NATURAL AND CULTURAL HERITAGE: What opportunities from tourism?

Tourism and protected areas: a symbiotic relationship

Steve McCool

(Presented by Ameer Abdulla)

IUCN World Commission on Protected Areas

Abstract

Tourism and protected areas often take on a symbiotic relationship. Protected areas provide values, settings and resources attractive to visitors from other places; they serve as settings to appreciate and learn, to have adventure and experience challenge and to enjoy other’s company in beautiful natural environments. By so doing, protected areas generate revenue for the tourism industry, through visitor expenditures for accommodation, food, guides, transportation, arts and crafts and so on. In addition, through the use of entrance and user fees and taxes, tourism often generates revenue that is used to sustain the operating expenses for a protected area. For example, in the Saba Marine Park, surrounding the island of Saba in the Netherlands Antilles, fees for recreational diving support 50% of the annual operating budget for the park. Through careful management of visitors and tourism development, based on the values for which the area was gazetted, tourism thus promises to be an important partner for sustaining values contained within protected areas, and for providing local residents with a viable source of income.

Biography

Steve McCool is Professor, Wildland Recreation Management, Department of Society and Conservation. He joined the faculty of the School of Forestry in 1977, after serving on the faculty of the University of Wisconsin-River Falls and Utah State University. He has held special assignment positions with the USDA Forest Service Northern Region office, the Supervisor's Office of the Flathead National Forest, and the Interior Columbia Basin Ecosystem Management Project. From 1987 to 1993 he served as the first Director of the University of Montana Institute for Tourism and Recreation Research. From 1995 to 1999 he also served as the Coordinator of the Recreation Management Program at the University of Montana.

In 2001, he completed an edited volume (with Neil Moisey of the University of Montana) titled "Tourism, Recreation and Sustainability: Linking Culture and the Environment" published by CAB International. This 18 chapter book explores analytical frameworks, issues of sustainability and provides examples of sustainable tourism projects around the globe. With Paul Eagles of the University of Waterloo, he wrote the textbook "Tourism in National Parks: Planning and Management", published by CAB International in 2004. Also, he is co-author of the IUCN Best Practice Guidelines "Sustainable Tourism in Protected Areas: Planning and Management". This popular book was originally published in 2002, and has been translated into Spanish, Japanese, Chinese and Russian.

Steve sits on the WCPA Tourism and Protected Areas Task Force and is a frequent contributor to research and strategic planning in this area. In 2004, Steve served as a visiting scholar at the University
of KwaZulu-Natal in the Republic of South Africa teaching a special course in integrated protected area management.

In 2005, Dr. McCool was recognized by the USDA Forest Service with the "Excellence in Wilderness Stewardship Research" award. The Wild Foundation and editors of the International Journal of Wilderness also recognized him in 2005 for lifetime achievements in wilderness research. The University of Idaho awarded Steve with the "Celebrate Natural Resources" Award for his work in integrated natural resource planning and research in April of 2006.

Dr. McCool is an active wilderness and backcountry user, and accepts assignments dealing with protected area management in various areas of the world.
Protected Areas and Tourism: A Symbiotic Relationship

Stephen McCool
The University of Montana, Missoula, Montana
IUCN WCPA Tourism and Protected Areas Task Force

Tourism and Protected Areas

• Much of tourism is dependent on natural environment
• Tourists are attracted to areas of high biodiversity
• Marine settings facilitate unique experiences

Goals

• Describe relationship between tourism and protected areas
• Outline ways protected areas can enhance tourism
• Suggest different ways private sector can become involved

Ways Protected Areas Can Enhance Tourism

• Provide unique and different experiences
• Complement onshore settings
• Enhance learning – a major motivation
• Encourage sustainable business

Types of Effects in the Private Sector

• Direct – from initial tourist spending
• Indirect – from spending of tourism firms
• Induced – from employee spending

Private Sector Involvement

• Protected area usually state managed
• Services needed by tourists provided by private sector
• Revenues may assist in funding management

أهداف

• شرح العلاقة بين السياحة و المناطق المحمية
• تحديد الطرق للمناطق المحمية التي تزود السياحة.
• إقراح مختلف طرق القطاعات الخاصة التي يمكن أن تضمن لها.

الطريقة التي من خلالها يمكن لوحدها تعزيز السياحة

• تزويد خبرات متنوعة و فريدة.
• تكلفة لإعادة الشاشة.
• تعزيز التعليم – دافع رئيسي.
• تشجيع التجارة المستمرة.

