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:

25-02-1997

FOR OFFICE USE ONLY

DD	MM	YY
23	06	75

Designation date

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Site Reference Number

2. Country:
Islamic Republic of Iran

3. Name of wetland: Hamoun-e-Saberi & Hamoun-e-Helmand

4. Geographical coordinates: 31°20'N 61°20'E

5. Altitude: (average, max., min.) 475 m (H-e-Saberi) ; 470 m (H-e-Helmand) **6. Area:** 50,000 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)
Two large, semi-permanent, fresh to brackish lakes with extensive marshes at the inland delta of the Helmand (Hirmand) River, in an internal drainage basin on the border between Iran and Afghanistan. The site is extremely important for passage and wintering waterfowl, and also, in years of high water levels, for breeding waterfowl. Parts of the two lakes are protected in the Hamoun Protected Area, which covers 37,000 ha of the 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: P Ts Ss W N

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: 2c, 2b, 1a

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:

***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).

1a: Hamoun-e-Saberi and Hamoun-e-Helmand are outstanding examples of semi-permanent and seasonal wetlands characteristic of the desert regions of southwest Asia.

1c: Spanning the international border between Iran and Afghanistan, the wetlands play a substantial hydrological and ecological role in the natural functioning of a major river basin shared between two countries.

2a: The wetlands are important for three species of globally threatened birds, supporting wintering populations of *Pelecanus crispus* and a breeding population of *Aythya nyroca*.

2b: The wetlands support an extremely diverse wetland flora and fauna, and thus maintain the genetic and ecological diversity of the region.

3a: The lakes regularly hold well in excess of 20,000 waterfowl during the migration seasons and in winter.

3c: The wetland supports over 1% of the regional populations of the waterbirds *Pelecanus onocrotalus*, *Egretta alba*, at least nine species of Anatidae, *Fulica atra* and *Himantopus himantopus*. When conditions are suitable for breeding, the wetland can support over 1% of the regional breeding population of *Platalea leucorodia*.

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

Hamoun-e-Saberi and Hamoun-e-Helmand are situated in the Province of Seistan / Baluchistan, in the Seistan Basin, northwest, west and southwest of Zabol. Only half of Hamoun-e-Saberi lies in Iran, the other half is situated in Afghanistan. There are several small settlements in the area.

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)

Hamoun-e-Saberi and Hamoun-e-Helmand form together with Hamoun-e-Puzak the main three lakes in the Seistan Basin. The last lake is the most northern one of those three lakes, which is always flooded first and is largely situated in Afghanistan. At times of peak-flooding the entire complex of lakes can cover over 200,000 ha. The lakes are unusual in that although they lie within an internal drainage basin, they are predominantly freshwater lakes. The system lies in an extremely arid region, and receives the great bulk of its water from the Helmand River, Fara River and several smaller rivers rising in the highlands of central and northern Afghanistan. During long periods of droughts, only Hamoun-e-Puzak receives enough water not to dry out. However, during years of heavy rainfall, the floodwater sweeps through all the lakes and overflows into a vast salt waste to the south-east, flushing the salts out of the system.

Hamoun-e-Saberi receives its water from the Fara Rud, which enters in the north-east (in Afghanistan), and from overflow of Hamoun-e-Puzak to the east. Hamoun-e-Helmand receives its water from the southern branch of the Helmand river, and from overflow of Hamoun-e-Saberi to the north. In wet years the average water depth is about 50 cm, and the maximum depth is about 1.5 m. Since prolonged drought in the 1980s, very little submerged vegetation is growing at the lakes. Recently (after 1992), most of the wetlands were dry. The bottom of the lakes consists of alluvial silts.

To the south the wetlands are bordered by low-lying plains. Much of the land around the town of Zabol and around villages to the east of the lakes is under irrigated cultivation. The plains to the south consist of extensive bare salt flats and sparsely vegetated sandy plains with sand dunes and some tamarisk scrub. An isolated volcanic plug, Kuh Khvajeh, rises abruptly out of the marshes on the east side of Hamoun-e-Helmand, and in the west is a line of low earthen cliffs situated at the edge of a vast undulating, gradually rising desert plain. The climate is hot and dry.

