

## **The Potential of Ecotourism in Siwa Oasis: Opportunities and Obstacles**

Ashraf Alhaddad      Osama Ibrahim      Hoda Lotaif  
Faculty of Tourism and Hotels, Fayoum University

### **Abstract**

Egypt is endowed with a natural heritage as rich as its cultural heritage. The country's future is dependent on the wise and sustainable use of its natural resources. Ecotourism is in the core of the tourism development strategy in Egypt and there is considerable effort to promote such type of tourism. Ecotourism is one of the most rapidly expanding forms of tourism, with an estimated growth rate of one of the largest industries in the world. Siwa Oasis is foreseen to be one of the major destination for ecotourism not only in Egypt but also worldwide and it is the most mysterious of all of Egypt's Oases; its history has been formed by many civilizations. Despite the Siwa Oasis destination contains much potentials for ecotourism, the major natural Siwa protected area and also its very rich in cultural and natural assets which could create various amazing activities for ecotourists, ecotourism programmes were designed by tour operators are minimal and it does not occupy a significant position on the touristic map of Egypt. This paper is an attempt to highlights and identifies the major potentials in Siwa Oasis as well as figures out the opportunities and hurdles that preclude its development. The paper uses descriptive and analytical methodology and it embraces a mixed strategy that is needed to investigate different components of the study. And also it analyzes the factors that lead to the declining of the tourism industry in the oasis and proposes a vision for developing the oasis to be one of the major destinations of ecotourism in Egypt as well as worldwide.

**Keywords:** Ecotourism, protected areas, potentials, tourism development, cultural and natural heritage, Siwa Oasis, Egypt.

### **Introduction**

Ecotourism is a form of tourism that involves visiting natural areas in the remote wilderness or urban environments in a responsible travel manner that conserves the environment and improves the well-being of local people. It is a growing source of revenue for the long-term management and care of more than 33,000 protected areas worldwide. It is not just about driving more tourists to these locations, it is about ensuring that visitors travel responsibly, help protect the wildlife they are visiting and contribute to the well-being of local communities (Conservation International, 2011). Siwa is a promising area that has all potentials to be a famous ecotourism area in Egypt. The Egyptian government declared a major protected area in it. Now, this protectorate area offers a good opportunity to support ecotourism development in Siwa Oasis destination. Although the uniqueness of Siwa, as it is its rich cultural and natural heritage resources and interesting history, it does not occupy a significant position on the touristic map of Egypt. Siwa Oasis has suffered from a continuous neglect, along with a tiny publicity effort exerted for promoting to its potentials which leads to a severe shortage in its tourism facilities and services. This paper principally attempts to highlight the major potentials in the Siwa Oasis as well as the constraints that hinder its progress to occupy a distinguishable position on the Ecotourism map of Egypt. The paper consists of five parts; part one is an introduction including the problem, the aim, the methodology and literature review of the paper and also displays ecotourism definitions, principles and significances, development of ecotourism in Egypt; Part two displays the results and discussions of the paper containing Siwa Oasis as a promising ecotourism destination, its location, climate and history importance; Part three illustrates potentials of Siwa Oasis and finally deals with the Siwa current ecotourism development plan; Part four analyzes opportunities and hurdles of Siwa Oasis destination and part five includes the conclusion and recommendations .

### **Study focus**

Despite Siwa Oasis is very rich in cultural and natural assets which could create various amazing activities for ecotourists, ecotourism programmes were designed are minimal. Very few itineraries are designed and achieved by some NGO`s, private sustainable development companies with collaboration of the Siwa Oasis Tourist Authority to develop ecotourism in Siwa. These non-professional itineraries are neither sufficient enough to display all the ecotourism core products in the region nor suitable to face most of ecotourism obstacles in the region. And also there are hardly any studies of heritage tourism in the oases of Egypt in spite of their richness of tourism resources. This research is a response to the urgent need to investigate how and why to identify Siwa Oasis assets through utilizing cultural and natural heritage key sites, which are key elements in the destination's comparative advantage in this rich region.

### **Study aim**

This paper aims to identify the potential of ecotourism in the Siwa Oasis destination and to figure out the Opportunities and Obstacles.

### **Study methodology**

The research nature is descriptive and analytical. The research methodology includes a mixed strategy that is needed to investigate different components of the study. It is based on two basic methodologies: The desk research comprises literature review, data collection, references, and journals. The field research, the researcher makes observations in the study area occurred on three levels: (1) Observation of all cultural and natural heritages in the Siwa Oasis destination to make an auditing of these sites. (2) Visiting all cultural and natural sites in the Siwa Oasis destination. (3) The analytical approach will be applied to emphasis the main findings of the researcher.

### **Literature review**

The relevant literature review on how to use Cultural Heritage for ecotourism development in Siwa Oasis was minimal. More and above, the researcher will indicate the concluding remarks of these studies as follow: Abd EL Ghani, (2012) explored the heritage and hospitality links in hotels of Siwa. Abd Elmonsef, (2012) dealt with the promotion ecotourism in Siwa depending on its natural environment only. Al Dumairy, (2008) demonstrated the archaeological discoveries of the recent excavations in the Siwa Oasis. Amara, (2010), evaluated the state of tourism in Siwa as a major destination and also established guidelines for a sustainable development approach. El-Khadrway, (2012) dealt with activating the role of NGOs to conserve the urban heritage to achieve sustainable tourism development in Siwa. Nofal, (2011), found the possibility of preservation cultural heritage landscape sites in Egypt and made an application on Siwa. Temraz, (2009) concentrated on revival of the cultural traditional for the Siwan Heml and Kleem. Zedan, (2013) compared the impact of sustainability with Siwa`s cultural traditional tourism in parallel with its trails to improve the development of sustainable tourism process. The previous studies as mentioned above provide a partial study about cultural and natural heritage resources in Siwa separated and for that this paper is important to make an ecotourism development in it depending on cultural and natural heritage assets together and identify the opportunities and hurdles in Siwa and also this paper reviews the literature on Ecotourism and its definitions and principles. It adapts and depends on a working definition appropriate to the case study of the Siwa Oasis and in the same time can overcome the major problems facing the ecotourism development in Siwa Oasis.

