in the PA is quite high. There is a huge gap between the revenues collected by investors in different economic activities (especially oil- Extraction Company and fish farming), and the concession paid to the EEAA.

Four strategies will be pursued to achieve sustainable financing.

A. Revenue generation: Higher levels of revenue will be generated, mainly for the national Environmental Protection Fund, from which protected area budgets are drawn.

B. Governmental funding: Increased financing is expected to enable higher levels of governmental budgets for annual operations and staffing, and for special development projects.

C. Revenue retention: Mechanisms will also be sought for retaining revenues arising from specific opportunities so that they can be focused on sustaining important protected area activities. i.e., environmental education activities could be sustained through the sale of education products and provision of education services by the Friends of Wadi El-Hitan non-governmental organization.

D. Partnerships: Another key strategy will focus on encouraging collaboration of stakeholders and in-kind support.

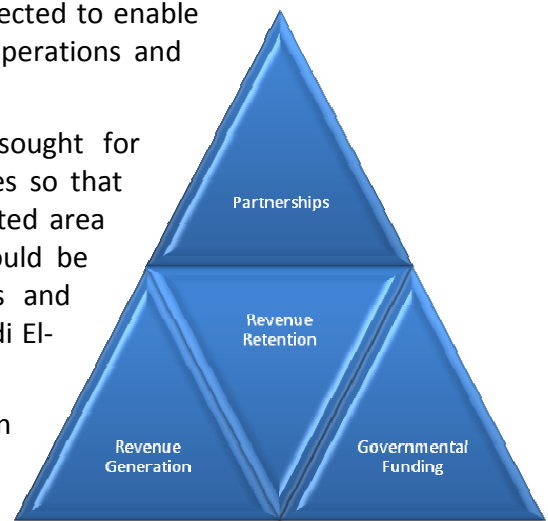


Figure 13. Four-part financial strategy

For each of these strategies, a series of *opportunities* are presented in the following sections, including an evaluation of the barriers.

A. Revenue Generation Strategy

This strategy aims to generate new revenues through 4 opportunities associated with tourism and ecosystem services provided by the protected area:

1. Entrance Fees to the Open Air Museum, Wadi El-Hitan World Heritage Site

Opportunity:

Presently, entrance fee is charged to enter WRPA, which includes Wadi El-Hitan. A separate fee for Wadi El-Hitan is proposed in recognition of its global importance as a World Heritage Site and its high potential to attract visitors. The product and services include a first class Open Air Museum with its collection of fossils and professionally developed display panels, shade structures and printed literature in multiple languages, high class

Prior to 2005, the number of visitors to Wadi El-Hitan was less than 2000/year. After declaration as a world heritage site, and construction of the access road, the valley received more than 5000 visitors in 2006. Based on visitor monitoring, it is anticipated that 10,000 – 12,000 will visit in 2007.

WCs, a cafeteria, and opportunities to hire camels. In addition, visitors find solitude, clean air, inspiring natural landscapes and a desert experience.

Market description:

The number of visitors to Wadi El-Hitan is expected to reach **12,000** by the end of 2007. Given its close proximity to Cairo, increasing daily visitation is expected. In the table below, visitation in 2008 is estimated to increase 50% over 2007, and 25% /year in the 2009 and 2010.

Visitor monitoring shows that about 95% of visitors are foreign (resident and tourist) coming from Germany, Italy, France, UK and many other countries. Only about 5% have been Egyptian, though this number is expected to increase in coming years.

Potential revenues/benefits:

A separate fee offers the highest potential for increasing revenues. If the new fee is set at \$2 (for foreigners), the potential revenues would be in the order of LE 139,000 (based on 2007 visitation). If set at \$5/person, the revenues for 2007 would have reached LE 348,000. As shown in the table below, new revenues in the order of LE 300,000 to LE 800,000 could be anticipated by 2010.

Revenue Projections (LE)				
Year	2007	2008	2009	2010
Visitation	12,000	18,000	22,500	28,125
Revenue (\$2/person)	139,200	208,800	261,000	326,250
Revenue (\$5/person)	348,000	522,000	652,500	815,625
(\$1 = LE 5.8)				

Potential costs:

The costs for introducing a ticket collection system are estimated to be about LE 60,000 /year. This includes hiring an additional two ticket collectors and printing tickets.

Readiness and needs:

Infrastructure development for visitors is now complete. The open air museum is operational, and staff is based full time at the site. The cafeteria, gift shop, camel hires and WCs are being operated by a private individual. A system for hiring trained tour guides is being developed. To properly protect the fossil resources and maintain high quality visitor facilities higher levels of visitation, additional operational and staffing resources will be needed. A visitor survey is being conducted to assess willingness to pay.

2. Redesign and Improve of the Current Concession System

Opportunity:

The current concessions inside Wadi El-Rayan include fish farms (Concession fees are L.E. 80 per feddan, of total LE 184,000, cafeterias (LE 12,700), 2 mobile stations (LE 14,055/year)

and petroleum company (It was not possible to find out any concession paid by the company or the Ministry of Petroleum to the EEAA).

For example, the concessions paid by fishing farms to EEAA are extremely low compared to the environmental problems they create in the PA. Substantial improvements to the Rayan Lakes recreational product are being made. For example, a landscape plan has been prepared for the main visitor area to increase the quality and economic benefits from recreational use. In addition, substantial investments through the Egyptian Italian Environmental Cooperation Programme are being made to re-develop the visitor centre.

There is no direct relation between funds generated by the PA and those utilized or reinvested in the PA. In terms of the fish farm concessions, the lakes provide substantial economic return for the fish farm societies. The protected area incurs considerable financial costs related to implementing patrolling, enforcement and monitoring programmes, and collaborative management activities.

Market description:

Visitation to Wadi El-Rayan has increased in recent years, and is expected to receive even higher levels with the infrastructure improvements and the anticipated growth in use at the Rayan Lakes and Wadi El-Hitan. This provides an increasing customer base for enterprises such as cafeterias and mobile phone companies.

Potential revenues/benefits:

Revised concession fees are essential for all concessions. These are needed to be negotiated on a case by case basis.

Potential cost:

Costs related to revising the concession fees are low.

Readiness/needs:

There are no additional needs; this opportunity should be pursued.

3. New Cafeteria Concession at Wadi El-Hitan

Opportunity:

A new cafeteria has been constructed at Wadi El-Hitan, and a new concession agreement is required. Based on the global significance of the site, and the quality infrastructure and services set up in Wadi El-Hitan (WCs, tracks, shade structures, information and guiding panels and booklets), and based on the growing number of visitors, it is expected that the cafeteria will be a viable operation. Use of the facilities for events, occasions and camping can be also considered.

Market description:

See above concerning visitation projections. Additional opportunities are associated with desert experiences, including camping and camel trekking.

Potential revenues/benefits:

The projected annual concession can be not less than LE 25,000. This is based on the estimated number of visitors that might have at least one soft drink and use the WC (charged 1 LE/person). The concession agreement should include care and operation of the WCs. Additional revenues that have not been projected, include camel hires, camping services and other desert experiences.

Potential costs:

No identified costs for the moment

Readiness/needs:

There are no additional needs; this opportunity should be pursued.

4. Special Events and Guided Trips

Opportunity:

A variety of special events could be offered to attract people to the area. They can range from small events for a limited number of people to large events with thousands of visitors. These could include, for example:

- Annual bird migration festival that ties together nature, arts, music, crafts in an annual festival. This could be based in a local community or at the protected area. It could be hosted during the period when waterfowl numbers are at their peak.
- Camel expeditions to a remote area of the protected area under the guidance of a ranger and community guard. By example, Kruger National Park in South Africa operates a successful program of 3-day hikes and ½ day hikes, with user fees.
- Competitive sports (water sports, fishing, marathons, etc.).
- Daily, guided tours could be offered, ranging from 1 hour to full day excursions.

Market description:

Daily and multiple day excursions would be attractive to markets in Cairo, as well as international tourists if advanced bookings could be made with reliability. Kruger National Park offers an effective service. Mass tourism is not the target; rather, in keeping with the concept of ecotourism, smaller groups (e.g., 10-12, microbus size) would be more suitable so that tours can be tailored to the group, the natural site features, and be operated efficiently. Trained and knowledgeable guides are a key success factor.

Potential revenues/benefits:

Special events have the potential to increase revenues for the protected area and for local communities and businesses. They could be sponsored by the Friends of Wadi El-Hitan, thereby achieving a revenue retention strategy. More detailed analysis and testing of opportunities is needed to determine routes, logistical needs, fees, etc.

Potential costs:

Costs will need to be determined on a case by case basis. Staff resources, equipment, communications, marketing, and training are needed to develop an effective programme.

Readiness/needs:

Organizing committees should be established for each special event and include key business participants in the local community.

Staff could work with established tour companies to bridge the gap related to logistics, bookings, equipment, etc., and focus on fulfilling the role of ranger guide.

A few test cases should be identified and tested.

Eco-tourist guide training programme and method of training/certifying guides.

B. Governmental Funding Strategy

This strategy aims to secure sufficient levels of funding to protect natural resources and infrastructure, thereby continuing to sustain local community benefits from a protected area that is effectively managed.