أنواع التأثيرات على القطاعات الخاصة

• مباشر – من الدخل السياحي المباشر.
• غير مباشر – من دخل الشركات السياحية.
• المسكنة – من دخل الموظفين.
The Tourism – Protected Area System

Basic Principles

- Conservation remains the core
- Tourism values contingent on core conservation mission
- Tourism and visitors must be managed
- Focus on identifying what experience to provide

Economic Impacts

- The sum of direct spending plus indirect and induced effects
- Thus, for every Euro spent by tourists, another Euro in effects occurs

Tourism and Visitor Management Tools

- Education
- Interpretation
- Site limiting
- Rules and regulations
- Dispersing and concentrating use
- Limiting use
- Managing development

Lessons Learned

- Integrate tourism with protected area
- Connect land and marine environments
- Engage tourism industry as supporters
- Consider tourism niche
- Use tourism to generate revenues

- Thank you
- And thanks to Adnan Al-Mesabhi for translation services

شكرا جزيلا لكم.
شكر خاص للأخ عبد المصبحي لقيمة الترجمة.
Saba Marine Park

Saba Marine Park Management Plan Principles

- Recreational activities and fishing in the Park are dependent on maintenance of pristine conditions, yet provide substantial monetary and social benefits to participants, the local community and the Park administration.

Example

- Direct
  - Dive shops and dive masters
  - Dive fees
- Indirect
  - Food purchased by dive shops for divers
- Induced
  - Housing needed by employees of dive shops

Hol Chan Marine Reserve

- مشتر
- محطات تجارية لبيع أدوات الغطس و توفير معلمين للغطس.
- رسوم الغطس.
- غير مشتر.
- الأكل الذي يطلب من محطات الغطس لغطاسين.
- السباح.
- المستخدمة.
- البيوت التي ستحتاجها موظفي محطات الغطس.
NATURAL AND CULTURAL HERITAGE: What opportunities from tourism?

Overview of the natural resources (and flag species) of the Libyan coast

Abdulmaula Hamza

Head, Marine Conservation Department, Nature Conservation Department, Environment General Authority EGA

Abstract

The strategic location of Libya in the central southern Mediterranean, with 2000km coast, and the well unspoiled coastal area make this country rich with so many habitats and species diversity compared to its neighbouring countries. Libya has also joined the majority of conservation treaties and conventions. The talk concluded activities of EGA for better knowing this natural wealth of both species and pristine coastal and marine habitats in Libya. The coastal lagoons, seagrass beds, salt marshes (Sebkhas), small islands and sandy beaches are very important habitats hosting several endangered species in the Mediterranean. The talk also included some basic information about cultural heritage of the Libyan coastal zone, i.e. Roman and Greek ancient cities, Islamic architecture and world heritage sites. Urgent conservation measures should be applied immediately to preserve such rich diversity, especially after the opening of Libya for investment in several sectors including tourism.

Biography

Abdulmaula Hamza has studied in basic sciences at secondary school (Biology Dept.). Then he obtained his B.Sc. Zoology (1995) from the University of Alfateh (UOA)-Tripoli. After two years as national servant (Biology teacher)-(1996-1997), he worked as full time research assistant for the Technical Centre for Environment Protection (TCEP)-1998-2000. TCEP was reformed to become the Environment General Authority, where he worked as full time researcher in the Biodiversity Unit and then moved to the Natural Resources and Biodiversity Department (NRBD). During his work time he have studied Freshwater Ecology of gastropods in Taourgha spring-Libya, and got a M.Sc in zoology from UOA-Tripoli. Before he defended his thesis in UOA, he has applied for a Chevenning Scholarship to the British Council which led him to another master from Leeds University in 2003-2004 (M.Res. Biodiversity and Conservation). At present, he is a chief researcher in the Marine Conservation Unit of NRBD. During the past years and still, he has been involved in several research activities related to marine conservation especially with sea turtles nesting program (which he is currently coordinating) and he is a member in IUCN- Marine Turtle Specialist Group -Med.

He has worked with many colleagues from the conservation community in the Mediterranean basin in: Ornithology (2005-to date) co-authoring the annual wintering water bird census, mapping of Posidonia meadows in Libya (2000-2006) with Mr. G. Pergent of Corse University, conducting several other activities on MPA's designation and governance and on organizing workshops and symposia in Libya in the Conservation Field.
Overview of the Natural resources (and flag species) and of the Libyan coast

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Contents

- Libya: Location, coastline topography.
- Libya: MDA & conventions
- Types of coastal natural habitats
- Flagship marine/coastal species
- Coastal cultural sites

المحتويات

- ليبيا: الموقع، طيور غرب ليبيا الساحل
- ليبيا: عضوية الاتفاقيات البيئية الدولية
- أهم أنواع النباتات الطبيعية الساحلية
- الأنواع البحرية والساحلية الرئيسية
- مواقع الموروث الثقافي بالساحل الليبي

