
THE ROLE OF ISO14001 IN IMPROVING THE ENVIRONMENTAL PERFORMANCE TO ACHIEVE SUSTAINABLE TOURISM DEVELOPMENT IN EGYPT

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ABSTRACT

The need to preserve the world's inherent assets for future generation is becoming a principle goal, not only for tourism but also, for all other industries that used the earth's natural resources. However, tourism, as one of the world's fastest growing industries, has a multitude of impacts, positive and negative, on the environment. Environmental degradation and natural resources depletion associated with tourism activities have sometimes serious problems in natural areas. The management of natural resources and protected area are thus one of the most difficult challenges for governments at different levels.

On the other hand, applications of the principles of sustainability are essential keys especially for the, protected areas include inhabited lands where the tourists go to enjoy the beauty and services available. If not carefully managed, these human activities can have a negative impact on the state

of health of, plant, ecosystems and animal species. And thus, protected areas are the ideal places to apply the principles of ISO14001. This paper provides a framework for applying ISO 14001 on protected areas and discusses the results of a practical case study in “Saluga and Ghazal “protected area wherein ISO 14001 was used as a benchmark for evaluating and improving the management plan. The results indicate that the some requirements of an ISO 14001 had not been incorporated into the management plan for the “Saluga and Ghazal “protected area, many of these needed improvements in order fully meet theISO14001 standard.

Key words: Tourism, Protected areas, Sustainability, ISO14001 standard.

1 INTRODUCTION

Tourism is one of the fastest-growing and biggest sectors of the global economy and has significant economic, social, cultural and environmental effects, both positive and negative (Narendar and Brahmaiah, 2015, p.296). For example, the positive effects of tourism on a country’s economy include the development and growth of various industries directly linked to the tourism industry, such as accommodation, transportation, entertainment and arts (Bethapudi, 2015,p.262).While tourism provides considerable economic benefits for many regions, communities and countries, its rapid expansion can also be responsible for adverse environmental (and socio-cultural) impacts (Yazdi, 2012,p:50).

On the other hand, tourism affects the environment of an area either directly or indirectly. Both tourism and environment have a very complex and interdependent relationship (Thullen,1996).It involves many activities that can have adverse environmental effects. Currently, the quality of the environment, both natural and man-made, is essential to tourism, nevertheless, if unplanned and unregulated, tourism can be extremely harmful to the environment(GhulamRabbany et al., 2013,p.117).Furthermore, there is no single “recipe” for achieving sustainable development, the methods and actions are many to be followed, and these methods can contribute to stimulating awareness and understanding of new ways of dealing with production activities and processes so as to reduce to minimum negative environmental transformations: these include the use of the ISO 14001(Naviglio,2001,p.1). Meanwhile, ISO 14001 certification is a powerful tool for producers wishing to enhance the environmental performance and demonstrate sound environmental performance and sustainability.

Application of the principles of sustainability is important in any type of region. Moreover, it is important when environmental assets are especially significant. This is the case with protected natural areas such as reserves, oases, national parks and regional parks (Naviglio,2001,p.1).Therefore, protected areas are established so as to protect and safeguard

especially significant natural, and cultural and historical assets (Secretariat of the Convention on Biological Diversity, 2008). For the most part,

Protected areas in Egypt have suffered from many shapes of deterioration and phenomena that threaten its safety. Yet, at the same time, it can represent major problems due to the increased numbers of visitors. Additionally, the environmental legislation and environmental management have not fully tackled the issue of conservation of protected areas. (Mozammel, 2015). Therefore, it is important to find tools and standards for managing protected areas especially international standards integrated with the management of all protected areas such as ISO 14001. This will ensure that there is a continuous and regular system for improving protected areas management and the overall protection of protected areas environment. The ISO 14001 standard in protected areas is as a generic management system standard, this standard includes a collection of items and requirements. Moreover, the application of the ISO 14001 standard in protected areas can provide a flexible and adaptive management system which can be integrated with existing practices as a standardized quality management process designed for the continuous improvement of protected areas management (Thompson et al., 2008).

This study will be an attempt to shed light on the concept of ISO 14001 on the protected areas to study its benefits. Furthermore, it will focus on the requirements of the ISO 14001 standard for implementing in protected area.