### **Ecotourism significances, definitions and principles**

Ecotourism is one of the most rapidly expanding forms of tourism, with an estimated growth rate of one of the largest industries in the world (UNWTO, 2012); it is considered a form of tourism, based on nature travel, focused on the tourist learning about the ecosystem and also based on preservation of natural resources; in only one case environmental conservation was not a priority (Fiorello & BO, 2012).

### **Ecotourism definition**

Since the 1980's, ecotourism has been defined by numerous authors' (Eriksson & Lidström, 2013), such as TIES, which defined it as "Responsible travel to natural areas that conserves the environment, sustains the well-being of the local people and involves interpretation and education" with the specification that education is to staff and guests (TIES, 2015, p.12). Finally, the following definition of ecotourism can be relevant in terms of its inclusiveness and sufficiency for the paper: Ecotourism is the best example of sustainable tourism development and implies responsible travel experience to an undisturbed destination with characteristic natural and/or cultural heritage where tourist motivations, activities and satisfaction levels can be achieved by collaboration amongst all destination stakeholders aiming at directly foster economic, socio-cultural and environmental wellbeing ( Ibrahim & Jones, 2011).

### **Ecotourism principles**

We now know much more about the tourism industry, and we are also better informed about environmental degradation and impacts on local cultures. It is important that this knowledge is reflected by these principles (TIES,1990). Ecotourism is about uniting conservation, communities, and sustainable travel. This means that those who implement and participate in ecotourism activities should adopt the following principles:1) Minimize physical, social, behavioral, and psychological impacts. 2) Build environmental and cultural awareness and respect. 3) Provide positive experiences for both visitors and hosts. 4) Provide direct financial benefits for conservation. 5) Generate financial benefits and empowerment for both local people and Private industry. 6) Deliver memorable interpretative experiences to visitors that help raise Sensitivity to host countries' political, environmental, and social climates. 7) Design, construct and operate low-impact facilities. 8) Recognize the rights and spiritual beliefs of the indigenous people in your community and work in partnership with them to create empowerment. (TIES 2015). Thus ecotourism appeared to solve the problems that happened from tourism or tourists' activities, also this was an act after understanding what is meant by the carrying capacity of the environment which was the gate to understand the need of more environmental tourism that respect environment without exceed its carrying capacity (Khalifa & El-Khateeb, 2011).

### **Development of ecotourism in Egypt**

Egypt is endowed with a natural heritage as rich as its cultural heritage. The country's future is dependent on the wise and sustainable use of its natural resources (Ibrahim & Jones, 2011). Ecotourism is in the core of the tourism development strategy in Egypt and there is considerable effort to promote such type of tourism. Tourism development strategy by Ministry of Tourism sets a basic concern on environmental aspects. This strategy provides an important consideration that is given to the protection of the unique heritage of Egypt beside the protection of the resources of ecotourism. Tourism development priorities include the Egyptian Coast of Gulf of Aqaba, the zone from Hurghada to Safaga on Red Sea and Yachting Tourism (Eraqi, 2007), without much emphasis on oases though their high potentials to play a significant role in fostering ecotourism development in Egypt.

Ecotourism can be a beneficial tool for sustainable development of Siwa and also it can be very effective means of development and conservation.

### **Siwa Oasis as a promising ecotourism destination**

The five major oases (Baharia, Farafra, Dakhla, Kharga and Siwa) in the Egyptian desert; are a depression in a calcareous sandy plateau with many springs that are fed from the deep underground water (Abd Elmonsef, 2012). All Egypt's oases contain monuments which date from different periods of Egyptian history. Temples, painted tombs, the remains of towns, fortresses and Christian monuments exist in all the oases and point to a flourishing past at certain periods of their long history. Although the oases of the Western Desert have much in common, Siwa is still the most fascinating of all the oases, not only for its history, but because of its natural beauty and its people's culture and traditions. Siwa had been known by a host of names through the centuries; there are many speculations about the origin and the meaning of the word Siwa (Fakhry, 1973). In the 2<sup>nd</sup> century B.C., Siwa was known as (Pen-) 'Ta', which was found in the temple of Edfu. Herodotus recorded that; its name was "Field of Palm Trees". During the Old Kingdom, it was named Tehenu means Olive Land (Vivian, 1990). And it was also named 'The Oasis of Jupiter Amun'. Arabs called it "Santariyah" and "AlWaha Al-Aqsa" the furthest oasis". In the 17<sup>th</sup> century, Siwa would become its common name; it has been called Siwa Oasis which comes from a Berber word "bird of prey, protector of Amun-Ra" (Fakhry, 1973).

