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RAMSAR WETLANDS CONSERVATION SCHEDULE

Ratified by the Conference of Parties by Rec. C.4.7 in Montreux, Switzerland - July 1990.

1. **Country : Republic of Turkey** 2. **Date: 1995** 3. **Ref:** 7TR005
design:13/07/94

4. **Name of wetland:** Sultan Sazlığı

5. **Ramsar criteria: (State and justify which Ramsar criteria as adopted by Rec C.4.15 of the Montreux conference-are applicable)**

- The region is a rare and extraordinary wetland due to its fresh water ecosystem (Sultan and Kepir marshes) and brackish water ecosystem (Lake Yay).

- It is a shelter for 12 of 23 endangered bird species.

- It is a sanctuary for an average 500,000 water bird species the total number of which sometimes reach 700,000.

6. **Wetland type (as presented in guidelines, based on Montreux Rec.C.4.7):**

Saline / Marshes :Permanent Q

Fresh Water Lake :Permanent O

7. **Date of Ramsar designation:** May 17, 1994

8. **Geographical coordinates:** 38 20' N - 35 17'E

9. **Altitude (average and/or maximum or minimum): 1071 m.**

!0. **Area (in hectares)** : 17,200 ha.

11. **General location (e.g. administrative region and nearest large town):** It is located within boundaries of Kayseri province in the Central Anatolia Region. The nearest town is Yahyalı.

12. **Owerview (general summary, in two or three sentences, of the wetland's principal characteristics):** Sultan marshes is a wetland complex consisting of brackish Lake Yay, surrounding steppes, small islands and fresh water marshes with

small lakes and marshy meadows surrounding the marshes.

13. **Physical features (e.g. geology, geomorphological origin - natural or artificial; hydrology; soil type; water quality; water depth; water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate:**

Creation of the lake has started in the Miocene period and it was gradually filled by erosion materials during pleistocene and helocene periods characterised by creation of strata which consisted of limestone, bozalt, andesite and tuff. Therefore, it is considered both as a techtonic and a alluvial natural dam lake. Its soils have alluvial characteristics with a widely varying water permeability. The bow-shaped lake located in the northern part of the area and which has no outlet has a brackish water. However, Kepir marshes, northeast of the Lake Yay and Sultan Marshes, south of the lake, have fresh water. The average depth of both these marshes and Lake Yay is around 1k - 1.5 mt. This level may vary by 40-60 percent depending

on seasons. Since the plain is flat and has no inclinations surface flow is only from Sultan and Kepir marshes towards Lake Yay. The area is being fed by water resources which do not have a regular regime. The total area of the basin is approximately 1000 square kilometres. Typical continental climate of the Anatolia plateau prevails in the region. Summers are dry and hot while winters are cold. There is a sharp difference between temperatures during night and day and during winter and summer. The average annual rainfall is 363 mm.

14. **Ecological features (main habitats and vegetation types)**: There are very different ecosystems at Sultan marshes. The fresh water ecosystem with a total area of around 5-6000 ha. consists of the Kepir marshes in the north and Örtülüakar marshes in the south. These marshes are surrounded by marshy meadows. Lake Yay with a total area of 3,650 ha. is located between these two fresh water systems. The lake has highly brackish waters. This ecosystem has halophyte plants growing around the marshes. Lake Çöl, not deeper than 30-40 cm. and also with brackish waters, is located in northwestern part of

the area. A large part of this lake becomes dry during summers. Fresh water lakes have a variety of flora. Although the region has a relatively less rainfall surrounding meadows and pastures remain under water particularly during spring as a result of rains, spring and underground waters and other sources. This creates a unique biotope for birds on this area of 8,350 ha. which comes as an addition to other types of ecosystems in the region.

15. **Land tenure / ownership of:**

a - Site: Government organs have uses over the area.

b - Surrounding areas: Unlimited uses for these areas belongs to private parties.

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

In 1971 the Ministry of Agriculture, Forestry and Rural Affairs declared Sultan marshes as a sanctuary and breeding zone for water birds by virtue of the Law on Hunting on Land.

