

Task Order No. 832

USAID Contract No. PCE-I-00-96-00002-00

**Egyptian Environmental Policy Program
Program Support Unit**

**WORK ASSIGNMENT REPORT
Tranche 1, Objective 12**

***Coastal Reconnaissance of Giftun Islands:
Field Survey Report***

John McEachern

November 1999

PSU-03

for
**U.S. Agency For International Development
Cairo**

by
**Environmental Policy & Institutional Strengthening
Indefinite Quantity Contract (EPIQ)**

A USAID-funded project consortium led by International Resources Group, Ltd.

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FACT SHEET

USAID Contract No.: PCE-I-00-96-00002-00
Task Order No. 832

Contract Purpose: Provide core management and analytical technical services to the Egyptian Environmental Policy Program (EEPP) through a Program Support Unit (PSU)

USAID/Egypt's Cognizant Technical Officer: Holly Ferrette

Contractor Name: International Resources Group, Ltd.

Primary Beneficiary: Egyptian Environmental Affairs Agency (EEAA)

EEAA Counterpart: Eng. Dahlia Loytaef

EEPP Policy Objective: Provide protection for the Egyptian Red Sea coral reefs, islands, and linked ecosystems of importance

Work Assignment Title: Senior Policy Advisor, Red Sea Marine Park Management

Work Assignment Author: John McEachern

Work Assignment Supervisor: Harold van Kempen

Work Assignment Period: November 1999

Preface

Through competitive bidding, the U.S. Agency for International Development (USAID) awarded a multi-year contract to a team managed by International Resources Group, Ltd. (IRG) to support the development and implementation of environmentally sound strategic planning, and strengthening of environmental policies and institutions, in countries where USAID is active. Under this contract, termed the Environmental Policy and Institutional Strengthening Indefinite Quantity Contract (EPIQ), IRG is assisting USAID/Egypt with implementing a large part of the Egyptian Environmental Policy Program (EEPP).

This program was agreed-to following negotiations between the Government of the United States, acting through USAID, and the Arab Republic of Egypt, acting through the Egyptian Environmental Affairs Agency (EEAA) of the Ministry of State for Environmental Affairs, the Ministry of Petroleum's Organization for Energy Planning, and the Ministry of Tourism's Tourism Development Authority. These negotiations culminated with the signing of a Memorandum of Understanding in 1999, whereby the Government of Egypt would seek to implement a set of environmental policy measures, using technical support and other assistance provided by USAID. The Egyptian Environmental Policy Program is a multi-year activity to support policy, institutional, and regulatory reforms in the environmental sector, focusing on economic and institutional constraints, cleaner and more efficient energy use, reduced air pollution, improved solid waste management, and natural resources managed for environmental sustainability.

USAID has engaged the EPIQ contractor to provide Program Support Unit (PSU) services to EEPP. The PSU has key responsibilities of providing overall coordination of EEPP technical assistance, limited crosscutting expertise and technical assistance to the three Egyptian agencies, and most of the technical assistance that EEAA may seek when achieving its policy measures.

The EPIQ team includes the following organizations:

- Prime Contractor: International Resources Group
- Partner Organization:
 - Winrock International
- Core Group:
 - Management Systems International, Inc.
 - PADCO
 - Development Alternatives, Inc.
- Collaborating Organizations:
 - The Tellus Institute
 - KBN Engineering & Applied Sciences, Inc.
 - Keller-Bliesner Engineering
 - Conservation International
 - Resource Management International, Inc.
 - World Resources Institute's Center For International Development Management
 - The Urban Institute
 - The CNA Corporation.

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INTRODUCTION

An EEAA team conducted a reconnaissance survey of Big Giftun Island during November 2nd to 4th and traveled by sea along the south coast of Little Giftun. This work followed from discussions with General A. Shehata on 25th October, and an earlier memo about a brief visit to Giftun Island dated 24th October. Giftun Is. is currently open to daytime visitation by tourist boats operating out of Hurghada. On the busiest days as many as 100 boats use the island, disembarking 900+ persons onto the beach at two locations—800 persons at one public site without facilities, and the rest at a beach-restaurant operating during daytime. The survey acquired information on the island as an aid to management decision-making.

Purpose of the survey was to (i) assess the coastal environment of Giftun; (ii) identify any coastal sites which would be capable of supporting tourism activities, (iii) outline a number of management options; and (iv) make recommendations . This kind of work is consistent with SO12 policy objectives. On Giftun, tourism is the principal development option and the primary task will be how to manage it sustainably.

