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:

24-02-1997

FOR OFFICE USE ONLY

DD	MM	YY
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Designation date

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Site Reference Number

2. Country:
Islamic Republic of Iran

3. Name of wetland: Miankaleh Peninsula, Gorgan Bay and Lapoo-Zaghmarz Ab-bandans

4. Geographical coordinates: 36°50'N 53°17'E

5. Altitude: (average, max., min.) sea level

6. Area: 100,000 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)
Gorgan Bay is a shallow, brackish embayment, almost cut off from the Caspian Sea by Miankaleh Peninsula, a 60 km long sand dune ridge, partly covered by grassland and scrubs. The bay receives freshwater inflow from a number of small rivers and streams rising on the humid northern slopes of the Alborz Mountains. Some freshwater marshes occur at the western end of the bay, where freshwater input is greatest. There are extensive tracts of seasonally flooded tamarisk woodland on that side of the bay, too. The Lapoo-Zaghmarz Ab-bandans are long, narrow freshwater lagoons located at the landward end of Miankaleh Peninsula, about 10 km west of Gorgan Bay. They support extensive reedbeds and fringing vegetation like *Salix*. The area is extremely important for breeding, passage and wintering waterfowl. The Ramsar site comprises one unit.

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: K J 6 Ss Ts E W M A

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: 1a, 2c, 2b

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).

1c: The wetlands of Miankaleh Peninsula and Gorgan Bay are an outstanding example of a natural sand spit/coastal lagoon system characteristic of the south Caspian. They play a substantial hydrological and ecological role in the functioning of the coastal systems of the southeast Caspian.

2a: They provide wintering habitat to four species of threatened birds: *Pelecanus crispus*, *Phalacrocorax pygmaeus*, *Oxyura leucocephala* and *Aquila heliaca*. Five other threatened species of waterfowl have occurred as occasional visitors in small numbers. The Lapoo-Zaghmarz Ab-bandans provide important wintering habitat for *Phalacrocorax pygmaeus*, a globally threatened species.

2b: Miankaleh Peninsula and Gorgan Bay support an extremely diverse wetland flora and fauna.

2c: Gorgan Bay is an important spawning and nursery grounds for various fish species, while the peninsula and the marshes support large breeding colonies of Ardeidae, Laridae and several species of shorebirds.

3a: The wetlands of Miankaleh Peninsula and Gorgan Bay hold well in excess of 20,000 waterfowl.

3c: The wetland supports over 1% of the regional Middle East breeding populations of the waterbirds *Glareola pratincola* and *Sterna albifrons*, and during the migration seasons and in winter, support over 1% of the regional populations of at least 32 species of waterfowl. The Lapoo-Zaghmarz Ab-bandans regularly support over 1% of the regional wintering population of *Anas strepera*.

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

Miankaleh Peninsula, Gorgan Bay and Lapoo-Zaghmarz Ab-bandans are situated in the Province of Mazanderan, in northern Iran. They are located at the south-east extremity of the Caspian Sea, about 2 km west of the city of Bandar-e-Torkeman, near the village of Zaghmarz

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)

Gorgan Bay is a shallow, brackish embayment, almost cut off from the Caspian Sea by the 60 km long Miankaleh Peninsula. That is a low, sandy peninsula with coastal dunes, pomegranate scrub and grassland. At its widest point it is about 4 km wide, at the narrowest point about 1 km. A chain of 50 metre-wide sand dunes parallels the Caspian Sea Coast. The dunes, which rise to about 4 m above sea level, form the highest point in the area. Gorgan Bay (23,800 ha) has a muddy bottom, and is oligotrophic, with a salinity of 10-12 ppt. It receives freshwater inflow from a number of small rivers and streams rising on the humid north slope of the Alborz Mountains to the south. The maximum water depth of the bay is 2 metres. There are extensive freshwater marshes at the west end of the bay and along its south shore, where the freshwater inflow is greatest. The marshes are flooded in autumn and winter, and are eutrophic due to the inflow of numerous streams, agricultural run-off and irrigation channels. There are also extensive tracts of seasonally flooded *Tamarix* woodland at the west end of the bay. Maximum water depth at the marshes is 0.5 metres.

A rise in the sea level of the Caspian Sea of the last decade has resulted in a marked rise in water level of the Gorgan Bay and re-flooding of all those bare flats at the west end of the bay which had been exposed by falling sea levels during the previous decades. On the seaward side of the peninsula, the sandy beach has virtually disappeared.

The Lapoo-Zaghmarz Ab-bandans are two long narrow freshwater lagoons with fringing reed-beds on the landward side of the coastal dunes bordering the Caspian Sea. An ab-bandan is a small man-made reservoir or flooded rice-paddy with a luxuriant growth of underwater vegetation. In this case it is a reservoir. Most were originally built as temporary water storage areas to provide water for irrigation during the dry summer months. However, many (including this one) also serve as private reserves for duck trapping during winter months. The Lapoo-Zaghmarz Ab-bandans are situated about 10 km west of the Gorgan Bay marshes. They are fed by irrigation ditches and local run-off, and drain east into the Gorgan Bay marshes. The water level fluctuates considerably, and extensive mudflats are exposed at low water levels. The ab-bandans do not appear to have been affected by the recent rise in water level of the Caspian Sea.