Opportunity:

The opportunity in this case is Wadi El-Rayan Protected Area, including the natural, social and economic values, infrastructure and vehicles. A minimum budget is required to protect investments. The alternative scenario is one of declining conditions, which results in reduced quality of services, reduced visitation, negative marketing and a loss of revenues.

Market description: Not applicable

Potential revenues/benefits:

A well managed protected area can be expected to generate revenues on an ongoing basis. Alternatively, a poorly managed site will lead to economic losses.

Potential cost:

It is anticipated that the governmental allocation for WRPA will increase to LE 450,000 (for operations) per annum starting from 2007/8, based on estimates made by NCS management. If applied, this is a step toward improving sustainable financing. Keeping in mind that salaries will be also paid by the government in addition to this figure.

Readiness/needs:

Rigorous annual work planning must continue along with annual assessment of management effectiveness.

C. Revenue Retention Strategy

This strategy aims to establish mechanisms to retain revenues for use in protected area programmes. It is particularly focused on retaining revenues that might otherwise not

be available to the PA or to government. Revenues can be generated through a variety of means such as those listed in the previous and following sections concerning revenue generation and partnerships.

1. The Friends of Valley of the Whales

Opportunity:

Throughout the world, non-governmental organizations, often referred to “friends” organizations, have achieved significant success in raising funds to support protected area activities. According to Emerson et al., (2006, 11):

“In addition to gifts from foundations, probably the best documented source of private funding for PAs is non-profit or “charitable” organizations. These include literally thousands of organizations, both large and small, some of them working locally and others internationally. While much of the funding that these organizations devote to PAs and related conservation activities comes from governments or from large foundations, a significant portion of their funding derives from individual contributions by members of the public.”

Friends’ activities are carried out in close cooperation with the protected area and are intended primarily to enhance the educational, recreational, monitoring, research and resource protection programmes and facilities in the protected area. As a result, they help to improve overall effectiveness and financial sustainability. Activities may include, but are not limited to, such things as:

- Producing and selling educational materials (e.g., trail guides, checklists, maps, newsletters, DVDs, posters, etc.).
- Organizing special programs and events as a means to raise revenues.
- Raising funds, applying for grants, accepting donations and bequests, and re-investing the funds to further the NGO’s objectives.
- Selling souvenir items (i.e., crafts, postcards, etc.) with a particular connection to the protected area and/or local community.
- Encouraging volunteer and community participation in its programs and those of the protected area.

The Friends organization is to be established under Egyptian law for NGOs. Their overall success is dependent upon how active the Friends are, the cooperation and support they receive from the protected area, and the degree to which government supports and enables the cooperation.

Market description:

The primary market is the visitors to Wadi El-Rayan Protected, and particularly to Wadi El-Hitan World Heritage Site. Due to the higher percentage of foreign visitors to Hitan (see section 3.2, opportunity 1), it is felt that the potential to generate revenues through sales, donations and participation in activities from this group is higher than in other locations.

Markets also include visitors to area hotels and educational visits. Cairo has a large number of private educational institutions that can afford to pay for quality services and products. In addition, Fayoum is internationally renowned for its fossil resources. Potential exists to cater to specialized university field trips. This opportunity fits well with the staff capacity to provide advanced level of site knowledge that is sought by this group.

Potential revenues/benefits:

Potential revenues are unknown as this time, however, there is a reasonable expectation for success, due to the following factors:

- There is considerable qualified support in the local village of Tunis, which has an influential group of Cairo based residents with expertise in various fields.
- Through the Egyptian Italian Environmental Cooperation Programme, a good supply of quality brochures (Guide Book to the Open Air Museum, Birds of WRPA) and a new DVD (Whales of the Desert) have been produced. Through agreement, this inventory would be made available to the Friends for selling in order to retain revenues for sustaining production of education materials.

Potential cost:

Contributions from the protected area to the Friends will come in a variety of ways, such as cooperating on the organization of events and other activities, providing space to operate from, sharing staff expertise in preparing new brochures and leading hikes, etc.

Readiness/needs:

Steps are underway to establish this new NGO. Some clarity in EEAA administrative rules may be necessary to enable the full potential of the NGO. The NGO will require some time to become organized and operational. Staff should be assigned to facilitate and assist to make this mechanism as effective as possible. The NGO should follow standard practices for assessing the potential benefits of its activities.

2. Special Services Unit

Opportunity:

A special services unit could be established, similar to the Nature Conservation Training Center of the Nature Conservation Sector in Sharm El-Sheikh, operated by the South Sinai protectorate sector. The training center is designated as an administrative unit, which enables it to gain money through renting training facilities (class rooms, laboratory facilities), training courses, lodges and meals, etc, and to retain and use 50% of the revenues. This type of mechanism could operate in a complementary manner with the PA and the Friends.

At WRPA, this mechanism could include use of the visitor centre for special events (events, conferences, etc.), use of the Hitan fossil laboratory (under construction), use of the former small staff accommodation at Hitan for research or educational groups or for training courses.

Market description:

The market for this product could vary widely, depending upon how it is scoped and marketed.

Potential revenues/benefits:

To be determined

Potential cost:

Effective operation will require professional service in marketing, bookings, and ensuring clean and functioning facilities. One option would be to contract this service, in whole or in part, to a professional company.

Readiness/needs:

- This option needs further study and discussion with NCS and EEAA to determine its feasibility for WRPA, including a detailed terms of reference and operational guidelines.
- Further considerations should be given to the WRPA facilities that can be eligible to meet these rules and conditions, including the operational parameters, fees, etc.
- A coordinator would be required to effectively manage the marketing, bookings and operation of the facilities.

D. PARTNERSHIP STRATEGY

This strategy aims to secure effective support through mechanisms that provide direct or indirect benefits. Often, they result in reducing impacts on the protected area budget or increasing capacity with no or low levels of additional inputs from the protected area. Overall, they increase effectiveness and sustainability.

1. In-kind Support and Sponsorships

Opportunity:

Most stakeholders inside WRPA have demonstrated or indicated their willingness to support the PA activities. Often, these are characterized as one-time opportunities. To date, these have included:

- Apache Oil has funded new signs.
- EMECO Travel has provided equipment for fossil preparation. Many other opportunities are possible.
- British Embassy contributed to production of the Hitan DVD.

Market description:

Today, many corporations are participating in social and environmental programmes. Within WRPA, the Apache Oil and the fish farming operations provide immediately relevant opportunities. For example, the extensive fish farm (Fayoum Society for

Development) has people and equipment that could maintain the main visitor area track. Potential also exists to tap private sources to sponsor projects.

Other nearby operations, such as the Helnan-Auberge Hotel, as well as Cairo based companies can be included.

Potential revenues/benefits:

The needs for the protected area are many, as described in the “Wadi El-Hitan Sponsorship Opportunities” (enclosed with this plan). This brochure aims to identify and promote partnerships with a wider audience.

Potential cost:

Costs relate to proper administration of a programme to market, seek and administer opportunities.

Readiness/needs:

The protected area is ready to cooperate and accept in-kind contributions. Further work on enhancing the programme is needed to realize improved benefits.

2. Agreements

Opportunity:

WRPA has several partnerships in place, through agreements, that have demonstrated the importance of this opportunity. In general, agreements can be characterized as longer term arrangements, usually established through some kind of written agreement or memorandum of understanding. They may have direct financial benefits through the provision of funds or indirect benefits through provision of services, in-kind.

To date, these have included:

- The tripartite agreement with the University of Michigan for research and training opportunities.
- Through the twin park agreement with Gran Sasso National Park, technical expertise and funding has been provided.
- The US-Egypt Joint Technology Fund supports fossil research.
- A memorandum of understanding with the Centre for Documentation of Culture and Nature in Egypt (CULTNAT) has supported printing and selling the WR bird brochure, without any financial provision from WRPA, and includes retaining the revenues for further education initiatives in the protected area.
- The US Forest Service has provided technical support in designing a landscape plan for the redevelopment of the Rayan Lakes main visitor area. Further support is being planned.

Market description:

Many different kinds of partnerships and collaboration are possible, ranging from local and national to international opportunities. These need to be further examined.

Potential revenues/benefits: As above, further examination is needed.

Potential cost: As above, further examination is needed.

Readiness/needs:

The protected area is ready to cooperate and establish effective partnerships. A person dedicated to nurturing partner opportunities and relationships is warranted.

3. Volunteer Contributions

Opportunity:

In many protected areas around the world, volunteers contribute in valuable and meaningful ways. Some programmes are self-funded by the participants. WRPA has had some volunteer contributions, such as the Wildlife Society visits to help at Wadi El-Hitan, and the Italian Dombosco technical school assistance with track work. Examples of opportunities might include:

- Clean-up programmes with Scouts and schools.
- Leading a special hike/tour by an expert, in different languages.
- Assisting with fossil excavations.
- Assisting with public relations, websites, translations, etc.
- Staffing the visitor center or monitoring visitors at the open air museum.

Market description:

Within Egypt, there are Egyptian and foreign people who have an interest in supporting conservation efforts. They are often associated with a conservation NGO or could be contacted through embassies.