The survey team consisted of M. Abbass, W. A. Fattah, M.A. Ghani, H. Habib, A. Afifi (one day) and J. McEachern. The team also benefited by the advice of tourism expert Keith Sproule (Hagler Bailly) who joined the mission for 2 days. Field notes from some of the other team members will be prepared separately. The survey team circumnavigated the Big Giftun island using a Molly and Zodiac and landed at a number of sand beach sites which were accessible from the sea. We also traveled by boat along the south coast of Little Giftun Is.

PRELIMINARY FINDINGS

Several significant findings came out of the survey:

- Among Egypt's islands of the Red Sea, Giftun Island is a special place, given its close proximity to Hurghada and the degree to which it is the object of tourist demand. Present touristic activities do not appear to have an adverse impact on the terrestrial resources of the island.¹
- There is serious environmental degradation at one northern coastal site on Giftun, and lesser environmental problems at some other sites along the NE coast, but these problems are not caused by tourism. At these sites, EEAA's environmental management responsibilities can—and should—be invoked independently of tourism-related issues.
- The most serious environmental problems occur on the beach at the head of the large bay on the NW coast of Giftun. This 300m-wide beach is the repository of oil pollution which coats a 7m-wide band along the front of the beach to a depth of approximately 10cm. On the upper berm beyond the extent of the oil, there exists a 2-to-5m band of rubbish and litter rafted high up the beach during storms.
- The beach-restaurant named *Mahmya*, located at the southern tip of Big Giftun, represents a successful collaboration between EEAA and the private sector. EEAA's key role in setting the environmental guidelines for this operation has been realized on the ground by the Restaurant management. EEAA can take some credit in making this operation environmentally sustainable.
- Most tourists disembark at a public site 200m west of the restaurant. The site is flat and windy due to its exposed location and away from the beach the site is in need of a cleanup as vestiges remain from an abandoned military communications facility. There are guy wires on the ground, old cement bricks, a cement blockhouse, and broken bottles. This is an aesthetic eyesore, incompatible with tourism use.
- In the public area, management of tourism is needed because the quality of the present tourist experience is diminished by too high a concentration of visitors arriving at the same site, overcrowding, and a total absence of any facilities. The aesthetic issue compounds the problem.
- Big Giftun Is. has a limited carrying capacity for beach-based tourism, with only three acceptable sites capable of supporting tourist use. The first site is occupied by the restaurant, and part of the second site is already used by the tourist vessels. The third site is unoccupied and lies midway along the SW coast. Little Giftun Is. has one good beach on the south coast, but landing there is currently prohibited.

¹ One exception may be signs of minor beach erosion at the site where tourist boats moor together at the edge of the beach. It is not clear if this is a natural seasonal situation or one induced by the presence of the boats, which are only in the area for 1/4 of the day. If the boats are the causal agent, then it is easily mitigated by having them moor off the beach.

- Expansion of day use sites on Big Giftun can be achieved by better utilization of the existing public site, and development of a new site further up the coast. These initiatives will reduce the present visitor pressure.. This involvement with the tourist industry offers opportunities for EEAA to be more visible in the public eye.
- Little Giftun Island is a protected area presently occupied and used by the military. Notwithstanding the protected area status, there is a large 3 or 4-story concrete building under construction and located mid-way along the island's south coast. An EIA review is recommended.
- There is an urgent need for EEAA to become actively involved in day-to-day management of Giftun Island's environmental resources. This will necessarily include the tourist areas, other areas subject to environmental pollution, the natural areas (wadis, seagrass beds and coral reefs), and the entire marine area extending seaward 1km from the shoreline. EEAA must assume the prime role in guiding, planning and overseeing Giftun's future

SITE DESCRIPTIONS AND SUITABILITY FOR TOURISM

(see maps "S1", "S2", etc.)

Site 1 (S1) - South tip of Big Giftun Island

The best beach on Giftun occurs on the south tip of the island. It is situated at the base of a small bluff that provides protection from the prevailing N. wind. The existing beach-restaurant is located here and it consists of an open-air restaurant, bar, and viewing areas, with trestle walkways between. Thatched palm umbrellas provide shade to sunbathers on the beach (see attached photos). Service areas include a kitchen, maintenance shed and well-built freshwater flush toilets with associated holding tanks.

The facility was designed in accordance with EEAA guidelines on architecture and environmental protection. Thatch roofing is used along with lightly constructed wood materials and local mud-bricks. There is no evidence of permanent concrete structures and the overall design blends in with the landscape and nestles below the skyline. The built structures could be readily removed if the decision was made in future to return the site to its natural state.

