

Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 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 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
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.

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

Dr. Sergey Sklyarenko
of. 203, 40, Orbita-1, Almaty, 050043, Kazakhstan
Ph./fax +7 (727) 2203877
Science Director,
Head of the Centre for Conservation Biology
Association for the Conservation of Biodiversity of Kazakhstan (ACBK)
e-mail: sergey.sklyarenko@acbk.kz

Andrey Kovalenko
11B Vakhtangova str., apt. 3, Almaty, Kazakhstan
Ph. +7 (727) 2462911, 8-7009100532, 8-7015702560
Research worker,
Institute of Zoology of Ministry of Education and Science of Republic of Kazakhstan
E-mail: akoval@nursat.kz, akoval69@mail.ru

FOR OFFICE USE ONLY.

DD MM YY

| | | |
|--|--|--|
| | | |
|--|--|--|

Designation date

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
|--|--|--|--|--|--|--|--|

Site Reference Number

2. Date this sheet was completed/updated:

20 July 2010

3. Country:

Republic of Kazakhstan

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.

Lesser Aral Sea and Delta of the Syrdarya River

[Local name: Малое Аральское море и дельта Сырдарьи]

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:

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 border corresponds to the border of two Important Bird Areas (IBA) (Lesser Aral Sea” and “Syrdarya delta lakes”) and it is delineated following the roads and shoreline.

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.

46°20'50"N 61°00'09"E

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.

Central-west part of the Republic of Kazakhstan, Kyzylorda region, Aral district. The nearest city – Aralsk – is situated in 30 km to the north-east of Lesser Aral Sea.

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

The current elevation of the level of water in Lesser Aral is 42 m above sea level. It is supposed after implementation of Stage II of the Syrdarya River and North Aral Sea Regulation Project to raise the sea level to the elevation of 46 m above sea level. Landmarks are between 42 and 80 m a.s.l.

11. Area: (in hectares)

Total area is 330,000 ha

Syrdarya Delta Lakes (IBA) 144,165 ha and the Lesser Aral Sea (IBA) 139,400 ha (information from map). For water surface, no final data is available. The former sea-bed continues to become submerged

12. General overview of the site:

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

In spite of the ecological catastrophe in the Aral Sea region, the Lesser Aral Sea and Syrdarya delta remain an important habitat for birds and other animals of the water-marsh complex. At present the stabilization and even improvement of the environmental situation in the Lesser Aral region can be observed due to rise of the water level in this part of the sea. This territory is a key place for nesting and migration of many birds in the region. This is also the habitat for several endemic species of fish.

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).

Criterion 2

This territory supports many species which are rare, threatened and species which are thought to be on the verge of extinction.

| English Name | Scientific Name | IUCN Red List | CITES | CMS | Kazakhstan National Status |
|-------------------|--------------------------|---------------|-------|----------|----------------------------|
| <i>Birds</i> | | | | | |
| Dalmatian Pelican | <i>Pelecanus crispus</i> | VU | App I | App I/II | Category II (vulnerable) |
| Imperial Eagle | <i>Aquila heliaca</i> | VU | App I | App I | Category II |

| | | | | | |
|---|--|----|--------------|-------|---------------------------------------|
| | | | | | (vulnerable) |
| Saker Falcon | <i>Falco cherrug</i> | EN | App II | App I | Category I (critically endangered) |
| Fish | | | | | |
| Syrdarian shovelnose sturgeon/ Syr Darya sturgeon | <i>Pseudoscaphirhynchus fedtschenkoi</i> | CR | App II- | | Category I (critically endangered) |
| Fringebarbel sturgeon/ Ship Sturgeon | <i>Acipenser nudiiventris</i> | CR | App. II - | | Category I (critically endangered) |
| Pike Asp | <i>Aspiolucius esocinus</i> | VU | - | - | Category I (critically endangered) |

Criterion 3

This site sustains plant and animal communities which are important for maintaining the biodiversity in the Palaearctic Realm biogeographic region.

This water-marsh is characterized by a high level of fish endemism (15%). Total number of fish species in Syrdarya River Basin and Aral Sea is about 60 and 10 of these forms (species and subspecies) are endemic:

The Syrdarian Shovelnose Sturgeon/Syr Darya Sturgeon (*Pseudoscaphirhynchus fedtschenkoi*), the Tashkent Riffle Bleak (*Alburnoides oblongus*), Turkestan Sculpin (*Cottus spinulosus*), *Cottus jaxartensis* (Upper Syr Darya drainage), *Noemacheilus kuschakewitschi* which are endemic to Syrdarya Basin of the Aral Sea

The Pike Asp (*Aspiolucius esocinus*), is endemic to Central Asia, Aral Barbel (*Luciobarbus brachycephalus*) is endemic to the Aral Basin, while the Sharpray (*Capoetobrama kuschakewitschi*), the Aral trout (*Salmo trutta aralensis*) are near-endemic to the Aral basin being distributed in the Syr Darya and Amu Darya rivers. *Leuciscus lebmani* and *Leuciscus squalisculus* are also endemics.