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

The Lapoo-Zaghmarz Ab-bandans are used as a source for irrigation water during the dry season. Miankaleh Peninsula an Gorgan Bay play a substantial role in the hydrological functioning of the coastal systems of the south Caspian.

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

Most of Miankaleh Peninsula is covered with a carpet of herbaceous plants and grasses. The western half also supports scrubby woodlands with scattered pomegranate, hawthorn, rhamnus and blackberry. There are a few large willow trees planted around shepherds' houses. Much of the shoreline of the bay is fringed with a broad belt of rush. and there are some large areas of glasswort flats. The extensive seasonally flooded marshes at the west end of the bay are dominated by sedges, with small patches of reed-beds, clumps of rush and a large stand of tamarisk. As the water levels fell during the early 1970s the tamarisk force increased greatly, but as the Caspian Sea level has started to rise again, the forest has started to die back. Cultivation bordering the bay in the south is predominantly wheat and cotton.

Open water areas of the Lapoo-Zaghmarz Ab-bandans support a rich growth of submerged and floating aquatic vegetation. The fringing marshes are dominated by reed-beds, but there are areas with pomegranate and other scrubs. The wetlands are bounded to the north by dune vegetation and to the south by arable land with cotton and wheat cultivation.

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

Miankaleh Peninsula is covered with herbaceous plants, and grasses such as *Agropyron*, *Bromus*, *Dactylis*, *Cynodon* and *Festuca*. At the western scrubby woodland there are *Punica granatum* (pomegranate), *Crataegus* (hawthorn), *Rhamnus* sp. (buckthorn), and *Rubus* sp. (blackberry). There are some *Salix* willow trees , *Juncus* (rush) and *Salicornia* (glasswort) flats. The marshes at the west end of the bay are dominated by *Carex* spp. sedges, *Phragmites* (reed), *Juncus* and *Tamarix*.

The Lapoo-Zaghmarz Ab-bandans have fringing marshes dominated by *Phragmites australis* reed-beds with some *Typha* sp. (reedmace), but there are also scrubby areas of *Salix*, *Ribes*, *Rubus* and *Punica*. Open water areas support rich growth of submerged and floating aquatic vegetation, mainly *Ceratophyllum* with some *Potamogeton*.

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

Miankaleh wildlife refuge is one of the finest waterfowl reserves in the Western Palearctic region. Some 126 species of waterfowl have been recorded, of which about 40 have occurred in internationally significant numbers. The reserve is extremely important throughout the year, supporting perhaps as many as 750,000 waterfowl throughout the winter months and large breeding colonies of herons, egrets, pratincoles and tens in summer. It also serves as a major staging area for many species of shorebirds in the south Caspian region.

The reserve is especially noted for its large wintering population of grebes, pelicans, herons, swans,

geese, surface-feeding ducks, diving ducks, shorebirds and gulls, and its breeding colonies of herons and egrets. The change in water depth due to the earlier mentioned rise in sea level has brought about a change in the populations that make use of the bay. Whereas before 1978 the profound species were the geese *Anser anser* and *A. erythropus*, now *Anser anser* has only been observed in small numbers, and *A. erythropus* has not been recorded anymore since 1989. Coot *Fulica atra*, which was hardly ever recorded before the 1970s, is now the great majority of wintering waterfowl in the marshes. Nine species of globally threatened waterfowl have been recorded in the reserve (see also the attached list of waterfowl counts).

The reserve is also very important for its large population of raptors. Twenty-eight species have been recorded. Breeding species include osprey (*Pandion halietus*), short-toed eagle (*Circaetus gallicus*), and white-tailed eagle (*Halieetus albicilla*). A wide variety of land birds occur during the migration seasons, and a large number of larks, thrushes, finches and buntings remain throughout the winter. At least 288 species of birds have been recorded at the reserve.

The Lapoo-Zaghmarz Ab-bandans are used by a wide variety of waterfowl during the migration seasons and in winter. Few species occur in large numbers except *Anas strepera* and *Fulica atra*. During periods of low water level in late summer and in autumn, the wetland occasionally attracts large numbers of migrant shorebirds like ruff, marsh sandpiper and little crake. There are breeding colonies of whiskered tern, great crested grebe, little grebe and moorhen. Up to three white-tailed eagles breed in the area, and peregrine (*Falco peregrinus*) and merlin (*Falco columbarius*) are regular winter visitors in small numbers. A list of waterfowl counts is attached.

At Miankaleh Peninsula and Gorgan Bay the golden jackal (*Canis aureus*) and wild boar (*Sus scrofa*) are abundant in the reserve, and the jungle cat (*Felis chaus*) also occurs. Caspian seals (*Phoca caspica*) occasionally haul out at the Caspian beach.