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

The lakes serve as a drainage basin for the area.

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

Hamoun-e-Saberi and Hamoun-e-Helmand support habitats that include fresh to brackish lakes, extensive mudflats, reed-beds, sedge and salt marshes, riverine tamarisk thickets, bare salt flats, and vast sparsely vegetated desertic plains. The marshes are predominantly eutrophic. In years of prolonged flooding, an abundant submerged aquatic vegetation develops on the floodplain. Halophytic vegetation fringes the wetland. Surrounding areas are desertic, with very few settlements and limited irrigated cultivation to the south and east.

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

At Hamoun-e-Saberi and Hamoun-e-Helmand *Tamarix* thickets grow in the marshes, with reeds *Phragmites australis*, reedmace *Typha* sp., and *Carex* sp. sedges. Halophytic vegetation includes *Halocnemum strobilaceum*, sea lavender *Limonium carnosum*, glasswort *Salsola* spp. and the orache *Atriplex verruciferum*.

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

The wetlands are extremely important as staging and wintering area for waterbirds, notably pelicans, herons, dabbling ducks and shorebirds, and in years of high water levels, they are also an important breeding area for many species. It was found in aerial surveys in the 1970s that the numbers of Anatidae wintering in the Seistan Basin vary from almost nil in extremely dry years, to over 700,000 in wet years. It is difficult to compare these figures with current counts. The drought of the early 1990s has resulted in an enormous decline in wintering waterfowl in that period. This has also been attributed to prolonged drought in the early and mid-1980s and large scale degradation of the aquatic vegetation.

Wintering waterfowl include Dalmatian pelican (*Pelecanus crispus*), great white pelican (*Pelecanus onocrotalus*), great egret (*Egretta alba*), grey heron (*Ardea cinerea*), greylag goose (*Anser anser*), ruddy shelduck (*Tadorna ferruginea*) and common shelduck (*T. tadorna*), common teal (*Anas crecca*), northern pintail (*A. acuta*), common pochard (*Aythya ferina*), crane (*Grus grus*) and black-headed *gull (Larus ridibundus*).

Breeding birds in years with high water levels have included great bittern (Botaurus stellaris), white spoonbill (*Platalea leucorodia*), little bittern (*Ixobrychus minutus*), ferruginous duck (*Aythya nyroca*), black-winged stilt (*Himantopus himantopus*), slender-billed gull (*Larus genei*), and whiskered tern (*Chlidonias hybridus*). Marbled teal (*Marmaronetta angustirostris*) is probably a scarce resident, it is sometimes observed in winter and it is thought to be breeding.

Raptors are common in winter, and include large numbers of moustached warbler (*Acrocephalus melanopogon*) and clamorous reed warbler (*A. stentoreus*), black kite (*Milvus migrans*), marsh harrier (*Circus aeruginosus*), white-tailed eagle (*Halieetus albicilla*), imperial eagle (*Aquila heliaca*), greater spotted eagle (*A. clanga*), steppe eagle (*A. nipalensis*) and cinereus vulture (*Aegypius monachus*). Black francolin (*Francolinus francolinus*), Spanish sparrow (*Passer hispanoliensis*) and Dead Sea sparrow (*P. moabiticus*) are resident in the tamarisk scrub around the lake. At least 170 species have been recorded around the lake. A list of bird counting results is attached.

Mammals that have been recorded around the lakes include wolf (*Canis lupus*), golden jackal (*Canis aureus*), red fox (*Vulpes vulpes*), striped hyena (*Hyaena hyaena*), caracal (*Lynx caracal*), wild boar (*Sus scrofa*), goitred gazelle (*Gazella subgutturosa*) and jebeer gazelle (*G. dorcas fuscifrons*).

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

There is a ruined settlement of considerable archaeological interest at the volcano Kuh Kvajeh, just outside the Ramsar Site. The reed-beds play a significant role in the local economy of the villages along the shoreline. The reeds are used for a number of purposes: as forage for domestic livestock, for constructing boats, for fabricating wind-breaks for houses and gardens, and as a source of fuel for cooking and heating. The rich fishery at the lake is used as a supplement to the income of the village people.