Potential revenues/benefits:

Direct financial benefits could be obtained for specific opportunities to assist with projects. Indirect (non-financial) benefits arise when volunteer support is focused on specific needed assistance.

Potential cost:

One full time ranger to coordinate the programme. This programme could be operated through the Friends of Wadi El-Hitan.

Readiness/needs:

- An annual task list should be prepared by the PA staff and introduced to interested individuals and groups.
- A serious volunteer programme requires planning and coordination to establish the terms of reference for each volunteer opportunity, find appropriate volunteers,

schedule their participation, ensure necessary staff and arrangement are in place, and evaluate the efforts. In some cases, fees can be assessed.

3.4. EVALUATION OF OPPORTUNITIES: BARRIER ANALYSIS

The opportunities presented in the previous sections have been examined in terms of their feasibility and impact. Feasibility considerations include potential barriers and limitations related to legal, political, capacity and likelihood of being implemented. Impact was assessed in terms of the degree to which the strategy will be supported. The following criteria (tables 11, 12) were used to assess the barriers. The evaluation is presented in table 13). The resulting ratings were then prioritized (table 13).

Table (11): Guideline for Evaluating Feasibility

Criteria	Low Feasibility	Medium Feasibility	High Feasibility
Legal	Change to legislation	Minister's decree	Minor or no implications
Political	High political concern; high public concern; anticipate lobbying		Low concern; low public interest anticipated
Capacity	No staff with appropriate abilities	Capable staff but training is needed	Capable and trained staff available
Likelihood	Unlikely to happen		Anticipate a high potential to be implemented

Table (12): Guideline for Evaluating Impact

Strategy	Low Impact	Medium Impact	High Impact
Revenue generation	Revenues less than 20,000 LE	Revenues 20,000 – 100,000 LE	Revenues over 100,000 LE
Baseline funding	Less than 30% of annual operating needs to meet basic level of operation	Provides 30-70% of annual operating needs to meet basic level of operation	Provides over 70% of annual operating needs to meet basic level of operation
Revenue retention	No retention possible	Potential to retain partial revenues; or, amounts up to LE 100,000	High potential to retain all revenues; or amounts over LE 100,000
Partnerships (In kind contributions)	Small donations of equipment or services; low level of direct or indirect benefits		High value donations of equipment or services; could be lower value but repeated as part of an ongoing programme; high indirect benefits

The overall assessment of feasibility and impact were prioritized according to table 13. In general, the impact of the opportunity to contribute to realizing the financial strategy takes precedence over feasibility. Simply, low impact, despite its feasibility, is a waste of time. However, a high impact opportunity may warrant the effort to address the barriers.

Table (13): Evaluation of Feasibility, Impact and Barriers

Opportunities	Feasibility Criteria				Overall Feasibility	Impact	Overall Priority	Barriers and Challenges	Remarks
	Legal	Political	Capacity	Likelihood					
1. Entrance fees at Wadi El-Hitan	M	M	H	H	M-H	H	H	- Ministerial decree	- Survey on willingness to pay underway
2. Redesign of current concession system	M	M	H	H	M-H	H	H	- Changing long term contracts	
3. Concession for new cafeteria at Wadi El-Hitan	H	H	H	H	H	M	M-H		- Medium impact is direct but it has indirect benefits (e.g., selling brochures)
4. Special events and guided trips	H	H	M	H	M-H	H	M-H	- Hosting events will cost the PA money	
Friends of Wadi-El Hitan NGO	H	H	H	H	H	M	M-H	- Establishment has low legal implications; operations require legal support	- Long term benefits are anticipated to be high.
Special services unit	M	H	M	H	M	H	M	- Ministerial decree	- It can follow the example of training center
5. In-kind support and sponsorships	M	H	M	H	M-H	M	M	- Capacity skills to seek support needs development - PA priorities and actions are ready and identified by the PA staff	- Past experience suggests impact to be medium
6. Agreements	M	H	M	H	M-H	H	M	- Well identify the issues of cooperation between the PA and others - Communication skills	
7. Volunteer contribution	H	H	L	H	M-H	M	M-H	- Communication skills	

Prioritization of Opportunities

		Feasibility		
		1-Low	2-Medium	3-High
Impact	3-High	Medium	Very High	Very High
	2-Medium	Low	Medium	Medium to High
	1-Low	Very Low	Very Low	Very Low

Some alternatives were found to be extremely attractive from a financial perspective, but face an important number of limitations to be achieved. The following chart presents the feasibility and impact analysis of the opportunities.

		Feasibility		
		1-Low	2-Medium	3-High
Impact	3-High		<ul style="list-style-type: none"> • Agreements • Special services unit 	<ul style="list-style-type: none"> • Entrance fees to Wadi El-Hitan • Re-design of current concessions • Special events and guided tours
	2-Medium		<ul style="list-style-type: none"> • In-kind support and sponsorships • Volunteer contribution • Friends of Wadi El-Hitan NGO 	<ul style="list-style-type: none"> • Concession for new cafeteria at Wadi El-Hitan • Support from relevant stakeholders and concessioners • Lateral agreements
	1-Low			

As estimated in Part II, WRPA will need about LE 5,105,557 to reach the basic management level and about LE 6,758,503 to reach the ideal management level. It is possible to say that the PA would need about LE 1,000,000/year (rather than the staff salaries) to reach the basic level of management in a period of 5 years. It is supposed to cover the gaps to basic and ideal levels of management through the 4 proposed financial strategies in this plan. It is proposed to increase the governmental budget to reach about LE 450,000 per annum (for operations). It is proposed to obtain the remaining LE 600,000 through the revenue generation and partnership strategies.

Referring to table (3), the revenues generated by the PA have reached LE 417,272 in 2006/07 (LE 299,415 from entrance fees; 31,857 from concessions; 86,000 from commercials). The next table shows the estimated profits generated by the main economic activities in WRPA,

Activity	Production/year	ESTIMATE profits (L.E.)	Concession value to EEAA (LE/2006-07)
Oil- extraction	365,000 barrel	122,640,000 (\$60/barrel)	??
Fish farming	1240 tons	12,400,000	184,000
Fishing	1500 tons	15,000,000	No conc. paid
Agriculture in Land Reclamation		2,579,167	No conc. paid
Cafeterias	150,000 visitors	200,000	12,700
Cell phone stations	about 3100 permanent users	1,860,000	14,055
Total revenues from activities		154,679,167	

WRPA produces a very high profit in terms of operating economic activities using the park natural resources reaches about LE 154,679,167/year. Based on this figure the PA would encourage the stakeholders to share and support the WRPA activities.

Analyzing the potential revenues and costs from the revenue generation/partnership strategies, and considering the feasibility of potential opportunities (Table 13), the needed amount of money/year to cover the PA needs can be estimated as follows:

Opportunity/ strategy	Priority	Potential cost LE/year	Revenues	Contribution to achieve basic level	
				50% retained	100% retained
Entrance fees at Wadi El-Hitan	1	60,000 (2 ticket collectors + printing)	139,000	69,500	139,000
Redesign of current concession system	2	100,000 (studies +consultants)	<ul style="list-style-type: none"> • Fish F. 184,000 to 368,000 • Cell phone 15,000 to 120,000 • Cafeterias 12,700 to 31,700 	259,850	519,700
Concession for new cafeteria at Wadi El-Hitan	4	0	25,000	12,500	25,000
Special events (win serve, sport fishing...) and guided trips	5	0	1000/person *100 * 2 kinds of events/year = 200,000	100,00	200,000
In-kind support and sponsorships	3		50,000 for printing of brochures + track maintenance....	25,000	50,000
Agreements	6				
Total			933,000	466,850	933,000
PA current revenues			417,272	208,636	417,272
Grand Total			1,350,272	675,486	1,350,272

On implementation of successful revenue generation/retention strategies, the financial gap to the basic level can be overcome within 5 years if current and potential revenue sources have been retained totally. If the retention strategy is only able to retain only 50% of the revenues the gap to basic could be covered within 8 years. The ideal level of management can also be reached within 6 years if the expected revenue been totally kept. In case of WRPA can grasp more in-kind support and other opportunities, the financial gaps can take less time to overcome.

3.5. MARKET ANALYSIS

The opportunities for revenue generation, presented in previous sections, are associated mainly with ecosystem services (e.g., fish production, oil production) and revenues derived through tourism. This section focuses on marketing considerations pertaining to tourism.

National Perspectives:

Tourism is a key sector of the Egyptian national economy estimated to generate a total of \$12.8 billion in direct and indirect economic activity. The tourism sector is also the greatest contributor to the total employment creating more than 2.2 million jobs, representing 7% of total employment.

Western and southern European markets are the prime generators of tourism for Egypt, followed by the Arab, Eastern European and U.S. markets respectively. Other new tourist generating markets in Southeast Asia, Latin America and Eastern Europe are also emerging as evidenced by extremely high growth rates. Tourism is the most dynamic Egyptian industry and the largest earner of foreign currency, representing around 4.4% of the GDP of the country¹.

