International Business Management
MEDWELL PUBLICATIONS

Sustainable Management for Natural Heritage in Egypt Case Study: Wadi Al-Hitan Protectorate as a Tourist Site

[1]Amira Hassan Abdou and [2]Sameh Ahmed Refaat
[1]*Department of Tourism Studies, Faculty of Tourism and Hotels, October 6 University, Cairo, Egypt*
[2]*Department of Tourism and Hotel Management, College of Tourism and Archeology, King Saud University, Riyadh, Saudi Arabia*

Key words: Touristic sites, wadi Al-Hitan, heritage managements, site management, sustainable tourism, eco-tourism, etc

Corresponding Author:
Amira Hassan Abdou
Department of Tourism Studies, Faculty of Tourism and Hotels, October 6 University, Cairo, Egypt

Page No.: 319-327
Volume: 14, Issue 9, 2020
ISSN: 1993-5250
International Business Management

Abstract: Wadi Al-Hitan is the most important site in the world to demonstrate one of the iconic changes that make up the record of life on Earth: the evolution of the whales. It portrays vividly their form and mode of life during their transition from land animals to a marine existence. It exceeds the values of other comparable sites in terms of the number, concentration and quality of its fossils and their accessibility and setting in an attractive and protected landscape. Wadi Al-Hitan is the only Egyptian heritage site that is natural rather than cultural; this site that was designated in (2002) provides vital fossil evidence that paints the full picture of how whales evolved from land-based mammals to beasts of the oceans. An effective sustainable management system is in place for the property as an integrated part of the implementation of the Management Plan for the WRPA (Washington Recreation and Park Association). Under the updated Management Plan (2008-2013) the property is identified as a "World Heritage Zone". No vehicle access is permitted whilst zones provide for well-controlled eco-tourism in part of the property whilst maintaining areas for research and studies. The buffer zone is also managed as a part of the World Heritage Zone within the WRPA. Effective and well-designed visitor facilities are provided to present the property, guide visitors to key localities via footpaths, prevent vehicular traffic in the property and provide for limited on-site accommodation. Maintenance of an effective and well-resourced management plan, supported by adequate staff, finance and resources is an essential long term requirement. Amongst the key management issues are the protection, conservation and encouragement of well-managed research in relation to the fossil remains and the associated geological values to international standards of best practice. Other important long-term management needs are the continued protection of the property from damage by traffic of vehicles, the provision and

maintenance of the essential management infrastructure within the property that minimizes intrusion and damage to its natural values and the provision of facilities for sustainable tourism at appropriate levels of visitation. The main problem of this unique place is lacking of the marketing efforts and to be put in the tourism programs, so, this study will focus on the important role of the sustainable management towards the heritage sites in Egypt and will highlight on Wadi Al-Hitan protectorate.

INTRODUCTION

Literature review

Concept and dimensions of Sustainable Development (SD): In literature, there is broad agreement on the definition of "sustainable development" along the lines set forth in "Our Common Future". However, "sustainable development" apparently is a very context-sensitive concept. It has different meanings in different socio-economic contexts and it has different dimensions in various areas of human activity. This might explain why there has been progress at different speeds with respect to operationalization of this concept. The concept of sustainable development combines three principal aspects:

Economic: An economically sustainable system must be able to produce goods and services on a continuing basis.

Environmental: An environmentally sustainable system must maintain a stable resource base, avoiding over-exploitation of renewable resource systems and depleting non-renewable resources only to the extent that investment is made in adequate substitutes. This includes maintenance of biodiversity, atmospheric stability and other ecosystem functions not ordinarily classed as economic resources.

Social: A socially sustainable system must achieve distributional equity, adequate provision of social services including health and education, gender equity and political accountability and participation[1, 2] (Fig. 1).

For UNESCO, this approach is not new. Back in 1989 when adopting the "Convention on Technical and Vocational Education" (CTVE), Member States stressed that:

"Technical and vocational education programs should meet the technical requirements of the occupational sectors concerned and also provide the general education necessary for the personal and cultural development of the individual and include, inter alia, social, economic and environmental concepts relevant to the occupation concerned".

