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

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th 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, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd 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:

Yasin Köycü
Ministry of Environment and Forestry
General Directorate of Nature Conservation and National Parks
Söğütözü Caddesi 14/E Beştepe, ANKARA/TURKEY
e-mail: ykoycu@cevreorman.gov.tr
tel: 0090 312 207 59 09

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DD MM YY

Designation date | Site Reference Number

2. Date this sheet was completed/updated:

30 November 2007

3. Country:

Republic of Turkey

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.

Lake Uluabat

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 ☑

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.

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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.

40° 10' N, 28° 35' 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 Lake Uluabat is located in Southern part of Marmara Sea within the border of Karacabey and Mustafakemalpaşa districts of the Bursa province, The lake, which is 34 km to the center of the Bursa province and 90 km to the Balıkesir province, is located near the south of the Bursa- Karacabey highway.

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10. Elevation: (in metres: average and/or maximum & minimum)
9 m (average)
11. Area: (in hectares)

19.900 ha.

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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.

It is a large turbid, shallow an eutrophic freshwater lake. There are four islands in the lake. Along the western and southern shores of the lake vast reed beds with clusters of trees are found, whilst in the east and north reed beds are more localized.

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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
☐	☑	☐	☑	☑	☐	☐	☑	☐

14. Justification for the application of each Criterion listed in 13 above:
Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criteria 2: the site hosts a number of species, animal and vegetal ones, that are considered vulnerable, endangered under the IUCN Red Book and also protected at European Level by the EU Bird and Habitats Directives and Bern Convention. Amongst them, *Hirudo medicinalis* (The medicinal leech) is listed in UICN as near threatened , *pelecanus crispus* (Dalmatian pelican) is a vulnerable species living in the Uluabat Lake. *Sagitaria sagittifolia*, ballıbabagillerden *Stachys palustris*, are vulnerable plant species also found in the region. **See also point 22**

Criteria 4: *Lutra Lutra* (otter) protected mammal species at international level, finds her habitat in the Lake area and its surroundings. In addition to that, the many birds every year use the site as staging, wintering and breeding area. Uluabat Lake is the most important breeding area in Turkey for the *Phalacrocorax pygmeus.*

Criteria 5: the area hosts every year more than 20,000 birds. according to a study carried out in 1996 429,437 birds were recorded, and in 2002 more than 25.000 birds were counted in the region.

Criteria 8: The Uluabat Lake provides source of food and spawing ground for many fishes. 21 fish species live in this lake.

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:

Mediterranean
b) biogeographic regionalisation scheme (include reference citation):
EEA EU Habitats Directive

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.

Gonen depression area spreading east-west direction. It is separated from the Lake Kuş (Manyas), which is located at the same depression area, by a shallow thresh-old. Different explanations were made about its formation. A.PHILIPPSON and E.LAHN have stated that in Neocene a big fresh water lake has been formed at the Bursa-Gonen depression area; as a result of movement in late Neocene or at the Quaternary four small basins formed at this lake area, other two basins were filled with alluvion and the Uluabat and Ku§ lakes remained EMRE, KAZANCI and colleagues (1997) accepted that while the Bursa-Gonen depression area, which is formed as depending on the tectonic activity in pliocene, were land bounded from the beginning to end of Quaternary, and at a later stage filling the beds of the meandered rivers by the alluvions carried by them caused to form the Uluabat and KuJ lakes; and that both of the lakes are typical alluvial-set lakes. When each of the opinion is assessed it is seen that the lake was formed at the tectonic depression area and the local rivers had a big role in shaping them. North of the lake, which is located at the elevation of 8-9 meters from the sea level, there are small hills formed in Neocene, and south of the lake there are mountainous areas with sharp edges formed in Palaeocene.

The length of the lake, which has a rough triangular shape, at the east-west direction is 23-24 km. and the width is 12 km. Lake area differs depending to the seasons. The highest measurement given for the Lake area up to now is 24.000 hectares and the lowest measurement is 13.500 hectares. The south-west shores of

the lake were rounded with the levees built in 1993 and this side of the lake was opened to the agriculture and by doing this the flooding of this vast area, which happened before, was prevented.

Average depth of the lake is 2.5 meters. Big part of the lake is shallow and the depth of this area changes between 1-2 meters. The deepest place of the lake is a depression of 10 meters at the Halilbey Island.

North coasts of the lake is wavy when compared with other shores. There are two peninsulas(Eskikaraagac and Gdlyazi) of limestone structure at the north. Again there are 7 islands in the lake that limestone is dominant in their structures. The biggest of these islands is Halilbey island.