Libya: The geographic location

- Location: North Africa
- Area: 1,759,540 sq km
- Coastline: 1,770 km
- Climate: Mediterranean along coast, very arid desert interior

- الموقع: شمال أفريقيا
- المساحة: 1,759,540 كم²
- طول الساحل: 1,770 كم
- المناخ: متوسط على الساحل، صحراوي في الجنوب

Libya is a contacting party to

- CMS
- ACCOSAR
- IUCN

- Natural resources of the coast

- 5 main zones
  - Zuwarah and Tripoli: Sandy-Medium rocky/sandstone coast
  - Gulf of Sirte: Low lying sandy beaches
  - Jebel Akhdar: high, limestone coast
  - Tubruk: medium to low sandy beach

Libya: Coast Topography
**Important Natural Areas: Farwa/Bukamash**

- 15 km east of the border with Tunisia.
- Lagoon covers a surface area of 31 km².
- In 2005: 47 waterbird species were counted: 2464.
- In 2006: 23 waterbird species were counted: 2548.
- Bird important site
- Sea Turtle nesting site
- Seagrass habitat
- Traditional fishing site
- Proposed to be MBA, but...

**Posidonia oceanica & Cymodocea nodosa beds**

- Evidences along the whole coastline.
- The biggest concentrations are: Ain Ghazala, Gulf of el Kheir, Msurat, and west coasts inc. Farwa area.
- Very important feeding and wintering areas for turtles.
- Hosts very rich marine fauna.

**Islands of Posidonia & Cymodocea**

The accumulation of washed downshore debris and shotts of these two plants are accumulated in some areas to form a sort of "islands". These sites are quite important nesting spots for endangered marine birds like Sterna albifrons and Sterna hirundo.

**Shallow coastal lagoons**

The Libyan coast exhibits 4 coastal lagoons:
- Farwa lagoon: close to Tunisian border.
- Ain Zayarah lagoon: 15km N of Benghazi.
- Bamba bay: 45 km east of Derna.
- Ain Al-Ghazala: 60 km west of Tebrur.

All of these sites are very important biodiversity spots and under pressure of fishing, hunting and limited pollution. Libyan authorities are working to declare these sites as specially protected areas under SPA protocol and other relevant conventions.

**Sobkhas (Salt marshes)**

- The most wide wetland habitat present in Libya. Scattered along the coast, and in some cases.
- Seasonally flooded depressions characterized by unique floral and faunal biodiversity.
- Taurgha, Hisha, Al-Kuz and Abulamash are the most important sites for migratory water birds.
- A recent census (2005-2008) of waterbirds have been conducted and reassured the importance of these habitats for many bird species.

**Examples of flagship marine and coastal species**
Flagship marine and coastal species

Marine Turtles
- 3 species of Turtles have been reported in Libyan waters (Caretta caretta, Chelonia mydas, Dermochelys coriacea).
- National coastal survey 95, 97, 98 covered the whole coastline, with support of RAC/SPA, WWF, MedAid (Laurent et al., 1995, 1999).
- Libya may host the largest Mediterranean sea turtle rookery (9000 nest/year).
- Western coast and Gulf of Sirte are major feeding/wintering areas.
- Satellite transmitter have been deployed on male Caretta carettaselected this month, to study migration routes.

Flagship marine and coastal species

Mediterranean monk seal
Monachus monachus

One of the rarest marine mammal in the world.
- 17% of the population estimated 20 individuals
- A recent study (WGA, RAC/SPA, ICRAF) on coastal structure mapping and fishermen questioning in 2002 indicated that 10% of fishers in eastern Libya have encountered the species at least once during the last 4 years.
- A second phase of the study was started last June 2006 aimed to further improve structures and food availability for the seals.
- WGA has produced awareness materials such as posters and postcards.

Flagship marine and coastal species

Lesser crested tern

Endangered (SPA protocol).
The sole Mediterranean population (300 pairs) breeds in only two small islands of the Libyan coast.
- Gezirah Garah and Elba 20 km west of Zawiya oil port.
- EGA considers this site an urgent priority for conservation. Communication with oil co. on how to protect these stands is underway.

Cultural sites along the coast

Libyan coastal area was a destination for many civilizations from prehistory till Islamic era.
- West: Sabratha, Oea, Leptis
- Middle: Tanurgha, Hisha, Sultan, Sire
- East: Bengazi, Tokra, Tolmitah, Apollonia, Cyrene, Tubruk...
NATURAL AND CULTURAL HERITAGE: What opportunities from tourism?

Case study:
The experience of the National Marine Park of Zakynthos (Greece)
Georgios Paximadis
WWF Greece

Abstract
The case study of the National Marine Park of Zakynthos illustrates what happens when the link between resource conservation and tourist development is broken.