When reading the activity profile of this international workshop on workforce development for the knowledge economy, I was particularly pleased reading that participants are expected to improve their understanding of the social, cultural and economic impact

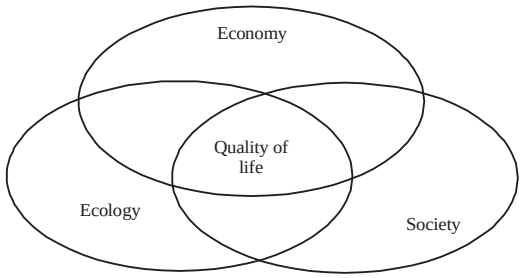

Fig. 1: The principal aspects of sustainable development

of the knowledge economy. It is evident that there is a wide area of overlap between the objective of this workshop on the one hand and the concept of sustainable development on the other hand (Fig. 2). And also there are more detailed dimensions as follows:

- Social
- Economic
- Ecological
- Political

SUSTAINABLE MANAGEMENT

The International Ecotourism Standard addresses three distinct sub-sectors of the industry: accommodation, tours and attractions. The principles in the Standard are the same for all three sub-sectors but the way in which the product may meet the principle may well differ. Explanations for where this is likely to occur will be provided in the User's Guide under each Performance Area (principle) and for some specific criteria. The definitions of the three sub-sectors covered by this standard are:

Accommodation is any type of structure of permanent or semi-permanent nature that is designed to house visitors overnight. Lodges, resorts, standing camps and camping/caravan grounds are included in this category. A major objective of the accommodation is to encourage guests to interact with natural areas adjacent to the accommodation. Tours offered as a separate ticket able item reassessed separately to the accommodation product.

Tours are activities that involve being taken on an excursion with a guide (or guides) for the purpose of viewing and interacting with the natural environment.

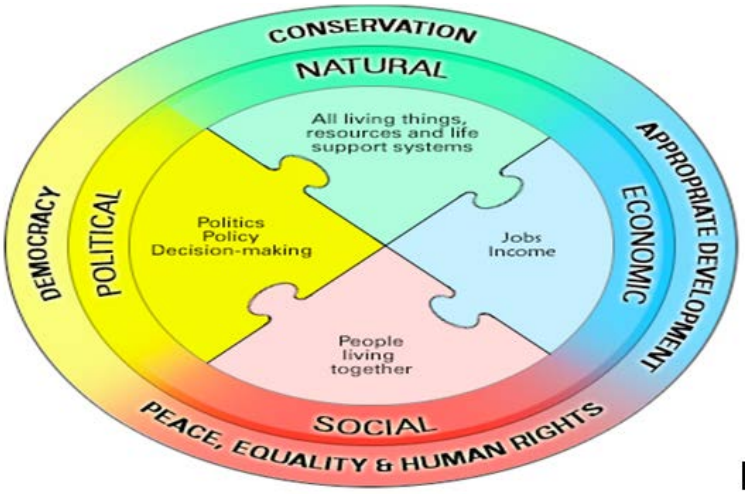

Fig. 2: Sustainable development requirements[3]

Tours typically combine activities such as driving, walking or riding with viewing and interacting with the environment. A tour may offer overnight accommodation (from camping or staying in huts, to hotel and resort-type lodgings) but these are not assessed as part of the tour product. However, if they meet ecotourism criteria for accommodation products, they can be certified under the accommodation category.

Attractions are facilities that combine a natural area (or natural area focus) with fixed infrastructure designed to help people explore and learn about nature. Typical examples of an attraction area Wild life Park, sanctuary, or interpretive center. Tours or accommodation offered as separate ticket able items are assessed separately.

Eco-tourism involves the provision of a wide variety of services to visitors from food sales in stores to overnight accommodation and from tourist guides to recreational equipment. In order to better understand the concept of land conservation and tourism provision Eagles suggested considering three important concepts separate from each other: land ownership, the source of the money for management and the identity of the tourism provider. He identified three alternatives for resource ownership for parks and protected areas: a government agency a non-profit institution or) a for-profit corporation. There are three broad categories of sources of income for parks and protected areas: societal taxes user fees and donations. There are four alternatives for the management institution: a government agency a parasternal which is a corporation owned or wholly controlled by government a non-profit corporation or a for-profit corporation, either public or private. This approach leads to 36 possible combinations of which 7 are commonly used.

