

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:

October 1997

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Designation date

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Site Reference Number

2. Country:

Islamic Republic of Iran

3. Name of wetland: Lake Oroomiyeh

4. Geographical coordinates: 37°30'N 45°30'E

5. Altitude: (average, max., min.) 1280 m (Kabudan 1525 m)

6. Area: 483,000 ha

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

A large, shallow, hypersaline lake with numerous islands and extensive fringing brackish to saline marshes, in a large internal drainage basin in the uplands of northwestern Iran. The lake is of great importance as a breeding area for many species of waterfowl, notably *Phoenicopterus ruber* and *Pelecanus onocrotalus*, and as a staging area for migratory species in spring and autumn. The lake is protected as a National Park and Ramsar Site.

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: Q Sp M N R

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: 2a, 2c, 1a, 1d

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:

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Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):

12. Justification of the criteria selected under point 9, on previous page. (Please refer to Annex II in the *Explanatory Note and Guidelines* document).

The lake and the mudflats around the lake and the undulated plains west, and the eastern parts of the lake provide wintering habitat to many species of threatened birds: *Pelecanus crispus*, *Phoenicopterus ruber*, *Oxyura leucocephala*, *Aquila heliaca*, *Marmaronetta angustirostris*, *Otis tarda*, *Cygnus bewickii*, *Falco cherrug*, *Haliaeetus albicilla*, *Aquila clanga*, *Haliaeetus leucoryphus*, *Gyphatus barbatus*, *Ciconia ciconia*, etc.

2c: Oroomiyeh National Park is an important area for breeding species of threatened birds: *Pelecanus crispus*, *Phoenicopterus ruber*, *Gyps fulvus* and *Otis tarda*.

1a: The lake is a very good example of a natural brackish to saline lake, with special characteristics for the biogeographic region.

1d: A sample of a special, rare and uncommon wetland in a biogeographic region.

13. General location: (include the nearest large town and its administrative region)

Oroomiyeh National Park is situated in a large internal drainage basin in Western Azarbayjan Province, 60 km southwest of Tabriz.

14. Physical features: (e.g. geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

Oroomiyeh National Park, formerly known as Lake Rezaiyeh, is a vast hypersaline lake of great scenic beauty with numerous small islands and extensive salt-encrusted flats and shingle beaches. The lake is about 140 km long (from north-west to south-east) and up to 55 km wide near its southern end. The average depth of the lake is about five metres, except in the southern portion where depth reaches eight metres. The bottom consists of mud or silt, often covered by salt crystals. Salinities range from 80 to 280 ppt and the water temperature ranges from 3°C to 30°C. The salts present in the lake are very similar to those in sea water. Seasonal inflow is mostly from snow-melt. This causes the water level in the lake to rise 1-2 m in spring, and reach its highest levels in the first half of June. Evaporation then lowers the level again throughout the summer and autumn. The marshes with abundant aquatic vegetation are situated in the "Deltas" of the many small rivers and streams that flow into the lake. The most extensive of these marshes is found at the mouth of the Jogatu Chay (river) at the south end of the lake. The lake includes 56 mostly small, uninhabited islands. The largest island, Kabudan or Ghoyoon Daghi, comprises 3,125 ha of hilly terrain covered with steppe vegetation and scattered trees. The climate is semi-arid, with very hot summers and extremely cold winters (temperatures regularly falling below -25 °C). The mean annual rainfall is in the range of 400-600mm.

15. Hydrological values: (groundwater recharge, flood control, sediment trapping, shoreline stabilisation etc)

The lake acts as a micro climate and temperates the weather during summer. Although plenty of work of the hydrology of the lake has been done by the university of Oroomiyeh since 1996, but they are not available until they are published.

16. Ecological features: (main habitats and vegetation types)

The lake supports an abundant growth of the algae *Enteromorpha intestinalis* (Ulvaaceae) and there is a build up of brine shrimp (*Artemia salina*) during the summer months. Savage (1968) has described secondary productivity in the lake ecosystem. In years when salt concentrations remain low, *Enteromorpha* becomes so abundant that the whole lake takes on the appearance of a thin vegetable soup. *Artemia* begins to appear in April, but does not build up in great strength until June; successive hatches maintain high numbers until September. The lake is too saline to support any other plants or animals. The shoreline vegetation is dominated by species of *Atriplex fra.* and *Suaeda*. The marshes around the lake

have typical saltmarsh plant communities with *Juncus*, some *Phragmites* reed-beds at river mouths, and occasional stands of *Tamarix*.