Criterion 4

Besides local breeding bird population, the Ruddy Shelduck (*Tadorna ferruginea*) and Common Shelduck (*Tadorna tadorna*) use the area as moulting sites in summer (June-August) congregating in numbers 400-600 and 500-1000 respectively.

The Lesser Aral and Syrdarya Delta is the place of mass nesting for birds such as the Great Crested Grebe (*Podiceps cristatus*) and the Black Winged-silt (*Himantopus himantopus*). Moreover, mass migrations of waterbirds take place here especially in autumn (and in lesser numbers in spring), and reach numbers in the hundreds of thousands (see Criterion 5).

Criterion 5

More than 200,000 thousand waterbirds can be found here during the migration season.

| Species | | Comments | |
|---------------------|-------------------------------|----------------------------|---------------------------------|
| Common name | Scientific name | Breeding | Autumn migration |
| Great Crested Grebe | <i>Podiceps cristatus</i> | 580 (2001), 100-300 (2011) | 1,000-1,500 on migration (2011) |
| Red-necked Grebe | <i>Podiceps grisegena</i> | 50-100 (2011) | 500-1,000 on migration (2011) |
| Black-necked Grebe | <i>Podiceps nigricollis</i> | | 500-1,000 on migration (2011) |
| Little Grebe | <i>Tachybaptus ruficollis</i> | 25-50 (2011) | 300-500 on migration (2011) |

Information Sheet on Ramsar Wetlands (RIS), page 5

| | | | |
|-------------------------|--------------------------------|--------------------------------------|---|
| Dalmatian Pelican | <i>Pelecanus crispus</i> | 100-200 (2005) | 100-200 on migration (2011) |
| Great White Pelican | <i>Pelecanus onocrotalus</i> | 150-300 (2005) | 100-500 on migration (2011) |
| Great Cormorant | <i>Phalacrocorax carbo</i> | approx. 500 | 3,000-5,000 on migration (2011) |
| Glossy Ibis | <i>Plegadis falcinellus</i> | | 100-500 on migration (2011) |
| Great Egret | <i>Casmerodius albus</i> | 200-300 (2005), 50-70 (2011) | 500-1,000 on migration (2011) |
| Grey Heron | <i>Ardea cinerea</i> | 100-150 (2011) | 500-1,000 on migration (2011) |
| Greater Flamingo | <i>Phoenicopterus roseus</i> | | 500-1,000 on migration (2011) |
| Greylag Goose | <i>Anser anser</i> | 50-100 (2011) | 3,000-5,000 on migration (2011) |
| Ruddy Shelduck | <i>Tadorna ferruginea</i> | 400-600 (2005) | 300-500 on migration (2011) |
| Common Shelduck | <i>Tadorna tadorna</i> | 500-1,000 (2005), 300-500 (2011) | 3,000-5,000 on migration (2011) |
| Mallard | <i>Anas platyrhynchos</i> | 300-500 (2011) | 10,000-15,000 on migration (2011) |
| Eurasian Wigeon | <i>Anas penelope</i> | | 8,000-20,000 on migration (2005), 5,000-10,000 (2011) |
| Common Teal | <i>Anas crecca</i> | | 5,000-10,000 on migration (2011) |
| Gadwall | <i>Anas strepera</i> | | 5,000-10,000 on migration (2011) |
| Northern Pintail | <i>Anas acuta</i> | | 5,000-10,000 on migration (2011) |
| Red-crested Pochard | <i>Netta rufina</i> | 3,000-5,000 (2011) | 14,300 on migration (2005), 5,000-10,000 (2011) |
| Common Pochard | <i>Aythya ferina</i> | | 40,100 on migration (2005), 10,000-15,000 (2011) |
| Ferruginous Duck | <i>Aythya nyroca</i> | 65-160 (2001, 2005) | 500-1,000 on migration (2011) |
| Tufted Duck | <i>Aythya fuligula</i> | | 8,000-20,000 on migration (2005), 5,000-10,000 (2011) |
| Common Coot | <i>Fulica atra</i> | 1,000-1,500 (2011) | 15,000 on migration (2011) |
| Black-winged Stilt | <i>Himantopus himantopus</i> | 400-1,000 (2005), 300-500 (2011) | 3,000-5,000 on migration (2011) |
| Pied Avocet | <i>Recurvirostra avosetta</i> | 400-600 (2005), 150-300 (2011) | 1,000-1,500 on migration (2011) |
| Eurasian Oystercatcher | <i>Haematopus ostralegus</i> | 50-100 (2011) | 500-1,000 on migration (2011) |
| Eurasian Curlew | <i>Numenius arquata</i> | | 500-1,000 on migration (2011) |
| Black-tailed Godwit | <i>Limosa limosa</i> | | 5,000-10,000 on migration (2011) |
| Little Ringed Plover | <i>Charadrius dubius</i> | 400-1,000 (2005, 2011) | 5,000-10,000 on migration (2011) |
| Kentish Plover | <i>Charadrius alexandrinus</i> | 1,000-2,000 (2005), 500-1,000 (2011) | 5,000-10,000 on migration (2011) |
| Red-necked Phalarope | <i>Phalaropus lobatus</i> | | 10,000-20,000+ on migration (2011) |
| Black-winged Pratincole | <i>Glareola nordmanni</i> | 100-200 (2005) | 300-500 on migration (2011) |
| Slender-billed Gull | <i>Larus genei</i> | | 1,000-1,500 on migration (2011) |
| Black-headed Gull | <i>Larus ridibundus</i> | | 5,000-10,000 on migration (2011) |
| Yellow-legged Gull | <i>Larus cachinnans</i> | 300-500 (2011) | 3,000-5,000 on migration (2011) |
| Gull-billed Tern | <i>Sterna nilotica</i> | 300-500 (2005, 2011) | 1,000-3,000 on migration (2011) |
| Common Tern | <i>Sterna hirundo</i> | 1,000-1,500 (2005, 2011) | 3,000-5,000 on migration (2011) |
| In total | | Up to 12,000-18,000 | Up to 170,000-260,000 |

