

## Improving Sustainability Concept in Developing Countries

# Evaluating the Performance of the Outdoor Spaces in Healing Eco-Tourism

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**Abstract**

Healing Eco-tourism has become a global trend. So people now seek for health care which related more to nature therapy. That's when a linkage between environment healing elements and sustainable outdoor spaces are presented. In order to obtain the maximum benefit of healing, design standers of the outdoor spaces have to be considered. However, there is no clear method for designing sustainable outdoor spaces for healing Eco-tourism places especially in Egypt. So this paper is presenting a framework to evaluate the performance of the outdoor spaces. So we can provide a development plan for these spaces in healing process and its effect on the visitors in Egypt.

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**1. Introduction**

Over the past decade, rising health and related societal concerns have alerted individuals, businesses, and governments to the importance of Healing and wellness. Chronic diseases, such as heart disease, stroke, and some cancers, many of which have been linked to a more prosperous Westernized lifestyle of convenience eating and sedentary employment, are the world's leading cause of mortality, killing 17 million people in 2011 ([World Health Organization, The Top 10 Causes of Death, 2013](#)). Furthermore, the psychological effects attributed to today's modernized lifestyle, such as increases in workplace stress, depression, and other major mental health issues, have introduced a new category to the list commonly referred to as "diseases of affluence". And travelling can decrease

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stress and help in relaxation especially when it aims to integrate with nature to help in healing and wellness like healing Eco-tourism, which is defined as “Temporary traveling that is free of duties and work, it’s for healing from some chronic disease, as treatment possibilities are unavailable in the home country, because of the lack of the healing resources and the aim is mainly to go to a specialized place with a lower price than the home country” (Hussien.H,1997). And according to the global Spa and Wellness Summit, wellness tourism defined as “Travel associated with the pursuit of maintaining or enhancing one’s personal well-being” (Health and Wellness market report Germany, October 2014).

Which proves the strong connection between health and Eco-tourism, so studies had discovered that most of people travel for treatment, healing and relaxation, like the estimation of European Spa Association (ESA) between 2004 and 2006 that the results of Eco-tourism had increased by 1.4% from the total gross of international. (Soliman, 2009) While in 2010 the Stanford research Institute valued the global healing industry at USD 106 billion. As of 2014 the institute reported that its value has reached USD 494 billion, which is comprised of revenue generating from lodging, shopping, in country transportation and other services. By 2017 its forecast to reach USD 679 billion, representing 11.2% annual growth from today’s current situation. (Health and Wellness market report Germany, October 2014).

That’s when the role of the environment comes represented in the outdoor spaces, as the interaction with natural resources helps in renewing energy to achieve the aim for the visitors and this will not happen if the outdoor spaces surrounding the healing resources are not following the design requirements and regulations. (Moughtin, Moughtin, Signoretta. 2009)

## 2. Research Problem

Although Egypt is considered as one of the countries that endowed with an array of natural healing resources because of its special location and high potentials, however it’s not appreciated whether by the government or by the local people, either for the lack of advertising or the suitable awareness for its importance. That’s why the paper will highlight the importance of the outdoor spaces in developing healing Eco-tourism in Egypt by providing a natural recreation environment full of activities and facilities besides healing which will help visitors to heal, relax and enjoy the nature through the designed outdoor spaces.

So to improve the outdoor environment design for the healing Eco-tourism spaces, we have to take in consideration the healing elements by using design standards and requirements for producing a composition of the environmental components that will fulfill the visitor needs and affect the nature positively.

## 3. Methodology

This study will evaluate the performance of the outdoor spaces in Cleopatra’s Bath at Siwa Oasis in Egypt by comparing it to Ma’in hot springs in Jordon which is consider a very successful country in the field of healing Eco-tourism as Jordon is ranked as the first place between the Middle East countries and the fifth place internationally. And it was rewarded during the global healing tourism ceremony which was organized by the international newspaper “Therapeutic Travel” for being the best healing Eco-tourism destination in 2004. (Istiklal) However Jordan has similar economic and environmental circumstances as Egypt, although they took advantage of their healing resources better than Egypt.

## 4. Case Study

The case studies are going to follow the methodology of evaluation for the outdoor spaces and its relation to the healing environment through suggested criteria that will identify the design of the outdoor spaces in the selected cases. This criterion follows four main steps: (Abed, 2010)

- Reasons for choosing the case studies as shown in table 1 and table 2.

Table 1. Environment reasons.