Fayoum Provincial Perspectives:

An assessment for potential economic diversification and support to the development of local economy was carried out in year 2000. The research came with the conclusion that the potential for developing ecotourism in the Fayoum, with its lakes, palm trees, pristine desert areas, fossil remains, bird sanctuaries, and rural quietude, is very high. Likewise, it was found that ecotourism could present ample opportunities to local residents.

These opportunities include jobs, extra income, and technical training in the field of tourism and small business management. Several challenges were identified, among which a difficult legal environment, a population marked by a low level of education and limited entrepreneurial attitude and experience.

Even if not a panacea for all of the region's environmental and economic ills, properly planned ecotourism could offer means to help develop and diversify the local economy and provide much needed business management training experiences and reduce environmental degradation. The aim is to demonstrate to the local people the economic benefits of maintaining a clean and healthy environment. Furthermore, the integration of the local population in the development of local ecotourism could demonstrate that the ecotourism's dollar circulates in, and benefits the local economy much more profoundly than the normal tourist dollar.

The Fayoum Tourism Authority, with the assistance of the Italian-funded NGO Cooperation International South-South (CISS), has recently produced an Eco-tourism

¹ Tourism Sector Developments in Egypt, Business Studies & Analysis Centre, American Chamber of Commerce in Egypt, 2005.

Master Plan that establishes the wider perspective on the products and services to be developed with Fayoum. WRPA is the principal eco-tourism resource for Fayoum Province.

WRPA Perspectives:

At WRPA, 98% of visitors are Egyptian and only 2% foreign. However, this mix is expected to change with increasing visitation to Wadi El-Hitan, which has received almost opposite numbers of foreigners (about 95%). Nevertheless, the Egyptian market remains the largest. Additional tourist monitoring is needed to better describe the origin and user preferences of Egyptian and foreign visitors. A new survey has been developed for this purpose.

Growth in tourism at WRPA is anticipated for several reasons related to market opportunities, location, product and price:

- Egypt has a rapidly growing population.
- Presently, WRPA is within a two hour drive of an estimated 20 million people living in several urban centers, including Cairo.
- Cairo contains a substantial population of resident foreigners associated with embassies and industry. They are a source of new tourists on a regular basis, who can take advantage of day trips and weekend vacations.
- WRPA contains a variety of ecosystems and opportunities, including the World Heritage fossil site, beaches, waterfall, oases and dunes.
- Nearby, Medinet Maadi and other archeological sites offer cultural tourism opportunities.
- Locally, villages such as Tunis are establishing a reputation as an arts and crafts center with hand made pottery, fine arts and music.
- Through the Egyptian Italian Environmental Cooperation Programme, substantial eco-tourism infrastructure and brochures have been developed in multiple languages. The visitor center is being enhanced with new exhibits and a plan has been made to re-develop the main visitor area and now awaits sponsor funding.

Together, these factors suggest growing opportunities. Close proximity to Cairo suggests that the opportunities for people to visit are easy compared to natural areas and World Heritage Sites, and also that the price for tourism opportunities will be highly competitive. New world class facilities and information resources are a welcome sign for foreign tourists, be they resident and non-resident.

Part IV of this plan identifies additional needs pertaining to market analysis.

3.6. MARKETING PLAN

This section introduces the key strategies and concepts for marketing the protected area and the opportunities in this business plan.

Professional marketing advice should be sought for establishing the marketing plan and for promoting partnership strategies (fund raising). The marketing plan should consider the following strategies.

1. Improve Name Branding

Presently Wadi El-Rayan Protected Area is known among Egyptian people, but has less resonance and meaning among foreign tourists who read travel books. The name conveys little about the attractions. Greater appeal could be established through improved name branding. For example, in Fayoum, Egypt has:

- Valley of the Whales World Heritage Site
- Rayan Lakes National Recreation Area
- Medint Maadi Ancient City

These names suggest importance, interest and diversity, and they are more descriptive of their values. On a map, they show more opportunities in a single geographic area, and therefore more reasons for visitors to include this destination.

2. Improve the Tourism Image of the Area

The area can be improved and more welcoming for foreign visitors by enhancing language skills. This includes:

- Signs in English language (and perhaps other languages at key locations)
- Printed information in multiple languages (WRPA is working on this strategy now).
- Tour guides who have different language skills (the Fayoum Tourism Faculty and tourism authority are improving this capacity).

3. Marketing Tools

Many people in Egypt and around the world are using the internet to find information, obtain advice, and to make reservations. For example, the website for Kruger National Park contains visitor blogs and skype contacts for visitors to call and ask for advice. The village of Shakshouk now has ADSL internet connection. The nearby Tourist Information Center could provide this kind of international and national service. As part of this, a website needs to be established. Again, considering the Kruger example, a coordinated web presence could be established for the “greater Rayan-Hitan” area.

4. Local Involvement

The involvement of local communities in the promotion and marketing of the area for tourism is important because they are part of the tourism product. Local artisans and

crafts people are a key part of maintaining the cultural values and reviving artisan production. Tourists are interested in buying arts and crafts.

5. Promoting Partnerships

Professional support can be helpful in approaching potential corporate and private sponsors. The “Sponsorship Opportunities” brochure is intended to be a support tool to communicate opportunities. Substantial effort is needed to network with and solicit contributions.

Next Steps

Marketing needs to be planned and carried out with local stakeholders and with the Fayoum Tourism Authority. In this way, efforts from all beneficiaries can be coordinated for greater impact.

As part of this, product development and marketing requires a clear understanding of several factors, including: (1) who the target audiences are, their interests, motivations and needs (2) the PA features that attract visitors and make them want to return (3) the information the audiences want about the PA, and (4) their willingness to pay for attractions and services.

PART IV. IMPLEMENTATION

This part of the plan focuses on the operational arrangements, key tasks and the major responsibilities to realize the business plan.

OPERATIONAL ARRANGEMENTS

A. Business Planning Team

This plan should be implemented by a team of people, including the protected area business planning specialist and senior staff, together with representatives from key stakeholders (e.g., concession holders, local tourism businesses, The Friends of Wadi El-Hitan).

Significant benefits can be accrued through active cooperation with partners. The team should review the barrier analysis and available resources, and prioritize the steps to implement the strategies described in the plan. The team should maintain a strategic perspective and anticipate the critical success factors that can be the pillars of implementation.

B. Operational Arrangements and Key Tasks

Based on the capacities, experience, barriers, and resources available, the team should identify and prioritize the steps that will lead to implementation of the financial strategies showed in this plan.

❖ Entrance fees to Wadi El-Hitan

The planning and monitoring unit with Wadi El-Hitan development unit should initiate and conduct a carrying capacity study for the visit sites of the valley. The study should consider the human impact and their mitigation in addition to monitoring indicators for the fossil sites quality and quantity. This study should be parallel to the visitor management and monitoring processes which is currently applied. Questionnaire about the visitor willingness to pay separate fees should be conducted in the appropriate time to investigate the necessary extra-facilities needed and the amount of proposed fees. At the end the 2 units, in addition to BP team should write a proposal to the NCS on the policy, mechanisms, limitations, and prices for the proposed fees.

❖ Redesign the current concession system

The PA should introduce a proposal to NCS on the value of the needed sites to redesign their concessions from both biodiversity and economic perspectives. of views. The proposal should include standard guideline mechanisms to evaluate each site, and to estimate the appropriate concession fees. Area covered by the activity, number of visitors benefited from the activities, the investment/profit of each activity and its impact on the environment and other related issues.

The NCS should negotiate with the EEAA (concessions committee) and the relevant stakeholders to redesign and increase concession fees.

❖ Concessions from the new cafeteria at Wadi El-Hitan

The Wadi El-Hitan development unit with the public awareness and planning units should write a proposal to NCS on the annual/seasonal visitation to the site. The proposal should identify the capacity of the cafeteria based on the visitor estimates and on the impact of the visitors on the services and facilities provided by the PA. The NCS will take the lead to initiate the appropriate contract with the investor through EEAA concessions committee.

❖ Special events and guided trips

The PAMU should identify a number of events that could be organized in order to promote the eco-tourism opportunities in the PA and to generate funds for supporting other ecotourism activities and infrastructure. An organizing committee should be formed and the relevant tourism authorities (FTA), projects or NGOs should be closely involved in identifying of such opportunities. An eco-tourist guide training programme and method of training/certifying guides is needed.

❖ The Friends of Valley of the Whales

Steps are currently underway to establish this new NGO. WRPA staff should work with other protected areas with Friends organization and NCS/EEAA to clarify and where necessary, establish necessary administrative rules to enable the full potential of the NGO. Staff should be assigned to facilitate and assist in making this mechanism as effective as possible.

❖ Special Services Unit

This option needs further study and discussion with NCS and EEAA to determine its feasibility for WRPA, including a detailed terms of reference and operational guidelines. A coordinator would be required to effectively manage the marketing, bookings and operation of the facilities.

❖ Partnerships, Agreements

A person with advanced communications skills (e.g., written and spoken English) is required to focus on tasks related to building and nurturing partner opportunities and relationships. This person could also coordinate a volunteer programme, including the planning and coordination to establish the terms of reference for each volunteer opportunity, find appropriate volunteers, schedule their participation, ensure necessary staff and arrangements are in place, and evaluate the efforts.