Criterion 6

This site supports 1% or more of the individuals of biogeographical population of a number of congregatory waterbird species. These species are listed in the book by Sklyarenko et al. 2008 on the 'Important Bird Areas in Kazakhstan', pages 140-143

| English Name | Scientific Name | Subspecies / population** | 1% Threshold | Recorded Count | Period/s Recorded |
|---------------------|--------------------------------|--|--------------|--|---------------------------------|
| Great Crested Grebe | <i>Podiceps cristatus</i> | 100% of " <i>cristatus</i> , South Asia" (250) + 100% of " <i>cristatus</i> , Caspian Sea" (100) 1% criteria | 350 | 1,000-1,500 on migration, 580 on breeding | autumn 2011, summer 2001 |
| Red-necked Grebe | <i>Podiceps grisegena</i> | 100% of " <i>grisegena (balchasbensis)</i> " (100) + 100% of " <i>grisegena</i> , Caspian" (150) + 25% of " <i>grisegena</i> , Black Sea, Mediterranean" (185) 1% criteria | 435 | 500-1,000 on migration | autumn 2011 |
| Black-necked Grebe | <i>Podiceps nigricollis</i> | 100% of " <i>nigricollis</i> , SW & S Asia" 1% criterion (250) | 250 | 500-1,000 on migration | autumn 2011 |
| Dalmatian Pelican | <i>Pelecanus crispus</i> | | 75* | 100-200 | autumn 2011 |
| Great White Pelican | <i>Pelecanus onocrotalus</i> * | 100% of "South Asia" (230) 1% criteria | 230 | 150-300 on breeding, 100-500 on migration | summer 2005, autumn 2011 |
| Great Cormorant | <i>Phalacrocorax carbo</i> | 100% of " <i>sinensis</i> , SW Asia" (1000) 1% criteria | 1000 | 3,000-5,000 on migration | autumn 2011 |
| Grey Heron | <i>Ardea cinerea</i> | 100% of " <i>cinerea</i> , Central & SW Asia" 1% criterion. Threshold of 1000 used for C/D estimate) | 1000 | 500-1,000-1,500 on migration | autumn 2005, 2011 |
| Greylag Goose | <i>Anser anser</i> | 100% of " <i>rubrirostris</i> , Caspian, Iraq" (2500) + 100% of " <i>rubrirostris</i> , South Asia" (250) 1% criteria | 2750 | 3,000-5,000 on migration | autumn 2011 |
| Ruddy Shelduck | <i>Tadorna ferruginea</i> | 100% of "W Asia, Caspian, Iran, Iraq" (500) 1% criteria | 500 | 400-600 on breeding and moulting, 300-500 on migration | summer-autumn 2005, autumn 2011 |
| Common Shelduck | <i>Tadorna tadorna</i> | 100% of "Caspian, SW Asia" (800) 1% criteria | 800 | 500-1,000 on breeding and moulting, 3,000-5,000 on migration | summer-autumn 2005, autumn 2011 |
| Eurasian Wigeon | <i>Anas penelope</i> | 10% of "NW Europe" (1500) + 50% "Black Sea, Mediterranean" (1500) + 100% of "SW | 5500 | 8,000-20,000 on migration | autumn 2005, autumn 2011 |