Lake water is always turbid because it contains colloidal clay. Sometimes greenish-yellow and sometimes grayish-yellow dominates to the lake water depending on the phyoplanktons at the lake. Light permeability is very poor of the lake water because of its turbidity. Depending on the amount of suspended particles entering in water during spring, the light permeability can be under 22 cms.

Most important water source feeding the lake is Mustafakemalpafa stream. Karst springs at the bottom and surroundings of the lake and small streams arriving to the lake at rainy periods contribute to feeding of the lake. In addition, the drainage water of the agricultural fields at the south-east of the lake also flow to the lake. The amount of the water entering to the lake highly differs depending on the seasons and years. The excess water of the lake are emptied to the Susurluk Stream with the Uluabat stream which is located at west of the lake, and by this stream to the Marmara sea. But, when the lake water level drops below the level of the Uluabat Stream, the stream starts flowing through lake and feeds the lake. In addition, the water is drained by the pumps from the lake and 6350 hectares of agricultural fields around the lake is watered by this water.

The annual average temperature is 14.6°C

The annual average rainfall is 476 mm.

The annual max rainfall is 878 mm.

The annual min rainfall is 54 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).

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18. Hydrological values:

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

Most important water source feeding the lake is Mustafakemalpaşa stream. Karst springs at the bottom and surroundings of the lake and small streams arriving to the lake at rainy periods contribute to feeding of the lake. In addition, the drainage water of the agricultural fields at the south-east of the lake also flows to the lake. The amount of the water entering to the lake highly differs depending on the seasons and years. The excess water of the lake is emptied to the Susurluk Stream with the Uluabat stream which is located at west of the lake, and by this stream to the Marmara Sea. On the other hand, when the lake water level decreases below the level of the Uluabat Stream, it starts flowing through lake and feeds the lake. In addition, the water is drained by the pumps from the lake and 6350 hectares of agricultural fields around the lake is irrigated with this water.

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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 • <u>O</u> • 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.

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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.

Uluabat is a eutophic freshwater lake. Convenient climate, being rich of food materials, existence of wide reed beds and open water surfaces, makes the lake a breeding and feeding area for thousands of waterfowls. The lake is also rich of planktos and benthos, 21 fish species live in the lake.

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*.

The lake Uluabat is rich of freshwater plants. Almost all coasts of the lake are covered with vast reed areas, and shallow parts with aquatic plants. The lake has the widest *Nyphaea alba.* Beds of Turkey. The site has no other noteworthy flora.

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*.

Uluabat Lake, is one of Turkey's eutrophic lakes for biological productivity, due to being rich of planktons and benthos creatures. It creates ideal conditions for breeding and feeding of the different living species. Existence of the thousands of birds at the region is an important indication for its importance. 21fish species have been identified at the lake. When compared with the other lakes, this number is almost high. Common mammal species seen at the lake surroundings, which has a very rich fauna, are *Lutra lutra, Canis aureua, Vulpes vulpes, Meles meles* and *Lepus capensis*.

Uluabat Lake is one of the most important wetlands not only for Turkey but also for Europe and Middle East by its bird existence.

Being located on the migration way which enters to Anatolia from north-west, stationed to the Kuş (Bird) lake, which is a very close (35 km.) important bird area, ,being highly rich for food and having suitable climatic conditions provided feeding, wintering and breeding possibility to the different species of crowded bird flocks.

Uluabat Lake is the most important breeding area in Turkey for the *Phalacrocorax pygmeus,* which is one of the endangered bird species. 300 pairs of the species, whose total breeding population in Turkey is estimated as 1500 pairs breed in the region. An important number of pygmy cormorants shelter at the lake even after breeding periods. In January 1995, 1075 individuals of the species were recorded at the site. Uluabat lake is also one of the important feeding and wintering areas of the *Pelecanus crispus*, which is another endangered species, and in October 1994, 136 individuals of this bspecies recorded at the site.

Other important species breeding at the site are; *Ardeola ralloides, Platalea leucoridia, Ergetta garzetta and Plegadis falcinellus, Podiceps cristatus, Lxobrychus minitus, Nycticorax nycticorax, Ardea purpurea, Circus aeruginosus, Collared pratincola, Hoplopterus spinosus, Chlidonias hybridus, Chlidonias niger*.

The lake is also an important wintering site and regularly supports the following species: *Aythya fulugila* (13600*), Aythya ferina* (42500), *Podiceps cristatus* (2780) *Pelicanus onocrotalus* (1310), *Fulica atra* (321550).