A professional engineer designed the water and sewage system and it operates effectively. A service vessel brings freshwater from Hurghada to the restaurant and pumps it up to the water tank at the back of the complex using a 2" diameter pipe contained within a 4" diameter sleeve for added strength. About 12 tons of sewage and wastewater is collected in a number of buried cross-linked 5-ton holding tanks, then evacuated once/week. To ensure environmental safety, the sewage line consists of a 4" pipe contained within a protective 6" diameter pipe. To make the transfers, the service vessel ties up to the end of the pipeline which is securely anchored 25m from shore. *The restaurant is designed and operated in an environmentally safe manner and represents a model for other developments of a similar nature.*

Site 2 (S2) - 150-200m West of the Beach Restaurant

This is the Public Site, currently being used by 80% to 90% of the tourists landing on Giftun. The area consists of an extensive flat featureless sandy plain with little protection from the prevailing wind because the ridge lies too far eastward. The beach is of good quality sand and extends for several hundred meters along the coast. Tourist boats drop their visitors directly onto the beach, then moor at the waters edge side-by-side and set anchors on the land (see attached photos). This is convenient for boat operators and tourists alike.

No facilities of any kind exist at Site 2, notwithstanding the fact that between 500 to 800 visitors may disembark on a given day. The only toilet facilities are aboard the vessels, and it is likely that they are utilized during the day. As most vessels do not have holding tanks there is probably some raw sewage being discharged from the heads in the water fronting the beach, but this has not been verified. Appearance of the site is diminished by the presence of debris left over from a derelict communications tower. The tower has been removed but a small concrete blockhouse remains, and metal guy lines snake along the ground. Other

construction blocks and some broken glass bottles which are embedded in the sand lie nearby.

Relative to other sites on Giftun, this site can continue to support large numbers of day tourists if properly managed. Part of the management strategy will have to be the provision of basic amenities and services. The major challenge will be to design lightweight structures that are both functional and aesthetic on this windy featureless site.

Site 3 (S3) - 3.5 km from the Public Site on the West Coast

This site is located at the mouth of a wadi, and is characterized by a 10m wide beach which is backed by clumps of vegetation, several coves, and some local bluffs east of the shoreline. Nearshore water is shallow and calm as it is protected from the wind by the topographic relief and seaward by the presence of distant reefs. These reefs effectively act as a natural breakwater and delineate the boundaries of this 1.7km-wide basin or submerged bay. Due to the calm conditions and shallow water (1.5m), small patches of seagrass occur in the area and cover approximately 10% of the seabed. The density of seagrass increases towards the NW.

A small broken-down shelter used by fishermen rests near the beach. Litter of plastic bottles and shells (tridacna clam and 5-finger conch) collected by fishermen occur at this site. With a clean-up, this site could support low-impact tourism activities, however the presence of seagrass in the adjacent shallow bay makes this use undesirable. Operation of many medium to large boats in the shallows will disturb the water clarity and adversely affect seagrass growth.

Site 4 (S4) - 7.5km from the Public Site on the West Coast

Site 4 is a 500m stretch of coast located mid-way along Giftun's west side. Reference to the map shows that it is some 7.5 km NNW of the Public Site (S2). At S4 the coastal plain is very narrow due to the presence of a hillside which abuts the coast then climbs northeastward to the island's highest point of 120m along a ridge. Nevertheless, the site offers potential for developing a touristic day-use facility. One possibility is to develop a beach-restaurant modeled after the Mahmya property (see S1).

The coast itself consists of a linked series of small scalloped bays, comprised of sand and sand mixed with pebbles. When walking between bays, one may encounter terns or gulls perched on the separating headland. Unlike S1 and S2, beaches are narrow and more variable in quality. Their quality ranges from "fair" to "good", depending upon the % composition of sand, depth of sand, and width of the beach (see attached photos). One of the good quality beaches exhibits signs of former tourist use, in the form of three steel barges that have been left abandoned on the beach. These are an eyesore and should be removed from Giftun.

To seaward there is a narrow 25-50m fringe of flat coral rock in 2m of water and covered by sand and traces of seagrass. Further offshore, water depths increase to 5m beyond 300m, and reach 15m at 800m. Deepwater access is available at the southern end of the site, and smaller outboard-driven craft can approach the middle and northern end.² Nearshore water quality is

² Reference to Marine Chart 62188 (US Defense Mapping Agency), illustrates that the deepwater access represents a 45m basin circumscribed to the north by the shallow reefs between Gaziret Abu Minqar and N. Giftun, and on the south by the shallows between Umm Agawish el-Kebir and S. Giftun.

good but more detailed survey work remains in order to assess the bottom conditions adjacent to the beach. Beach materials are variable. Several beaches contain pebbles and small rock outcrops, making them less suitable for sunbathing, while others are pure sand. It is likely that snorkeling is not supported at this site, but further sublittoral investigations will be necessary.