| | | | | | |
|----------------------|--------------------------------|--|------|--|-------------------------------------|
| | | Asia, NE Africa" (2500) 1% criteria | | | |
| Red-crested Pochard | <i>Netta rufina</i> | 100% of "C & SW Asia" (2500) 1% criterion | 2500 | 3,000-5,000 on breeding, 5,000-14,300 on migration | summer 2011, autumn 2005 and 2011 |
| Common Pochard | <i>Aythya ferina</i> | 100% of "SW Asia" (3500) + 25% of "South Asia" (875) 1% criteria | 4375 | 40,100 on migration in 2005, 10,000-15,000 in 2011 | autumn 2005 and 2011 |
| Tufted Duck | <i>Aythya fuligula</i> | 100% of "SW Asia, NE Africa" (2000) + 50% of "C & South Asia" (2000) 1% criteria | 4000 | 5,000-20,000 on migration | autumn 2005 and 2011 |
| Black-winged Stilt | <i>Himantopus himantopus</i> | 100% of "himantopus, SW Asia" (500) 1% criterion | 500 | 300-1,000 on breeding, 3,000-5,000 on migration | summer 2005, summer and autumn 2011 |
| Pied Avocet | <i>Recurvirostra avosetta</i> | 50% of "W, SW Asia & Eastern Africa" (125) + 25% of "Central & S Asia" (250) 1% criteria | 375 | 400-600 on breeding, 1,000-1,500 on migration | summer 2005, autumn 2011 |
| Little Ringed Plover | <i>Charadrius dubius</i> | 100% of "curonicus, W & SW Asia, E Africa" (500) 1% criteria. 500 used based on population guess of 10,000-100,000 | 500 | 400-1,000 on breeding, 5,000-10,000 on migration | summer 2005 and 2011, autumn 2011 |
| Kentish Plover | <i>Charadrius alexandrinus</i> | 100% of "alexandrinus, SW Asia | 1000 | 500-2,000 on breeding, 5,000-10,000 on migration | summer 2005 and 2011, autumn 2011 |
| Slender-billed Gull | <i>Larus genei</i> | 100% of "W, SW & S Asia" (1500) 1% criterion. Breeding status in W Siberia uncertain. | 1500 | 1,000-2,000 on migration | autumn 2005 and 2011 |
| Common Tern | <i>Sterna hirundo</i> | 100% of "hirundo, W Asia" (1000) 1% criterion. Threshold of 1000 used for C/D | 1000 | 1,000-1,500 on breeding, 3,000-5,000 on migration | summer 2005 and 2011, autumn 2011 |

*Source: Waterbird Population Estimates 4th Edition, Wetlands International.

** The approach to the thresholds calculations based on "Waterbird Population Estimates" was agreed with BirdLife International and used for IBA program in Central Asia and Western Siberia. C/D 1% thresholds based on C/D range (25,000–1,000,000)

Criterion 8

The Lesser Aral and Syrdarya Delta is an important feeding, breeding /spawning ground and migration path for fish such as the critically endangered Fringebarbel Sturgeon (*Acipenser nudiiventris*, Aral fish population), Turkestan Barbel (*Barbus capito conocephalus*), and Aral Barbel (*Barbus brachycephalus brachycephalus*)

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:

Palearctic Realm - Desert/Xeric shrubland biome - Central Asian Deserts

b) biogeographic regionalisation scheme (include reference citation):

WWF classification (David et al., 2001)

http://wwf.panda.org/about_our_earth/ecoregions/ecoregion_list/

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.

The site covers the eastern part of the Lesser Aral Sea, including Saryshyanak Bay and the mouth of the Syrdarya River, west to Domalak Cape and the Koktyrnak Peninsula and a 1 km wide strip of the shore. It also includes the lowland area of Syrdarya river delta with a number of lakes at the north-eastern end of the Aral Depression, 120 km to the south of Aralsk and 40 km to the north-west of Aiteke-Bi (Novokazalinsk).

The “sea” part of the site mainly consists of the former seabed, exposed since sea levels fell and salinity increased about 30 years ago, now overgrown by halophyte vegetation. There are also parts of the original shoreline which is typical clayey, sandy and saline northern desert. There are reedbeds in the mouth of the Syrdarya River. The “river” part of the site consists of a group of lakes, lying in natural depressions in a smooth plain, in the lower reaches of the Syrdarya River between 20 and 60 km from the river’s mouth. The largest lakes are Kamyshlybash, Laikol, Akshatau, Shumyshkol, Kozhakol, Zhalanash and Aidarkol. The waters exhibit the full range of salinities from fresh through brackish to severely salty. The shores of many of the lakes have a substantial amount of fringing vegetation, mostly reed and club-rush. The site can be divided into two major habitats: wetlands, with standing fresh, brackish and salt waterbodies, river, saltmarshes and tall emergent vegetation; and desert habitats, opened or covered with scrubs, with rare trees near the river streams.

Recent (2011) salinity of Lesser Aral in the limits of the site is 5.2-7.5 gr/liter, salinity of Syrdarya river including avant-delta - 0.4-1.0 gr/liter, in the lakes it varies very much. In some periods mineralization of water in river delta can reach 1.5-3.9 gr/liter.