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

Gorgan Bay and the adjacent inshore waters of the Caspian Sea support an important commercial fishery. The Lapoo-Zaghmarz Ab-bandans are a traditional duck hunting area. There is also a little subsistence fishing.

20. Land tenure/ownership of:

(a) site: The National Government owns Miankaleh Peninsula and Gorgan Bay, the Lapoo-Zaghmarz Ab-bandans are privately owned by the people of the nearby village of Zaghmarz.

(b) surrounding area: no information available

21. Current land use:

(a) site: fishing, both subsistence (Lapoo-Zaghmarz) and commercial (Gorgan Bay), cutting of reeds (Lapoo-Z), grazing by domestic livestock like sheep, water buffalo, goats, cows and horses (Miankaleh Peninsula), a fish processing factory (M Pen), some farms (M Pen), cultivation of cotton and wheat and some small villages (south of Gorgan Bay), irrigation and waterfowl hunting (both Lapoo-Z).

(b) surroundings/catchment: there are a few small settlements and some agriculture (wheat and cotton), and there is a large power station situated on the Caspian shore about 10 km west of the reserve.

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: At Miankaleh Peninsula and Gorgan Bay poaching occurs throughout the area. Much of the peninsula is open to livestock grazing, and in the western portion of the reserve this has been excessive. Irrigation schemes on agricultural land to the west and the south reduce the flow of freshwater into the marshes and the bay, especially in summer. The major threat to the site is the construction of an asphalt highway down to the centre of the peninsula to provide easy access to the fishery stations along the beach at Ashuradeh. A highway has been constructed already up to the western boundary of the reserve. Recent reports indicate that the work on the road has been resumed. The greatly increased access to the peninsula because of that road will inevitably lead to increased pressure for settlement, increased farming activities and increased poaching.

At the Lapoo-Zaghmarz Ab-bandans no threats are known.

(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 entire area of Miankaleh Peninsula and Gorgan Bay was designated as a protected region in May 1970. The entire wildlife refuge, to which 68,800 ha of the area was designated between 1970 and 1975, was designated as a UNESCO Biosphere Reserve in June 1976.

At the Lapoo-Zaghmarz Ab-bandans the owners are, under an agreement with the Department of the Environment, permitted to hunt on a maximum of three days per month throughout the hunting season. However, in recent years they have hunted only three or four times per season. To protect their interest, the owners pay a warden to prevent poaching.

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

Various recommendations have been made by Harrington and Scott in 1972, by Matthews in 1973 and by Van Beuningen in 1975. A Ramsar Monitoring Procedure Mission to the site in January 1992 concluded that the construction of a proposed paved highway along the peninsula would have a detrimental effect on the reserve and should not proceed. At the Lapoo-Zaghmarz Ab-bandans no proposed conservation measures are known.

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

Both at Miankaleh Peninsula and Gorgan Bay the Ornithology Unit of the Department of the Environment has carried out annual mid-winter censuses since 1968, and many ornithological surveys have been undertaken on other occasions. A considerable amount of limnological and fisheries research has been conducted by the National Fisheries Organisation (Shilot), and there is a large fisheries station at Ashuradeh, at the eastern end of the peninsula. Visiting researchers can be accommodated at two game guard stations on the peninsula.

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)

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.

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. (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
Miankaleh Peninsul, Gorgan Bay and Lapoo-Zaghmarz Ab-bandans

waterfowl

- globally threatened species

Marmaronetta angustirostris	pass
Phalacrocorax pygmaeus	28
Oxyura leucocephala	460 w
Pelecanus crispus	several

- 1% or more of Middle east population

Anas acuta	30,400 w
Anas clypeata	18,200 w
Anas crecca	57,000 w
Anas penelope	61,100 w
Anas platyrhynchos	56,600 w
Anas strepera	1,500 w
Ardea cynerea	630 w
Ardeola ralloides	200 br
Aythya ferina	22,500 w
Aythya fuligula	8,000 w
Bucephala clangula	1,110 w
Calidris alba	150 w
Calidris alpina	5,000 w
Cygnus olor	2,174 w
Cygnus columbianus	21 w
Charadrius alexandrinus	300-400 br
Egretta garzetta	100 br
Glareola pratincola	1000 br
Larus ichthyaetus	2,250 w
Larus genei	1,330 w
Larus ridibundus	5,000 w
Limosa limosa	800 w
Mergus serrator	700 w
Numenius arquata	157 w
Phalacrocorax carbo	15,000 w
Phoenicopterus ruber	25,080 w
Pluvialis squatarola	155 w
Podiceps cristatus	2,000 w
Podiceps nigricollis	2,000 w
Recurvirostra avocetta	816 w
Sterna albifrons	600-800 w
Sterna hirundo	20-40 br
Tadorna ferruginea	328 br
Tadorna tadorna	1,605 w
Tringa totanus	650 w
Vanellus vanellus	1,500 w

- other

Fulica atra	18,600 br

other birds:

Aquila heliaca	few
Falco cherrug	4 w
Francolinus francolinus	common
Halieetus albicilla	50-100 w

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