Remnant stands of pistachio *Pistacia atlantica* woodland survive on the larger islands, notably Kabudan and Ashk. Other conspicuous plants on the larger islands include buckthorn *Rhamnus palasii* and species of wormwood *Artemisia*, *Dianthus*, *Cerastium* and the grasses *Hordeum* and *Bromus*. There are rolling wheat-lands to the west and south of the lake, and semi-arid steppes and hills to the north and east. Much of the surrounding semi-arid steppe has been converted to wheat fields. There are small settlements at various points on the shore.

17. Noteworthy flora: (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc)

Several of the islands, notably Ashk and Kabudan, support almost pristine stands of Azarbaijan pistachio (*Pistacia atlantica*) forest. The few surviving stands of this forest elsewhere in northwestern Iran are now much degraded.

18. Noteworthy fauna: (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

The lake is extremely important for breeding *Pelecanus onocrotalus* (1000-1600 pairs), *Egretta garzetta* (90 pairs), *Plegadis falcinellus* (100+ pairs), *Platalea leucorodia* (50-100 pairs), *Phoenicopiterus ruber* (15,000-25,000 pairs), *Tadorna ferruginea* (300-500 pairs), *Tadorna tadorna* (4,000-5,000 pairs), *Himantopus himantopus* (300-500 pairs), *Recurvirostra avosetta* (1,500-2,000 pairs), *Tringa totanus* (2,000-3,000 pairs), *Larus cachinnans armenicus* (4,000-5,000 pairs) and *Larus genei* (3,000-4,000 pairs). Other breeding birds include several pairs of *Anser anser*, *Marmaronetta angustirostris* (maximum of 25 birds present in summer) and *Aythya nyroca*. *Charadrius leschenaultii* has been recorded during the summer months and may breed on the saline flats around the lake.

The pelicans, spoonbills, little egrets and many of the gulls breed on a group of small islands (the Dowguzlar Islands) near the south end of the lake, and fly to the extensive brackish and freshwater wetlands on the plain to the south of the lake to feed. Savage (1964) surveyed the lake in 1960 and found only about 100 non-breeding flamingo's; he located some nest-mounts, and speculated that flamingo's had bred there in the past. However, some 10,000 to 12,000 birds were found breeding in 1965 and 1966, and in 1970 there were an estimated 40,000 birds in the colony.

Flamingo's are known to have bred in large numbers at lake Oroomiyeh every year since then, and numbers still appear to be increasing slightly, with perhaps as many as 25,000 breeding pairs in recent years. Towards the end of the breeding season, the adults congregate in huge rafts to moult.

Most other species of waterfowl breed on the mudflats surrounding the lake or in the extensive fresh to brackish marshes at the main river mouths. The vast mudflats surrounding the lake are the most important autumn staging area for migratory shorebirds and garganey (*Anas querquedula*) in Iran, while the open waters of the lake occasionally support huge numbers of black-necked grebe (*Podiceps nigricollis*).

Over 425,000 waterfowl of at least 53 species were recorded in the Oroomiyeh basin during an aerial survey on 29-31 August 1973. These included 146,000 unidentified small shorebirds (probably mostly *Calidris minuta* and *C. ferruginea*) on the mudflats around the lake, along with 21,000 *Anas querquedula* and 13,000 *Recurvirostra avosetta*.

The lake appears to be an important moulting area for common shelduck *Tadorna tadorna* (with up to 35,000 in August), and in mild winters it may support large numbers of wintering waterfowl. The islands in Lake Oroomiyeh are the only known breeding site in Iran for lanner (*Falco biarmicus*) in Iran (at least five pairs), and also provide nesting sites for at least ten pairs of *Neophron percnopterus*. *Falco cherrug* and *Falco peregrinus* have been recorded during the summer months and may breed; *Gyps fulvus* and *Aegypius monachus* are regular visitors from the surrounding hills; and *Halieetus albicilla* and *Falco columbarius* occur in winter. The great bustard *Otis tarda* was a regular visitor to the plains around the lake in the 1970s, and there is still a population of about 25 Great Bustards frequenting the area, and breed there (at least 4 pairs).

Wild sheep (*Ovis ammon*) of the western race were introduced on Kabudan Island in the 19th century,

while Mesopotamian Fallow deer (*Dama dama mesopotamica*) were introduced on Ashk Island in the 1970s. The sheep population peaked at over 4,000 in 1971/1972, but then crashed to only 1,150 in 1973/1974. Leopard *Panthera pardus* was introduced onto Kabudan in about 1970 in an attempt to control Wild Sheep numbers. Although the leopards are known to have bred on the island, they are believed to have died out towards the end of that decade.

19. Social and cultural values: (e.g. fisheries production, forestry, religious importance, archaeological site etc.)

The lake has little value for conventional outdoor recreation because of its extremely high salinity, but it has exceptionally high values for eco-tourism because of its great scenic beauty and spectacular concentrations of waterbirds. Local people believe that the lakeside mud has special medicinal properties.