2 METHODOLOGY

The research aims to focus on the application and requirements of the ISO 14001 on the protected areas. The theoretical part reviews the benefits of ISO 14001 standards in protected areas and understanding its requirements to improve environmental performance in these areas. The practical study follows the descriptive analytical method as a strategy. The descriptive analytical method is used to obtain information concerning the current status of the phenomena and to describe "what exists" with respect to variables or conditions in a situation. There are three main types of descriptive methods: observational methods, case-study methods and survey methods (Jackson, 2009, p. 89). This research will use the observational and survey methods (interviews).

This paper focused on "Saluga and Ghazal" protected area as study area. "Saluga and Ghazal" Protected Area, two small islands in the Nile at Aswan, support a luxuriant natural vegetation cover including some of the only remnants of natural Nilotic vegetation existing in the Nile Valley before cultivation by man. The Protected Area plays an important role in preserving an

exceptionally beautiful natural landscape of the Nile River at Aswan, which has long been one of the city's primary tourist attractions (Egyptian Environmental Affairs Agency, 2006).

The researcher depended on secondary data sources such as books, reports, journals and case studies, in addition to field visits and interviews held with the manager and employees of "Saluga and Ghazal" Protected Area and the Egyptian Environmental Affairs Agency. The questions in the interviews have been characterized as specific and divided into five axes to cover the ISO14001 requirements, so as to get the most amount of information about the current status of the "Saluga and Ghazal" protected area for all the responsible parties in order to determine the availability of ISO14001 requirements in the reserve.

3 STUDY AREA

3.1 Saluga and Ghazal Protected Area

Cataract Island (Saluga and Ghazal) is a very small protectorate (0.5 km^2) located 3 Km north Aswan Dam on the southern edge of the city of Aswan. It was declared by the decision of prime minister no 928 in 1986. (Haseb et al., 2004).

The beauty of this protectorate lies between its landscape and location in the middle of the Nile at Aswan. In spite of, the small area of this protectorate it contains incredible vegetation; the recorded flora is 120 species. In addition, to 135 species of birds were recorded; they vary between resident migrants and visitors. All of that makes "Saluga and Ghazal" Protected Area one of the most important regions in Egypt for bird monitoring, and the dense vegetation made diversity for reptiles and insects, like bean sink, Egyptian gecko, Nubian spitting cobra, many species of butterflies and dragonflies (Egyptian Environmental Affairs Agency, undated).

3.2 Reasons for choosing "Saluga and Ghazal protected area

In the beginning, the city of Aswan was selected because it contains many elements of the natural and human attractions. In spite of, this diversity of tourist attractions, it suffers from the unilateral of the tourism product, that more than 98% of the total tourist arrivals to Aswan in order to visit monuments and entertainment.

Aswan city contains a lot of the stunning landscapes that can be exploited for the development of Ecotourism through the development of protected areas, such as the protected areas of "Wadi El

Alaqi” and “Saluga and Ghazal” and hence, this protected area was chosen as one of the most important natural tourist reserves in Aswan.

ISO 14001 specification clause	Status
1.Environmental policy	Does not meet
2.Planning	
A. Environmental aspects	Needs improvement
B. Legal and other requirements	Needs improvement
C. Objectives and targets	Meet
3.Implementation and operation:	
A. Resources, roles, responsibilities	Needs improvements
B. Competence, training	Does not meet
C. Communication	Needs improvements
D. Documentation	Does not meet
E. Emergency preparedness and response	Does not meet
4.Checking and corrective action :	
4.5.1 Monitoring and measurement	Needs improvements
4.5.2 Control of records	Needs improvements
5. Management review	Needs improvement

Table 1. The gap analysis of ISO14001 requirements where the current proposed management system

The importance of "Saluga and Ghazal" shows through the elements of tourist attractions, that it contains unique environmental diversity along the Nile River and for this it is called the "golden egg". It has many types of plants and natural trees, which represents the remainder of the plants of Nile Valley. It is also a destination for many rare birds which are qualified it to be a popular destination,

Develop new tourism destinations such as "Saluga and Ghazal" protected area to become one of the new potential tourist sites especially for the environmental tourism.

for the "Saluga and Ghazal" Protected area .Based on our findings the researcher recommend that Saluga and Ghazal Protected area should design strategy for the Implementation of ISO 14001 standard in Saluga and Ghzal protected area ,In order to set strategy it must first :

