

# Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 version

Available for download from [http://www.ramsar.org/ris/key\\_ris\\_index.htm](http://www.ramsar.org/ris/key_ris_index.htm).

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9<sup>th</sup> Conference of the Contracting Parties (2005).*

## Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2<sup>nd</sup> edition, as amended by COP9 Resolution IX.1 Annex B). A 3<sup>rd</sup> edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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### 1. Name and address of the compiler of this form:

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Designation date

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Site Reference Number

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### 2. Date this sheet was completed/updated:

30 November 2007

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### 3. Country:

Republic of Turkey

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### 4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

**Sultan Marshes**

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### 5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or  
b) Updated information on an existing Ramsar site

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### 6. For RIS updates only, changes to the site since its designation or earlier update:

#### a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

**If the site boundary has changed:**

- i) the boundary has been delineated more accurately ; or
- ii) the boundary has been extended ; or
- iii) the boundary has been restricted\*\*

and/or

**If the site area has changed:**

- i) the area has been measured more accurately ; or
- ii) the area has been extended ; or
- iii) the area has been reduced\*\*

\*\* **Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

**b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:**

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**7. Map of site:**

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

**a) A map of the site, with clearly delineated boundaries, is included as:**

- i) a hard copy (required for inclusion of site in the Ramsar List): ➤
- ii) an electronic format (e.g. a JPEG or ArcView image) ➤
- iii) a GIS file providing geo-referenced site boundary vectors and attribute tables .

**b) Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The boundary is the same as a The Sultan Marshes National Park

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**8. Geographical coordinates** (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

38° 20' N, 35°17' E

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**9. General location:**

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

The Sultan Marshes is located in the triangle formed by Develi, Yahyalı and Yeşilhisar countries within the borders of province Kayseri in the Central Anatolia Region. The nearest town is Yahyalı.

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**10. Elevation:** (in metres: average and/or maximum & minimum)

average 1074 meters

**11. Area:** (in hectares)

17.200 hectares

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## 12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Sultan marshes is formed by habitats having different characteristics such as small lakes that have fresh and brackish water ecosystems, areas of reed-beds and marshes and areas of meadows, pastures and steppes surrounding the areas of reed-beds and marshes.

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## 13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

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## 14. Justification for the application of each Criterion listed in 13 above:

**Criteria 2 :** there are 12 bird species listed in UICN red list. 7 of them (*Branta ruficollis* (red breasted goose), *Aythya nyroca* (common white-eye), *Aquila heliaca* (imperial eagle), *Aquila clanga* (greater spotted eagle), *Falco naumanni* (lesser kestrel), *Crex crex*, *Otis tarda* (great bustard)) are vulnerable and 1 of them (*Oxyura leucocephala* (white headed duck)) is endangered.

**Criteria 3:** The Sultan Marshes consists of fresh, salty and brackish water ecosystems it therefore supports a big and interesting variety of plant and animal species. The marshes area is located in a wide Middle Anatolian Steppe ecosystem and different phytogeographic regions (Iran Turanian, Europe- Siberian, Mediterranean, Eastern Mediterranean ) are represented in this area. Most of the species are endemic for Turkey. According to a study conducted between 2002-2004, 428 plant species belonging to 73 family were spotted and 48 of them were endemic. Another important fact is the marshes are on the intersection point of two main migration routes of migratory birds.

**Criteria 4:** In the summer period and also in winter period, *Ardea cinerea* (grey heron), *Phalacrocorax pygmeus* (pygmy cormorant), *Oxyura leucocephala* (white headed duck), *Tadorna ferruginea* (ruddy shelduck), *Circus aeruginosus* (marsh harrier) and *Alcedo atthis* are present in the area. *Phoenicopterus roseus*, *Platalea leucordia*, *Ciconia ciconia* and some duck and goose species uses the site as a stopover during their migration.

**Criteria 5:** Every year, in September-October the bird population exceeds 500.000 birds.

**Criteria 6:** The Sultan Marshes is a breeding and feeding area for a lot of species. In particular, during the Migration period, *Phoenicopterus roseus* reaches far more than 1% threshold. For example in 1998 more than 200.000 Flamingos were recorded in the area.

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## 15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

### a) biogeographic region:

Anatolian

### b) biogeographic regionalisation scheme (include reference citation):

European Environmental Agency

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## 16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Creation of the lake has started in the Miocene period and it was gradually filled by erosion materials during Pleistocene and holocene periods characterised by creation of strata which consisted of limestone, basalt, andesite and tuff. Therefore, it is considered both as a tectonic 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 part of the lake Yay and Sultan Marshes, Southern part of the lake have fresh water. the average depth of both these marshes and lake Yay is around 1k-1.5 m. 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 Anatolia plateau prevails in the region. Summers are dry and hot while winters are cold. There is sharp difference between temperatures during night and day and during winter and summer. The average annual rainfall is 363 mm.

### 17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

### 18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

The area is being fed by waters returning bac 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 let to a decline in water level since they have been constructed for agricultural purposes.

### 19. Wetland Types

#### a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • Q • P • Q • R • Sp • Ss • Tp Ts • U • Va •  
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

#### b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

1- Q (saline lakes)

2- O (freshwater lakes)

### 20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

There are very different ecosystems at Sultan Marshes. The fresh water ecosystem with a total area of about 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 3650 ha is located between these two fresh water systems. The lake has highly brackish waters. This ecosystem has halophyte plant growing around the marshes. Lake Çöl, not deeper than 30-40 cm and also with brackish waters, is located in north-western 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 8350 ha which comes as an addition to other types of ecosystems in the region.

