

Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

1. Date this sheet was completed/updated:

28/6/1998

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Designation date

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Site Reference Number

2. Country:

EGYPT

3. Name of wetland:

BARSAWI

4. Geographical coordinates:

31° 03' - 31° 14' N 32° 40' - 33° 30' E

5. Altitude: (average and/or max. & min.)

6. Area: (in hectares)

60,000 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

Shallow hypersaline lagoon along the Mediterranean Coast of international importance to migrating, wintering and breeding waterfowl.

8. Wetland Type (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document.)

marine-coastal: A · B · C · D · E · F · G · H · I · **(J)** · K

inland: L · M · N · O · P · **(Q)** · R · Sp · Ss · Tp · Ts
· U · Va · Vt · W · Xf · Xp · Y · Zg · Zk

man-made: 1 · 2 · 3 · 4 · **(5)** · 6 · 7 · 8 · 9

Please now rank these wetland types by listing them from the most to the least dominant:

J, Q, 5

9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page.)

1a · **(1b)** · **(1c)** · 1d | **(2a)** · 2b · 2c · 2d | 3a · 3b · **(3c)** | 4a · 4b

Please specify the most significant criterion applicable to the site: **1b, 3c**

10. Map of site included? Please tick **yes** -or- **no**

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits.)

11. Name and address of the compiler of this form:

Nature Conservation Section, Egyptian Environmental Affairs Agency.
23 A, Ismail Mohammed St. Apt 81, 7th Floor.
Zamalek, Cairo, Egypt.



12. Justification of Criteria Selected

Lake Bardawil is the least polluted wetland in Egypt and probably in the Mediterranean region as a whole.

The lake is important for waterfowl populations, including:

1% or more of population

<i>Phalacrocorax carbo</i>	5000-30,000	Wintering
<i>Phoenicopterus ruder</i>	13,000	Wintering
<i>Sterna albifrons</i>	1,200	Breeding
<i>Charadrius alexandrinus</i>	1,900	Breeding

The lake is considered an internationally important bottleneck for migratory birds in the autumn, particularly for waterfowl. Several globally threatened species pass through the area.

The lagoon is an important nursery for Mediterranean fisheries.

13. General Location

North Sinai Governorate, 35 km from El Arish

14. Physical Features

Shallow hyper saline lagoon along the Mediterranean Coast. The lake is 95 km long and 25 km wide. Maximum water depth is 3m and average water depth is only 1m. The lake is separated from the sea by a narrow sandbar varying in width between 100m-1km. There are two man-made inlets and one natural inlet between the lake and the sea. The lake maintains a salinity higher than sea water with water circulating between the three outlets which connect it to the sea. Salinity increases from the openings towards the southern shore and varies considerably depending upon water exchange, with salinity values up to 110‰ in some areas. Small islands, salt marshes and saltflats are found around the wetland.

15. Hydrological values

Shore protection

16. Ecological features

46% of the lake shores are bare sand, 35% are fringed with a band of halophytic vegetation and 19% are mud flats of varying width. Dense vegetation is only found in a few places, in particular on the islets within the Zaranik Lagoon. The main genera are *Arthrocnemum* and *Halocnemum*. The sandy bottom of the lake is covered by scattered patches of the sea grass *Ruppia spiralis*. The nutrient, phytoplankton and zooplankton content of the open water is low.

17. Noteworthy flora

Three globally threatened species occur: *Zygophyllum aegyptium*, *Pantago chamaepsyllum* and *Allium crameri*.

18. Noteworthy fauna

Two globally threatened species of mammal occur: Fennec Fox *Fennecus zerda* and Sandcat *Felis margarita*.

Lake Bardawil/Zaranik Protected Area is considered a BirdLife International Important Bird Area (IBA) as an internationally important bottleneck for migrating birds, particularly waterbirds. Significant percentages of the world populations of a number of species passes through the area in the Autumn, including over 221,616 Gargeny *Anas querquedula*. Eight globally threatened species have been recorded: *Pelecanus crispus*, *Crex crex*, *Glareola nordmanni*, *Marmaronetta angustirostris*, *Aythya nyroca*, *Circus macrourus*, *Falco naumanni* and *Aquila helica*

Five globally threatened reptile occur: *Chelonia mydas*, *Caretta caretta*, *Testudo kleinmanni*, *Varanus griseus* and *Chameleo chameleo*. The sea turtles could be possibly breeding on the sand bar of the lake.

A number of restricted range terrestrial invertebrates also occur in the area.

19. Social and cultural value

The lake is an important local fishery, producing over 2,500 tones annually, mostly of the high value saltwater fish species and employing some 3000 fishermen.

Salt is produced from the lake, which is the highest quality salt in the country.

Bedouins graze livestock around the lake shore, including on accessible islands.

Bird hunting, particularly of quail takes place in the Autumn along the coastline of the lake.

There are a number of archaeological sites mostly from the Roman period situated in and around the wetland.