Eagles suggested the addition of an additional institution, a community as an owner and as a management institution. The four ownership types, the three sources of income and the five management bodies led to 60 combinations. He then outlined the current status of governance of the 8 most commonly used combinations. These 8 combinations were labeled as:

- National park
- Parasternal
- Non-profit
- Eco lodge
- Public and for-profit combination
- Public and non-profit combination
- Aboriginal and government and
- Traditional community

AGENDA 21 AND SUSTAINABLE DEVELOPMENT GOALS (SDG'S)

Agenda 21 was discussed at a major international conference in Rio de Janeiro, Brazil in June, 1992. Known as the United Nations Conference on Environment and Development or more simply as the Earth Summit this meeting brought together nearly 150 Heads of State where they negotiated and agreed to a global action plan for sustainable development which they called Agenda 21.

The Earth Summit was also attended by nearly 50,000 official observers and citizens from around the world who met in a wide range of official and community-based councils and seminars at a Global Forum[4].

As well as Agenda 21, four new international treaties on climate change, biological diversity, desertification and high-seas fishing were signed in the official sessions. In addition, a United Nations Commission on Sustainable

Development was established to monitor the implementation of these agreements and to act as a forum for the ongoing negotiation of international policies on environment and development.

Agenda 21 has been the basis for action by many national and local governments. For example, over 150 countries have set up national advisory councils to promote dialogue between government, environmentalists, the private sector and the general community. Many have also established programs for monitoring national progress on sustainable development indicators. At the local government level, nearly 2000 towns and cities worldwide have created their own Local Agenda 21 plans.

There is sometimes confusion about the meanings of 'sustainable development' and 'sustainability' and the relationship between them. A report on Education for Sustainable Development in New Zealand proposed the following explanation:

Sustainability is the goal of sustainable development -an unending quest to improve the quality of people's lives and surroundings and to prosper without destroying the life-supporting systems on which current and future generations of humans depend. Like other important concepts such as equity and justice, sustainability can be thought of as both a destination and a journey[5].

SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES (HERITAGE)

Australian Heritage Commission defines (Natural Heritage) as: Natural features consisting of physical and biological formations, geological and physiographical formations and specific areas that constitute the habitat of indigenous species of animals and plant which demonstrate natural significance from the point of view of science, conservation or natural beauty.

The functions of natural heritage are to support society and economy through maintaining biodiversity, eco systems balance, tourism, natural beauty views conservation and providing resources for environmental education and awareness. It also plays an important role in the research of species evolution, geosciences and biodiversity[6].

Moreover, according to the National Assembly for Wales natural resources includes air, water and soil; minerals; animals, plants and other organisms; physiographical and geological features and processes; climatic features and processes. In addition it defines Biodiversity as "the diversity of living organisms including the genetic, species or ecosystem level".

According to Welsh Essentials Guide many global evidences shows that natural resources and the ecosystems benefits are suffering. Stresses and negative activities and results such as pollution, climate change, habitat fragmentation and over-exploitation are placing great pressure on them. Ensuring resilience of natural resources and ecosystems and flexibility that these benefits are available for current and future generations is essential. In managing and controlling global natural resources wisely, we can provide solutions achieve the balance between the all four aspects or dimensions of sustainable development: economic, social, environmental and cultural well-being. This is the 'sustainable management of natural resources'.

Sustainable Management of Natural Resources (SMNR) can be expressed as the using of natural resources with the way and the rate that maintains and reinforce the resilience of ecosystems and its benefits.

Knoepfel and Nahrath[7] mention that the sustainable management of natural resources depends on the fundamentals of environmental policies and procedures, these policies are means or managerial tools to control environmental impacts such policies aims to the protection of the air, water bodies, soils, nature and landscape and the treatment of waste.

Benninghoff emphasizes the fact that many existing non-environmental policies and activities affect directly or indirectly in adding burdens and loads on the environment. All areas combined by different aspects of economic development, soil affected by urban development, water, air and soil by agriculture, air and urban surfaces by transport, water, landscape and air affected by energy.

According to Wales Natural Resource the principles of Sustainable Management of Natural Resources (SMNR) which are able to be applied in the natural heritage sites such as adaptable: interaction and adaptation with the environmental changes that occur through planning, monitoring, reviewing and changing future work; scale: ability to take the accurate decisions and actions at national, regional or local levels to deliver the appropriate outcomes. Working together: everyone in is a stakeholder and all views are considered even engaging the public in the natural environment preservation and decision making process to ensure best management of natural resources; realizing natural resources benefits: understand the economic, social, cultural and environmental values and benefits of natural resources for present and future generations.