Although tourism in Zakynthos Island is associated with the loggerhead turtle and its natural beauties and should capitalize on these very same resources by conserving them, reality is quite the opposite. Zakynthos tourism development demonstrates the paradox of tourism. The very same resource that attracts tourism is destroyed by it, leading to a collapse in the system, a negative feedback loop.

Tourism in Zakynthos is characterised by a spatial and temporal “competition” between turtles and a large number of middle to low income tourists. This - together with irresponsible practices – results to a series of environmental problems.

The creation of the National Marine Park of Zakynthos in the Bay of Laganas in 1999 was a step towards conservation, but unfortunately its role nowadays can be described in the best case as damage control. As a result, the NMPZ today faces severe environmental problems, as well as intense social unrest and dissatisfaction.

Although the opportunity for the development of low impact tourism has been lost, the only solution that will ensure the financial viability of tourism at this point is conservation. The lesson to be learnt from Zakynthos is that resource degradation should be prevented in the first place by linking conservation with long term tourism development goals.

Biography
Giorgos Paximadis is the Marine Officer of WWF Greece. His academic background includes a B.A. in Economics and a M.Sc. in Marine Resource Management.

He has extensive experience in cetacean research and conservation. He has worked for Tethys Research Institute, Milano at the Ionian Dolphin Project in Greece, the Canary Islands Project in the Canarian Archipelago, and the Mediterranean Fin Whale Project in the Ligurian Sea. Furthermore, Giorgos is one of the founding members of Pelagos Cetacean Research Institute in Greece, of which he remains Vice-President to date.

He also has a wide experience in communications, having worked for Ogilvy advertising agency as an Account Director, handling numerous multinational accounts for 5 years.
The experience of the National Marine Park of Zakynthos, Greece

Giorgos Paximadis, WWF Greece
Al Bayda, November 29, 2006

Purpose

• Illustrate the need for
  – setting the appropriate development goals
  – preventing resource degradation in the first place

...by sharing the exactly opposite experience

Contents

• Zakynthos Island
  – Location
  – Ecological importance
  – Tourism development

• Zakynthos Tourism
  – Characteristics
  – The picture today

• National Marine Park of Zakynthos
  – History and activities

• The future

Zakynthos Island

• Ecological importance
  – Loggerhead turtles
  – Monk seals

• Migratory birds
  – Indigenous plants
  – Posidonia fields

Zakynthos Island
Zakynthos Island

- The “discovery” of Zakynthos in the 70s
  - NGOs (local, national, international)
  - The first steps of conservation in Greece
  - Local controversies
  - Social tensions
  - Lack of stakeholder participation in conservation

Zakynthos Island

- Tourism associated with sea turtles and natural beauties
- Development patterns should capitalize on these resources...

The negative feedback loop

- Unspoiled resources
- Tourist inflow
- Infrastructure development
- Resource degradation
- Decrease in income from tourism

Zakynthos tourism

- Characteristics
  - Spatial and temporal concentration
  - Best beaches for turtles / best for tourists!
  - Best time for tourists: nesting period
  - 700,000 tourists/yr vs. 35,000 inhabitants
  - Medium to low income tourists

Zakynthos tourism

- The picture today
  - Umbrellas and sun-beds
  - Illegal buildings
  - Electric lights
  - Cars and motor bikes on beaches
  - Horseback riding
  - Boats
  - Turtle spotting
  - Quality of water
  - Waste problem

NMPZ

- The National Marine Park of Zakynthos
  - Set up under pressure from the EU in 1999 in the Bay of Laganas
  - First management body in Greece
  - Research and conservation
  - The role of NGOs
**NMPZ**

- **WWF and the NMPZ**
  - Purchase of 32.7 hectares around Sekania beach with the financial support of the EU and thousands of members from all over Europe in 1994
  - Every summer Sekania beach hosts 500-1000 nests, making it the most important nesting beach in the Mediterranean

- **Size**
- **Zoning system**
- **Restrictions**
- **Management**

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**A reality check…**

- **Waste disposal site**
  - Run off
  - Seagulls
  - Expansion
- **Illegal buildings at Dafni area**
- **Insufficient patrolling and wardening**
- **Stakeholders’ unrest and discontent**

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**The future**

- **A lost opportunity…**
- **The only way to ensure the financial viability of tourism in Zakynthos in the long run is conservation, but at this point it can only be limited to damage control**

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**The future**

- **The costs and the effects of development are visible after the long term thresholds have been crossed and the outcomes are almost irreversible**

  - **Prevent resource degradation in the first place!**

- **Identification of needs, careful planning, wise choices, analyses of interactions and conflicts, environmental monitoring, involvement of stakeholders**

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**Thank you**
NATURAL AND CULTURAL HERITAGE: What opportunities from tourism?