20. Land tenure/ownership of:

(a) site: National Government

(b) surrounding area: no information available

21. Current land use:

(a) site: small scale commercial fishing, reed-cutting, grazing by domestic livestock

(b) surroundings/catchment: There are a few small settlements with irrigated agricultural grounds further upstream.

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

(a) at the site: Irrigation schemes in both Iran and Afghanistan have reduced the flow of water into the Hamouns. As a consequence, the wetlands are only completely filled in very wet years. Many of the drought problems in the Seistan Basin have been caused by dam construction and water diversion schemes on the Helmand River in Afghanistan. An average flow rate that was agreed upon by the two governments did not result in any improvements, since the "average" flow was given in a winter bulk of water, not as a continuous flow. According to the FAO, the floods in 1991 destroyed a large dam and damaged the irrigation projects in Afghanistan, so for the time being the inflow of water has increased again. However, there is a proposal to build a new, larger dam already, the Kamal Khan Dam.

Despite the availability of water, the aquatic vegetation is almost absent, unlike in the 1970s, where it would immediately recover after a dry period. The reason for the absence of aquatic vegetation may be, that the dry period in the 1980s lasted so long (six years at some places). The digging up of tubers by the local people for use as fuel may also have contributed to the problem, as may the massive stocking of the lakes with herbivorous fishes (grass carp) over the last years.

Local pastoralists are concerned about the lack of aquatic vegetation, since they are dependent on it as a source of grazing for their herds of cattle and water buffalo. The majority of them have moved to the Hamoun-e-Puzak marshes on the Afghan border.

Increasing soil salinity is becoming a very serious problem in the agricultural land bordering the wetlands, and is of considerable concern to the agricultural sector. An increase of the human population (partly refugees from Afghanistan) together with a decrease in land suitable for agriculture cause serious problems. Some areas have been abandoned and others produce extremely low yields, also because of wind-blown salt that cover the land during the summer months.

An asphalt road has been constructed through the Ramsar site, passing between the two lakes. The building of some bridges does guarantee the flow of water between the lakes, and the effects on hydrology and ecology are yet unknown. A canal that has been built to connect the two lakes will have a major effect on the hydrology of the system.

Other developments include the Seistan Drainage and Irrigation Project, possibly funded by the World Bank, other irrigation projects and the building of a large water reservoir in the desert east of Zabol, supplied by a feeder canal from the Parian branch of the Helmand River.

A major unexplained kill of fish, pelicans, flamingo's and shorebirds occurred in 1994.

(b) around the site: no information available

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)

The western half of both lakes and a large area of desert were designated as a protected region in August 1967. This was enlarged in 1969, and reduced again in the 1970s, and it was upgraded to a wildlife refuge. It has since been downgraded to a protected area.

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

Since the mid-1970s, plans have existed to merge the protected areas of Hamoun-e-Puzak, Hamoun-e-Saberi and Hamoun-e-Helmand into one large wildlife refuge, so far without success.

The *Action Plan for the Conservation of Wetlands in South and West Asia* suggests that the impact of the dams in the Helmand River on the Seistan Basin should be studied to achieve a long-term agreement on the sharing of waters in this region.

The Ramsar Monitoring Procedure Mission that visited the area in 1992 made several recommendations: to merge the two Ramsar sites in the Seistan Basin to one large site and wildlife refuge, to demarcate the borders of the site clearly with signs, to develop an integrated water management plan for the region (that also takes the ecology and hydrology of this wetland into account), and to perform a study that could meet the basic requirements for the management plan that is to be drawn. This study should cover the hydrology of the system, its limnology and chemical composition, the ecological and economical effects of fish introduction, waterfowl studies, effects of grazing and fishing, effects of harvesting of reeds and other vegetation, and include an environmental impact assessment of the new asphalt road that has been built.