Long term: take the different managerial and environmental decisions that have a long term impacts beside its short term such as prevention: decisions and actions to maintain and enhance biodiversity and preventing damage to ecosystems; resilience: effective ability to deal with increased pressures on eco systems and environment resources such as climate change.

In that context, tourism is often known by its ability to achieve the balance between natural heritage

conservation and its development goals in protected areas, from a conservation view; tourism can gather and increase funds for protecting natural areas, enhance locals and tourists awareness of eco systems conservation and biodiversity issues as well as avoiding local people the unsustainable livelihoods[8].

Borges *et al*.[9] state that from a development point of view, last year's tourism incomedecrease poverty by tourism business andenterprises development and generating job opportunities in accordance with principles of biodiversity conservation and enhancing local services and through improving education and awareness authorization for local people to contribute the protection of the natural environment.

However, if tourism is unplanned and unmanaged responsibly, it can cause biodiversity loss, ecosystem degradation and many negative impacts for local communities. So, it is necessary for tourism in protected areas to be well and sustain managed according to the principles of sustainable development. Moreover, the tourism authorities should emphasize on the main goal of protected areas which is conservation, especially, the protection of world heritage sites.

In general, many researches around the world concluded that there are different implementations of tourism development in natural world heritage sites. It is proven that in some destinations tourism development is wellplanned and occurs in a sustainable manner but in other destinations development occurs rapidly without sustainable planning or effective and recommended control [9].

Parks Australia explains that, although, there are many similarities between natural world heritage sites there are also many differences. These begin with the different natural characteristics in area, management system, features, species, habitats and ecosystems as well as the diverse social, political, cultural and economic characteristics. Also, identify common impacts amongst them but it is much more complex to attempt identifying the causes or indicators for these impacts. In fact, the effort in comparing these sites to identify its common features and specify a set of rules for sustainable tourism development would be over simplistic and lead to quite contrary results. In addition, it is more useful to examine deeply the required conditions for tourism to be managed sustainably.

SUSTAINABLE MANAGEMENT AND NATURAL HERITAGE SITES IN EGYPT

Amara[10] demonstrates that in the tourism industry, environmental management is a vital foundation for sustaining competitive advantage. In that context Egyptian Ministry of Environment mentions that Protectorates Law 102 of 1983 gave the authority for the Prime Minister to determine specific areas to be as protectorates. A Prime Minister's decree explains the limits of each protected area and sets the basic principles for its management and for its resources conservation, until now 30 protectorates are declared.

Anonymous[11] states that the Government of Egypt is obliged to achieve the Sustainable Development Goals (SDGs),this commitment is reflected in its understanding of the complicated nature of sustainable development and is included in the framework and axes of Egypt's national strategy, "Sustainable Development Strategy: Egypt Vision 2030" (SDS). The strategy involves the three dimensions of sustainable development: economic, social and environmental that preserves national heritageis at the core of the United Nations Development Program (UNDP). Egypt is committed to pursuing sustainable practices to preserve its natural heritage and to decide the necessary frameworks to achieve this goal.

Agence Française de Developpement (AFD) in cooperation with the Egyptian authorities developed a strategy to protect and preserve the natural and cultural heritage including promoting sustainable management of natural resources, especially development and sustainable management of natural protected areas. One of the main worth of the Protected Area (PA) in Egypt is its role in preserving the biodiversity resources found within its boundaries[12].

Fouda[13] in the report of "Protected Areas of Egypt" adds that determined criteria for protected areas in Egypt Declaration of new protected areas are decided by following main factors: the inseparable value of the resource and the degree of clear threat for it. The value of a natural site is decided by its integrity, importance for biodiversity conservation, contribution to the network of environment preservation and the site's potential ability for generating direct financial benefits for the nationand society.

Aboulnaga *et al*.[14] explains that Egypt is famous with its unique ecological diversity including a wide range of both terrestrial and aquatic ecosystems and is obliged to the protection of its naturalrichness. Egypt not only supports the non-governmental or friendly of environmentally national strategies but also interest with regional and international conventions from the 1992 Convention on Biological Diversity (CBD). Egypt's main environmental goal is to focus on developing and maintaining natural protected areas trying to preserve its biological diversity. To date, there are 30 natural protectorates in Egypt, covering approximately 140,000 km^2 (nearly 15% of the of the country's territory).