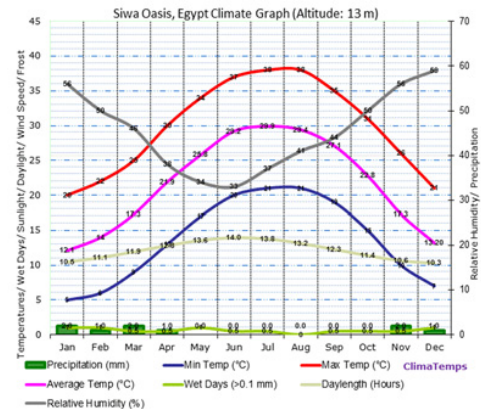
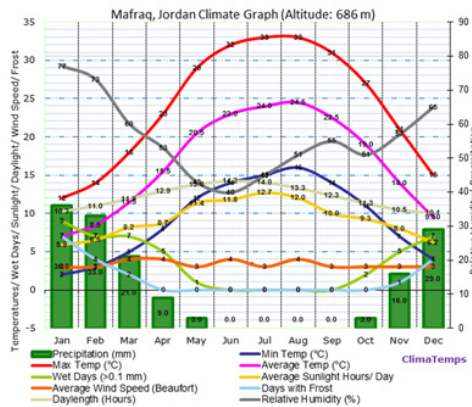
Point of Comparison	Ma'in hot springs	Cleopatra Bath
Site Location	It is located 58 kilometers south of Amman, capital of Jordan, which is away from the city of Madaba 37 kilometers.	It is located in Siwa Oasis, at the north of Western Desert, which is away from the city of Marsa Matrouh 300 kilometers.



## Climate

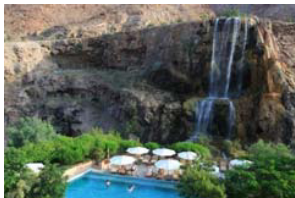
Annual temperatures average between 12 and 25 °C, up to 40 °C in the desert areas during the summer period however it's rainy and moisturized in winter, as the annual rain average between 50 mm to 800mm especially at the north heights. (UNFPA,2012)

Annual temperature average between 19 °C to 45 °C with very limited moisturizing so it's very hot at summer and very cold at winter although the rain can be very rare in the region as the annual rain average between 2 mm to 7mm. (Climatedata)



Healing resources

Ma' In consists of a set of mineral water springs and waterfalls that reached a number of 63 springs with temperature 43 ° and 18% salt in the water that helps in healing some chronic disease such as skin diseases, blood circulation and bone pain. (FoxNews, 2012)



It is pure water in the middle of a salty swamp, it was describe as bubbling waters in because it is boiling hot in the chilly evenings and cool during the heat of the day. In reality, the spring's waters are a constant 29 C; it's the changing air temperature and bubbling water that give the impression of boiling water. It helps in healing Rheumatic diseases and in losing weight. (SiwaOasis)

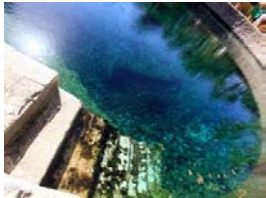
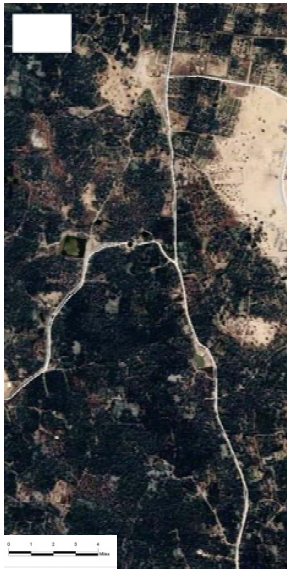


Table 2. Design Standers reasons.

Point of Comparison	Ma'in hot springs	Cleopatra Bath
Design Concept	To make a composition between the mountains and the mineral water coming from it and using the level difference to enhance the design by establishing hotels and resting areas.	The outdoor space has a main linear axis that has historical places and healing areas distributed on it starting from Siwa city that is full of commercial places.

Site view



- Collecting data of these areas through the specialized authorities, photos that will clarify the design concept of the outdoor spaces, in addition to the personal observation through the theoretical studies that have been made by the researcher.
- Analyzing the relation between the collected data and the regulations and requirements of the outdoor environment in healing Eco-tourism spaces that have been concluded by the researcher in the theoretical part.
- Evaluating the performance of the healing outdoor spaces in the two cases through the convenience between the design requirements and the current situation for the two cases.