Case study:  
*The experience in Samadai (Egypt)*  
*Giuseppe Notarbartolo di Sciara*  
Tethys Research Institute

Abstract

Spinner dolphins (*Stenella longirostris*) throughout the Tropics rest within coral reefs during daytime, after nights spent hunting in the open sea. Samadai, a dolphin-frequented reef few km off the Egyptian Red Sea coast, has attracted in recent years large numbers of tourists, who travel there to watch the dolphins and swim with them. Concerned about the potentially disruptive effect of uncontrolled tourist crowding in this vulnerable ecosystem, the Egyptian authorities closed Samadai to public access in 2003, and implemented a management scheme since January 2004. Management involved time and space restrictions (including the zoning of the reef with a no-entry area encompassing the dolphins’ main resting space), a ceiling of 200 daily visitors, the leading of visits by trained guides, the adoption of a code of conduct, the strict enforcement of regulations, and a daily fee of €15 per visitor. A monitoring programme, which was initiated contextually to the management scheme and continues to this day, indicates that the dolphin presence in Samadai has slightly increased from 2004 to 2006. Revenues to the tourist industry catering to Samadai’s visitors are substantial, while entrance fees to a protected area no greater than four football fields generates a yearly governmental income of several hundreds of k€. Although perfectible, the Samadai case provides an excellent example of how: (a) the timely intervention by the government has halted the potentially irreversible degradation of a valuable natural resource, and (b) the implementation of a management regime is ensuring that two possibly incompatible objectives – dolphin conservation and fruition by tourists – are simultaneously met. Most importantly, Samadai is a demonstration that environmental protection can have economically important implications even in the short term.

Biography

**Giuseppe Notarbartolo di Sciara** is a marine conservation biologist who earned his doctoral degree at the Scripps Institution of Oceanography (La Jolla, California) in 1985. His major professional interests focus on marine science, conservation and policy.

Giuseppe has been concerned for over 30 years with the advancement of knowledge of the natural history, ecology, behaviour, taxonomy and conservation of aquatic vertebrates, with an emphasis on marine mammals and cartilaginous fishes, and described his research in more than 100 scientific papers and 30 reports and conference presentations.

During the last decade he has concentrated efforts on the development of marine protected areas as a conservation tool. In particular, he has stimulated the creation of the first high-seas marine protected area, the Pelagos Sanctuary for Mediterranean Marine Mammals, established in 2002 by a Treaty among France, Italy and Monaco. He is now coordinator of the Mediterranean Group of the IUCN’s World Commission for Protected Areas.

Giuseppe has been responsible for the leading and management of governmental and private, national and international science and conservation organisations, including the Tethys Research Institute, the Central Institute for Applied Marine Research (an Italian governmental body), and the European
Cetacean Society. He currently chairs the Scientific Committee of ACCOBAMS, an UN-based international agreement.

In recent years he has served as a marine policy advisor to various national and international bodies, and participated in multilateral meetings and negotiations in representation of Italy.

In many occasions Giuseppe has engaged in training and teaching activities. Through appearances on television and radio, and the publication of popular articles and prize-winning books, he has been striving to increase public awareness on the conservation of the marine environment, with an emphasis on the Mediterranean Sea.

Further details of Dr. Notarbartolo di Sciara’s activities and accomplishments, including the full texts of his main publications, can be found in www.disciara.net.
The Samadai Dolphin Reef in Southern Egypt:
balancing nature conservation with economic benefits

Giuseppe Notarbartolo di Sciara
Tethys Research Institute, Milano, Italy

Workshop on Sustainable Tourism
Al Bayda, 28-29 November 2006

Where is Samadai and why is it special

- A reef in the Red Sea, about five nautical miles offshore near Marsa Alam
- The lagoon is a semicircle offering shelter from the prevailing winds, with an inner diameter of approx. 300 m.

Where is Samadai and why is it special

- One of the many offshore tropical coral reefs serving as a daytime resting place for spinner dolphins, *Stenella longirostris*;
- Dolphins normally enter the reef at daybreak to rest, and exit the reef during the afternoon, to travel beyond the shelf break to forage on mesopelagic prey.

A brief history of management in Samadai
The pre-2004 situation

- Rapid diffusion in the 1990s and early 2000s of the notion that Samadai was a place where anyone could swim with wild dolphins;
- The site is easily accessible by large numbers of tourists;
- Lack of regulations in terms of:
  - Number of visitors;
  - Time and area limitations;
  - Conduct of visitors;
- Great concern for the continuation of the use of Samadai by the dolphins, considering that these animals frequent the reef for their resting needs (negative precedents exist);
- In Dec. 2003 access to Samadai was closed by decree of the Red Sea Governor.