The main soil types presented at the site and some of their characteristics are given in the table below.

| Soil type | Humus content | Salinity | pH |
|---|---------------|------------|---------|
| Alluvial-meadow | 3.0-6.0% | up to 1.5% | |
| Desert grey-brown | 0.4-1.2% | 1.2-1.8 | |
| Grey-brown- meadow | 0.4-0.8% | | |
| Meadow-marsh | 0.8-3.0 | 0.2-1.2% | |
| Marsh | 1.5-4.5 | 0.2-0.8% | |
| Takyr (including saltmarsh takyr and non-salty takyr) | 0.36-3.0% | | > 8.0 |
| Desert-meadow | 0.32-0.45 % | | |
| Sand-desert | 0.28-0.43 % | | |
| Desert-takyr | 0.34-0.47 % | | |
| Meadow saltmarshes | 0.25-0.36 % | > 1% | > 8.0 |
| Crast saltmarshes | up to 0.69 | up to 22% | 8.8-9.2 |
| Meadow | 0.37-0.69 % | | |

| | | | |
|-------------------------------|------------------------|------------|-------|
| | Former sea-bed (dried) | | |
| Saltmarshes | | 3-10% | |
| Seaside soils with sand cover | 0.62 | 0.2-2.1% | 8-8.2 |
| Seaside sandy | 0.33-0.16 | 0.36-0.58% | 8-8.2 |

The main geological, vegetation and other characteristics are similar with section 17 and are partly given in section 20.

For the stabilization of the Lesser Aral (Kazakhstan's part of Aral Sea) a dam was constructed in 2003-2005 to divide the Lesser Aral from other parts of the sea. This governmental project was supported by World Bank. Kazakhstan decided to save its part of the sea, since saving the whole sea was impossible. The dam was constructed on the rational that the Syrdarya River going partly through Uzbekistan and mainly through Kazakhstan carries enough water to save only a part of the sea. In addition the Amudarya going through Turkmenistan almost does not reach the sea because it is used completely for irrigation. After the dam was constructed, the level of Lesser Aral began to increase. Hydrological figures are given in Appendix 1.

The climate is strongly continental and is characterized by a hot and dry summer giving place to a cold winter with a low precipitation (snow). The climate includes: droughts, hot and strong winds, dust storms, extremely hot weather in summer and low temperatures in winter. In July the temperature rises up to +50°C and in winter the temperatures drops to -30°C. The precipitation is no more than 300 mm a year and over 80% of its annual amount fall during the cold period. Air moisture is usually low. The relative air humidity per annum on average is about 75%.

17. Physical features of the catchment area:

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

Syrdarya river - the only source of water for the site - rises in two headstreams in the Tian Shan Mountains in Kyrgyzstan and eastern Uzbekistan—the Naryn River and the Kara Darya—and flows for some 2,212 kilometres west and north-west Uzbekistan and southern Kazakhstan to Lesser Aral Sea. The Syrdarya drains an area of over 800,000 square kilometers, but only about 200,000 square kilometers actually contribute significant flow to the river. The widely used figure for the surface of the catchment area is 219,000 square kilometers.

The Syrdarya lowland within the Aral Sea area is a flat lowland plain formed on the surface by thick strata of sand deposits consisting partially of paleoalluvial formations and partially of the products of destruction/disintegration of cretaceous and tertiary sandstones and limestones.

The flood-plain of the Syrdarya River reaches in some places the width of 20-30 km. Sections of the river-bed is located above the surrounding plain, and during periods of water high levels the dikes in certain areas prevent large areas of the plain from flooding. Subsoil/subterranean waters come up close to the surface and are not drained by the river, but quite the contrary they are fed by the river waters. The most part of the subsoil/subterranean waters are considerably mineralized, and the degree of their mineralization increases from the upper reaches to the lower reaches of the river. The saline waters result in development of salt-marshes, alkali soils or saline lands and various saline meadow grounds. The present-day flood-plain of the Syrdarya River is occupied by meadow desert soils with gramineous plants, grass and bushes alternating with plump saltworts and large areas of takyr. The older flood-free areas are occupied by hillocks among which argillaceous (clay) plains represented mainly by absolutely bare takyr soils or (on slightly elevated areas) by takyr-like sierozem overgrown with Saxaul (*Haloxylon aphyllum*).

The climate is strongly continental and is characterized by a hot and dry summer and cold winter with a low precipitation (snow); it is generally the same in the most part of the catchment area as at the site (see

section 16). In remote mountain part of the catchment area (Western Tian Shan), the precipitation level is much higher both in summer and in winter, in average up to 600-900 mm per a year, and the climate is more mild. The precipitation level and temperatures in the catchment area vary very much in dependence of altitude.

18. Hydrological values:

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

This territory feeds the subsoil waters of the large arid region and it is critically important for local people as almost the only source of subsistence. The upper part plays an important role in sediment trapping, reducing the amount of sediments entering into the sea.

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 • O • 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.

O • L • M • Sp • Ss • Ts • 4 • 3 • 1 • 2 • 9 • 7

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.

The most valuable places of habitat within the given lands are the deltaic lakes such as Tushchebas, Kamyshlybash, Akshatau, Karakol, Laikol, Zhalanashkol, Sarteren, Shomshykol, etc. The most part of the above lakes are fed directly from the Syrdarya River. Many of the above listed lakes have developed reed-beds. The lake water level is unsteady or variable and depends upon seasonal changes in the Syrdarya water level.