#### 4.1. First Case: Ma'in Hot Springs Jordan

##### 4.1.1. Environmental Standers for the outdoor spaces.

- **Site Topography:** it's mountains outdoor space area that is specialized with its contour and levels which was successfully designed combined with the hot mineral waterfalls burst from inside, as its shown in *fig. 1.a*
- **Surrounding Environment:** Climate wasn't from the successful items in the space as its cold most of the time of the year and the design of the outdoor spaces didn't help in treating the climate, the plants found was from the salty type as Barhy, Al- Derany and Al-zhdy palm and its limited so it increases the effect of the mountains according to the visitors, **the water element** found in the space are all natural presented in waterfalls and springs that begins from the start of the site till the end. as its shown in *fig. 1.b* (Culture, 2014)



Fig.1. (a) Site Topography; (b) Combination between nature elements.

##### 4.1.2. Design Standers for the outdoor spaces.

The design concept is inspired from the mountain environment that embraces the outdoor spaces. All of the used materials are from the surrounding nature including the architectural buildings. And the contour was used perfectly in acting as a natural background for the whole design; in spite of the high mountains it didn't prevent the visitors to have an open visual view. The outdoor spaces activities were distributed in a linear way so it is easily accessed for the visitors, as shown in *Fig 2*.





Fig 2. Ma'in Layout

#### 4.1.3. Functional Standers for the outdoor spaces.

The function of the outdoor spaces in Ma'in considered successfully designed by being a part of the healing process, according to those three main elements added by the designer to enhance the efficiency of the outdoor spaces of the healing area. As shown in Fig 3.

- **Planted elements:** Natural palms are used to define the main pathway in addition to the added dense leave trees that helps in separating areas for the visitors privacy and making a clean environment for the by exchanging carbon dioxide, although the waste water is used to water those trees.
- **Water elements:** there is 10% manufactured water from the total land, which is presented in two swimming pools, one of them in Jannh Ma'in resort and the other in the host village.

- **Compounds of the outdoor spaces:** Most of the pathways are made from sand in addition to the Asphalt path for cars, also the designer treat the slopes by the stairs sculpted in the mountains, while all of the walls are from stone combined with added 60cm tall trees to identify the pathways so the visitors will not be lost and the furniture all made of stones inspired by the mountain environment but they are few compared to the numbers of visitors, as the designer depend on the hotels and resorts resting area, with less lighting units and activities besides healing.

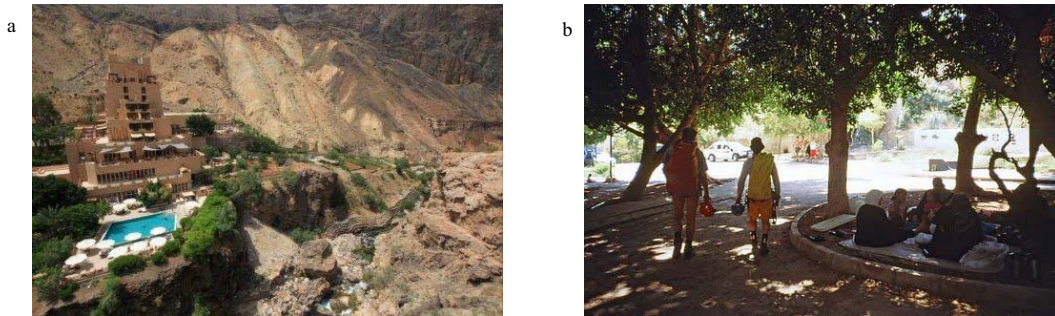


Fig.3. (a) Using the planted trees for the pool privacy; (b) The lack of the sitting areas

#### 4.1.4. Social Standers for the outdoor spaces.

The designer encouraged the social interaction by providing points of gathering at every waterfall or hot spring spot and providing visitors with hotels and resorts which also depend on the healing activities only, to give them the chance to react with the activities and with each other, as shown in Fig.4 .a (Shaftoe, 2008)

#### 4.1.5. Physiological Standers for the outdoor spaces.

The mountain steep contour combined with the surrounding environment as water and plant give the visitors the feeling of privacy with the only entrance gives a feeling of security for the outdoor spaces. Fig. 4. b.