Implementation of a provisional management regime

- Management was implemented in Jan. 2004 to ensure:
  - an acceptable quality of life for the dolphins in Samadai, and therefore the continued use of the reef by these mammals;
  - the orderly and sustainable fruition by the tourists of an extraordinary situation;
  - local development: income and workplaces in the tourist sector.

Implementation of a provisional management regime

- Why provisional? No data, use of precaution.
- Two management objectives:
  1. The continuation of the use of the reef by the dolphins.
  2. The continuation of enjoyment of such an extraordinary natural experience by the tourists.

Main elements of the provisional management plan

- Time and area limitations:
  - Zoning: A= no-entry zone (approx. 4 ha); B= swim-only zone; C= small boat zone.

Monitoring activities

- Rangers were trained in monitoring techniques in Jan. 2004;
- Monitoring continued on a daily basis from Jan 2004 onwards (ongoing);
- Data are being collected on:
  - Seasonal trends and year-to-year trends of the presence of dolphins in Samadai;
  - Changes of dolphin behaviour and reef use with time of day;
  - Human effects on the dolphins’ presence;
  - Environmental effects on the dolphins’ presence.
Research and training project

• Project funded by the Italian Cooperation Office in Cairo, through the Debt Swap Programme.
• Main goals of the project:
  – Progress in the knowledge of spinner dolphins and Red Sea marine mammals in general, and provide elements for the improvement of Samadai management regime;
  – Local training in research and management techniques.

Focus of research

• Ecology of spinner dolphins in Samadai:
  – Use of reef
    • Temporal use (by season and by time of day)
    • Spatial use
  – Feeding habits
  – Breeding habits
• Behaviour
• Photo-identification

Some results of research and monitoring activities

Presence in Samadai

mean monthly number of spinner dolphins in Samadai, 2004 - 2006
Swimmer and dolphin presence in BC vs time in 2004-2006

Dolphins' use of reef vs. time of day
Dolphin positions tracked at 2.5 min. intervals on a sample day.
**red** dots: positions from 6.00 to 11.59
**blue** dots: positions from 12.00 to 16.00

Feeding habits
Squid beaks found in dolphin vomits
Small mesopelagic squid, possibly enoploteuthid

Reproduction
Seasonality of reproduction
Aerial behaviours

Aerial behaviours: changes with time of day

Photo-identification

- Recognition of particular individuals from their body marks to detect fidelity to sites and fidelity to other group-members;
- Indications about the size of the population.

Residency in Samadai of the 111 most identifiable individual dolphins
Research conclusions relevant to management

- Samadai is an important habitat for spinner dolphins for daytime resting, socialising and breeding.
- The dolphins' behaviour and use of reef changes with time of day in a predictable pattern.
- Although dolphins use the reef regularly, their abundance in the reef varies seasonally, also in a predictable pattern.
- There is a marked breeding season in Summer.

Research conclusions relevant to management

- Dolphins using Samadai are likely to be a community of <400 individuals.
- Dolphins observed and photo-identified in Samadai were not the same of those observed in other reefs to the south (e.g., Satayah).
- Dolphins forage during the night, likely above or beyond the shelf break; their main prey during the study period apparently was a small enoploteuthid squid.
- Dolphins have not been declining since the beginning of management in Samadai; coexistence with strictly regulated tourist activities is possible.

Recommendations for Management

1. Zoning of Samadai
2. Visiting regulations
3. Enforcement
4. Communication

1. Zoning of Samadai

Based on research conclusions, the current zoning can be slightly modified with no obvious detriment to the dolphins but to the benefit of swimmers
2. Visiting regulations

- Extension of visiting time from the current schedule to encompass the period 9.30 – 16.30 (inform visitors that likeliness of encountering dolphins outside of Zone A increases with time of day).
- Swim visits in Zone B must always be conducted by trained guides.
- Maintenance of current visitor ceiling at 200 per day.
- Try to distribute visits during the allowed period.

Use of reef: changes with time of day

3. Enforcement

Enforcement of regulations by rangers is essential at all times

Communication from the Managing Authorities

- A communication channel between the MA and the tourists themselves must be kept open. This may be done by an intermediary organisation.
- Dissemination of state-of-the-art information material for tourists, including: (a) information on the Samadai marine environment, (b) spinner dolphins, (c) code of conduct, through posters (e.g., in the airport, in the hotels, dive centres, etc.), booklets, leaflets, and possibly an information centre.
- Periodical organisation of seminars for operators, to facilitate a participatory, transparent relationship.