The Syrdarya flood-plain is open along the most part of its length and only in some places (especially near the river outlet) there are small areas of willow (*Salix sp.*) and Russian Olive (*Elaeagnus oxycarpa*) and tugays (riparian forests). There are reed-beds which grow on the flood-plains surrounding these deltaic lakes. There are also the thick Salt Trees/Russian Salt Tree (*Halimodendron*) areas and water sedge-grass scrub meadows.

The Aral Sea shore is now changing its configuration due the rise in water level. In general, its coasts are sandy and slightly/gently sloping. From the west such coasts have chink steeps. The terrain which surrounds the lakes and delta is arid. Some hilly areas can be observed in certain places. The flora is poor and is characteristic of arid lands, various flood-plain type plant communities are found only at the river mouth. Some areas are occupied by saxaul and tamarix brush-woods.

Due to the territory peculiarities, the main representatives of the fauna community are birds of water-marsh complex such as grebes, pelicans, cormorants, herons, geese, swans, ducks, waders, gulls, terns.

Birds of prey are rather common here during nesting and migrations. Like an oasis in a desert, this territory is attractive in the view of nesting and migrations for many passerine birds.

The territory is of great ecosystem significance as the place of habitat for a large number of species including rare, endangered/vanishing and endemic ones. Moreover, it is of especially high importance due to the continuing degradation of the Big Aral Sea and the Amudarya Delta. This territory is source of subsistence for the most part of the local population (fishery and agriculture, depending on the aquatic environment condition).

By the flora characteristics, the region falls in the Eastern-Aral zone of the Aral-Caspian Province of the Turanium Group. It is characterized by predominance of saline soils and a wide spread occurrence of sands in large and small massifs scattered up and down the lowland. On the clayey soils *Anabasis salsa* communities along with warmwood (*Artemisia pauciflora*, *A. glauca*) alternating with bare takyrs soils predominate. The Syrdarya River and its old beds are occupied by Black Saxaul (*Haloxylon aphyllum*), Saltwort (*Salsola sp.*) and Sarsazan (*Halocnemum strobilaceum*)

On the thin sands *Salsola arbuscula* and wormwood (*Artemisia sps.*, frequently with *Agropyron sp.*) predominate, while on the thick hilly sands the *Calligonum sp.* and White Saxaul (*Haloxylon persicum*) prevail. Within the Syrdarya delta and its flood-plains the large areas are occupied by peat-land/swamp reed meadows, the remaining part of the Syrdarya flood-plain is occupied by willow-oleaster riparian forests (called “tugay”).

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.*

This territory sustains the unique water-marsh complex in the center of a large continental desert zone. The area mainly consists of the former seabed, exposed since sea levels fell and salinity increased about 30 years ago, now overgrown by halophyte vegetation. There are also parts of the original shoreline which is typical clayey, sandy and saline northern desert. There are reedbeds (*Phragmites communis*) in the mouth of the Syrdarya River and especially on the shores of many of the lakes together with club-rush (*Scirpus sp.*).

The flora is typical Central Asian wetlands and northern type of desert, with domination of reed-beds near the lakes, with *Salix/Elaeagnus* riparian forest along the river, and with desert vegetation in surrounding areas.

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.*

The Aral Sea and Syrdarya River provides habitat for some species of fish such as the Aral trout (*Salmo trutta aralensis*), are on the verge of extinction. However these species are sometimes considered to be already extinct since they are very rare and very difficult to find. Turkestan barbel (*Barbus capito conocephalus*), Aral barbel (*Barbus brachycephalus brachycephalus*) are also rare in the Aral Basin.

These species below have national protection status but not international status.

| Common name | Scientific name | National Status |
|------------------|---|--------------------------|
| Aral barbel | <i>Barbus brachycephalus brachycephalus</i> | Category II (vulnerable) |
| Turkestan barbel | <i>Barbus capito conocephalus</i> | Category II (vulnerable) |

| | | |
|------------|-------------------------------|------------------------------------|
| Aral trout | <i>Salmo trutta aralensis</i> | Category I (critically endangered) |
|------------|-------------------------------|------------------------------------|

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:

The site has crucial importance for local population. A lot of local people use the area for subsistence and commercial fishing, as water source for agriculture and for domestic animals, as source for reed used as material for building construction, as hunting area etc.

Local population uses lakes and reedbeds around for life subsistence: water is used for irrigation, and reed is used as material for walls by building construction etc. Fisheries is quite developed, too. So, all these can influence the ecological character of wetlands - both as whole and at specific components

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:

24. Land tenure/ownership:

a) within the Ramsar site:

Mainly state owned - all waterbodies are in state property, and more than 90% of land as well; less than 10% are in private use for agriculture.

b) in the surrounding area:

Mainly state owned; about 90% of land is the state property, about 10% are privatised for agriculture; all waterbodies are state property.

25. Current land (including water) use:

a) within the Ramsar site:

Fisheries, hunting, cattle grazing, in small scale - vegetable gardens

b) in the surroundings/catchment:

in the surroundings - mainly cattle grazing, and vegetable gardens as well. In the whole catchment - full scale of possible land use types, including cattle grazing, market gardens, rice & wheat production, orchards, hunting, fishing, energy production, mining etc.