C. “Opportunity” Implementation Plans

The potential opportunities for revenue generation should follow a standard planning and evaluation process. This should include:

- A careful study and proposal by the PAMU and/or external participants, with a review by the NCS to negotiate any necessary policies and implementation needs at a higher level.
- Where necessary, an Environmental Impact Statement should be prepared.
- Detailed market analysis should be carried out, including researching and preparing a specific description about market potential (size of market, characteristics of target groups including demographics, economics, etc., motivations, willingness to pay, competition, methods of marketing to reach audiences, etc.).

-
- Budgets, needs and action plan.
 - Means of evaluation to identify areas for improvement.

D. Strategic Overview: Critical Success Factors

The overall success of this business plan depends on several factors. These include:

1. Maintaining a strategic perspective: The business planning team should always know where it's going and wants to end up, that is, what the long term goals are. With this, annual work plans and detailed "opportunity implementation plans" can be prepared.
2. Ongoing evaluation and reporting: All opportunities should be evaluated and reports prepared to determine successes, failures and areas for improvement. This forms the basis for informed planning. Results need to be integrated with the management plan, evaluations of management effectiveness and annual work plans.
3. Enabling environment: All levels of the government need to strive to create an enabling environment for entrepreneurial activities. Laws, decrees and administrative procedures should be examined, as required, when they present barriers. In addition, the protected area needs to provide logistic support to enable effective partnerships.
4. Local community benefits: When benefits are realized by local communities and businesses, they are more likely to support protected area activities. This becomes a mutually reinforcing relationship.

Key indicators of success in implementing this business plan include the following:

- Sources of funding have diversified (e.g., governmental budget, NGOs, country donors, corporate and private donors, and research institutions).
- The types and amount of funding and support have increased (e.g., revenue generation, governmental budget, revenue retention and partnerships).
- Funding has become more stable. The peaks and troughs of funding (the boom and bust cycle) have been smooth out so that funding from one year to the next is even and at a sufficient level.

Looking forward, we hope to secure sustainable financing to carry out the principal role of the protected area in conserving the unique natural resources and values of WRPA for the enjoyment, education, research and inspiration of this and future generations. WRPA can be an important stimulus for local community development.

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Appendix 1. Methodology

Creating a Business Plan Team

A national team was appointed by the Head of Nature Conservation Sector to fulfill the task of BP preparation and follow up. Mohamed Talaat El-Hennawy has been selected to be the focal person of WRPA business planning process.

Planning the process

A 2 days workshop had been held with external consultants who initiated the process and ensure having the right steps towards gathering the required information through PA staff participation. A business plan model and manual had been created and circulated to PA staff.

The needed information have been identified and categorized to general description data, PA activities including management programs, visitors and economic activities, financial data and future plans.

Information collection

The necessary information about the PA activities have been obtained from the PA management plan, the Italian project working plans and from staff presentations about their on the ground activities.

The financial data have been obtained from 3 sources. The first is from the Italian project which provided with working plans and financial reports. The second is from the NCS which provided about the annual operating funds, salaries and other sources of expenditures and revenues. The third is the PA staff themselves who realized the data obtained by the first 2 sources and make them clear to the BP team.

Several stakeholder meetings had been held to view the possible opportunities for cooperation and involvements in the PA activities, which enabling the BP team to assess the market

Information analysis

This process included several stages:

- Presenting the collected financial data (WRPA BP focal person & NCS team)
- Proposing with the PA staff of 3 scenarios for actual, basic and ideal management status which include the major activities according to the PA management plan objectives and the available/needed resources (human resources, infrastructure, equipment, operation and maintenance)
- Analyzing the obtained data in terms of funding sources for the past 5 years 2002-2007, analysis of expenditures and revenues. (WRPA BP focal person)
- Financial needs assessment including categorizing the needs for the basic and ideal scenarios according to the identified expenditure categories (WRPA BP focal person)
- Estimating the financial gaps for each of the management programs and then for the PA in total.
- Presenting a portfolio of current and potential opportunities for revenue generation and proposing the suitable financial strategy (PA staff, NCS, Italian project, stakeholders)

Document development

This part has included the writing up of the document, introducing 4 drafts, revising and discussing with WRPA staff, NCS business planning team and NCSCB project until introducing the final version

Appendix 2. Economic Activities in WRPA

Land reclamation is a major component of the government of Egypt's policy of food self-sufficiency and for this reason such schemes take precedence on virtually any other form of land use in the country. In the south-west of the WRPA about 4500 feddans of drip-irrigation scheme is located. The impact of the scheme in the WRPA is likely to be significant both on soil salinity and on the quantity and quality of water in the Rayan lakes. Perhaps, more critically, the scheme may also affect, in ways which are still to be determined, the adjacent and ecologically sensitive spring's area of the WRPA, through the influx of thousands of settlers into the area.

Oil extraction. There are currently 7 operational oil wells producing about 360,000 barrels/year, established in the northern region of the WRPA by the Qaroun Petroleum Company, a joint venture with the American company Apache. The visible impact of current drilling operations within the WRPA is limited to landscape mutilation due to the development of infrastructure, including a central pumping and storage station, several km of asphalt access roads and a helicopter landing pad.

Aquaculture. Authorizations for two fish farms of 1000 and 1300 feddans have been granted in the area along the waterway between the two Rayan lakes.

The first is already being developed by a private company as an intensive farm. To date, the main infrastructure includes 106 concrete ponds (400 m² each), 29 non-concrete ponds under construction/operation, a larger feeding pond and several feed and water distribution canals. The farm currently has an estimated daily requirement of more than 100.000 m³ of freshwater. The planned expansion of the farm will bring the number of ponds to a total of 120 in addition to a fish feed production unit, a hatchery unit and a canal which will supply the farm with water by gravity directly from the waterway between the two lakes.

The most obvious and immediate impact of the actual and planned farm system will be due to the untreated wastewater being dumped into the main waterway feeding the lower lake without filtration or sedimentation of suspended organic matter. This is likely to lead to eutrophication of the near side of the second lake, propagation of infectious and parasitic diseases originating from the fish farm, and expected anaerobic conditions leading to algal blooms in the waterfall area and surrounding beaches (main visitor area), situated about 2 km downstream from the farm. In turn, this would inevitably have an adverse effect on the thriving tourism activities currently concentrated in this area of the WRPA. The introduced EIA studies are not comprehensive, however, it stated that the farm should fix filters before discharge into the lake.

The annual fish production for each pond is about 3-4 tons which means about 370 tons of fish per year, which generating about LE 3,700,000 annually.

The second is developed by NGO: Fayoum fish farming society on extensive farming basis. The invested area is larger than the first farm and the impact is more or less the same as the intensive farm. To date, the main infrastructure includes 68 farms each of 4-6 ponds (about 8000 m²

each). 58 farms are currently operating while the other 10 are under construction. The annual fish production is about 2.5-3 tons for each pond, which means about 870 tons of fish per year, which generating about LE 8,700,000 annually.

Fisheries. Fisheries activities in the Wadi El Rayan lakes are managed by the fisheries department of the Fayoum Governorate. The PA includes some of 1724 local fishermen using 182 traditional fish boats and was yielding an annual total of about 450 tons of fish in 1994, down from about 600 tons in 1988. Presently. At current levels of activity the overall impact of this economic sector is thought to be relatively mild although no data are available on its possible effects on the birdlife of the WRPA.

Tourism. Wadi El Rayan has the highest number of visitors of any Protected Area in Egypt outside South Sinai and the highest number of Egyptian visitors of any Protected Area in the country (Baha El Din & Baha El Din, 1999). About 150 000 visitors are annually visiting WRPA.

The vast majority of visitors is Egyptian (over 95%) and demand for the WRPA as a recreational destination is likely to continue to rise, given the over-crowded and highly polluted conditions prevailing in many urban areas of lower Egypt.

The fees collection is currently generating about LE 299,415 for the latest update in 2006/07.

The main visitor area in the WRPA, widely known as the Waterfall Area, covers a stretch of beach of about one km along the northern shore of the Lower Lake. Existing infrastructures include six cafeterias, a tourist camp, 2 public WC units, a small police station and a mosque. Overall, the environmental impact of current tourism infrastructure and activities is considered to be mild (IUCN, 1998b; 2000b).

The park is currently redesigning the area in an attempt to transform it into a recreational area with a strong eco-tourist and educational vocation. Expanding and improving the existing visitor centre , will offer eco-tourist and educational services to the visiting public as well as providing a hub for local tour-operators. New simple camping site and bird watching hide and other visitor facilities have been established in key locations.

Salt extraction. The impact of this activity is thought to be negligible under the present mode of operation and as long as it does not expand to ecologically fragile areas such as the Springs and the Fossil areas. This activity is based on very poor local people whom permitted by the WRPA to work in a very limited barrel desert area (has no importance for biodiversity or other values) due to their very limited income levels.