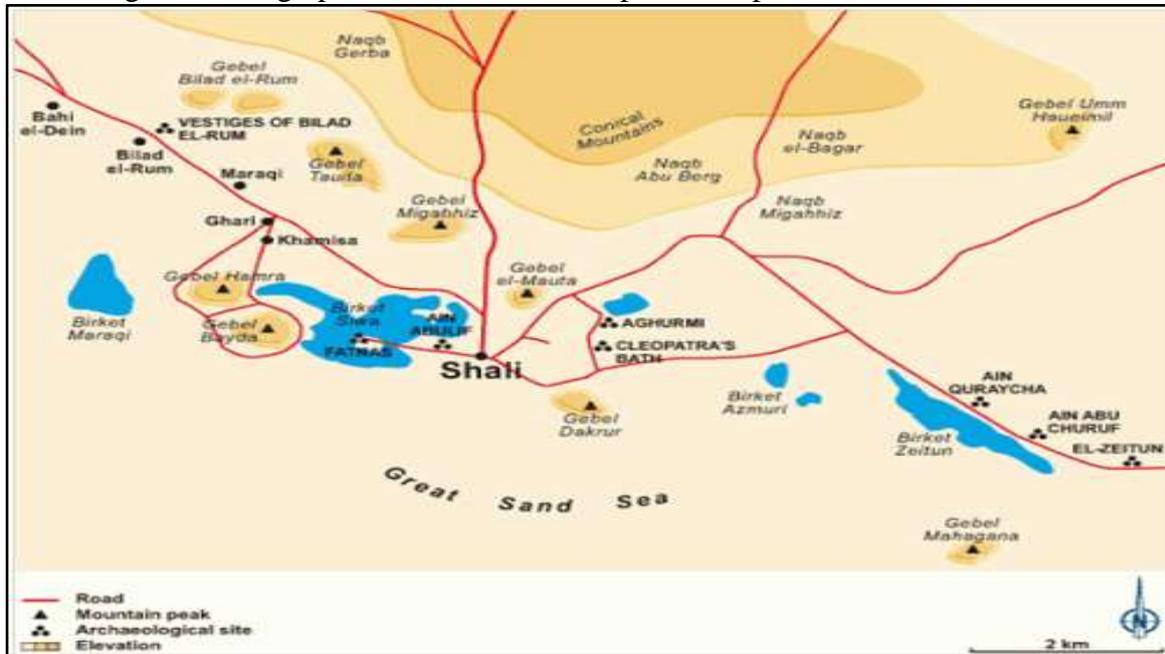
Siwa Oasis is located in the extreme western part between Qattara Depression and Great Sand Sea (El-Khadrawy, 2012), closer to Libyan Desert (Massoud, 2012), 300 km South West of Marsa Matrouh (Hegazi et al 2005), and 800 km of Cairo (Al Dumairy & Dahlfelt, 2012), ( Figure1).

The Siwan Depression extends 82 km long, it's wide between 9km and 28 km in the east and it has an elevation about 25 m. below sea level (Ayad & Shujun, 2013). There are uninhabited oases surrounding Siwa, with spectacular landscapes and geological formations, like; Al Arag, El Bahrain, Sitra and Nawamisa, Shiyata and Tibaghbagh Oasis (Al Dumairy, 2005). The Oasis contains Siwa town and a few villages; Aghurmi, Qurayshat, Abu Shuruf, Al-Zaytun, El Gara, Al-Maraqi, Khamisah, Meshenditt, Bilad al-Rum, Deheba, Bahi El-Din and Dakrour (Abd Elmonsef, 2012). Siwa region falls in the extremely arid zone of Egypt, it is famous for the continental desert climate with no rains. The best timing to visit it is in Spring or Autumn (Temraz, 2009).

Siwa is the most mysterious of all of Egypt's Oases; its history has been formed by many civilizations (Abd EL Ghani, 2012). The Siwans have recorded their history in a Siwa Manuscript document with their traditions and customs (Vivian, 2007). Past civilizations have left many vestiges in and around Siwa, which now offer visitors a unique window into its fascinating history; Siwa has been settled since prehistoric times; the Paleolithic and Neolithic eras (El-Shafei, 1998). The earliest evidence of a connection with Ancient Egypt is the 26<sup>th</sup> Dynasty, when the oracle temple was built by Ahmose II (Petruccioli & Montalbano, 2011). Siwa enjoyed the fame of its oracle for over three centuries, which led to its being a religious center for many rulers who flocked to Siwa to consult the Oracle (Zedan, 2013) such as; Cambyses, the Persian ruler traveled to conquer Siwa but his army disappeared (Fakhry, 1973). And Alexander the Great visited Siwa in 331 B.C (Nofal, 2011), the priests greeted him "Son of Zeus Amun". In 1820, Muhammad Ali, the founder of modern Egypt, conquered all the Oases (Mikhail, 2012). In 1904 Khedive Abbas II visited Siwa, he gave ordering the re-establishment of three springs and ordered the refoundation of the great mosque which is completed by King Fu ad (Fakhry, 1973). During both World Wars; Siwa was a vital military theatre. For a little over 20 years, the link between Siwa and the outside world was restricted. Tourists, visitors, and non-Siwan

peoples were not allowed to enter the oasis. These restrictions were lifted in the 1980's and, after this, Siwa has started to change (Abd El Ghani, 2012). These changes were a challenge but they have proved to handle the Siwan customs and traditions (Vivian, 2007).

Figure 1: Geographic of Siwa Oasis: Map of Transport links for Siwa Oasis.



Source: Rady, 2011); Zedan, 2013); [http://www.minamar.com/images/map\\_siwa\\_oasis.gif](http://www.minamar.com/images/map_siwa_oasis.gif)