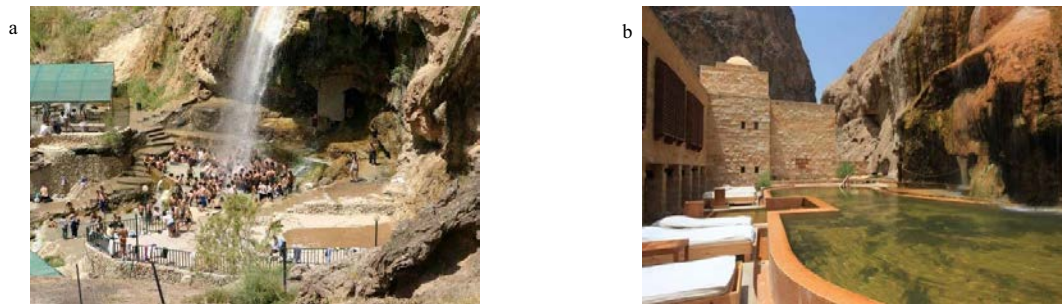


Fig.4. (a) Visitors interaction places; (b) The embraced mountains gives the feeling of privacy.

## 4.2. Second Case: Cleopatra's Bath Egypt

### 4.2.1. Environmental Standers for the outdoor spaces

- **Site Topography:** It is below sea level by 18 meters and it contains of huge percentage of sand dunes and many mineral and sulfur springs, and it also has a problem in withdrawing the waste water because of its small slop towards the north direction. (El-Khouly, 2004)
- **Surrounding Environment:** the design of the outdoor spaces has successfully treated the hot climate by refractive the pathways and decreasing its length which leads to provide Shade and minimizing the feeling of the hot weather. Although there is lot of plants in the outdoor spaces as it consists of 40 different spices especially the spices that can resist dry and salty soil like Acacia, Tamarisk, Date Palm and Olive groves; all of this minimize the designer interference by adding other plant. And mineral water is the main healing element in the region as it's a rocky pool in the middle of the outdoor space full of mineral water, as shown in Fig.5.

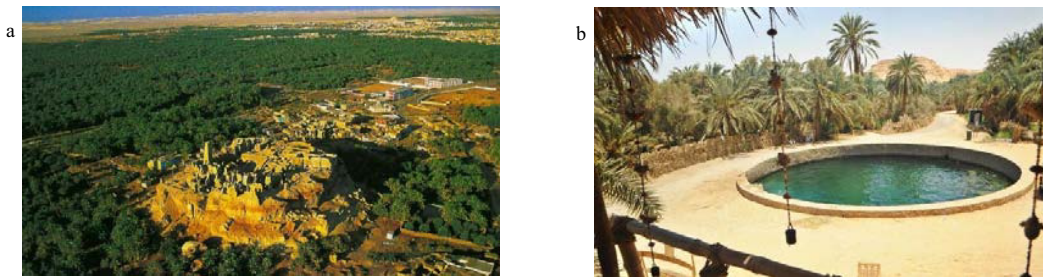


Fig.5. (a) A top view for Siwa Oasis; (b) Cleopatra's bath nature elements.

### 4.2.2. Design Standers for the outdoor spaces

The design is centralized as the mineral water pool of Cleopatra Bath in centered in the middle of the all the important sighs in Siwa like Gebal Al-Mauta, Abuuf spring, Shali and the temple of Amun as shown in Fig.6 . The pool itself has been surrounded by rocks due to the sandy location so it prevent it from backfill, beside the pool there is a sitting area designed on the Siwan way.