20. Land tenure/ownership of:

a) site

Most of the land is considered to belong to the government, although the Bedouins claim traditional land ownership.

b) surrounding area

Most of the land is considered to belong to the government, although the Bedouins claim traditional land ownership. Some of the land is privately owned, particularly land which has been sold to investors.

21. Current land use:**a) site**

Fishing, salt production, grazing, tourism.

b) surroundings/catchment

Scattered towns and human settlements, The North Sinai Development Project (a large-scale land reclamation project on the northwest side of lake), tourism (extensive tourism development spreading along the coastline on either side of the wetland), scattered rainfed agriculture, grazing.

22. Factors adversely affecting the site's ecological character**a) at the site**

During the building of a temporary road along the sandbar for maintenance of the inlets, the natural inlet at Zaranik was closed which is negatively effecting the saltmarsh.

There are concerns that tourism development might encroach upon the lake shores generating pollution and human disturbance.

The activities of the GADFR on the lake, such as dredging and inlet maintenance could be having negative impacts but requires further investigation.

Illegal and over fishing.

Illegal and over hunting.

Over grazing could possibly be occurring.

b) around the site

There are concerns that the lake might be polluted from the drainage water from the North Sinai Development Project

There are concerns about the negative impacts from the increasing tourism development and human population in the areas surrounding the lake.

23. Conservation measures taken:

Zaranik Protected Area was declared in 1985 encompassing the Zaranik Lagoon on the east corner of the lake. The boundaries of the reserve were officially declared in 1996 and cover 250 km² of terrestrial and saltmarsh habitat. Zaranik is one of the best managed reserves in the country outside the South Sinai Protectorate Network. Other than the salt factory, all development has been prevented within the Protected Area. Hunting has also been controlled in the area.

24. Conservation measures proposed by not yet implemented:

There is planned to launch a Medwet-Global Environmental Facility (GEF) in 1999 to develop the management and infrastructure of the Zaranik Protected Area, including the production of a management plan. One of the aims of the project is to develop consensus to expand the Protected Area boundaries to cover the whole of the lake to facilitate the management of the wetland as a RAMSAR site.

25. Current scientific research and facilities:

The GADFR undertakes research at the lake, but from the perspective of fisheries.

There is a field research station at the Zaranik Protected Area. The reserve has been supporting migration research by the Max Planck Institute, Germany.

There is an on-going Darwin Initiative project which will survey sandbar of the lake for sea turtle nesting sites.

26. Current conservation education

Zaranik Protected Area regularly has conservation education programs for schools, university students, government officials, journalist, etc... While most of the attendants are from the Governorate, many of the individuals come from other locations around the country. The reserve has hosted training and education programs for nationals and foreigners, including from the Arab region. Audio-visual and printed materials (stickers, booklets, posters) have been made for the reserve's education programs. There is a newly established Visitor Center at the Zaranik Protected Area with a museum/library, auditorium and exhibits. Hides have been erected around the salt marsh at the Zaranik Lagoon.

27. Current recreation and tourism

There is little tourism to Lake Bardawil except along the coast near the wetland. Tourist villages/second homes have been established along the coast west and east of the lake, which are mainly for the Egyptian leisure tourism market and are seasonal, mainly for the summer months (June-July-August). Most of the tourism to the lake is from the Zaranik Protected Area, which is primarily ecotourism. The tourism to the reserve is small, but growing annually. Most of the visitors are foreigners and

28. Jurisdiction

The lake is under the management of the General Authority for the Development of Fisheries Resources (GADFR) under the Ministry of Agriculture.

The management of the Zaranik Protected Area and the RAMSAR site is under the Nature Conservation Section of the Egyptian Environmental Affairs Agency (EEAA).

The salt pans and factory is under the management of the Nasser Salt Production Company which is government owned.

The Ministry of Interior/Defense control and regulate access to the lake.

The Governor influences and controls the management of the area.

29. Management authority

General Authority for Fisheries Resource Development, Lake Bardawil Branch, El Talul, North Sinai.

Zaranik Protected Area, Governorate Building, El Arish, North Sinai.

Governor of North Sinai, Governorate Building, El Arish, North Sinai.

30. Bibliographical references:

Baha El Din, M. (et. al.), *Biodiversity Assessment of the Mediterranean Coast of Egypt*, Nature Protection Sector, Egyptian Environmental Affairs Agency, 1996.

Baha El Din M., *Pre-project study toward the development of a Global Environmental Facility (GEF) Biodiversity Project for Egyptian Mediterranean Wetlands and Coastal Areas*, EEAA-Medwet-UNDP, 1996.

Baha El Din M., *Report on Sites of Importance for Avifauna and Terrestrial Biodiversity for the National Oil Spill Contingency Plan*. EEAA-Danida, 1997.

Baha El Din S., *Important Bird Areas in Egypt Directory*, BirdLife International (in publication).

EEAA-Medwet-UNDP, *Revised GEF Provisional Project Document*, 1998

Meininger P. & Gamil Ata, *Ornithological Studies in Egyptian Wetlands 1989/90*, Fore-report Nr. 94-01, WIWO-report Nr. 40, 1994.