GEF Report, mentions that these natural protected areas have been established to preserve Egypt's unique and diverse habitats, rare and endangered species, geological formations and landscapes of natural beauty.

Their habitats and species, however, face many hreats and greater resources are needed to relieve or reduce the negative impacts of these threats. Moreover, the national protected area network is seriously suffering from poor resources and the generated revenues of the protected areas are not reinvestedin conservation, management and development. It is a proved fact that without the look of increased investment and effective management, the threats will affect negatively their sustainability.

Anonymous[11] assure that Egypt remains committed to environmental conservation including the protection of coastal areas, coral reefs, resisting harmful activities like overgrazing, overfishing, hunting, desertification, climate change and different types of pollution have helped formunanimity around this environmental commitment and Egypt has actively deployed efforts to ensure the sustainability of its terrestrial ecosystems and to protect its biodiversity.

The Egyptian Environmental Affairs Agency (EEAA) first implemented Egypt's Protected Areas Self-Financing Project (EPASP) as a means to develop and manage Egypt's natural protectorates. The EPASP aims to develop the plans of sustainable management to protect Egypt's biodiversity in the Egyptian protectorates[14].

Biodiversity conservation report determines that the effective sustainable management and conservation of natural heritage through protected areas in Egypt would have wide national benefits such as. Maintain and enhance the value of protected areas as tourism destinations will becompetitive market advantages for Egypt.

The funds of the Egyptian protectorates mainly will be depended on entrance and user fees paid by tourists, Foreign interested and visitors, therefore, reducing the burden on the Egyptian national budget.

Sustainable management of Egyptian protectorates will help concentratingon the nation's sustainable development; generate investment increase rural job opportunities and reduce the drift to urban areas. Provide more secure for Egyptian biodiversity heritage with many future strategies facing climate change and biotechnology challenges.

Case study: wadi al-hitan protectorate: Since, ancient times, Egypt has believed on a fortune and treasure of natural resources to sustain its civilization. Egypt has a wide range of habitats and species representing different environments such tropical and Mediterranean. Egypt has many other heritage resources of value, some are related to geological times as the skeletons of whales in the Western Desert (a Natural UNESCO World Heritage Site in Wadi Al-Rayan Protected Area) while other sites represent the Stone Age, about 10,000 years ago. These resources have been negatively affected by plenty of pressures and risks in recent years including solid waste, grounding, over grazing, over fishing, invasive species, habitat fragmentation and many other negative activities and bad factors. There is always a need to manage natural resources according to sustainable rules and principles, to develop national capacities and to develop and implement policies for nature conservation.

El-Bedewy and Dahroug[15] display that the origin of the name "Wadi Al-Hitan"created through three stages,the first name was"Zeuglodon Valley" by its discoverer Beadnell, after the whale genus Zeuglodon was found there. Then, later it was renamed "Basilosaurus", after the name"Zeuglodon Valley" had left but it is still used in some non-scientific writings. When (Philip Gingerich) came in the late 1980's he called it"Whale Valley". A few years later the Arabic translation of that name, "Wadi Al-Hitan" was officially used by the Egyptian Government as well as by local and foreign researcher workers.

Wadi Al-Hitan whale valley is located in Fayuom Governorate (N29 19 59.988 E30 10 59.988) in the Western Desert of Egypt, contains invaluable fossil remains of the earliest and now extinct, suborder of whales archaeoceti. These fossils represent one of the major stories of evolution: the emergence of the whale as an ocean-going mammal from a previous life as a land-based animal. This is the most important site in the world for the demonstration of this stage of evolution. It displays clearly the form and life of these whales during their movements[16].

In Wadi Al-Hitan the number of fossils, its concentration and quality is rare, moreover its accessibility and setting in an attractive locations and protected landscape. The fossils of Wadi Al-Hitan show the youngest archaeocetes in the last stages of losing their hind limbs. The suitable environmental and ecological conditions can be reconstructed according to the fossil material in the site[17].

Moreover, the fossils are found within a horizontally rock succession of marine sandstones, shale's, marls and limestone's, often associated with evaporate minerals. The rocks are very extensively displayed in the natural exposures in the desert land and in that series displays ranging from small escarpments to large. In addition, to the fossil whales, the unique area involves a range of other fossil values and other geological proof enabling a robustpaleo geography and palaeo environmental reconstruction of the area through Eocene times to bemade .