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:

Surveys have shown that, since 4000 BC the area has been occupied by different civilizations. But the first clear information is belong to 1200 BC. Known ancient settlements are Miletepolis (Karacabey) and lapadion (Uluabat village) near the Uluabat Lake. From 1200 BC to the

Foundation of Republic of Turkey, Bithynia, Lydia, Pers, Romans, Byzantines, and Ottoman sovereignty has been occurred in the area.
Earthenware pots of the Romans, remaining of earthenware water pipe and an Apollion statue made of bronze have been found during the archaeological excavations made at the area.

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: The site is a public property.

b) in the surrounding area: The surrounding area consists of lands by state, private persons, village legal entities.

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25. Current land (including water) use:
a) within the Ramsar site: As a result of the surveys made at the lake, 21 species of fish were found. When compared with other lakes of Turkey, it is a very high number. Among these species, main fish caught for commercial purposes are; *Esox lucius* and *Cyprinus carpio*. Also, although few in quantity, *Silirus glanis*, *Leuciscus cephalus*, *Caspialosa maeotica* and *Scardinius erythrophtalmus* are caught for commercial purposes. It is stated that *Anguilla anguilla* was abundant in the past; the last 25 years it is seen rarely.
The species of the fish caught in the lake most are pike and carp.
One of the most important water product of the lake is *Astacus leptodatylus*. While average 700 ton of crawfish was caught in the past, the crawfish production is totally finished because of fungus disease in 1986. Local fishers indicate that last few years the effects of the disease has began to diminish and the quantity of the crawfish caught has increased. All of the crawfish caught are exported. 5 cooperatives connected with the water products are having activities at the lake

b) in the surroundings/catchment: The area is one of the most productive agricultural area of Turkey due to suitable climatic conditions and quality soils. The Karacabey and Mustafakemalpaşa districts, which contains the lake within their borders, are the most developed district of the Bursa Province and Marmara Area. The people of neighborhood earn their living generally from agriculture and agricultural products. Main products grown commonly are; onion (approximately 6% and 12% of the total onion production of Turkey), potato, beet sugar, corn, bean, and barley. Fruit trade also has an important role in agriculture at the area.
Stock-breeding is common in both districts, and an important source of income. The area is famous by its Merino sheep and quality cow. Karacabey district is famous with its Mihalic Cheese.
The history of the Agricultural Enterprise at Karacabey district goes to the first years of the Ottoman Empire. It was established to meet the animal products and horse requirements of the Palace and Armed Forces. The

enterprise has provided important contributions, mainly stock-breeding, to develop the agriculture of our country.

The industry at the area contains small enterprises mostly based on the agriculture. These are; canned vegetable factory, leather manufacturing workshops, dairy farms, vegetal liquid oil establishment and water products processing enterprises. Almost all of these establishments have pollutant characteristics because of their type of production. They cause pollution in the lake because lacking of purifying plants. In addition, there are many workshops doing business in metal households and manufacturing at the area.

Kestelek Boron Mineral Enterprise is one of the most important establishments polluting the lake through Mustafakemalpaşa river with its wastes

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:

The Mustafakemalpaşa river drains a large part of southern Marmara and north Aegean region, bringing large quantities of urban and industrial waste into the lake. The drainage water from surrounding fields flows back into the lake. Although no studies are available, further and intensive eutrophication may pose a serious threat to the lake's ecosystem. Despite existing regulations, out-of-season and over fishing is regular and widespread.

b) in the surrounding area:

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.

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 in operation and the management plain is revised in 2006.

d) Describe any other current management practices:

28. Conservation measures proposed but not yet implemented:

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

29. Current scientific research and facilities:

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

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.

A booklet for giving general information about Lake Uluabat and surrounding areas published by The Ministry of Forestry and Environment is being distributed to local schools and related institutions

31. Current recreation and tourism:

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

32. Jurisdiction:

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

Bursa Provincial Organization of the Ministry of Environment and forestry,
Fatih Sultan Mehmet Bulvarı No: 133 16140 Nilüfer / Bursa/TURKEY

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.

Ministry Of Environment and Forestry
(The General Directorate of Nature Conservation and National Parks)
Söğütözü Cad. No:14/E 06560 Beştepe/ANKARA - TÜRKEY
ykoycu@cevreorman.gov.tr

34. Bibliographical references:

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

- ERDEM O., (1995), Bird Paradises of Turkey, Ministry of Environment, Environmental
- Protection General Directorate, Green Serial 5, Page 58,59.
- SEAMEN O., LEBLEBiCI E., (1987), Flora and vegetation of the lakes and Marshy lands of
- the Thrace, Marmara, West and Middle Black Sea, Interior Anatolia and East Mediterranean.
- Wet-land mid-winter water-birds counting of Turkey, Association of Protecting the Nature life,
- ISTANBUL.
- YARAR M., MAGNIN G, (1997), Main Bird Areas of Turkey, Association of Protecting the
- Nature Life.