



Information Sheet on Ramsar Wetlands

As approved by Rec.C.4.7 of the Conference of the Contracting Parties, Montreux, Switzerland - July 1990

NOTE: Please read the accompanying guidelines before attempting to complete this form. An example of a completed data sheet is also included.

Completed sheets should be returned to: T.A. Jones, Ramsar Database, IWRB, Slimbridge, Gloucester GL2 7BX, England

1. Country: PAKISTAN 2. Date: 20-01-92 3. Ref: office use only ZPK007

4. Name and address of compiler:

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5. Name of wetland: DRIGH LAKE

6. Date of Ramsar designation: 23 July 1976

7. Geographical coordinates: 27°34'N 68°06'E

8. General location: (e.g. administrative region and nearest large town)

18km west of Larkana, Larkana District, Sindh Province.

9. Area: (in hectares)

164ha (182ha given in Asian Wetlands Directory)

10. Wetland type: (see attached classification, also approved by Montreux Rec.C.4.7)

Q, R

11. Altitude: (average and/or maximum & minimum)

50m asl

12. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics) A small, slightly brackish lake with extensive marshes, situated on the Indus plain & formerly an arm of the Indus river, but now almost 30km from the river. Active management has led to the increase of wintering waterfowl following declines in the 1970s & 80s as a result of siltation & vegetational succession.

13. 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)

The lake is fed by water from a nearby canal system & by local run-off of monsoon rains. Several small streams enter the western side of the lake.

The lake is situated in an area of cultivated plains, generally divided into small fields for rice cultivation. The limestone & sandstone Kadir Hills lies some 80km to the west.

Climate is arid, sub-tropical. Av. annual rainfall = 175mm. Summers are hot (49°C in the shade) and winters cool: av. min. temp. in January is 1.7°C.

14. Ecological features: (main habitats and vegetation types) Digh Lake is a very interesting semi-natural wetland, supporting a rich & diverse aquatic vegetation consisting of at least 19 aquatic/marshy habitats.

Species include *Cyperus alternifolius*, *Hydrilla verticillata*, *Najas minor*, *Scirpus littoralis*, *Ipomoea aquatica*, *Juncus articulatus*, *J. maritimus*, *Nymphaea lotus*, *Potamogeton pectinatus* & *Typha angustata*. High ground within the Sanctuary is covered with *Saccharum* sp. Surrounding areas are mostly under cultivation for rice.

15. Land tenure /ownership of:

(a) site

State & private ownership.

(b) surrounding area

16. 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)

gazetted as a Wildlife Sanctuary in 1972. Cultivation, destruction of vegetation, hunting, shooting & trapping are prohibited.

A management plan was prepared by P.J. Conder in 1976/7.

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

see section 19.

The SWMS began a management programme in 1989 by cutting back *Typha* to create more open water. Other measures planned included deepening of some parts of the lake & erection of bunds to reduce wastage of water through over-spill. The 1990 Monitoring Procedure Mission report commended these measures as "essential".

18. Current land use: principal human activities in:

(a) site

nature conservation

some illegal hunting & cutting of shrubs for fuel

livestock grazing

(b) surroundings/catchment

agriculture (rice cultivation)

grazing of livestock

19. Disturbances/threats, including changes in land use and major development projects:

(factors which may have a negative impact on the ecological character of the wetland)

(a) at the site

The May 1990 Monitoring Procedure Mission concluded that the lake had decreased in size in recent years as a result of the diversion of flood water for irrigation purposes, siltation and spread of emergent vegetation. By 1988, much of the wetland had become overgrown with dense stands of *Typha* & *Tamarix*. This change had been reflected in a fall in numbers of wintering waterfowl. Heavy grazing was also thought to be a problem. However the mission also concluded that Digh should be retained on the Ramsar list in view of the lake's continuing importance for waterfowl & the introduction in 1989 of a management regime under the auspices of

Sindh Wildlife Management Board.

(b) in the surroundings/catchment

see above - diversion of water for irrigation

20. Hydrological and physical values: (e.g. groundwater recharge, flood control, sediment trapping, shoreline stabilisation etc.)

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

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

An important breeding and wintering area for a wide variety of waterfowl, and in recent years has supported a very large roost of Nycticorax nycticorax (e.g. 5,000 in January 1990).

The lake regularly held >20,000 wintering waterfowl in the early 1970s but numbers were generally much lower in the late 1970s and throughout the 1980s. However, following the commencement of management work in 1989, 38,000 ducks were present in January 1990.

The area is also important for raptors.

1987-91 av = 28K.

23. Noteworthy flora: (e.g. unique, rare, endangered, or biogeographically important species/communities etc.)

No special values known

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

Annual mid-winter waterfowl counts have been carried out since the 1970s by SWMB.

Included in the IWRB AWC database.

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

The lake is situated less than 30km by road from the large town of Larkana, thus providing excellent potential for conservation-oriented education/recreation. A building on the edge of the lake (built in the 1930s as a hunting lodge but now abandoned) would make an excellent centre.

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

See section 25, above.

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

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

29. Bibliographical references: (scientific/technical only)

30. Reasons for inclusion: (state which Ramsar criteria - as adopted by Rec.C.4.15 of the Montreux Conference - are applicable)

See sections 19 & 22.

1a, 3a, 7, 3b.

31. Map of site (please enclose the most detailed and up-to-date map available - preferably at least 1:25,000 or 1:50,000)

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