Abed and Attia state that Declaration of this Protected Area attracted visitors and facilitated excursions into it ssurrounding areas of interest. While increasing the numbers of visitors to the protected area was welcome, their pressure on the Wadi Al-Hitan is seen as dangerous threat to the fragile fossils. Therefore, it was agreed that the Wadi Al-Hitan should be as a part of Wadi Al-Rayan Protected Area (WRPA) and this was done and that it needs special management measures within the management plan of WRPA.

Sustainable management in Wadi Al-Hitan protector at: UNESCO Region[17] remembers that the WRPA enjoys the highest number of visitors of any Egyptian protected area outside the South Sinai. Some 150,000 people visit it each year; the majority of them are Egyptians. Demand for the WRPA as a recreational destination expected to be continued to rise.

In 1998 the Egyptian and Italian Governments, respectively through the Environmental Affairs Agency (EEAA) and the General Directorate for Development Cooperation have established a conservation and development project to support the Wadi el Rayan Protected Area. In addition Abed and Attia state that this advisory participation is by providing technical support according to the international accredited guidelines and strategies related to the sustainable management of protected areas. Moreover, this participation involves concentratingon the biodiversity conservation and sustainable economic production also contributing to the WRPA development as a prime recreational and educational area.

The sustainable management plan for the WRPA was applied to Wadi Al-Hitan by restricting visitors to the site to guided tours along a specific trail and controlling or preventing many activities. These include the destruction of geological formations, discharging pollutants, hunting and littering. The Wadi Al-Hitan site is patrolled daily to catch illegal visitors or activities and monitors the condition of the fossils twice a week, photographing them and when necessary repairing damage. To ward off intruders, staffs from neighboring tribes and local people are to be trained as guards and tourist guides to participate the area's management. The plan also proposes motorcycle patrols and camel supply transport. Site a field outpost to protect excavated caves from the extreme conditions. Projects include an open-air museum, two camping sites, camel tours and a Bedouin-style Eco lodge supplied by private Eco tourist companies, additionally providing a sustainable source of funds will be sought.

The exposed skeletons are fragile and vulnerable which makes it imperative that it should be preserved. The exposed skeletons and fresh fossils to wind erosion and burying by wind-carried sand also they are in dangerous from collectors who steal bones and fossil wood to sell it as souvenirs, the increasing of tourism and number of visitors will need permanent control and monitoring: the damage in these areas always done by intruders over the skeletons and fossils driven by distinguished Foreigners. A minimum number of tracks is scarred the wild unique landscape. Moreover, there is a long-term general threat to the Wadi El-Rayan area is the drying up of the artificial lakes by evaporation.

Ministry of State for Environmental Affairs[18] mentions that the protected area programs were listed depending on planning, management and monitoring Wadi El-Hitan development in accordance with the three main objectives of the WRPA management plan as follows: natural resource management, human and economic activities management, public awareness and environmental education.

The keys of planning and sustainable management in Wadi Al-Hitan depending on the following: updating the management plan, achieving the effectiveness in evaluation system to specify the threats and deciding the latest trends in biodiversity conservation assuring the patrolling and law enforcement system and managing human and financial resources[18].

For achieving sustainable management in Wadi Al-Hitan "monitoring" is an essential tool. A comprehensive monitoring system was established with the Italian project support in 2001which currently include (fossils keeping and protecting, controlling the illegal access of the vehicle tours to the valley that can adversely affect the fossil remains, vegetation, large mammals, birds, fish, water quality, paleontology, number of visitors and carrying capacity limitations) also it involves preventing of any illegal discharging of different pollution sources [19].

The sustainable management of Wadi Al-Hitan includes the development of this protected area as a national and international natural world heritagesite, the development involves the visitor facilities such WCs, Coffee shops, shade structures, information panels, guides, roads and trails with other infrastructure in a sustainable methods and through the high level control of the licensed activities[20].

Ministry of State for Environmental Affairs[18] state also that the program developed for sustainable management dealing with Wadi Al-Hitanas an eco-tourism site by improving eco-tourism facilities, develop new services and its promotion strategy, new signposting of natural materials, new areas for bird watching activity, new camping sites. This program is developed coordinated with Fayoum Tourism Authority and Fayoum Eco-tourism project.