The presence of hills will protect the area from N and NE winds, but the site is more exposed winds from the NW. The presence of local relief gives architects an opportunity to design facilities that blend into the landscape. It also give tourists a chance to sightsee if trails were provided.

It is believed that Site 4 is capable of supporting a beach-restaurant facility, although the variable terrain and nature of the small scenic coves will require a unique design to take advantage of the distinctive beach-and-cove landscape which stretches some 500m along the coast. A detailed site plan should be prepared to assess the full potential of this site.

Site 5 (S5) - Head of the Bay on the NW Coast of Giftun

From the standpoint of the terrestrial flora and fauna, Site 5 is one of the most diverse areas on Giftun because of the areal extent of the wadi vegetation occurring there. However, the 300m-wide beach which fronts the area suffers from serious environmental pollution. It is the repository of oil pollution which has coated a 7m-wide band along the front of the beach to a depth of approximately 10cm and more. Further back from the waterline, the oil turns to tar where weathering has taken place. Source of the floating oil is unknown, although it may be related to the presence of the Port of Hurghada's designated Waiting Area for in-bound vessels, located 6km NW of the beach. Alternatively, the oil may also originate 40km to the NW from the oil wells in the Tawila Channel. It is not clear if the oil pollution is a result of a single accidental spill or recurrent leakage's or bilge-cleaning.

There is also a severe rubbish problem. On the upper berm beyond the extent of the oil, there exists a 2-to-5m band of flotsam rafted high up the beach during storms. This rubbish is comprised of 60% plastic litter, 30% small pieces of discarded used lumber, and 10% other materials including metal and rubber products. The volume of litter is at maximum along the SW end of the beach, suggesting that the prevailing wind direction is N-to-NE. Inland beyond the berm is relatively luxuriant vegetation (*Zygophlum* sp.) reflecting the presence of moisture in the delta of the wadi. Osprey nest in the area and perches of other bird species occur (see attached photos). With a clean-up of S5, the area will be of interest to bird watchers and naturalists.

200m south of the bay can be found a burial ground containing 8 graves as well as a tin shed or shrine housing the remains of a revered Holy man.

Site 6 (S6) - NE Coast of Giftun (4km in length)

Unsuitable for tourism. Numerous picturesque 5m to 10m-wide sandy beaches constitute this stretch of coast, but access from the sea is blocked by the presence of a 25m-wide fringing reef growing within 1m of the surface. The access problem is exacerbated by the high surface chop of the sea, driven by strong northeast winds prevailing throughout much of the year. There are no secure anchorages due to the precipitous angle of the reef face and increasing water depth. At the reef crest the depth plummets to 30m. Two hundreds meters from the

shore, the depth reaches 100m. This stretch of coast suffers from some modest oil pollution and rafted litter, but not nearly to the same degree as found at Site 5 (S5).

Marine Dive Sites

Reference to Annex 2, illustrates the location of currently used dive sites in the Giftuns. Dive boats operate independently from the tourist boats bringing visitors ashore at Sites 1 and 2. The normal operating schedule of dive boats is to travel to the environs of Giftun, tie up to an existing EEAA mooring buoy, schedule a first dive with their clients, eat lunch aboard and rest, then move to another dive site for the 2nd dive of the day, before returning to Hurghada. With such a tight schedule, the dive boats do not have time to visit Giftun's beaches.

The following table summarizes the dive sites in the environs of the Giftuns (information provided by Mohamad Habib, Hurghada EEAA Office):

Table 1 Dive Sites in the Giftun Islands Area

<i>Dive site and name</i>	<i>Description</i>	<i>Quality and use rating</i>
A-Turtle Bay	4 moorings; shallow with calm water. Dive boats move to this area from Carless Reef, Shabrun um Gaman & um Gammar is.	Medium quality; high use
B-El Fanous	5 moorings plus drift diving. One of the 5 moorings is shallow water sandy-bottom for training only.	SW end low quality. NE end high quality; high use
C-Stone Beach/Hamda	2 moorings. Drop-off.	Med. quality; medium use
D-Sabina	3 moorings; 9m depth, easy diving. High biodiversity of corals.	High quality; high use
E-Erg Sabina	2 moorings; often used in conjunction with site D-Sabina	Medium quality; medium use
F1, F2, F3, F4-Been El Gebel	Consists of four sites between Big and Small Giftun Islands. Used as training area for new divers.	Low quality; medium use
G- Hepca Garden	2 moorings (unverified).	Med. quality; medium use
H-Little Giftun	Several moorings along south coast, in the environs of the relict pier. Training dives.	Low/medium quality; medium use