- ❖ Evaluation of "Saluga and Ghazal protected area current situation
- ❖ Determine the target situation
- ❖ Plan

A- Evaluation of "Saluga and Ghazal protected area current situation

The evaluation of "Saluga and Ghazal" Protected area depends on analyzing the strengths and weaknesses of the protected area and, it was reached to the following by SWOT analysis depends on the clarification of the strengths points that "Saluga and Ghazal" reserve had it and the weaknesses points which stand in front of Saluga and Ghazal" reserve. in addition to the threats that facing the reserve,and all of that should be controlled through improving ,developing,and applying the ISO14001standard in the reserve.

The following **table 2**. Addresses the internal environment analysis (strengths and weaknesses) and the external environment analysis (opportunities and challenges).

Table 2. SWOT analysis of " Saluga and Ghazal "Protected Area

Internal environmental Analysis	Strengths	Weaknesses
	<ul style="list-style-type: none"> - Uniqueness location where is a path for birds in addition to its proximity to the city - Good soil and structure of rocks that it is working as a windbreak, to protect the soil and the island from the erosion process. - Rare plants: the islands contain five different kinds of acacia species - The linking between the adjacent islands in the winter: in this time the level of the water is reduced and the two islands are connected with the other adjacent islands, which facilitate the transfer process between them and exchange of the environmental resources such as plants and animals. - The availability of the natural conditions on" Saluga and Ghazal" island and the declaration as a nature reserve by the decision of prime minister without the rest of the other Nile River Islands. 	<ul style="list-style-type: none"> - The movement of boats and launches in the Nile which is threatens the security of the reserve and that because of its location at the mouth of the Nile River. - The topography of reserve: where it is difficult to control in terms of high , low , rocky lands , water and soil that expose the reserve to erosion in some of its parts. - The small space between the two islands (Saluja and Ghazal), which sometimes works to ease the transfer of dangers such as: fires. - The shortages in some specialties and scientific staff such as graduates of Faculties of agriculture and science - The monthly reports that are requested each month are routine and it doesn't add anything. ❖ The lack of facilities and services andlack of availability of the publications, pictures and Statistics about protected area

External environmental
Analysis

Opportunities	Threats
<ul style="list-style-type: none"> - The desire of schools and universities to visit and learn about the protected area and its activities. - The reserve opportunities in the field of eco-tourism. - Investment opportunities: the idea to set up a crocodile farm and planting medicinal plants. - The protected area a good source of plant and animal diversity . 	<ul style="list-style-type: none"> - Slow decision-making by the Egyptian Environmental Affairs Agency in terms of providing basic needs and services to the reserve. - The lack of interest by state bodies about the declared protected area in Aswan. - The large number of encroachments by local residents on the lands and plants of the “Saluga and Ghazal” protected area. - There are some hotels near by the protected area such as:”Isis and Basma” hotels and that may bring some problems as,the fire, which flared up on the” Basma” hotel.

A- Target situation

1- Development of the environmental policy

- Development of the policy requires that the top management of “Saluga and Ghazal” takes critical decisions on what the protected area aims to achieve, The ISO14001 standard requires the development of the policy is to be suitable for the nature, scale and environmental impacts of the “Saluga and Ghazal “ protected area’s activities, and services.

The standard also requires the policy to make three commitments :(a) Compliance with all applicable legal requirements, and with other requirements which “ Saluga and Ghazal “protected area subscribes relating to its environmental aspects. b) Prevention of pollution. c) Continual improvement.

- To be effective, the policy of Saluga and Ghazal must be communicated with employees , official bodies , local peoples

2- For the Planning

A- Determine the environmental aspects

- Before “saluga and Ghazal “protected area can manage its environmental issues, it needs to identify how protected area interacts with the environment. The identification of environmental aspects is best done in a systematic way designed to capture all actual and potential impacts.
- Environmental aspects must include those that currently interact with the environment of Saluga and Ghazal , and those that have potential to interact with the environment.
- The results of this process to identify, analyze and evaluate environmental aspects are used to establish environmental objectives and targets.