### Potentials of ecotourism in the Siwa Oasis

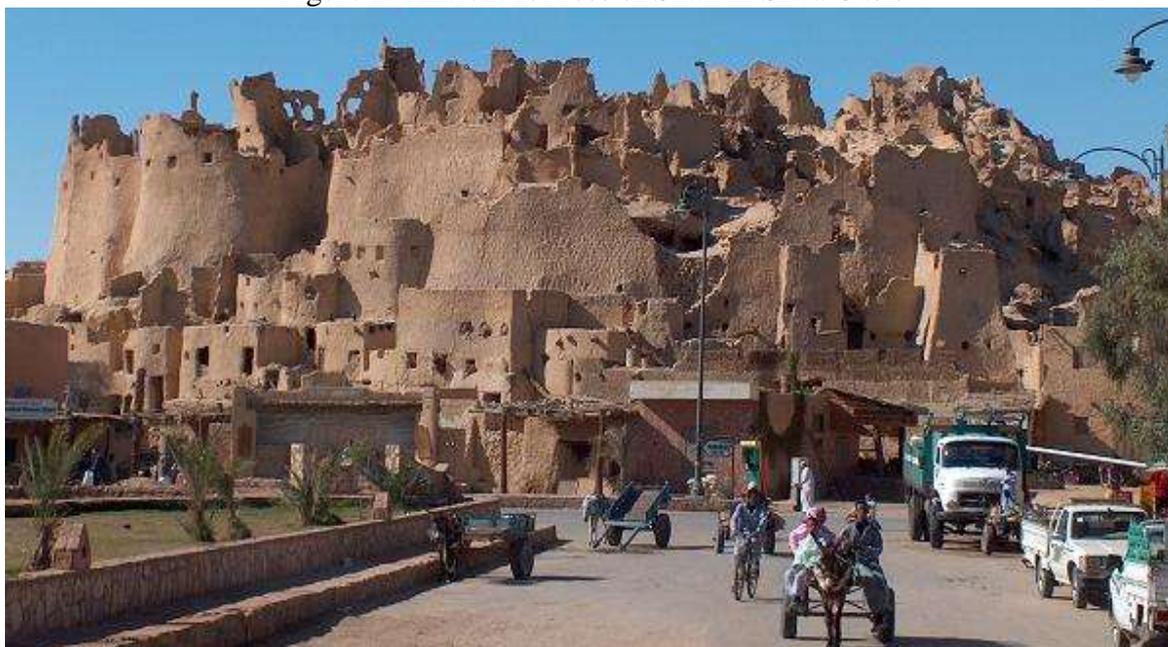
Ecotourism development in certain areas in Egypt cannot be ignored. In the Siwa Oasis, for example, the government plays an active role to support the local tribal system, to pave roads to connect Siwa Oasis with Marsa Matrouh town and to prepare Siwan cultural and natural assets for ecotourism activities. Ecotourists now can enjoy its stunning desert landscapes, hot and cold springs, as well as its unique history and culture. Besides, Siwan people themselves, who preserve their own traditions and language over centuries. The area within the Siwa Protectorate, the surrounding desert and other oases have been identified as premium destinations for such "sustainable" forms of tourism but an appropriate development strategy is needed (Abul Hawa et al 2007). Siwa has many traditional attractions which focus on the oasis' charming landscape; its lakes, bird habitats, and desert areas, fossil remains of great world importance, varied cultural heritage sites reflects a great civilization through ages and its environmental nature, distinctive culture (Mikhail, 2007). Siwa as a destination is considered a hybrid of very attractive natural and cultural heritage assets that can be very competitive and to develop ecotourism activities, if sustainable development strategy is to be adapted (Ibrahim & Jones, 2011).

### Cultural heritage assets

The Siwan heritage can be observed all over the oasis; the ancient Egyptian, Greco Roman and Islamic Antiquities which have been discovered in Siwa (Abd EL Ghani, 2012). The ancient citadel, "Shali", which means "the town" (Rady, 2011). It was built in 1203 A.D. (Belgrave, 1923). The "Gama Ateeq" is the oldest mosque in the Oasis and it still dominates the center of Siwa, as well as ruins of ancient buildings and other archaeological sites (Abd EL Ghani, 2012), ( Figure 2). Al Beit Al Siwi , this eco-museum was built as a traditional house, and displays jewelry, musical instruments, baskets and pottery of Siwa (Nofal, 2011). At Aghurmi, where the remains of the two principal temples of siwa still

stand; Oracle Temple, where the crowning hall of Alexander the Great, during his historic visit to Siwa (Ayad & Shujun, 2013), it was built in the 26<sup>th</sup> Dynasty, in the reign of Ahmose II (Mikhail, 2012). Umm Ubaydah temple is the other temple, was built during the 30<sup>th</sup> Dynasty in the reign of Nectanebo II and lies within the forest of palms near Aghurmi. The most famous spring is Cleopatra's Bath was known as: Juba spring (Mikhail, 2012). Gabal al Mawta tombs, the most important are; tomb of (Ne-Per-Pa-Thoth) that date back to the 26th dynasty, tomb of Misu-Isis which is dating from the 3<sup>rd</sup> century BC., the wonderfully colored " the Crocodile tomb" and the most famous tomb is that of "Si-Amun" and its walls are richly decorated with colorful scenes (Fakhry, 1950). Gabal El Dakroul is to the east of Siwa, famous for curing rheumatic disease. The ancient mud brick fortress cities of Shali and El Gara Oasis. The last inhabited Hatiyat on the eastern side of Siwa is El -Zaytun, constructed around a stone temple, the village is now abandoned, but remains of interest for its intact houses and mosque is still. In Hatiyat Khamisah, one of the most fertile parts of Siwa, we find a small stone temple and a ridge of over 100 rock- cut tombs. Doric Temple; is one of the most important temples at Bilad el-Rum, is located at the base of the mountain opposite Maraqi (Vivian, 2007). Bahi el-Din is one of major villages in Siwa and famous for its production of Siwan Heml and Kleem (Temraz, 2009). We can describe Siwa as a wall covered with many layers of paints; every layer represents a historical age from different civilizations (Ibrahim, & Kamh, 2005).

Figure 2: Ancient fortress of Shali in Siwa Oasis



Source: (Petruccioli & Montalbano, 2011).