In addition, one of the main fundamentals of sustainable management in Wadi Al-Hitan is public awareness and environmental education; improving the visitors experience need the public support in resources protection also the community stakeholders play a vital role in public awareness[20] .

Emerton *et al*.[21] adds that the sustainable management program of Wadi Al-Hitan has two main funding sources: a budget from the Egyptian government and international donors such Italian Environmental Cooperation Program.

Chances and opportunities for the tourism market management: Make better use of existing material: Develop an information distribution plan for e WRPA

(even if limited) the Governorate information material and train park staff and Tourism Authority staff on basic information management, communication and presentation strategies on the implementation plan.

Train Governorate key employees from different departments on tourism management and marketing and facilitate the development of an integrated marketing strategy that involves also private sector stakeholders.

Develop ecotourism attraction inventories in a systematic and categorized way, identifying focal, complementary and support attractions. These inventories should be the basis for promotional and marketing efforts.

Hire specialists that identify important visitor target groups and develop custom target brochures and other information material who should professionalize the existing Governorate website and link it up with other existing websites on Fayoum.

Develop and distribute best practices and information material for visitors, hotel owners and tour operators. Train and assign a market researcher that provides key stakeholders with information on existing markets on tourism related fairs and with general relevant information on the visited sites and on Fayoum. Institutionalize and participate in relevant tourism fairs.

Take the interest and operational process of the private sector into account when developing and implementing a market strategy. Marketing should emphasize environmentally sound and socio-culturally equitable behavior on the part of the tourists and the tourism industry in general. After studying many scientific researches and analyzing the latest official reports of Wadi Al-Hitan resources, its management and development programs, the following conclusions and recommendations could be proposed as follows:

CONCLUSION

Natural heritage is an important part of a society's heritage, encompassing the countryside and natural environment including flora and fauna. These kinds of heritage sites often serve as an important component in a country's tourist industry, attracting many visitors from abroad as well as locally. The WRPA is one of the most remarkable components of the world's natural heritage list which attracts tourists and scientists as well. The Egyptian government is highly concerned about achieving the Sustainable Development Goals (SDGs) and they are included in the framework of the Egyptian new national strategy: "Sustainable Development Strategy: Egypt Vision 2030" (SDS)

The management of sustainable tourism in a World Heritage site is an issue of universal relevance, due to the importance of its preservation for future generations. We also have to consider that in each site tourism can have a different meaning. Well-managed tourism can help local people to value authenticity and promote what is distinctive about their place; it can also be an important vehicle for promoting cultural exchange and for preserving traditional local businesses. It is important to recognize that the uniqueness of World Natural Heritage sites and their relationship to creative industries is part of the most relevant tourist attraction in these historic sites. The WRPA project was funded by the Italian-Egyptian Environmental Program in the first phase (March, 1998-February, 2001) . The management strategy is being achieved through using the following management tools; environmental regulations and law enforcement, communication, documenting, monitoring and research. The management issues of WRPA are the variety of authorities that operate inside WRPA including the Ministry of Agriculture and Land Reclamation, Ministry of Petroleum, Ministry of Irrigation, Ministry of Tourism, Ministry of Defense and Ministry of Interior. It is also a major site of economic development and a popular site of attraction for local and foreign visitors.

The natural resources of the protected area are under threat from the economic and human activities within WRPA but sound management practices; law enforcement (in collaboration with stakeholders) and monitoring can ensure the sustainable use of the natural resources.

The public use inside the area has been identified to include eco-tourism activities, human economic activities and human settlement. The development of the public awareness program in WRPA is a main and important component of the management plan of the protected area.

RECOMMENDATIONS

It is essential to re-establish the baseline conditions by resuming the fossil monitoring program to further discover more fossils. There is a need for more specifying of priorities and indicators related to the fossils such: deciding fossil locations, determining suitable measures for fossil degradation and the suitable carrying capacity for visitors.

Police powers should be increased to provide effective management for this high value resource and to reduce threats that may damage the protected area.

For visitor area, it is necessary to improve the management plan to specify recreational objectives and associated actions to be more attractive and to enhance the funds for the protected area. There is a need for more focusing on the staff (human resource) activity on priority actions as a main part of sustainable management in Wadi Al-Hitan.

The awareness, education and communications program for local communities should be enhanced inside WRPA generally and Wadi Al-Hitan particularly to direct the communities toward the proper behavior.