Appendix 3. Expenditures of WRPA (source: NCS, Italian project)

Year	Item	LE	Source
2002-2003	Equipment (3 Trailers)	38,500	GoE
	Salaries	383,819	GoE
	Operational Costs	80,000	GoE
	Total	502,319	
2003-2004	WCs	360,000	GoE
	Salaries	426,465	GoE
	Operational Costs	162,500	GoE
	Total	948,965	
2004-2005	Wadi El-Hitan Track	3,375,000	GoE
	Purchasing 1 5 meter Boat Fiber Glass	108,889	GoE
	Salaries	473,850	GoE
	Operational Costs	138,000	GoE
	Total	4,095,739	
2005-2006	Providing (3) Vehicles	342,000	WRPA Project
	Field Equipment	293165	WRPA Project
	Office Equipment	10250	WRPA Project
	Furniture	48075.5	WRPA Project
	Staff Allowances	253,333	WRPA Project
	Travel & Accommodation	74,100	WRPA Project
	Work Shops	112,333	WRPA Project
	Public Awareness / Education	91,200	WRPA Project
	Training programs	15,000	WRPA Project
	Staff Uniform	50,000	WRPA Project
	Wadi El-Hitan out post	1,000,000	WRPA Project
	Salaries	526500	GoE
	Wadi El-Hitan Track	1125000	GoE
	Operational Costs	145000	GoE
	Total	4,085,957	
2006-2007	Field Equipment	22,869	WRPA Project
	Office Equipment	28,050	WRPA Project
	Furniture	15,384	WRPA Project
	Micro-Bus	160,000	WRPA Project
	Staff Allowances	253,333	WRPA Project
	Travel & Accommodation	148,200	WRPA Project
	Work Shops	112,333	WRPA Project
	Public Awareness / Education	615,600	WRPA Project
	Training programs	106,750	WRPA Project
	Staff Uniform	10,000	WRPA Project
	Salaries	585,000	GoE
	Shade Structure	300,000	Grand Saso
	Operational Costs	165,000	GoE
Total		2,522,519	

Appendix 4. Available resources, needs and their cost for each of the management programs of WRP

Planning and Management

Categories	Items	Scenarios (available resources/needs)			Cost (LE) / Unit	Scenarios Total Cost (LE)		
		Actual	Basic	Ideal		Actual	Basic	Ideal
Salaries	Manager	1	1	1	1300	15600	15600	15600
	Environmental Researcher -"Ranger"	11.7	11	11	1100	154440	145200	145200
	Accountant	1	2	2	1000	12000	24000	24000
	Ticket Collector	5	5	6	900	54000	54000	64800
	Driver	2	2	4	800	19200	19200	38400
	Mechanic	2	2	3	500	12000	12000	18000
	Security	3	3	5	450	16200	16200	27000
	Community Guards	12	12	15	700	100800	100800	126000
	Lawyer	2	2	2	600	14400	14400	14400
	Store man	1	1	2	700	8400	8400	16800
	Administrator	3	5	5	500	18000	30000	30000
Total Cost of Salaries		43.7	46	56		425040	439800	520200
Equipment	GPS	3	3	4	2000	6000	6000	8000
	Digital Camera	2	3	3	3000	6000	9000	9000
	Binocular		5	7	1500	0	7500	10500
	Compass		5	7	200	0	1000	1400
	VHP Mobile Radios	12	16	20	3000	36000	48000	60000
	Electric Generator	6	6	6	25000	150000	150000	150000
	Computer DESK TOP	4	4	6	5000	20000	20000	30000
	Lap top	4	4	4	8000	32000	32000	32000
	Printer	1	2	4	1000	1000	2000	4000
	Scanner	3	3	4	800	2400	2400	3200
	Data Show	1	2	3	10000	10000	20000	30000
	Projector	2	2	3	1500	3000	3000	4500
	Video Camera		1	2	6000	0	6000	12000
	Furniture	1	1	1	150000	150000	150000	150000
Total Cost of Equipment & Furniture		39	57	74		416400	456900	504600
Infrastructure	Head Quarter Building	1	1	1	67000	67000	67000	67000
	PAMU Accommodation	0	1	1	1500000	0	1500000	1500000
	Visitor Center - (Extension)	1	1	1	200000	200000	200000	200000
	Spring outpost	1	1	1	150000	150000	150000	150000
	Bridge to Water Falls	1	1	1	73425	73425	73425	73425

	Main Gate	1	1	1	35000	35000	35000	35000
	WC s- beside Water falls	2	2	2	30423.5	60847	60847	60847
Total Cost of infrastructure		7	8	8		586272	2086272	2086272
Vehicle & Boats	Car	2	3	4	110000	220000	330000	440000
	Micro-Bus	0	1	1	160000	0	160000	160000
	Motor Boat	2	3	4	75000	150000	225000	300000
	Tractor	1	2	3	130000	130000	260000	390000
	Trailers	2	2	5	30000	60000	60000	150000
	Motor Bikes	5	5	5	15000	75000	75000	75000
Total Cost of vehicles and boats		12	16	22		635000	1110000	1515000
Operational Cost	Fuel & Oils					48000	78000	102000
	Equipment use (Depreciation)-(15%)					25342.5	31950	40132.5
	Building use (Depreciation)-(5%)					173108.2	260108.2	265508.2
	Vehicle use (Depreciation)-(20%)					129500	228500	302000
	Furniture use (Depreciation)-(5%)					6000	6000	6000
	Communications (Land Lines & cell phones)					1000	1250	1500
	Uniforms (Skirts , Trouser , Boot,....)					25000	50000	50000
	Lab Equipment (Chemicals)							
	Supplies (materials and stationary)					12500	20000	20000
	Spare parts (Boats , Vehicle , Beach Buggy)					26550	48200	62636.5
	Miscellaneous (Electricity & Water & ect...)					5000	5000	5000
Total cost of operations						452000.7	729008.2	854777.2
Maintenance	Buildings (20%)					692432.6	1040433	1062033
	Vehicles/Boats (25%)					129500	228500	302000
	Equipments (25%)					42237.5	53250	66887.5
	Furniture (25%)					30000	30000	30000
Total cost of maintenance						894170.1	1352183	1460920
Special Services	Management Plan Study	1	1	1	30000	30000	30000	30000
	Management Effectiveness Study	1	1	1	30000	30000	30000	30000
	Lisencing procedure study for Economic activities	0	1	1	30000	0	30000	30000
	Contingency plan	0	1	1	30000	0	30000	30000
Total cost of special services						60000	120000	120000
Total Costs						3468883	6294163	7061769

Expenditures

For the actual scenario

The highest expenditures were spent in general maintenance work (LE **894,170**), purchasing of new vehicles (LE **635,000**) and infrastructure (LE **586,272**) followed by operation expenses (LE **452,001**) and purchasing of new equipment (LE **416,400**).

For the basic scenario

The highest expenditures are expected to be in the infrastructure category (LE 1,500,000) for building of the planned staff accommodation. The next highest expenditure will be given to purchase new vehicles (1 car, 1 motor boat, 1 tractor, and a microbus) which will cost about LE 475,000. The general maintenance works are expected to have the next highest amount, which requires an extra LE 458,013 for the increased number of vehicles and buildings. More money will be required in the basic management status for operation expenses, purchasing of new equipment and hiring new employees, which needs LE 277,008; 40,500; and 14,760 respectively.

For the ideal scenario

To reach the ideal management state for WRPA, more money is required to fill the extended gaps in the different expenditure categories. The gaps reach LE 880,000 to purchase new vehicles; LE 566,750 for maintenance; LE 402,777 for operation expenses, LE 95,160 for hiring new employees and LE 88,200 for purchasing new equipment.

Basic and Ideal needs

The major shortfall was shown by the planning and management program as LE 2,825,280 to basic and 3,592,887 to ideal management states.

Basic needs:

Human resources	: 1 accountant and 2 administrators
Infrastructure	: staff accommodation,
Vehicles and boats	: 1 patrolling 4WD car, 1 microbus, 1 patrolling motor boat, 1 tractor
Equipment	: 1 digital camera, 5 binoculars, 5 compasses, 4 VHF mobile radios, 1 printer, 1 data show, 1 video camera
Special services	: a study of licensing procedure for economic activities inside WRPA, and a contingency plan are needed
Operation and maintenance:	LE 277,008 and 458,013 are required

Ideal needs:

Human resources	: 1 accountant, 2 administrators, 1 more ticket collector, 2 drivers, 1 mechanic, 2 security, 1 store man
Infrastructure	: staff accommodation,
Vehicles and boats	: 2 patrolling 4WD car, 1 microbus, 2 patrolling motor boat, 2 tractor
Equipment	: 1 GPS, 1 digital camera, 7 binoculars, 7 compasses, 8 VHF mobile radios, 3 printers, 1 scanner, 2 data shows, 1 projector, 2 video cameras
Special services	: a study of licensing procedure for economic activities inside WRPA, and a contingency plan are needed
Operation and maintenance:	LE 402,777 and 566,750 are required