20. Land tenure/ownership of:

Public (Government)

21. Current land use:

Several small steamer services operate on the lake, ferrying people and supplies between five small ports, and there is some grazing by domestic livestock in peripheral marshes. Otherwise the entire area is protected as a National Park.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:

None known

23. Conservation measures taken: (national category and legal status of protected areas - including any boundary changes which have been made; management practices; whether an officially approved management plan exists and whether it has been implemented)

Ghoyon Daghi (Kabudan) Island was established as a Protected Region in February 1960. This was enlarged to encompass the entire lake and all its wetlands (483,000 ha) in August 1967. The Protected Region was reduced to 465,000 ha and given the National Park status in the early 1970s. The National Park has since then been reduced to its current size of 463,000 ha. The entire lake (483,000 ha) was designated as a Ramsar site on June 1975. 462,600 ha of the National Park were designated as a UNESCO Man and Biosphere Reserve in June 1976. The site has been identified as an Important Bird Area by Birdlife International (Evans, 1994).

24. Conservation measures proposed but not yet implemented: (e.g. management plan in preparation; officially proposed as a protected area etc.)

Cornwallis (1976) recommended that the boundaries of the National Park be extended to the upper limit of the inundation zone of the lake. This would involve no conflict with agricultural interests, and would incorporate the Gerdeh Git and Mamiyand Marshes (site 6), and other wetlands within the National Park.

25. Current scientific research and facilities: (e.g. details of current projects; existence of field station etc.)

The Department of the Environment has carried out a considerable amount of research on the fauna of the lake and its islands, and especially on the introduced population of *Ovis ammon* and *Dama dama mesopotamica*, and the breeding colony of *Phoenicopterus ruber*. A flamingo ringing programme was initiated in 1970, and by 1990 over 35,000 chicks had been ringed with metal rings bearing the inscription of the Department of the Environment. Pelican chicks have also been ringed on a regular basis since 1970, although in much smaller numbers, and some gulls were ringed in the late 1970s. Mid-winter waterfowl counts have been carried out on an annual basis since the early 1970s, and several aerial censuses of breeding waterfowl were conducted during the 1970s. Accommodation for research works and basic laboratory facilities are available at the park on Kabudan Island.

26. Current conservation education: (e.g. visitors centre, hides, information booklet, facilities for school visits etc.)

no information available

27. Current recreation and tourism: (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

no information available

28. Jurisdiction: (territorial e.g. state/region and functional e.g. Dept of Agriculture/Dept. of Environment etc.)

Department of the Environment

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29. Management authority: (name and address of local body directly responsible for managing the wetland)

Department of the Environment, address as mentioned above (28)

30. Bibliographical references: (scientific/technical only)

Carp, E. (1980). *A Directory of Western Palearctic Wetlands*. IUCN, Gland, Switzerland.

Environmental Office of Oroomiyeh (1996). Oroomiyeh National Park.

Evans, M.I. (1994). *Important Bird Areas in the Middle East*. BirdLife International, Cambridge, United Kingdom.

Mansoori, J. (1983). *National Report on Iran's Wetlands of International Importance as Habitat for Waterfowl*. Prepared for the Groningen Conference, Netherlands, in May 1984.

Mansoori, J. (1997). Flamingo ringing project in Oroomiyeh National Park in Farsi.

Scott, D.A. (1995). *A Directory of Wetlands in the Middle East*. IUCN, Gland, Switzerland and IWRB, Slimbridge, United Kingdom.

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**List of bird species including counting results
Oroomiyeh National Park and surrounding areas**

Waterfowl

- globally threatened species

<i>Phoenicopterus ruber</i>	13,000
<i>Cygnus cygnus</i>	255
<i>Pelecanus onocrotalus</i>	230
<i>Cygnus bewickii</i>	2

- 1% or more of Middle east population

<i>Tachybaptus ruficollis</i>	493
<i>Egretta alba</i>	8
<i>Ardea cinerea</i>	8
<i>Phoenicopterus ruber</i>	13,000
<i>Cygnus spp.</i>	400
<i>Anser anser</i>	2,310
<i>Tadorna ferruginea</i>	1181
<i>Tadorna tadorna</i>	20,300
<i>Anas crecca</i>	3,150
<i>Anas platyrhynchos</i>	4,148
<i>Aythya ferina</i>	1,650
<i>Aythya fuligula</i>	2,700
<i>Anas spp.</i>	16,744
<i>Fulica atra</i>	2,350
<i>Vanellus vanellus</i>	250
unidentified shorebirds	1,000
<i>Larus spp.</i>	1,502
<i>Sterna spp.</i>	40
<i>Haliaeetus spp.</i>	11
<i>Falco spp.</i>	17

source: A. Ghahramani, mid-winter count 1997