RECOMMENDED APPROACH

- *Allow tourists to continue to make day visits to Giftun.* This offers the Hurghada-based tourists some diversity in their program of activities and maintains the employment and income of local boat operators.
- *Enhance the visitor's touristic experience by providing a range of basic amenities.* Although no Giftun Is. Visitors Survey has been carried out, it is likely that a portion of the tourists arriving at the public site may be disappointed by the complete absence of any facilities or services offered there. They are simply dumped on the beach and left to their own devices. If a visitor's fee is to be instituted, then provision of basic amenities will be expected.
- *Reduce congestion at the public site.* This can be achieved by: (a) redistributing tourists along the coast with provision of dispersed amenities (sun umbrellas); (b) opening up another location further up the coast for tourist use (ref. Site 4); and (c) by initiating a daily visitors fee which will have the effect of reducing the demand for travel to Giftun.
- *Initiate environmental management of Giftun Is. as a whole.* Giftun has problems relating to tourism and environmental pollution arising from the shipping and oil industries. These can best be resolved by a permanent presence of an EEAA Ranger station on the island, operating during the daytime. Facilities, equipment and further training will be required to support this objective. Giftun should be viewed as a pilot project for Red Sea island management, and lessons learned here will have application to islands elsewhere.
- *Levy a user fee on visitors landing on the island.* Funds collected will defray the costs of providing overall management of Giftun's environment. The fee should be instituted after sufficient advance notice has been given to the tourist industry. This will give them lead time to adjust their prices.

RECOMMENDED ACTIONS

Public Site, at the Southern Tip of the Island

1. Remove site debris. Scattered debris occurs 25m inland from the beach is an eyesore currently seen by 90% of the visitors to Giftun. Debris consists of a small concrete blockhouse, metal guy lines snaking along the ground which were left-over from the former communications tower, concrete blocks, and some broken glass bottles embedded in the sand.
2. Conduct a Giftun Is. Visitors Survey at the beachside to determine visitors' characteristics, recreational activities of interest (ranked), facilities and services desired (ranked), spending habits/willingness to pay, and satisfaction ratings. Survey design & implementation to be in collaboration with TDA. Results of this survey to be made available to proposed investors.
3. Prepare general environmental and design guidelines for basic facilities investment. Collaborate with TDA/Hagler Bailly.
4. Tender out site design, facilities planning, and construction activities. Identify operational requirements including staff.
5. Decide mooring strategy; emplace moorings where required.
6. Select location for establishment of a Ranger station (see paragraph 4.1).

New Site (S4), 7km up the Coast (NNW) from the Public Site

1. Prepare detailed terrestrial and near-shore site map.³ This site extends along the coast, incorporating 4 or 5 small coves. One development concept would be to decentralize the structures where practicable, to discourage users from bunching up in one place.
2. Prepare general environmental and design guidelines for the new beach-restaurant facility. Collaborate with TDA/Hagler Bailly.
3. Tender site design, facilities planning, construction and operational requirements.
4. Prepare mooring strategy. Among the options are anchors with buoys or the installation of a floating jetty.

Mahmya Beach Restaurant (S1)

1. Re-new the existing lease with the current owners/managers
2. Determine appropriate lease period, no less than 2-years

Clean-up Contaminated Beach at Site 5

1. EEAA to arrange for beach clean-up campaign of litter and debris.
2. Contact oil industry to arrange for clean-up of oil pollution.

³ Required: large-scale pair of airphotographs (if available) with appropriate topographic map.

EIA Review of New Building Construction on Little Giftun Island

Little Giftun Island is a protected area. There is a large 3 or 4-story concrete building under construction mid-way along the island's south coast. An EIA review is recommended.

Equipping EEAA to manage the Giftuns

Locate, plan, design and equip an EEAA Ranger Station to establish a permanent presence on Big Giftun. In keeping with the tourist use of the island, this could be a day facility, with the Rangers returning to Hurghada following the departure of the boats. Suggestion: initially the facility could be located in the Public area where all the tourist traffic occurs, away from the Site 1 restaurant activity. Later the facility might be relocated further up the coast if substantial tourist become attracted to the New Site (S4). The area to be managed includes Big Giftun, Small Giftun and their contiguous waters extending seaward to a distance of 1km.

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