### **Natural heritage assets**

Siwa is the most famous oasis in Egypt for its unique natural characteristics which differ from any other one in Egypt. The natural resources of the region are already an asset that contributes to diversify the existing range of activities (Abul Hawa et al 2007). Natural heritage of Siwa is blessed with numerous natural springs and salt lakes and also it is renowned for its beautiful scenery, includes millions of thick groves of palm and olive trees, a vast area of sand dunes, Acacia groves and sulfurous hot water springs, the surrounding mountains in the hot sand sea, rock formations, mud and rays in Dakroul Hill used for skin diseases, opportunities for sand baths and also for curing respiratory system diseases (Ayad & Shujun, 2013). Siwa Protected Area was established as a natural protectorate in 2002 (Abul Hawa et al 2007) with about 7,800 km<sup>2</sup>. The protected area and

its vicinity represent one of Egypt's most fascinating regions, a rich cultural heritage, breathtaking landscapes and an outstanding diversity of habitats and wildlife (Mikhail, 2012). Siwa Oasis is full of natural underground hot and cold water springs, it contains about 230 natural freshwater springs and more than 1,000 wells (Abo-Ragab, 2010). Ayn Fatnas is situated on an island in the middle of Salt lake, the Palm trees form relaxing surroundings for swimming and seeing the sunset. The most well-known lake is Bir Wahid, is located on the north-west side of the Oasis, almost 15 km away on the edge of Great Sand Sea. It is a hot spring, where sulphurous water bubbles in a pool (Abd EL Ghani, 2012). Siwa is rich in its Flora; at least 40 wild plant species well adapted to the hyper-arid conditions. The area of the uninhabited oases in the vicinity of Siwa is rich in plant diversity; Acacia raddiana groves. Species of special botanical interest include: Populus euphratica and Wild Cotton (Hadidi et al 1992), Date Palms in the region represent unique varieties of special value as a genetic resource (Baha El Din, 1999). Also the region is distinguished with its Fauna; 164 bird species have been recorded, of which only 26 breed locally and 68 spend the winter months. The other 70 species are visitors that pass through on migration. A total of 32 reptiles and two amphibians have been recorded and 28 species of mammals are thought to be present in the region; the highest diversity is found in uninhabited oases. The region has several endangered species; Slender-horned Gazelle, Dorcas Gazelle, Fennec Fox and the North African Cheetah.

### **Socio - cultural life in Siwa Oasis**

Siwa is considered the farthest Oases of the Nile Valley, their unique culture forms an important part of the region's landscape. Their handicrafts and jewelry, ornaments are among the finest in Egypt. Siwa's history has grown in relative isolation for hundreds of years and its culture is unique and different from any other area of Egypt. Several characteristics of Siwan culture are still discernible, although it has changed over the last decades (Mikhail, 2012). Most important characteristic of Siwan cultural life are;

### **Population**

Siwa was inhabited by the natives as early as 10,000 B.C., by an indigenous community of the North African Berbers known as Amazigh (EQI. 2012). The population has changed throughout the centuries (Vivian, 2000). Today 30,000 people live in Siwa Oasis (Siwa Council City, 2015). They descend of the Berber tribes of Zanatah, with a Berber community majority whom still hold on to their culture. The Siwan culture is characterized by the qabila system and the Muslim religion (Malim, 2007), it has 11 tribes administered by 12 sheikhs (Mikhail, 2012).

### **Language**

Siwan have their own culture and besides Arabic, they speak their own Berber (Amazigh) language is known as Tasiwit and they call themselves Ti-Swa-"people of the oasis" (Vivian, 2000). This language resembles to language Berber groups of Algeria and Morocco (Souag, 2009).

### **Vernacular architecture**

The traditional style of architecture in Siwa is known as Karsheef. It has been developed to suite its harsh desert climate (Rovero et al 2009). The use of this material has nowadays declined and is substituted with cemented, sawn stone foundations and brick masonry. Archeological sites abound; structures from several eras used local materials "Kerchief". Today Siwa's contemporary architecture is striving to conform to its vernacular and historic styling. Vernacular architecture is now utilized in moderneco-lodges and the

governorate has passed a law conforming the colors and textures of new buildings to be similar to that of Karsheef. (Martinelli, 2007)

### **Feasts and festivals**

Many occasions are celebrated in Siwa, include births, marriages, Mawlid El Nabi and others (Fakhry, 1973). The Siwa Feast is celebrated with tourists and Siwans, it became known as Eid el Siyaha, meaning 'Tourism Day 'or the "feast of peace" It takes place at Dakroun mountain village, and dates back 150 years (Mikhail, 2012).

### **Siwan customs and traditions**

Thousands of years of isolation in a vast and unforgiving desert have allowed the Siwan community to preserve many old customs and characteristics and to develop unique cultural traditions, building techniques, Styles of embroidery and systems of agricultural production those are remarkable for their beauty and harmony with the natural environment (Nofal, 2011). Social relations are quite conservative and people show respect for each other. The relations within the family are tightly knit and Marriage is a crucial and vivid tradition in the Siwans life (Fakhry, 1973), both married and unmarried women alike do not leave the home unaccompanied, though stronger restrictions are placed on the movement of married women, they cover themselves from head to toe traditional costumes and silver jewelers. Age-old customs include unique festivities, family advice meetings, wedding ceremonies, brides hair styles and colorful and rich traditions (Mikhail, 2012). Siwans are fond of singing beautiful songs in Siwan language (Abd EL Ghani, 2012).

### **Arts and local handicrafts**

Siwan culture boasts a variety of traditional arts and crafts which are highly prized by collectors from all the world (Vivian, 2007). The handicrafts in Siwa are a beautiful tradition giving light to a past rich with culture and tradition. This rich culture makes Siwa a great place to shop for handicrafts. These include a large array of traditional pieces such as baskets, pottery, jewelry and embroidered women's clothing, produced with colorful silk, are among Siwa's most impressive crafts (Al Dumairy & Dahlfelt, 2012). Siwans use 5 dominant colors in their baskets, clothing, and other crafts: red, green, orange, yellow, and black. These colors symbolize the fruit of date tree at different stages of maturity (Vivian, 2000). Siwan jewelry is stunning large and heavy, the design is influenced by Berber heritage of North Africa. The silver is outstanding in design and craftsmanship, includes necklaces, bracelets, and rings (Mikhail, 2012). Siwa is also famous for Heml and Kleem, from pure wool in the weft and warp and it was exported to Africa (Temraz, 2009).