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:

In the past

Catastrophic drying-up of the Aral Sea: Drying up of the sea led to the loss of fish species, bird species and mammals. Local population lost the big part of their resources, the impact of people on the rest of biodiversity increased sharply. Part of population migrated to other regions.

At present

The Government conducted works on regulation of the Syrdarya River bed and the North Aral Sea watercourse; water level is regulated with dam dividing Lesser Aral Sea (Syrdarya basin) from the rest of the sea (Amudarya basin in Turkmenistan and Uzbekistan). Water level is stabilized in Lesser Aral, fisheries and agriculture activities are being increased again. One of the main affecting factors is growing agriculture within the Syrdarya Valley (runoffpesticides and fertilizers).

In future

A negative effect will be possible as a result of a human excessive presence due to development of the infrastructure (hydraulic works (structures), tourist facilities, hunting, and reviving (renascent) fishery).

b) in the surrounding area:

The same factors, mainly agriculture including cattle grazing etc.

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.

The site includes two confirmed Important Bird Areas – 1) Lesser Aral Sea (National IBA code KZ 043, BirdLife ID number in WBDB - 21951, the area – 139400 ha); 2) Syrdarya Delta Lakes (National IBA code KZ 044, BirdLife ID number in WBDB - 19953, the area – 144165 ha). But the IBA are not Specially Protected Areas still because it is not obligatory under national legislation.

Extension of Barsakelmes State Nature Reserve is planned so it will include part of the Ramsar Site 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?:

There is a plan for regulation of water regimes prepared by regional water-use administration, jointly with regional authorities. The plan is officially approved in 2007 and it is revised every year (not the plan as whole but timetable, used water limits etc.) Regional water-use administration (or “water basin department”) is responsible for the implementation. But the plan almost does not take into consideration the biodiversity aspects.

d) Describe any other current management practices:

The Syrdarya River and North Aral Sea Regulation Project (financing at first stage by the participation of the World Bank). The project was started in 2003, with the total cost of 85 millions USD. In 2005, the dam between North (Lesser) Aral and other part of the sea was ready for use, as well as regulatory

waterworks facility at Syrdarya in 15 km upstream from the sea. In 2006, the situation with water level and salinity in Lesser Aral was already sharply improved.

Now, the water level in Lesser Aral is stabilized, fish population is in process of natural restoration. The restoration of species composition and numbers of freshwater fish, some of which are endemic ones, can currently be observed in the Aral Sea, deltaic lakes and Syrdarya River.

At the Kamyshlybash lake, there is a fish hatchery introducing 15-17 millions of young fishes of different species (mainly commercially valuable) per year to Lesser Aral, Syrdarya and delta lakes, with annual governmental funding about 700,000-800,000 USD. This work is done since 2011 and will be continued with inclusion of rare species of fishes.

In several lakes, private commercial fish breeding is accomplished.

28. Conservation measures proposed but not yet implemented:

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

a) Implementation of Stage II of the Syrdarya River and North Aral Sea Regulation Project; it had to be started in 2012-2013, and now the different options are under discussion. The Stage II of the regulation project is planned and had to be started in 2012-2013, with additional dam and waterworks facilities construction at Lesser Aral and Syrdarya. This has to help to increase water level in Lesser Aral and the water surface, as well as the wetland habitats status etc. Now, the different options of the project are under serious discussion.

b) Inclusion of the Syrdarya delta part and neighboring areas of Lesser Aral Sea to the territory of the Barsakelmes State Nature Reserve. In 2012, the feasibility study and technical calculations will be prepared, with governmental funding.

29. Current scientific research and facilities:

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

Some research projects are implemented from time to time, without special monitoring scheme. Monitoring research in 2011 was done by support of International Fund for saving the Aral Sea (IFAS) in Kazakhstan. The data for bird numbers in 2011 were provided for the RIS by the Fund.

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.

International Fund for saving the Aral Sea (IFAS) in Kazakhstan conducts some programs on communication and public awareness, including Conference on Aral Sea conservation in Kyzylorda city (autumn 2011). The Fund has an Internet-site - <http://www.ec-ifas.org/>, in English and in Russian, where information about the Aral (including the Ramsar site), current activities etc. is presented. In frame of several projects of GEF Small Grant Program, a number of leaflets and other materials on water saving, biodiversity conservation etc. were published and disseminated among local population. At the moment, tourism is not developed in the area, and there are no special facilities for visitors.

31. Current recreation and tourism:

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

It is not used at the time being, but expected to be used in future.

32. Jurisdiction:

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

Territorial Jurisdiction: The governmental authority for the Ramsar Site is the governor office (“Akimat”) of Kyzylorda region of Kazakhstan, situated in Kyzylorda city; at the local level it is Akimat of Aral district of the region, situated in Aralsk city.

Functional Jurisdiction: There is no governmental body responsible for the site itself, but The Aral-Syrdarya Basin Authority of the Water Resources Committee of the Ministry of Agriculture is responsible for water level management at the site.

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.