A 17.200 ha. section of the basin was on 21.4.1988 established as "Nature Conservation Zone" by the Ministry of Forestry. In 1992 the Ministry of Culture declared the region as a "Natural SIT Area". Conservation work in the region is being carried on by a local organisation attached to Yahyalı Forestry Directorate.

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

The General Directorate for National Parks, Hunting and Wildlife attached to the Ministry of Forestry has caused a master plan prepared for the region. An implementation plan within the framework of the master plan is in hand. Activities to be included in the plan will be implemented in the course of time.

18. **Current land use :**

(a) **Site** : Main human activities in the region include cutting of rushes and visits for scientific and touristic purposes.

(b) **surraundings / catchment** : Lands in the periphery of the region are being used for agricultural purposes including intensive and widespread pasturing.

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** : Water resources feeding the region are being stored by the existing dams in order to be used for irrigation purposes. In addition to this, the level of ground water is decreased by draining through bracing channels. All these factors lead to destruction of flora needing fresh water which are eventually replaced by halophyte plant communities.

- uncontrolled cutting and burning of rushes have an adverse effect on micro and macro fauna.

- in spite of all measures taken illegal hunting in the region poses a threat to bird population.

- In parallel with extended irrigated agriculture chemicals used in agriculture are transported to wetlands through irrigation water and drainage channels. Furthermore, domestic and industrial waste are discharged to the area without being treated. These also create a negative impact on regional ecosystems.

(b) **in the sorroundings / catchment** : Chemicals used in surrounding arable lands create a detrimantal effect on bird population.

- Over-pasturing in the basin leads to desiccation and destroys structure of natural fauna.

20. **Hydrological and biophysical values (ground water recharge, flood control, sediment trapping, shoreline stabilisation, etc.)**: The area is being fed by waters returning back from rainfall, drainage and irrigation in addition to Soysallı fountains (outside the irrigation season). Dams built on Yahyalı and Dündarlı creeks which were previously feeding the region have prevented floods, but led to a decline in water level since they have been constructed for agricultural purposes.

21. **Social and cultural values (e.g. fisheries production, forestry, religious importance, archeological site, etc.)**: There is no fish production in the region. It is an important centre in terms of ornitho-tourism. Rush exports is a source of revenue for local people.

22. **Noteworty Fauna (indicating, e.g., which species are unique, rare, endangered, abundant or bio-geographically important; iclude count data, etc.)**: There are three fish species living in Sultan marshes. They are Aphanius sp., spirlinus sp.,

cyprinus sp. In addition to these there are 25 and 40 mollusc and Hymnoptera species. 25 mammal species live in the region.

259 bird species have been spotted in the region. 153 of them are Nonpasseres and 106 are passeres. The region is one of the important breeding zones for 12 of 23 bird species including phalacrocorax pygmeus, branda ruficollis, oxyura leucocephala, aguila heliaca, otis tarda and circus aeroginosus incorporated by the European Council in the list of endangered species. In addition to these, ciconia nigra, grus grus and aytha nyroca, which are among species whose numbers are decreasing in Europe, live in the region. Species with relatively larger populations include phoenicopterus ruber (50,000), aytha ferina, aytha fuligula and netta rufina (300,000-400,000), anas crecca and fulica atra (over 10,000), ardea cinirea, egretta garzetta, ardeola ralloides, ıxobrychus minitus and platelea leucorodia (7000-8000), charadridae (2000-3000), tadorna ferruginea (more than 2,500), pelicanus onocrotalus (1500-2000) and pelicanus crispus. The total bird population is close to 600,000. Their

number reach peak point in spring and fall and fall to the lowest level in February, July and August.

23. **Noteworthy Flora (indicating, e.g. which species/ communities are unique, rare, endangered or bio-geographically important, etc.):** Aladağlar and Erciyes mountains located near the region are among places where most comprehensive studies have been conducted in the Near and Middle East so far. However, species found in these regions are only a part of the total flora and therefore studies should continue.