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### 21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

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, Dinophyceae, Cyanophyceae, Euglenophyceae and Phodophyceae.

Plant species are from Nymphaeaceae, Ranunculaceae, Papaveraceae, Compositae, Lenthibulariaceae, Asctepiaadeaceae, Convolvulaceae, Primulaceae, Genianaceae, Cuscutaceae, Boraginaceae, Solanaceae, Scrophulariaceae, Labiatae, Plumbaginaceae, Lauraceae, Aristolochiaceae, Euphorbiaceae, Moraceae, Rubiaceae, Caryophyllaceae, Polygonaceae, Chenopodiaceae, Tamariceae, Droseraceae, Malvaceae, Zygophyllaceae, Leguminosae, Rosaceae, Lythraceae, Onograceae, Umbelliferae, Valerianaceae and Alismataceae families.

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### 22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

There are 21 mammalian, 3 amphibian, 7 fish species living in The Sultan Marshes. Some of these fish are *Aphanius sp.*, *Spirilinus sp.* and *Cyprinus sp.*; *Phoxinellus anatolicus* is listed in UICN Red List as an endangered species. In additions to these there are 119 insect species; *Gedeon wernerii*, *Pedinus strabonis* and *Calyptosis escherichi* are endemic insect species. 22 benthic invertebrate, 36 terrestrial invertebrate, 43 zooplankton species, live in the region.

247 bird species have been spotted in the region. The region is one of the important breeding zones for 12 of 23 bird species including *Phalacrocorax pygmaeus*, *Branta ruficollis*, *Oxyura leucocephala*, *Aguilla helica*, *Otis tarda*, and *Circus aeruginosus* incorporated by the European Council in the list of endangered species. In addition to these, *Ciconia nigra*, *Grus grus*, *Aythya nyroca*, which are among species whose numbers are decreasing in Europe, live in the region. Species with relatively larger populations include *Phoenicopterus ruber*, *Aythya ferina*, *Aythya fuligula*, and *Netta Ruffina Anas crecca* and *Fulica atra Ardea cinerea*, *Egretta garzetta*, *Ardeola ralloides*, *Íxobryus minutus*, and *Platelea leucorodia*, Charadriidae: *Tadorna ferruginea*, *Pelicanus crispus* and *Pelicanus onocratolus*.

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### 23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

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.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box  and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:

- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

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**24. Land tenure/ownership:**

- a) within the Ramsar site: Government organs have uses over the area.
- b) in the surrounding area: Unlimited uses for these areas belongs to private parties.

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**25. Current land (including water) use:**

- a) within the Ramsar site: Main human activities in the region include cutting of rushes and visits for scientific and touristic purposes.
- b) in the surroundings/catchment: lands in the periphery of the region are being used for agricultural purposes including intensive and widespread pasturing.

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

- a) within the Ramsar site: Water resources feeding the region are being stored by the existing dams in order to be used for irrigation purposes. In addition, 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 all measures taken illegal hunting in the region poses a threat to bird populations.
  - In parallel with extended irrigated agriculture chemicals used in agriculture are transported to wetland through irrigation water and drainage channels. Furthermore, domestic and industrial wastes are discharged to the area without being treated. These factors also create a negative effect on regional ecosystems.
- b) in the surrounding area: Chemicals used in surrounding arable lands create a detrimental effect on bird population.
  - Over-pasturing in the basin leads to desiccation and destroys structure of natural fauna.

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**27. Conservation measures taken:**

**a)** List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

- Natural park,
- Natural site area,
- Wildlife conservation area.

**b)** If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?: A management plan is being prepared by the General Directorate of Nature Conservation and National Parks.

d) Describe any other current management practices:

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**28. Conservation measures proposed but not yet implemented:**

e.g. management plan in preparation; official proposal as a legally protected area, etc.

Management plan is being prepared.

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**29. Current scientific research and facilities:**

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

The Society for the Conservation of Wildlife, one of the voluntary organizations, 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 out by METU, Hacettepe and Ankara Universities. Two observation towers were built in the region within the framework of the master plan.

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**30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:**

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There is an information and conservation centre in Ovaçiftliği Village, southern part 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. Row boats are also available for tours to observe birds more closely.

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**31. Current recreation and tourism:**

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/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.

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**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/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.

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**33. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

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(The General Directorate of Nature Conservation and National Parks)  
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**34. Bibliographical references:**

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

- ✓ The most important bird sanctuaries of Turkey, 1989, The Society for the Conservation of Wildlife, Ertan A., Kılıç A., Kasperek M.
  - ✓ Die Sultans Sumpfe, Natugeschishle Eires Wogel Paradieses in Anatolian, Heidelberg, 1985, Kasperek 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.
  - ✓ Sultan Marshes Manangement Plan 1995 Hacettepe University Faculty of Pedagogy, Kiziroğlu İ, Turan L., Erdoğan A.,
  - ✓ Rehabilitation of Wetlands 1995 Ankara University, Faculty of Agriculture, Yüksel M
  - ✓ Bird Paradises of Turkey 1995 Ministry Of Environment Erdem. O.
  - ✓ Sultan Marshes 1995 a publication of the Kayseri Foundation for Conservation of Environment.
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