### **Opportunities in Siwa Oasis**

#### **Tourist supporting and accessibility services**

The supporting attractions are man-made elements (facilities and services) that serve needs of tourists and satisfy practical requirements of eco-tourists. The existing tourism facilities include local handicrafts, existing accommodation facilities in the oasis, and Safari in Siwan desert. Roads and means of transportations are considered one of the most important factors which affect on the tourist's decisions to choose the destinations. Siwa can be reached by travelling over paved road from Marsa Matrouh in about 4 hours. Siwa is reached by paved desert road of 300 km from Bahariya oasis. There is an airfield 40 km north of Siwa and a helicopter landing terrace only 10 km away. These are under military control, but there is a possibility that they could be used for charter flights with military's permission (Rady, 2011). There are some hotels and old houses in the desert and some paved roads which facilitate travel to hotels (Abd EL Ghani, 2012). It is connected to other oases through roads and trails as it is the gate to many Safari trips (Salheen, 2013).

A variety of accommodation types is found in Siwa, including luxury hotels, budget hotels and foreigners' houses. All Siwan hotels are of a similar size and they use modern chinaware and have simple guest-room designs. Half of the hotels are built using modern architectural styles and half are in traditional styles. Most hotel staff is not Siwan. All of them are young men. No hotel web sites made reference to any form of Siwan tradition in the services that they provide (Abd EL Ghani, 2012).

### **Obstacles in Siwa Oasis**

The main problems that hinder the development of Ecotourism in Siwa and causes of problems and threats are the environmental obstacles and the impediments to tourism development have been illustrated in the following:

#### **Environmental problems**

Siwa suffers environmental problems such as; Saltwater lakes; Random digging of wells (Martinelli, 2007); Marshes; Water logging and Soil salinization. These problems lead to decrease of agricultural land and deterioration in land productivity (Al-Kadi, 2003). And also many of human activities such as: 1) Overgrazing of the new growth of plants, and 2) The increase in industrial activities causes increases in waste products which drained in lands of the oasis ( El- Khouly, 2004). These solutions were suggested: biological drainage through the use of high water consumption plants, redeveloping agricultural drains, using the excess of water for sand dune fixation (Abo-Ragab, 2010), pumping the excess water outside the Oasis, and building a fence around lakes to protect the cultivated areas from deterioration by construction drain pipe lines and lining of water canal. (EI-Naggar, 2010).

#### **Official problems**

Many stakeholders seem to have interest in the tourism development and management aspects. In addition to the local communities who operate several visitors' activities and services mostly on the small and household level, this includes a wide spectrum of government agencies such as:

##### **□ Ministry of Environment/ EEAA**

The Egyptian Environment Affairs Agency responsible for the management of the Siwa Protected Area, and the promotion of the sustainable use of natural resources in the whole area. It needs to implement a program to monitor impacts on natural and cultural heritage involving local people (e.g. fossil area).

##### **□ Ministry of Armed Forces**

The Armed Forces which control access to the sites and provide security permits to all visitors entering desert areas within and outside the protected area including the protected areas staff themselves. A closely related issue is that of the permits required to access desert areas surrounding Siwa, including the Protected Area. Visitors wishing to visit any area outside Siwa, including all sites within the protectorate, must obtain a permit from the military and border police. Moreover, military authorities are not currently allowing overnight stays in the desert, thus limiting options for camping.

##### **□ Ministry of Defense**

It is the agency that issues security clearances at present and is therefore the main point of control for the desert tourism activities, and the implementation of the program would require therefore its assistance and full cooperation.

##### **□ Ministry of Tourism**

a) The tourism strategy needs to include a clear economic monitoring program to assess tourism current and future impact on local and national economy; b) It is essential to

establish an effective visitors' database on site for monitoring impacts, future trends and developments; b) Domestic and regional tourism promotion is rather weak; c) A specific promotional program needs to be developed and implemented in partnership with local communities.

### **Supporting services**

In terms of transportation options, in spite of the asphalt road, Siwa remains a remote and distant location. At present, the options for independent travellers wishing to reach the Oasis of Siwa are by road and limited to the daily bus service or their own private form of transport. The oasis can be reached by a 7-10 hour drive from Cairo, 800 km southwest or via the North Coast. The main road now is Matrouh–Siwa with a length of 306 km (Rady, 2011). Most independent tours, Egyptians and foreigner tourists travel to Siwa via this road, they do not require police escort but this method would not be suitable for international tourism. This road is on a good condition but there are no any services like Car Services or cafeterias and toilets, it needs more Rests and Cafeterias and to develop the existing services. Cairo Ring Road and Al Alamein- Alexandria by pass have greatly shortened the amount of time it takes to visit the Oasis from Cairo, 602 km (EEAA, 2002). This road has some good Rests and Cafeterias (Al Dumairy & Dahlfelt, 2012). Some tourists travel to Siwa also via Bahariya road, mostly in private vehicles or with tour operators, it is about 350 km, is not as well maintained so at present is not used as much (Abul Hawa et al 2007).

### **Access to Siwa and to sites of interest**

Major difficulties persist in accessing the Siwa region and specific areas within the region. These are linked both to the travel options currently existing for travellers to reach Siwa, as well as to security limitations requiring escorts and official permits. For travellers to reach Siwa, options are today relatively limited. Moreover, Egyptian and International Travel Agents / Tour Operators, wishing to promote Siwa as an ecotourism destination, must apply for police escort, and this procedure makes it difficult for travel agents to propose a visit to Siwa to overseas travellers.

#### **□ Airport issues.**

The present absence of a direct air link between Cairo and Siwa probably greatly reduces the interest of many tour organizers and consumers. At the same time the issue of the airport is contentious as some locals believe it would benefit Siwa while others believe it will attract the wrong type of visitors.