Monitoring

Categories	Items	Scenarios (available resources/needs)			Cost (LE) / Unit	Scenarios Total Cost (LE)		
		Actual	Basic	Ideal		Actual	Basic	Ideal
Salaries	Environmental Researcher -"Ranger"	2.1	4	5	1100	27720	52800	66000
	Driver	4	5	5	800	38400	48000	48000
Total Cost of Salaries		6.1	9	10		66120	100800	114000
Equipment	GPS	0	3	4	2000	0	6000	8000
	Digital Camera	2	4	4	3000	6000	12000	12000
	Camera Trap System		1	3	5000	0	5000	15000
	Telescope	2	3	4	4000	8000	12000	16000
	Binocular	3	5	5	1500	4500	7500	7500
	Compass	5	5	5	200	1000	1000	1000
	Camping tents		3	5	600	0	1800	3000
	Computer DESK TOP	1	1	2	5000	5000	5000	10000
	Lap top	1	1	2	8000	8000	8000	16000
Total cost of equipment		15	27	36		33500	59300	90500
Vehicle & Boats	Car	4	5	5	110000	440000	550000	550000
	Motor Boat		1	1	130000	0	130000	130000
Total cost of vehicles and boats		4	6	6		440000	680000	680000
Operational Cost	Fuel & Oils					19200	31200	40800
	Equipment use (Depreciation)-(15%)					10137	12780	16053
	Building use (Depreciation)-(5%)							
	Vehicle use (Depreciation)-(20%)					51800	91400	120800
	Furniture use (Depreciation)-(5%)							
	Communications (Land Lines & cell phones)					400	500	600
	Uniforms (Skirts , Trouser , Boot,...)					10000	20000	20000
	Lab Equipment (Chemicals)					2000	2800	2800
	Supplies (materials and stationary)					5000	8000	8000
	Spare parts (Boats , Vehicle , Beach Buggy)					10620	19280	25054.6
	Miscellaneous (Electricity & Water & etc., ...)					2000	2000	2000
Total cost of operations		0	0	0		111157	187960	236107.6
Maintenance	Buildings (20%)							
	Vehicles/Boats (25%)					51800	91400	120800
	Equipments (25%)					16895	21300	26755
	Furniture (25%)					7500	7500	7500
Total cost of maintenance						76195	120200	155055
Special Services	Carrying Capacity for the spring habitat for Gazelle		1	1	30000	0	30000	30000
	Lake carrying capacity for the nutrient enrichment		1	1	50000	0	50000	50000
	Impact of land use on distribution of biodiversity elements		1	1	20000	0	20000	20000
	Impact of habitat change on population and species composition: Gazelle population study		1	1	40000	0	40000	40000

	of the springs area						
	study the importance of WRPA as a migration pathway for the migratory birds compared to the other sites in Egypt	1	1	20000	0	20000	20000
	Study the fisheries in WRPA and reviewing the effect of the fish farms on the lake fisheries with reference to the effect of the water quality and water balance	1	1	50000	0	50000	50000
	Feasibility Studies for Constructed Wetlands, Springs, Hydrology study	1	1	90000	90000	90000	90000
	Complete biodiversity profile of WRPA (Considering the available data and heavily study the unavailable ones)	1	1	30000	30000	30000	30000
	Assessment and evaluation of WR as IBA		1	40000	0	40000	40000
Total cost of special services		2	9		120000	370000	370000
Total Cost					846972	1518260	1645663

Expenditures

For the actual scenario

The highest expenditures were for vehicles (LE 440,000), special services (LE 120,000) which mainly include the studies and technical reports dealing with natural resources issues, then for operations, maintenance, salaries and equipment which are LE 111,157; 76,195; 66,120 and 33,500.

For the basic scenario

The highest expenditure are expected to be in the technical studies needed for the natural resources which will cost about LE 250,000 to reach the basic management status in this program. Vehicles are also expected to need LE 240,000 for purchasing of new car and motor boat. Other amounts of money are required after that for operations, maintenance, salaries and equipment.

For the ideal scenario

To reach the ideal management state for WRPA, this program need to be enhanced to cove the gaps in technical studies and services which expected to be LE 250,000; to purchase new car and motor boat: LE 240,000; to cover the operation and maintenance expenses which is expected to be LE 124,951 and 78,860 respectively. Less gaps are found for equipment and staff salaries which are LE 57,000 and 47,880 for purchasing of GPS, cameras, telescopes...etc and for appointing of new 4 staff to work in the monitoring program.

Basic and Ideal needs

The shortfall in the monitoring program was estimated as LE 671,288 to basic and 798,691 to ideal management states.

Basic needs:

Human resources : 2 rangers and 1 driver
Vehicles and boats : 1 4WD car, 1 motor boat
Equipment : 3 GPS, 2 digital cameras, 1 camera trap system, 1 telescope, 2 binoculars, 3 camping tents
Special services : Carrying Capacity for the spring habitat for Gazelle, - Lake carrying capacity for the nutrient enrichment, - Impact of land use on distribution of biodiversity elements, - Impact of habitat change on population and species composition: Gazelle population study of the springs area, - study

the importance of WRPA as a migration pathway for the migratory birds compared to the other sites in Egypt, - Study the fisheries in WRPA and review the effects of the fish farms on the lake fisheries with reference to the effect of the water quality and water balance, - Assessment and evaluation of WR as IBA.

Operation and maintenance: LE 76,803 and 44,005 are required

Ideal needs:

Human resources : 3 rangers and 1 driver

Vehicles and boats : 1 4WD car, 1 motor boat

Equipment : 4 GPS, 2 digital cameras, 3 camera trap system, 2 telescopes, 2 binoculars, 5 camping tents

Special services : Carrying Capacity for the spring habitat for Gazelle, - Lake carrying capacity for the nutrient enrichment, - Impact of land use on distribution of biodiversity elements, - Impact of habitat change on population and species composition: Gazelle population study of the springs area, - study the importance of WRPA as a migration pathway for the migratory birds compared to the other sites in Egypt, - Study the fisheries in WRPA and reviewing the effect of the fish farms on the lake fisheries with reference to the effect of the water quality and water balance, - Assessment and evaluation of WR as IBA.

Operation and maintenance: LE 124,951 and 78,860 are required

Wadi El-Hitan Development

Categories	Items	Scenarios (available resources/needs)			Cost (LE) / Unit	Scenarios Total Cost (LE)		
		Actual	Basic	Ideal		Actual	Basic	Ideal
Salaries	Environmental Researcher -"Ranger"	2	2	3	1100	26400	26400	39600
	Driver	2	3	3	800	19200	28800	28800
Total coast of salaries		4	5	6		45600	55200	68400
Equipment	Compass		3	3	200	0	600	600
	Computer DESK TOP	0	1	2	5000	0	5000	10000
	Camping tents	5	7	7	600	3000	4200	4200
	Lap top	1	1	2	8000	8000	8000	16000
Total coast of equipment		6	12	14		11000	17800	30800
Infrastructure	Camping Site	1	1	1	30000	30000	30000	30000
	Cafeteria Wadi El-Hitan	1	1	1	30000	30000	30000	30000
	Wadi El-Hitan tracks	1	1	1	4500000	4500000	4500000	4500000
	Hitan Out post ,ticket station and WCs	1	1	1	700000	700000	700000	700000
	Shade Structure	9	9	9	33333.33	300000	300000	300000
	Open Air-Museum	0	1	1	570000	0	570000	570000
	Guiding Signs	1	1	1	100000	100000	100000	100000
Total coast of infrastructure		14	15	15		5660000	6230000	6230000
Vehicle	Car	0.5	2	3	160000	80000	320000	480000
Total coast of vehicles		0.5	2	3		80000	320000	480000
Operational Cost	Vehicle Fuel / Solar					9600	15600	20400
	Educational Materials (Printing brochures, Leaflets, Booklets, small books)							
	Equipment use (Depreciation)-(15%)					5068.5	6390	8026.5
	Building use (Depreciation)-(5%)					57702.72	86702.72	88502.72
	Vehicle use (Depreciation)-(20%)					25900	45700	60400
	Furniture use (Depreciation)-(5%)					1500	1500	1500
	Communications (Land Lines & cell phones)					200	250	300
	Uniforms (Skirts , Trouser , Boot,...)					5000	10000	10000
	Lab Equipment (Chemicals)							
	Supplies (materials and stationary)					2500	4000	4000
	Spare parts (Boats , Vehicle , Beach Buggy)					5310	9640	12527.3
	Miscellaneous (Electricity & Water &etc,...)					1000	1000	1000
Total coast of operations		0	0	0		113781.2	180782.7	206656.5
Maintenance	Buildings (20%)					230810.9	346810.9	354010.9
	Vehicles/Boats (25%)					25900	45700	60400
	Equipments (25%)					8447.5	10650	13377.5
	Furniture (25%)					7500	7500	7500
Total coast of maintenance						272658.4	410660.9	435288.4
Total Cost						6183040	7214444	7451145

Expenditures

For the actual scenario

The highest expenditure were for infrastructure LE 5,660,000. This was for establishing a 34 km road to the valley, the budget was LE 4,500,000 coming directly from the Ministry of Environment away from the annual operating budget of WRPA. Other infrastructure were established such as 9 shade structures and information panels which cost about LE 300,000 came from donor contribution, Grand Sasso Italian National park, through a twinning program with WRPA. Ticket station, WCs, camel stall, cafeteria, and guiding signs are also established by funding from the Italian project support to WRPA which allocated about LE 860,000. Other expenditure were in the maintenance and operation which constituted LE 272,658 and 113,781 respectively. Vehicles, salaries and equipment have had the least expenditures due to the limited resources.