Algae : Over 50 species including Bacillariophyceae, Charophyceae, Chrysophyceae, Cyanophyceae, Dinophyceae, Euglenoghceae and Rhodohpyceae.

Plant species have been collected by Kasparek, Demirkuş and Sümbül and included in Hacettepe University's collection. They include the following:

Nymphaeceae, Ranunculacee, Papaveracae, Compositae, Lenthibulariaceae, Asctepiadeaceae, Convolvulaceae,

Primulaceae, Genianaceae, Cuscutaceae, Boranginaceae, Solanaceae, Scrophulariacea, Labitae, Plumbaginaceae, Lauraceae, Aristolochiaceae, Euphorbiaceae, Moraceae, Rubiaceae, Caryophyllaceae, Polygonaceae, Chenopodiaceae, Tamariceceae, Droseraceae, Malvaceae, Zygophyllaceae, Leguminosae, Rosaceae, Lytrhraceae, Onograceae, Umbellifarea, Valerianaceae and Alismataceae.

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

The Society for the Conservation of Wildlife, one of the voluntary organisations, is providing guidance which may form a basis for scientific studies. In addition to this, the Association for the Conservation of the Nature in Turkey has carried out the Central Anatolia Wetland Research Project for a period of two years. Related scientific studies are being carried on by METU, Hacettepe and Ankara universities. Two observation towers are being built in the region within the framework of the master plan drawn up by the Ministry of Forestry.

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

There is an information and conservation centre in Ovaçiftliği village, south of rushy areas in Sultan Marshes providing information on ecological characteristics of the wetland. It is also used by officials responsible for conservation of the region. In addition, there is an observation tower to observe the fresh water ecosystem as a whole. Raw boats are also available for tours to observe birds more closely. The Ministry of Forestry, the General Directorate for Conservation of Environment are carrying on various studies to promote the region.

26. **Current recreation and tourism (state if the wetland used for recreation / tourism; indicate type and freguency/intensity):** Ornitho-tourism has replaced hunting tourism after the area has been put under protection. Local and foreign tourists and ornithologists whose numbers are steadily increasing every year visit the region. Following a

comprehensive promotion campaign ornithotourism can make an important contribution to local economy.

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

Ministry of Forestry

(The General Directorate for Conservation of Natural Parks, Hunting Animals and Wildlife) Bakanlıklar / ANKARA

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

The area is wholly covered by the government's sphere of influence. Lands under private proprietorship are being used for agricultural purposes.

29. **Bibliographical references (scientific/ technical only):**

- The most important bird sanctuaries of Turkey, 1989, The Society for the Conservation of Wildlife, Ertan A, Kılıç A., Kasparek M.

- Die Sultans Sumpfe, Natugeschishle Eires Wogel Paradieses in Anatolian, Heidelberg 1985 Kasparek M.

- Sultan Marshes A Bird Paradise in Central Anatolia A Challenge for Bird Watchers, The Association for Conservation of Wildlife, 1989.

- Flora and Fauna of Lakes and Marshes in Thrace, Marmara, West and Central Black Sea, Central Anatolia and East Mediterranean Regions, The Scientific and Technical Research Institution of Turkey (TBGA) 654

- Annual Ornithology and Ecology Reports for Sultan Marshes, Gürpınar T. (Unpublished)

- Sultan Marshes Management Plan 1995 Hacettepe University Faculty of Pedagogy, Kiziroğlu İ, Turan L, Erdoğan A.

- Rehabilitation of Wetlands 1995 Ankara University, Faculty of Agriculture, Yuksel M.

- Bird Paradises of Turkey 1995 Ministry of Environment Erdem o.

- Sultan Marshes 1995 a publication of the Kayseri Foundation for Conservation of Environment

30. **Name and adress of complier:**

The Ministry for the Environment

The General Directorate for the Conservation of the Environment

Eskişehir Yolu 8.km. ANKARA

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31. **Map of the region (please attach the most detailed and accessible one updated - preferably at a scale of 1:25,000 or 1:50,000).**

- A map of the area at a scale of 1:25,000 is attached to this report.