Communication from the Managing Authorities

- Quality control of the information provided by operators to tourists
- Quality control of snorkel guides’ training and certification
- Solicit and facilitate direct feedback from tourists to MA through a questionnaire and evaluation/complaint sheets (paper and web-based).
Communication from the Tourist Operators

1. Modify the message on what is being offered in Samadai

2. Revise and improve information provided to tourists before visit and pre-snorkel.

1. Modify the message on what is being offered in Samadai

- Samadai is a protected area with many valuable elements; dolphins are one of them. These are "coral dolphins" and coral is an important part of why dolphins are special.
- Provide information and increase awareness about all the natural elements that make Samadai beautiful.
- Dolphins are wild animals, free to do what they want. Part of their beauty is in the image of freedom they convey.
- Dolphins are not always in Samadai (statistics are available); there are seasons; so their presence is never guaranteed.


d| Probability of not finding dolphins in Samadai based on month (2004 and 2005 combined)

Visitors may miss the dolphins in Samadai but they still are privileged to visit such an intact marine reef.

2. Revise and improve information provided to tourists before visit and pre-snorkel

- Implement sessions of dolphin-watching from the top deck of boats, with binoculars and display material, during time between arrival to Samadai and time of snorkel session.
- End dolphin-watching session with briefing on snorkel session prior to visit in the water.

Tourist presence in Samadai: 2004
23,977 visitors, € 360,000

Tourist presence in Samadai: 2005
17,534 visitors, € 263,000
Achievements of management and related activities

• Until the management continues, dolphins are protected and will continue using the reef.
• At the same time, tourists can continue enjoying an extraordinary experience on a sustainable basis, while providing significant revenues to the local tourist industry.

Achievements of management and related activities

• The Samadai dolphins, from an area no wider than four football fields, support conservation in the whole of the southern Egyptian coast: revenues from government fees in Samadai have allowed the Red Sea protectorates to hire > 60 persons, employed in several locations from Marsa Alam southwards.
• Strong case is made for the protection of the marine environment in Egypt, which can provide lasting economic resources and sources of development in alternative to mass tourism and major coastal construction and infrastructure.

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Thank you
NATURAL AND CULTURAL HERITAGE: What opportunities from tourism?

Case Study:
Using GIS in relation to ecotourism – the experience of the Libyan Arab Jamahiriya

Osama M. A. Shalouf
Environment General Authority EGA

Abstract
Tourism is important for any healthy economy, providing a steady inflow of money to local businesses. When planned out and marketed well, tourism can be a powerful economic force. GIS can help tourism succeed. The integration of roads, buildings, landmarks, restaurants, hotels and routes with prices, availability, and activities can make GIS a valuable tool in tourism.

The first part:
• Why is GIS important to tourism?
• Eco-tourism definition.
• The principles of eco-tourism.

The second part:
• How is GIS important to tourism development?

The third part:
• Using GIS in eco-tourism planning.
• Using GIS in seedy - Almasry National Park.
• Using GIS application in seedy - Almasry National Park.

The fourth part:
• Using GIS to convert the hard copy to digital copy for Abo-Gilahn National Park.

Biography
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GIS IN ECO-TOURISM

Introduction in GIS & tourism

Tourism is important for any healthy economy, providing a steady inflow of money to local businesses. When planned out and marketed well, tourism can be a powerful economic force. GIS can help tourism succeed. The integration of roads, buildings, landmarks, restaurants, hotels and routes with prices, availability, and activities can make GIS a valuable tool in tourism.

Outline

- Introduction in GIS & tourism
- What is a GIS Good At?
- Why is GIS Important to tourism?
- GIS/Tourism – Planning
- GIS/Tourism – Guide

ECO-TOURISM DEFINITION

“Ecotourism is responsible travel to natural areas that conserves the environment and sustains the wellbeing of local people.”

The Ecotourism Society, 1991

A main difficulty is that the tourist sector is large and diverse that even with detailed research, unique and interesting places will be overlooked.

Why is GIS Important to tourism?

+50 of 50 questions most likely to be asked by tourists have a “where” element.

This means that those who implement and participate in ecotourism activities should follow the following principles:

- Minimizes impact
- Build environmental and cultural awareness and respect
- Provide positive experiences for both visitors and hosts
- Provide direct financial benefits for conservation
- Provide financial benefits and empowerment for local people
- Gain an understanding of host countries’ political, environmental, and social
أهمية نظم المعلومات الجغرافية – التنمية السياحية

مدخل:
تنقسم الجماهيرية بجمال طبيعتها ومناخها الساحر، والذي يجعلها قلعة سياحية تؤدي السفر والسياحة من مختلف بلدان العالم بما جماها الخلاق من عوامل الجاذبية السياحية المعقدة، والتي تتفرد بها عن معظم بلدان العالم. وتعتبر السياحة على مقومات طبيعية وتراث حضاري وعاصفة تحتوي ووسائط نقل وإمكانيات إقامة واستمراراً ومجهودات إنسانية مشابهة، على طريق إبراز المعالم السياحية بصورة لامعة تحقق مع طبيعتها وعابتها، وعظام الطريق وسيلة التواصل المناسبة إلهاً، وتوفير الختمات السياحية حول هذه العالم.