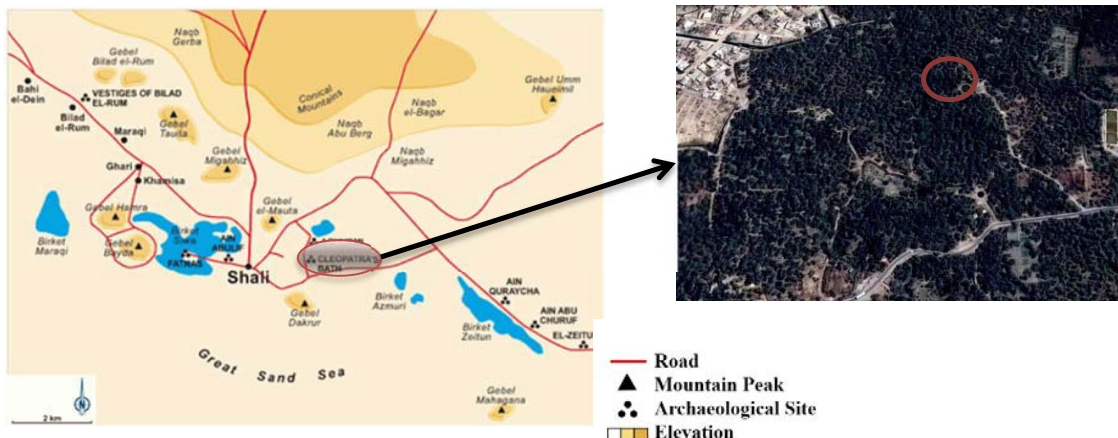


Fig.6. Cleopatra's bath Site Plan



#### 4.2.3. Functional Standers for the outdoor spaces

The design of the outdoor spaces is very weak as it's not using the surrounding resources in the design concept; however this region is considered very important and famous healing place. So we can observe that visitor's activities are limited to only healing. Beside the lack of connection between accommodations places and Cleopatra's bath.

- **Plants:** There is a big verity in plant spices, so the designer didn't add more but they are not designed properly, as the distance between them is very small that causes shade, mystery and insecurity.
- **Water:** the only water element is presented in the centralized mineral water pool which surrounded by rocks.
- **Compounds of the outdoor spaces:** The pathways are made from sand to ensure the Siwan design and because of the flat location there are no slops or stairs not even for the aesthetic shape. The walls are presenting in the high palms surrounding the space that prevent the vision. Also the ceiling is presented by this high palm that made a huge shade besides the cafeteria which covered with wicker and palm leaf to be suitable with the surrounding environmental. The furniture in the space is presented in the only exist cafeteria so it's not enough for the visitors however it's made of wood and palm leaf to be part of the nature, as shown in Fig. 7.



Fig. 7. (a) The relation between the bath and the Cafeteria; (b) The Siwan style Cafeteria

#### 4.2.4. Social Standers for the outdoor spaces

There is no social interaction in the outdoor space, due to the lack of connection between all of the tourism activities in the region and there is no services surrounding Cleopatra Spring rather than this only Cafeteria that doesn't even have activities inside besides beverages and food.

#### 4.2.5. Physiological Standers for the outdoor spaces

The outdoor space of Cleopatra's bath is isolated due to the high palms surrounding the region besides having one entrance which gives the visitors the feeling of security; however it's totally opposite for the people how use the spring itself as there is no barriers between the cafeteria and the pool, so it doesn't give any privacy for the pool especially when its used by ladies.

### 5. The Pros and Cons of the outdoor spaces.

Table 3. The effect of the outdoor spaces on the healing environment

Point of Comparison	Ma'in hot springs	Cleopatra Bath
Potentials	The attractive mountain nature.	Mineral resources which have many healing benefits.

	<p>The mineral springs in the region gave it a healing Eco-tourism importance.</p> <p>Amman airport is near to the region which makes the transportation easier.</p> <p>The existence of some of famous sights, including archaeological sites such as the prehistoric petroglyphs at Wadi Rum, the rock-cut architecture of Petra, the Byzantine mosaics of Madaba and the Roman ruins at Jerash.</p>	<p>The climate of the area helps in healing.</p> <p>The diversity of wildlife and plant life surrounding the area.</p> <p>The existence of many near historical places, like Amun temple.</p> <p>The variety of visual and aesthetic sights caused by the topography and demography of Siwa oasis, like Jebel Dakrur, Jebel Al Mawta.</p> <p>The unique social life of the Siwan people that appears in their architecture, urban design and traditions, like the town of Shali.</p>
Pros	<p>The visual connection between all environmental elements in the outdoor spaces.</p> <p>The connection between the design of the outdoor spaces and the urban design.</p> <p>The topography was designed successfully to give the visitors the feeling of beauty in the outdoor spaces.</p> <p>The variety of the healing water spots.</p> <p>The variety of accommodation places and its separation from each other.</p> <p>The designer protects the natural environment from any elimination.</p> <p>The easy access for the visitors and the components of the outdoor spaces in obvious to the visitors.</p>	<p>Protecting the aesthetic siwan characteristics of the area.</p> <p>Protecting the natural plants from any elimination.</p> <p>The resources used all are environment friendly.</p>
Cons	<p>The lack of design flexibility due to the surrounding mountains and the steep contour.</p> <p>The social activities are limited to the healing only.</p> <p>The plant was only for the aesthetic view and some of them are not suitable for the environment.</p>	<p>Poor management for the mineral water resources.</p> <p>The lack of accommodation places near Cleopatra's Bath.</p> <p>The acute shortage in the need of the infra structure for the development process.</p> <p>The simplicity of the design makes it very poor.</p> <p>The lack of privacy for the visitors using the pool.</p> <p>The lack of any activities in the outdoor spaces, however there is a suitable space for it.</p> <p>No relaxation private places in between the natural resources.</p>

In spite of the centralization of Cleopatra's bath, it's not connected to the urban design.