### **Assets conservation and restoration**

Siwa is characterized by substantial tourism potential, which makes it a distinct tourist destination in the desert (Nofal, 2011), but there are some obstacles and problems in its assets conservation for example: the crowing hall of Alexander at Oracle temple and Gabal El Mawta tomb excavations. They have suffered due to deterioration and cracks of different kinds and some parts are getting worse as rock falls occur. The temple was threatened by slope instability due to the underlying Aghurmi mesa weak rock, the causes of that are groundwater springs. To prevent rock falls and protect the temple; remedial measures such as bolting, cable anchorages, narrow diameter bored piles, underpinning, buttressing and redirecting the spring water away from Aghurmi mesa are suggested. At Gabal El Mawta tomb excavations interbedded layers of weak limestones and medium expensive shales lead to decrease in the strength bearing capacity of ceilings and walls of the excavated tombs, which suffered from cracking and falling down of walls. The excavated tombs are more cracked and deteriorated than those excavated due to differences in the lithology and accordingly in strength. To save tombs, walls, and pillars

should be erected and suitable grouting should be used for cracks. Generally, the lithology plays an important role in monuments cracking, but the spring water accelerates the rate of damage of Oracle Temple. Though Geoarcheological sites at Siwa had suffered from both natural and man-made causes, it received scant attention earlier. (Ibrahim & Kamh, 2005)

### **Awareness**

#### **Environmental awareness**

A) The risk is to face a situation where too many hotels are built in the area and too many tourists, comparing with what the oasis's infrastructures can handle. B) Another issue is regarding the sidewalks: it is very hard to find a continuous pavement where to walk without being forced to an uncomfortable up and downs. C) Siwa does not bright for the cleaning ness of its streets. There is an evident lack of litter boxes in the streets, which make it more difficult to keep places clean. D) It is very rare in fact, to find toilets in streets or in restaurants and cafes around town, discouraging visitors used to the town comforts to come back again.

#### **Archaeological awareness**

a) There are many buildings with three and four floors like Hotels, cafeterias, residential buildings are towering up for gaining a better panorama from their terraces where the city center of town, especially around Shali and the market square. b) Air/ Noise pollution as a result of allowing to the traffic of cars and truck in the historical center of Siwa and in the area close to Shali where most of the tourists hang out for shopping and arranging safaris

### **Review on Siwa Oasis tourism development plans**

Within the framework of cooperation, applying the protocols signed with Matrouh governorate, Tourism Development Authority (TDA) started researches for the development of Siwa Oasis, seeking the effective ways to promote the area as a tourist destination. Matrouh Governorate put a comprehensive plan for Siwa development until 2020. The plan includes 17 development projects in different sectors; the most important projects include the establishment of (1) a factory for packing dates and olive for exporting, (2) a handicraft center to develop human resources, and (3) an industrial complex to produce salts both for local demand and exportation. Moreover, the plan includes (4) tourist projects to promote therapeutic tourism, safari, environmental and cultural tourism (TDA, 2001). The first phase for proposed tourism development projects covers the following: Siwa City sector (El Dakrur Mountain center for curative tourism – Al Zaytun Lake sector (Al Zaytun Lake center for resorts and safari – Al Maraqi sector (Heritage and ecotourism center) (Amara, 2010). The aim from dividing Siwa into sectors is to achieve a balance in the distribution of areas to avoid the concentration of development at specific locations. This help in achieving integrated development, setting planning regulations and criteria, with regard to the fragile nature of the place.

### **Egyptian – Italian environmental cooperation program**

With the funding of the Italian government and International Union for Conservation of Nature, and with the supervision of the Egyptian Environmental Affairs Agency (EEAA), “Siwa Environmental Amelioration Project (SEAP)” implemented over 2 phases during the period May 1998-October 2003, To contribute to the conservation and sustainable use of natural and cultural resources of Siwa region with the involvement of local community, while respecting the Siwan traditions and culture. The project was based on 4 components including: (1) Development of Sustainable Agriculture; (2) Strengthening the Siwan association; (3) Strengthening Siwa protected area; (4) Solid waste management through developing and implementing a new SWM in Siwa and surrounding villages (EIECP, 2002). According to final report of United Nation Environmental Programme (2011) Siwa

tourism development witnessed 2 phases. Phase 1, in which all of the hotels were 1-2 stars in Siwa with number of rooms which does not exceed 25 rooms per hotel and the visitors were small groups coming to Siwa for adventure or cultural tourism (Rady.2011). Phase 2 started in the 2000's with the opening of Adrere Amellal hotel which was a genuine ecolodge rebuilt from using the remains of a group of old Siwi houses with the remains of old Siwi group of houses ( Ayad & Shujun, 2013). Based on rich cultural and natural resources of the region, tourism is emerging as a key sector of the local economy. Some privately owned hotels offer a total capacity of 361 rooms and several new facilities are under construction. Some cultural and nature-based eco-tourism services are being developed; spearheading private investment in what may become one of the leading and most flourishing sectors of the Siwan economy of the future ( Amara, 2010). In addition to some entertainment and cultural facilities such as an eco-museum, 20 handicraft Bazaars, 5 Desert Safari Centers, organizing daily tours , traditional Spas, and under the sun, the cure of diseases rheumatism, 5 Tourist restaurants and 2 Sports courts (UNEP, 2011).