For the basic scenario

Priorities should be given to complete the infrastructure and open air museum which need about LE 570,000 and to purchase new vehicles which will might cost about LE 240,000. Maintenance and operation will need extra LE 138,003 and 67,002 over the actual running expenses.

For the ideal scenario

To reach the ideal management state for WRPA, this program need to make more efforts to improve its infrastructure (LE 162,000) and purchasing new vehicles (LE 400,000), and more allocated money for maintenance (LE 162,630) and operation (LE 92,875) due to the elevated infrastructure and vehicle resources. Less money should be directed towards appointing more staff and for equipment.

Basic and Ideal needs

The shortfall in Wadi El-Hitan development program is estimated as LE 1,031,404 to basic and 1,268,105 to ideal management states.

Basic needs:

Human resources : 1 driver
Infrastructure : continue the establishment of the open air museum
Vehicles and boats : 1 4WD car
Equipment : 3 compasses, 1 PC, 2 camping tents, lab facilities for maintaining fossils.
Operation and maintenance: LE 67,002 and 138,003 are required

Ideal needs:

Human resources : 1 geologist, 1 driver
Infrastructure : continue the establishment of the open air museum
Vehicles and boats : 2 4WD car
Equipment : 3 compasses, 2 PC, 1 laptop, 2 camping tents, lab facilities for maintaining of fossils.
Operation and maintenance: LE 92,875 and 162,630 are required

Eco-Tourism

Categories	Items	Scenarios (available resources/needs)			Cost (LE) / Unit	Scenarios Total Cost (LE)		
		Actual	Basic	Ideal		Actual	Basic	Ideal
Salaries	Environmental Researcher -"Ranger"	0.6	1	2	1100	7920	13200	26400
	Driver	0	2	3	800	0	19200	28800
Total cost of salaries		0.6	3	5		7920	32400	55200
Equipment	Camera Digital		1	2	3000	0	3000	6000
	Telescope		2	2	4000	0	8000	8000
	Computer DESK TOP	1	1	2	5000	5000	5000	10000
	Lap top	1	1	1	8000	8000	8000	8000
	Printer	1	1	2	1000	1000	1000	2000
Total cost of equipment		3	6	9		14000	25000	34000
Infrastructure	Camping Site	1	2	3	30000	30000	60000	90000
	Cafeteria waterfalls	3	3	3	48000	144000	144000	144000
	Bird Hides (Bird Watch Stations)	1	1	2	20000	20000	20000	40000
	Guiding Signs	0	1	2	100000	0	100000	200000
Total cost of infrastructure		5	7	10		194000	324000	474000
Vehicle	Car	1.5	2	3	110000	165000	220000	330000
Total cost of vehicles		1.5	2	3		165000	220000	330000
Operational Cost	Fuel & Oils					9600	15600	20400
	Educational Materials (Printing brochures, Leaflets, Booklets, small books)							
	Equipment use (Depreciation)-(15%)					5068.5	6390	8026.5
	Building use (Depreciation)-(5%)					57702.72	86702.72	88502.72
	Vehicle use (Depreciation)-(20%)					25900	45700	60400
	Furniture use (Depreciation)-(5%)							
	Communications (Land Lines & cell phones)					200	250	300
	Uniforms (Skirts , Trouser , Boot,....)					5000	10000	10000
	Lab Equipment (Chemicals)							
	Supplies (materials and stationary)					2500	4000	4000
	Spare parts (Boats , Vehicle , Beach Buggy)					5310	9640	12527.3
	Miscellaneous (Electricity & Water &etc....)					1000	1000	1000
Total cost of operations		0	0	0		112281.2	179282.7	205156.5
Maintenance	Buildings (20%)					230810.9	300908.2	303308.2
	Vehicles/Boats (25%)					25900	45700	60400
	Equipments (25%)					8447.5	10650	13377.5
	Furniture (25%)							
Total cost of maintenance						265158.4	357258.2	377085.7
Total Cost						758359.6	1137941	1475442

Expenditures

For the actual scenario

The highest expenditure were for maintenance then for infrastructure of ecotourism facilities inside WRPA which cost currently about LE 265,158 and 194,000. Other current expenditures were for vehicles and operation then for equipment and salaries which are about LE 165,000; 112,281; 14,000 and 7,920 for the working staff due to un-availability of appointed rangers for the program.

For the basic scenario

Priorities should be given towards the infrastructure at the first. the gaps from the actual to the basic management state of this program were as follows: LE 130,000; 92,100; 67,002; 55,000; 24,480 and 11,000 to cover the expenditures in the categories: infrastructure; maintenance; operation; vehicles; salaries and equipment respectively.

For the ideal scenario

To reach the ideal management state, efforts should be directed to priorities in: infrastructure; vehicles; maintenance; operation; salaries and equipment; the required amounts of money to fill those gaps are LE 280,000; 165,000; 111,927; 92,875; 47,280 and 20,000 respectively.

Basic and Ideal needs

The shortfall in the eco-tourism program was estimated as LE 379,581 to basic and 717,083 to ideal management states.

Basic needs:

Human resources : 1 ranger and 2 drivers
Vehicles and boats : 1 4WD car
Infrastructure : 1 camping site, guiding signs
Equipment : 1 digital camera, 2 telescopes
Operation and maintenance: LE 67,002 and 92,100 are required

Ideal needs:

Human resources : 2 rangers and 3 drivers
Vehicles and boats : 2 4WD car
Infrastructure : 2 camping sites, 1 bird hide, guiding signs
Equipment : 2 digital cameras, 2 telescopes, 1 PC, 1 printer
Operation and maintenance: LE 92,875 and 111,927 are required

Public Awareness

Categories	Items	Scenarios (available resources/needs)			Cost (LE) / Unit	Scenarios Total Cost (LE)		
		Actual	Basic	Ideal		Actual	Basic	Ideal
Salaries	Environmental Researcher -"Ranger"	1.6	2	3	1100	21120	26400	39600
	Driver	2	3	3	800	19200	28800	28800
Total cost of salaries		3.6	5	6		40320	55200	68400
Equipment	Camera Digital	1	2	3	3000	3000	6000	9000
	Computer DESK TOP	2	2	3	5000	10000	10000	15000
	Printer		1	2	1000	0	1000	2000
Total cost of equipment		3	5	8		13000	17000	26000
Vehicle	Car	0	1	2	110000	0	110000	220000
Total cost of vehicles		0	1	2		0	110000	220000
Operational Cost	Fuel & Oils					9600	15600	20400
	Educational Materials (Printing Procures,Leaflets, Booklets, small books)					91200	100320	110352
	Equipment use (Depreciation)-(15%)					5068.5	6390	8026.5
	Building use (Depreciation)-(5%)							
	Vehicle use (Depreciation)-(20%)					25900	45700	60400
	Furniture use (Depreciation)-(5%)							
	Communications (Land Lines & cell phones)					200	250	300
	Uniforms (Skirts , Trouser , Boot,...)					5000	10000	10000
	Lab Equipment (Chemicals)							
	Supplies (materials and stationary)					2500	4000	4000
	Spare parts (Boats , Vehicle , Beach Buggy)					5310	9640	12527.3
	Miscellaneous (Electricity & Water &ect...)					1000	1000	1000
Total cost of operations		0	0	0		145778.5	192900	227005.8
Maintenance	Buildings (20%)							
	Vehicles/Boats (25%)					25900	45700	60400
	Equipments (25%)					8447.5	10650	13377.5
	Furniture (25%)							
Total cost of maintenance						34347.5	56350	73777.5
Total Cost						233446	431450	615183.3

Expenditures

For the actual scenario

To use the park cars for transporting to the program targets and to produce the educational materials (brochures, posters, educational materials.....etc) are the usual activities, so, the operational costs are the highest expenditure category of this program, which reached about LE 145,779 even there is no cars appointed for the program until the moment, but it uses the cars from other programs such as planning and management unit.

For the basic scenario

Priorities should be given towards purchasing of new car, operation expenses and maintenance. To buy a new car it requires about LE 110,000; the operation expenses should be increased to LE 192,900 with an extra LE 47,122 than that is running actually. The maintenance category should has an extra LE 22,003 than in the actual state.

For the ideal scenario

Some financial gaps should be overcome to reach the ideal management state, such gaps are purchasing of 2 new cars: LE 220,000; extra LE 81,227 and 39,430 for operation and maintenance than those actually allocated.

Basic and Ideal needs

The shortfall in the public awareness program was estimated as LE 198,004 to basic and 381,737 to ideal management states.

Basic needs:

Human resources : 1 ranger and 1 driver
Vehicles and boats : 1 4WD car
Equipment : 1 digital camera, 1 printer
Operation and maintenance: LE 47,122 and 22,003 are required

Ideal needs:

Human resources : 2 rangers and 2 drivers
Vehicles and boats : 2 4WD car
Equipment : 2 digital cameras, 1 PC, 2 printers
Operation and maintenance: LE 81,227 and 39,430 are required

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