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

The Ornithology Unit of the Department of the Environment has carried out annual mid-winter censuses since 1970, and breeding season surveys have been undertaken on several occasions. During the mid-1980s a major ecological study of the wetlands of the Seistan Basin was undertaken by a group of experts from Tehran University. More recently, the Department of the Environment has embarked upon a study of the wetlands, as a part of its nation-wide inventory of wetlands. A Government Committee has been established to coordinate studies and centralise the collection of information. Visiting researchers can be accommodated at the Department of the Environment's office in Zabol.

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
PO Box 5181
15875 Teheran
Islamic Republic of Iran

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)

Anon. (1992). *An Action Programme for the Conservation of Wetlands in South and West Asia*. Asian Wetland Bureau, Kuala Lumpur, Malaysia, and IWRB, Slimbridge, United Kingdom.

Ashtiani-Zarandi, M.A. (1990). The current status of waterfowl and wetland conservation in the Islamic Republic of Iran. In: Matthews, G.V.T. (ed.), *Managing Waterfowl Populations: 81-83. Proc. IWRB Symposium Astrakhan 1989*. IWRB Special Publications No. 12, Slimbridge, United Kingdom.

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

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

IUCN (1992). *Protected Areas of the World: a review of national systems. Volume 2: Palearctic.* IUCN, Gland, Switzerland and 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.

Scott, D.A. (1976). *A List of the Wetlands of Iran*. Internal Report. Department of the Environment, Teheran, Iran.

Scott, D.A. (1993). Wetlands of West Asia - a regional overview. In: Moser, M. and Van Vessem, J. (eds), *Wetlands anf Waterfowl Conservation in South and West Asia:2-22. Proc. International Symposium, Karachi, Pakistan, 14-20 December1991*. IWRB Special Publication No. 25. AWB Publication No. 85. IWRB, Slimbridge, United Kingdom and AWB, Kuala Lumpur, Malaysia.

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

Scott, D.A. and Smart, M. (1992). *Wetlands of the Seistan Basin, South Caspian and Fars, Islamic Republic of Iran.* Ramsar Convention Monitoring Procedure Report no. 26, Ramsar Convention Bureau, Gland, Switzerland.

WCMC (1990). Iran. In: Spagnesi, M (ed.), *Proceedings Conference on the Conservation of Wetlands of International Importance especially as Waterfowl Habitat, Cagliari, Italy, 24-29 November 1980*. Supplemento alle Richerche di Biologia delle Selvaggina. Vol.III (1): 741-747.

List of bird species including counting results
Hamoun-e-Helmand and Hamoun-e-Saberi

waterfowl

- globally threatened species

Marmaronetta angustirostris	7 w
Pelecanus crispus	75 w
Aythya nyroca	10 br

- 1% or more of Middle east population

Anas acuta	300,000 w
Anas clypeata	10,000 w
Anas crecca	222,500 w
Anas penelope	5,000 w
Anas platyrhynchos	36,000 w
Anas strepera	13,000 w
Anser anser	2,600 w
Ardea cinerea	40 br, 208 w
Aythya ferina	4,110 w
Chlidonias hybridus	600 br
Casmerodius albus	2150 w
Himantopus himantopus	100 br
Larus ridibundus	2,860 w
L. cachinnans/argentatus	365 w
Limosa limosa	300 w
Pelecanus onocrotalus	1,300 w
Platalea leucorodia	120 br, 55 w
Sterna albifrons	50 br
Tadorna ferruginea	666 w
Tadorna tadorna	1,600 w
Tringa totanus	350 w
Vanellus leucurus	10 br
Vanellus vanellus	760 w

- other waterfowl:

Egretta alba	2,150 w
Grus grus	84 w
Botaurus stellaris	40 br
Ixobrychus minutus	many br
Larus genei	300 br
Sterna caspia	several br

other birds:

Acrocephalus melanopogon	many br
Acrocephalus stentoreus	many br
Aquila clanga	5 w
Aquila heliaca	5 w
Aquila nipalensis	4 w
Aegypius monachus	10 w
Circus aeruginosus	30 br
Milvus migrans	70 w
Halieetus albicilla	13 w

all counts individual birds
br = breeding, w = wintering
sources: Evans, 1994 and Scott, 1995