### **Role of private sector in Siwa local development**

Environmental Quality International (EQI), a consulting company providing services in environment and natural resources, has been privately investing in Siwa since 1997, with the involvement of the Siwan community. EQI has implemented a series of community-based initiatives in Siwa that form a sustainable, private sector led development initiative, titled the "Siwa Sustainable Development Initiative". This initiative worked towards improving solid waste management practices, restoring traditional building techniques; revitalizing indigenous handicraft; and promoting small enterprises as well as participating in the rehabilitation of Siwa's marketplace and selected historic sites. This Initiative included: (1) In 1997, EQI began the development of an ecolodge overlooking Lake Siwa and nestled at the foot of a mountain's cliff called Adrère Amellal (White Mountain in the native Siwa language); (2) The development of Shali Lodge located where lies the village of Siwa, Shali Lodge is an 8-room lodge using the same construction materials and techniques as in Adrère Amellal; (3) Siwan Women's Artisanry Development Initiative, launched in August 2001 as a community development intervention designed to increase the empowerment and economic self-sufficiency of Siwan woman through the revitalization of traditional handicraft production and the promotion of a culture of artisanry; in addition to (4) Participatory Art Events such as a land art event was organized in November 2003 by EQI and a British art dealer, in collaboration with members of the local community. The second Siwa Art project took place 2005. The famous Russian artists displayed a work of "installation art" in participation with the Siwan community (EQI, 2012). Additional EQI Activities in Siwa such as: Two of Siwa's most famous ancient Roman springs, Cleopatra's Bath and Fatnas Restoration, Solid Waste Management Design, Plastic Bag Substitution Initiative and Canada Fund for Local Initiatives which is to finance small, grassroots, and community run projects that provide economic, educational, technical and/or social development assistance to local communities in Egypt.

### **Conclusions and recommendations**

Exploring the potentials exist in Siwa Oasis, particularly the diversity of its resources indicated that Siwa Oasis should occupy a distinguishable position on Egypt Ecotourism map. Several attempts to develop a number of Tourism Development Plans of Siwa Oasis has been initiated, however, very few of these plans and its suggested approaches have been implemented. Environmental Problems, Official Problems which are represented in many stakeholders such as; ministries of Environment, Tourism, Armed forces and

Defense and also Supporting services and Awareness of Archaeological sites can be seen as some of the reasons for the difficulty and inability of implementation. Although during the past few years the investors have put effort in marketing the oasis, with some results, still many services and facilities need to be improved, updated or created. There is still a lot to do in many directions to achieve satisfactory results in Siwa sustainable development. Tourism in Siwa must be based on principles of effectiveness; with respect to the tourism activity itself, in order to minimize its negative impacts; and with respect to its role as a vehicle for developing desert destinations. Local population must be able to control conditions and guides choices within their own territories.

The current study has some major findings; 1) the majority of Siwa's visitors in addition to the participating experts perceived Siwa as a natural asset that need to be preserved. 2) Both parties agreed that priority goes to infrastructure including solving drainage problem as to improve Siwa's local community way of life as well as its visitors' stay. 3) The overuse of resources it is important to discourage over development especially non ecological development projects. 4) The absence of site planning and management techniques is considered an obstacle to develop tourism in areas such as the case of Siwa. 5) The study also stressed the need of the private sector role in initiating ecological development, and opening up viable business opportunities for Siwan local community, and therefore enhancing their skills and knowledge. 6) The study revealed the importance of the local community efforts in contributing to the preservation of Siwa's natural and cultural resources. 7) The ecotourism and curative tourism are new patterns of tourism that still need careful development to be offered by Siwa to the international market. Finally, the results of the study have revealed the importance of a delicate balance to be achieved among the objectives of ecotourism development, the conservation of natural and cultural heritage, and direct benefits to local communities.

So this paper can be an essential necessary starting point for the Siwa Oasis destination to be developed and become competitive to the other similar destinations in Egypt, and all over the world. It also emphasizes the importance of sustainable development for the conservation of the natural assets and the preservation of the cultural ones. It focuses on local community participation in ecotourism development process through poverty alleviation and empowerment. It considers the cultural heritage sites part of the environment and one of the pillars ecotourism destination development depends on, which is relevant to what has been stated in the World Ecotourism Summit, since the relationship between the monument and the environment is intimate. The proposed Ecotourism activities focus on sustainable tourism development in the Siwa Oasis destination and will contribute to the national efforts in promoting ecotourism and diversification of the existing tourism product of Egypt.

The key recommendations presented in the current study involve the following:

- 1) Ensuring the protection of biological diversity within protected areas and other fragile areas contributing towards conservation and tourism through the application of proposed management impacts techniques.
- 2) Monitoring the evolving patterns of natural geographic suitability, that is, beyond the status of physical capability for development as measured through impact assessments and carrying capacity of various kinds-within such concepts and strategies as balance, diversity and complementarily.
- 3) The need of plans to provide Siwa's residents with better basic services (such as tourism and hospitality schools, hospitals and specialized clinics) is urgent;
- 4) The government should define specific parameters for the new constructions in Siwa, where the city center of town, especially around Shali and the market square.
- 5) To limit the traffic of cars and truck in the historical centre of Siwa and in the area close to Shali to have a wider portion of town protected from noise/air pollution. It should also be there a restricted area where cars are

never allowed, where people can walk safely and kids play freely. 6) To distribute around town, above all the old town, litter boxes, also contemplating a separated collection of glass, paper, and plastic for recycling purposes. The litter boxes can be also decorative, designed or multifunctional according with their location.7) The local government must put rules and regulations in terms of hygiene and related services within commercial activities (such as shops, cafes, restaurants, etc) to serve, at least the central area of town, with public toilets. 8) Enhancing the cultural wealth of Siwa's local community and their tangible and intangible heritage, but without converting traditions into commercialized "folklore" or looting archaeological sites, as its preservation is fundamental. 9) Encouraging good practice and eliminating bad practice, in relation to the built environment as to ensure that all new development are adequate in terms of existing on-site services and infrastructure and are developed in a way that minimizes the use of natural resources. 10) Setting a marketing plan promoting Siwa as a fragile ecotourism destination focusing on marketing campaigns based on environmental themes and events. 11) Improving medical hospitality through the provision of a specialized center for natural therapy in addition to trained staff to promote Siwa as a Curative destination.

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