البدائل الأثرية الطبيعية
الجبال الطبيعية
الكثبان الرملية
القرى السياحية
التحف والأسواق
المناطق التجارية
العوامل المشتركة

أهمية نظم المعلومات الجغرافية – التنمية السياحية

من هذه المقومات الطبيعية وحضارية المعبدة المؤثر في الجذب السياحي، مع لذاك في التكنولوجيا المعلومات أصبح من الضروري الشركة أكثر وتضاعف هذه المقومات السياحية وتطويرها.
ومن المعروف أن مكان السفر هو هو العضل الهام في السياحة، فقد استفادت المقومات السياحية من قضاء وتطوير القطاع السياحي، مما لها على التأمليات، في تحليل ودراسة وتحليل قواعد البيانات المكلفة المرتبطة بالموقع.

الربط بين البيئات المكلفة والوسيلة
في قضاء بيئة واحدة داخل نظم المعلومات الجغرافية تساهم في دعم مناخ القدرات المختلفة.

أهمية نظم المعلومات الجغرافية – التنمية السياحية

تبرز أهمية نظم المعلومات الجغرافية بصفة عامة لقدرتها على:
1. القيام بعمليات الاستعلام وتحليل الجذب السياحي
2. اتخاذ قرارات أفضل
3. إخراج الخريطة

أهمية نظم المعلومات الجغرافية – التنمية السياحية

مكانيات نظم المعلومات الجغرافية في القطاع السياحي

1. مواقع الغابات والأنماط الطبيعية
2. مراكز السياحة داخل القطاع السياحي
3. مركز المعلومات السياحية
4. الخدمات السياحية
5. المواقع السياحية
أهمية نظم المعلومات الجغرافية – للتنمية السياحية

المكتبات نظم المعلومات الجغرافية في القطاع السياحي:

1. تحديد المناطق المعدرة للسياح
2. تصنيف المنتجات السياحية
3. تصنيف المنتجات الجبلية
4. تصنيف المنتجات البحرية
5. تصنيف المنتجات الزراعية
6. تصنيف المنتجات السياحية الأخرى

نقطة على انتاج العديد من الخرائط السياحية الرسمية:

نقطة على انتاج العديد من الخرائط السياحية الرسمية:

نقطة على انتاج العديد من الخرائط السياحية الرسمية:

نقطة على انتاج العديد من الخرائط السياحية الرسمية:
أهمية تنظيم المعلومات الجغرافية – للتنمية السياحية

مشروع منتزه سيدي المصري

مقدمة

تقع متنزه سيدي المصري في وسط مدينة طرابلس بحدود من الشمال منطقة سكنية كثيفة هي منطقة رأس حسن و من الشرق منطقة زنانة و من الجنوب طريق الجامعة - سيدي المصري -، ومن الغرب منطقة رأس بن غشير.

على مساحة 86.6 هكتار تقريباً (88.5991 هكتار) وهو عبارة عن غابة ذات طبيعة خاصة تمتاز بتنوع جوفي كبير جداً من أنواع الغابات، ويشتهر شجرة و جزيرة و نباتات زينة و طبيعة و حيوانات و殺ها و سباعات متنوعة، مما يزيد من أهميتها و كماليتها، وهي بيئة مثالية ت/window

تتمتع بحالات طبيعية و حيوانات و انتقالاتها بالطرق الصحيحة و تنميتها بتبادل مهجة النزهة المستمرة.
محكمة أبو غيلان

باستخدام نظم المعلومات الجغرافية
خريطة رقمية ثلاثية الأبعاد للمحمية (3D Maps)

تم عمل خريطة رقمية تشمل الطبقات:

- حدود المحمية
- الطرق
- الأودية
- معلمة الطيور
- مساحات العزل
- خليط الفطريات
- المداومات والبيئات
- النشاطات الفردية
- التهويجات الزراعية
- الأراضي الزراعية

خريطة رقـ.م (3D) للمحمية

1. إنشاء و تصميم قواعد بيانات تتكون من:
   - قاعدة معلومات أنواع الطيور والฟัง
   - قاعدة معلومات أنواع الحيوانات
   - قاعدة معلومات أنواع الطيور
   - قاعدة معلومات الخدمات البشرية الدورية
   - قاعدة معلومات البيوت ومخايل الحيوانات
   والطيور.
The text appears to be a collection of words from various languages along with their translations:

- könzönöm
- dēkuji
- mahalo
- 고맙습니다
- thank you
- sizh shie
- 谢谢
- danke
- شكرا
- Evxaristó
- merci
- gracias