## 6. Conclusion

We can conclude the importance of healing Eco-tourism and its effect in all disciplines, that's why we have to take in consideration all the factors affecting the healing Eco-tourism generally and outdoor spaces specifically to be able to suggest an accurate developing plan through the designing of the outdoor spaces, to enhance the healing Eco-tourism in Egypt. As shown in *Fig.8*.



Fig.8.The factors of the developing plan

Enhancing the factors of the developing plan through taking advantage of Egypt high potentials and natural resources, so designers should follow the standers and regulations of the area while designing the outdoor spaces by using the diversity of the natural environment to create outdoor activities besides healing activities, to reach an integral tourist area having healing tourism as a main source supported by the characteristics of the surrounded environmental, by using the diversity of wildlife and unique species of plants in designing an outdoor natural reserve and prohibiting their hunting down so we can give the visitors an outside staying between the natural resources and healing elements, or by encouraging the entertainment outdoor activities like; restaurants, cafeterias, sitting areas, an open theater, green areas and play grounds for children that ensure the special characteristics of the area.

Not only that but also the restoration of historical healing places in the area like old Roman baths, Pharaonic healing temples and Islamic public baths and transform the very old and the non-usable ones to be historical sites will develop the region and give visitors chance to know the history of the healing places in Egypt. In addition to the historical trips, safari and campaigning that could help in the social interaction in the area.

So we can reach integral Eco-tourism area and create more activities for the visitors to enhance the interaction between visitors and the surrounded environment and also the interaction between visitors with each other.

Besides the accommodation places which is very important for the visitors as it has to be a continuing design for the outdoor environment and simulating its special characteristics, by using the same decoration, building or construction materials of the environment or other material that will not affect the surrounding natural resources negatively or make a disorder for the aesthetics of the design.

Also raising awareness of healing environment is very important by knowing its benefits for the human health besides healing because it's not only for therapeutic proposes, but it's also for relaxation and enjoying nature through highlighting the regulations and instructions of dealing with these resources among local community, visitors, and tourists, as it is considered a very effective step in the developing plan.

So by encouraging the establishment of tourism institutions and awareness campaigns among local people we can have experts' manpower in this field and we can keep up with the developed countries specially Middle East countries like Jordan, Lebanon and Algeria. As they have mainly similar economic and environmental circumstances and still they can rank internationally. So we can benefit from their experience by encouraging the exchanging leaning trips to be exposit to new ideas in the field of healing.

Although the services which are surrounded the area have to be taken in consideration by improving the infrastructure and redesigning the net of the main roads that will make the area ready to host more amounts of people besides the current population.

So briefly, the designers have to meet all of the visitor's standers in spite of the social diversity and fulfill their needs. So Eco-lodge principles are recommended while developing so we can protect the natural resources and produce an architectural product that simulates the cultural unique diversity of the Egyptian environment.

While on the other hand we have to highlight the importance of the government role in the developing plan, as the government has to host expert people in the field of healing to provide opportunities to share experiential knowledge about healing environmental and the designing of the outdoor spaces among individuals and institution, so those experts can help by improving the educational and managerial systems by giving lectures and work for a period of time in the healing places to help in training the local people and enhance their abilities.

Also the government has to concentrate on the publicity of the benefits of healing Eco-tourism and the famous healing places in Egypt, In addition to the activities that will be made, which will encourage people to visit these places, so we can increase the demand of the internal tourism.

Furthermore the government has to encourage design competitions and researchers to contribute in the developing process from their point of view and aspects, not only that but to increase the environmental awareness by transferring the industrial places away from the healing resources areas as pollution will affect the natural resources and the climate that will lead to affect the tourist negatively.

At the end, the government must put a development strategy to encourage more diversity of tourists, by developing our air transport services, increase the security in the region especially after the political events happened, and encourage the worldwide publicity to expand globally. It also should concentrate more on the local people, as it's necessary to design communities depend on the tourism aspects though connecting tourism with economic; to make sure that these communities will protect the environmental as their income resources. That's why it's necessary as well to distribute surveys on the local people to know their needs and their special traditions to provide them with opportunities and to be keen to fulfill the visitor's needs, so by that the developing strategy could be applied in all healing areas to enhance the healing Eco-tourism in Egypt.

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