B-Activate legal and other requirements

- In general, protected areas are usually subject to a number of environmental legal requirements through legislation, regulations, permits, and licenses.
- The ISO14001 standard on “Saluga and Ghazal” protected area requires to identify and activate the legal , regulations and other requirements applicable to its environmental aspects.

C-Objectives and targets

- Saluga and Ghazal protected area should determine environmental objectives and targets, and those must be consistent with the framework for setting and reviewing, and commitments to the prevention of pollution, compliance with legal and other requirements and continual improvement in the environmental policy.
- When setting objectives and targets, “Saluga and Ghazal “ protected area must

consider its legal and other requirements, its significant environmental aspects, its technological options, its financial, operational and the views of interested parties.

3-Implementation

A- Development of the resources, and services

- Lack of services and facilities on “Saluga and Ghazal” are considered one of the most important obstacles are facing the application of ISO14001 in Saluga and Ghazal “ protected ,there for”Saluga and Ghazal” should provide sufficient resources ,services typically include: the development of sewage systems s, W.C, ambulance station, design and publish the signs , development the Center for tourists and other services .

B-Activating the training

- The training component is considered on of the most important element of the ISO14001 requirements, particularly the application of the standard depends on the availability of trained workers and employees should have an environmental awareness Through field study, “Saluga and Ghazal is lacking on the training component . Therefore Saluja protected and Ghazal should activate the training component so that these item is not confined only on the training of fire fighting course , but also should include

C-Enhancing the communication process

- Saluga and Ghazal must communicate with different parties such as (employees and external local communities ,stake holders , official bodies .

D- Emergency preparedness and response

- Saluga and Ghzal protected area should identify potential emergency situations and potential crisis that can have environmental impact and determine how it will respond to them. From the field study ,it was found that one of the biggest problems and potential crises is the fire crisis .

4-Checking and Management review

- It is an opportunity for top management of “Saluga and Ghazal” to monitor , take a holistic and strategic look at the continuing suitability, adequacy and effectiveness of the environmental management system, and approve actions to improve the system, thereby reducing exposure to environmental risk and improving the environmental performance of “saluga and Ghazal protected area .

B. plan

Aim	Implementers	Description
1- Development of the environmental policy		
	The manager of “Saluga and Ghazal” and environmental researchers	
2- Planning		
Environmental aspects	The manager of “Saluga and Ghazal” and environmental researchers	<p>The Environmental aspects typically involves: Systematic identification of all activities undertaken in “Saluga and Ghazal “ protected areas, and all services provided. Identification of the environmental impacts associated with the environmental aspects. Analysis of the risks to determine risk levels. Evaluation of the risks to determine which environmental aspects and impacts are significant risks to “Saluga and Ghazal” protected area</p>
B- Legal aspects	The manager of saluga and Ghazal and EEAA	<p>Determine the legislations and instructions of saluga and Ghazal</p> <p>Activating the laws and legislation and draw up minutes for Violators</p> <p>Provide rangers to ensure that there are no Contraventions</p>

		Documentation and preparation of reports of the legal aspects .
c- Objectives and targets	The manager of “Saluga and Ghazal” and environmental researchers	Determine and improve the objectives and goals by making them more specific and quantitative Establish a program or multiple programs for achieving environmental objectives and targets. Such programs are also commonly known as environmental management plans, environmental improvement programs and environmental management programs. Programs must include a designation of responsibility for achieving the objectives and targets as well as means and timeframes.
3- Implementation		
Development of the resources, and services	THE EEAA and manager of “Saluga and Ghazal”	Should provide a financial resources to develop the infrastructure and other services The development of networks of sewage Banners - Maps – Publications should provide . Ambulance services - visitor center
Activating the training component	Manager of “Saluga and Ghazal”	Provide different training course to cover all the aspects such as First Aid Courses, Field skills (map reading, GPS...etc) ,English language courses , Computer (office) ,Monitoring Landscape management (for geologists) , Surveying and Sampling and EIA. Create a process to identify ongoing training needs for the reserve’s management staff.
Communication	Manger and EEAA	Once the communities are identified, the management of “saluga and Ghazal “should determine what is needed to communicate to them. (What do they need to know about protected areas, operations or management efforts? What are their concerns?) Next, the management should decide how to reach to the different parities to participate in the developing process. Held seminars and meetings with the employees, local