More studies should be developed about community socio-economic profiles to assist in planning, managing and implementing sustainable programs such employment opportunities for locals, etc. The establishment of Wadi El-Hitan as a World Heritage Site is equal to opening a new protected area, so, sustainable financing is urgently needed and diversify the sources of funding. Generally, the management plan should to be constantly reviewed and coordinated with different programs to address the future strategy and to ensure the sustainability management for Wadi El-Hitan.

REFERENCES

01. Holmberg, J., 1992. Making Development Sustainable: Redefining Institutions, Policy and Economics. Island Press, Washington, California, Pages: 236.
02. Reed, D., 1997. Structural adjustment, the environment and sustainable development: Executive summary. WWF International, Macroeconomics for Sustainable Development Program Office (DFO), Washington, DC., USA.
03. Ospina, G.L., 2000. Education for sustainable development: A local and international challenge. Prospects, 30: 31-40.
04. PCE., 2004. See change: Learning and education for sustainability. Parliamentary Commissioner for the Environment, Wellington, New Zealand.
05. World Commission on Environment and Development, 1987. Our Common Future. Oxford University Press, Oxford, England, UK.,.
06. ZhaoPing, Y., X. Zhang, D. Feng, W. Geoffrey, L. XinYu and S. Rui, 2010. Natural heritage values and comparative analyses of Kanas, China. J. Arid Land, 2: 197-206.
07. Knoepfel, P. and S. Nahrath, 2005. Sustainable Management of Natural Resources: From Traditional Environmental Protection Policies Towards Institutional Natural Resource Regimes (INRR). IDHEAP, Switzerland,.
08. Figgis, P. and R. Bushell, 2007. Tourism as a Tool for Community-based Conservation and Development. CABI Publisher, Cambridge, Massachusetts,.
09. Borges, M., G. Carbone, R. Bushell and T. Jaeger, 2011. Sustainable tourism and natural world heritage, priorities for action. International Union for Conservation of Nature, Switzerland.
10. Amara, D.F., 2017. Responsible marketing for tourism destinations: Saint Catherine protectorate, South Sinai, Egypt. J. Bus. Retail Manage. Res., 11: 184-191.
11. Anonymous, 2018. Ministry of planning, monitoring and administrative reform. Egypt's Voluntary National Review, United Nations Resident Coordinator Office, UK.
12. Khalil, M.T., 2013. Environmental management of Burullus protectorate (Egypt) with special reference to fisheries. Int. J. Env. Sci. Eng., 4: 93-104.
13. Fouda, M., 2006. Protected areas of Egypt: Towards the future , published by: Nature conservation sector. Ministry of State for Environmental Affairs, Egyptian Environmental Affairs Agency, Egypt.
14. Aboulnaga, M., N. Makhlouf, S. Emad and M. Farid, 2012. Egypt reports recommended national sustainable urban and energy savings actions for Egypt: Donors and financial initiatives for Egypt. Hulla & Co Human Dynamics, Vienna, Austria.
15. El-Bedewy, F. and S. Dahroug, 2001. Geology and palaeontology in Wadi El-Rayan gateway to the Western desert. Egyptian Italian Environmental Cooperation, Egypt.
16. King, C., C.J. Underwood and E. Steurbaut, 2014. Eocene stratigraphy of the Wadi Al-Hitan world heritage site and adjacent areas (Fayum, Egypt). Stratigraphy, 11: 185-235.
17. UNESCO Region, 2005. World heritage scanned nomination. Wadi Al-Hitan (Whale valley) World Heritage Committee, UNESCO, London, UK.
18. Ministry of State for Environmental Affairs, 2007. Wadi Al-Rayan protected area, nature conservation sector. Ministry of State for Environmental Affairs, Cairo, Egypt.
19. Gallindo, J., 2007. Alternative business plan model. Egyptian Italian Environmental Cooperation Program, Egyptian Italian Environmental Cooperation, Egypt.
20. Paleczny, D., A. Khalid and M. Talaat, 2007. The state of Wadi El-Rayan protected area and valley of the whales world heritage site an evaluation of management effectiveness. Egyptian Environmental Affairs Agency, Cairo, Egypt.
21. Emerton, L., J. Bishop and L. Thomas, 2006. Sustainable financing of protected areas: A global review of challenges and options. International Union for Conservation of Nature, UK.