		peoples , stakeholders, official bodies in order to participate .
G) Documentation	Manger and employees	The management of “Saluga and Ghazal” must stipulate a minimum list of documentation and records to be included in ISO14001 management system such as : Create an electronic database and associated GIS (with backup) for the deposition of the reserve’s environmental records Documentation of objectives and targets Records of the number of visits Maps and regular monitoring reports
F) Emergency preparedness and response	The manager of “Saluga and Ghazal” and environmental researchers	For effective emergency preparedness and response, protected area may already conduct the following tasks that are required by the international standard (ISO14001): Identify potential (environmental) impacts from all possible emergencies and accidents. Devise controls to prevent emergencies and accidents. Develop responses to emergencies and accidents that can still happen despite the implementation of controls. Prepare and distribute an emergency preparedness and response plan. Train employees in emergency response, especially those people with key roles. Review and, as appropriate, revise the emergency preparedness and response plan after each test and each actual emergency and accident
Checking and management review		
	Manager of “Saluga and Ghazal” and EEAA	Clearly state how and how often the protected area’s management system will be reviewed, revised, and updated. thus there some, questions the top management of saluga and Ghazal protected area should ask it , such as: Did “saluga and Ghazal protected area achieve its objectives and targets? If not, why not? Should the

		<p>management modify these objectives? Is "Saluga and Ghazal "environmental policy still relevant to what we do? Are roles and responsibilities clear, do they make sense and are they communicated effectively? Are we applying resources appropriately? Are the saluga and Ghazal procedures clear and adequate? Do we need other controls? Are the management of "saluga and Ghazal " fixing problems when we find them? Are the management monitoring its EMS (e.g., via system audits)? Do changes in laws or regulations require the management to change some of its approaches? What other changes are coming in the near term? What local community concerns have been raised since the management last review? How are concerns being addressed? Is there a better way? What can the management do to improve?</p>
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5 RECOMMENDATIONS

1. For the management of protected area

- The study recommends that protected area management should take the subject of ISO 14001 certification in a serious way, to achieve its benefits.
- The protected area management must ensure that the employees have knowledge about ISO14001 systems
- Increase the number of employees and environmental staff within the protected area in order to monitor any environmental changes and conserve the protected area.
- Activate the training programs for the employees and guards.
- The reports, maps, documents and information should be updated.
- The need to raise the level of services and facilities in the reserve for keeping and maintenance it
- Encourage the idea of a local environmental guide in order to publish the environmental awareness in the community.

2. For the governmental bodies

- The EEAA and official bodies whose role are to oversee the management of protected areas should hold seminars for employees of protected area to provide them with information about the ISO 14001 and its benefits .
- The need for coordination between the Egyptian Environmental Affairs and the various parties which are related to the protected area, (travel agencies - tour operators - tourism companies - the official tourist bodies) .
- Egyptian Environmental Affairs should establish a competent party which called “ ISO 14001 committee “and the role of this committee is for supervising the effectiveness of applying ISO 14001 requirements and thus continuing to work on the review and examination of the environmental performance of protected area
- Design logos for protected areas which intended to implement ISO 14001 system in their protected areas and the media vehicles should announce about those reserves to encourage them.
- Increasing financial resources so that the protected area will be able to make a progress .
- The international cooperation, especially ask help from international experts, who have been applied the ISO 14001 system in their protected areas .

3. For the local community

- Raising the level of environmental awareness of the local community to protect the natural reserve
- Environmental education activities must be offered and promote the aims of the ISO14001 certification by:
 - Increasing the awareness of, and care for, the local environment by recreational users and residents.
 - Training personnel and tourist service providers in environmental matters and best practice methods.
 - Promoting sustainable recreation and tourism in the area.

6 CONCLUSION

The use of ISO 14001 in protected area management could be a tool in a new internationally recognized standard for protected area management, which is certifiable and.auditable. Adopting this ISO standard will provide a global benchmark for protected area management that can be utilized for identifying weaknesses in the management systems of protected area

around the world. As case study of “Saluga and Ghazal “revealed, implementing an ISO 14001 requires, at a minimum, that a management and organizational structure be in place. It would be interesting to apply the EMS Gap Analysis to a well-established protected area to determine if it can be readily certified to the ISO 14001 standard.

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