The Aral-Syrdarya Basin Authority of the Water Resources Committee of the Ministry of Agriculture of the Republic of Kazakhstan.

Head: Mr. Karlykhanov Amangeldy

Address: 107, Amangeldy str., Kyzylorda, Kazakhstan.

Phone: +7 (7242) 235607, 235850

34. Bibliographical references:

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

Berezovsky V.G. (1981). Numbers of Rare and Endangered/Vanishing Birds during the Period of Seasonal Migration on the Eastern Shore of the Aral Sea // Ecology and Birds Protection (Abstracts from the Report at VIII All-Union Ornithological Conference). Kishinev. - 23-24. (in Russian).

Berezovsky V.G. (1983a). Spring Over-flight of Swimming and Semi-Aquatic Birds on the Eastern Shore of the Aral Sea in 1978-1979 // Birds Migration in Asia. Issue 8, Alma-Ata. - 26-34. (in Russian).

Berezovsky V.G. (1983 b). Over-flight of Birds of Prey on the Eastern Shore of the Aral Sea in 1978-1979 // Ecology of Birds of Prey. M. - 7-8. (in Russian).

Berezovsky V.G., Auevov E.M., Khrokov V.V. (1982). Present-Day Condition of Ornithofauna on the Eastern Shore of the Aral Sea and its Possible Change as a result of the Water Area Drying // Kazakhstan's Fauna and Problems of its Protection. Alma-Ata. - 30-31. (in Russian)

Biodiversity of wetlands of avant-delta of Syrdarya river. Eds. Ospanov M.O., Stamkulova K.Zh. - Almaty, 2012. (in Russian).

David M. Olson., Eric Dinerstein, Eric D. Wikramanaya K E., Neil D. Burgess., George V. N., Pow, E. L.L., Emma C., Underwo O.D., Jennifer A. D'amico., Illanga Itoua., Holly E. Strand., John C. Morrison., Colby J. Loucks., Thomas F. Allnutt., Taylor H. Ricketts., Yumiko Kura., John F. Lamoreux., Wesley W. Wettengel., Prashant Hedao., and Kenneth R. Kassem. (2001). Terrestrial Ecoregions of the World: a new map of life on Earth // *Bioscience*. November 2001 / Vol.51 No. 11 . - 933-938.

Grachev V.A. (2000). Birds in Surroundings of Aralsk City and Kymyslybash Lake (according to the Research Data for 1951-1954). Not (Passeriformes) Perching Birds // “Selevinia”, №1-4. - 95-104. (in Russian).

Gubin B.M. (1999). Birds of the Eastern Aral Sea Area // Russian Ornithological Journal. Express-Issue, № 80. - 3-16. (in Russian).

Gubin B.M. (2000). Modern State of Bird Diversity in Northern Aral Sea Region and Problems of its Conservation//Sustainable Use of Natural Resources of Central Asia. Envir. Problems of Aral Sea and Surrounding Areas. Almaty, 1998. - 23.

Gubin B.M. (2000). Problems Associated with Animal Diversity and Conservation in the Modern Aral sea//Abstract in the second Arab Int. Conference and Expedition on Envir. Biotechnology (Coastal Habitats) 8-12 April 2000. Abu-Dhabi. - 43.

Khrokov V.V. (2004). On Numbers of Birds on Deltaic Lakes and within the Syrdarya Mouth in Spring of 2001 // Birds Migration in Asia. Issue 12, Zoology Institute, Vol. 47, Almaty. - 216-230. (in Russian).

Khrokov V.V., Tailer G., Faustov L.V., Shaimukhanbetov O. (2005). Research Expedition Under the Project “(Numenius Tenuirostris) Slender-billed Curlew: Kzyl-Orda Oblast // Kazakhstan Ornithological Bulletin 2004. Almaty. - 41. (in Russian).

Kovalenko A.V. (2006). Ornithological Research of the Valley of the Syrdarya River Downstream and some Adjacent Territories in 2005//Kazakhstan Ornithological Bulletin 2005. Almaty. - 59-69. (in Russian).

Kovshar V.A. (2000). Observations of Birds in the Syrdarya Delta and Adjacent Areas of the Aral Sea Dried Up Bed in August, 2000 // Selevinia, №1-4. - 104-110. (in Russian).

Markov V.I. (1965). Notes on Pelicans and Cormorants of the Aral Sea // Fish-eating Birds and their Importance for the Fish Industry. M. - 156-165. (in Russian).

Report of the regional program of CGIAR for Central Asia and Caucasus, ICARDA. - Tashkent, Uzbekistan, 2012. (www.icarda.org)

Sklyarenko, S.L., Welch, G.R. and Brombacher., M. eds. (2008). Important Bird Areas in Kazakhstan – priority sites for conservation. Association for the Conservation of Biodiversity of Kazakhstan, Almaty - 140-143.

Spangenberg E..P., Feigin G.A. (1930a). Prevalence and Biology of Dalmatian Pelican (*Pelecanus crispus* Bruch.) in the Valley of the Syrdarya Downstream // Bulletin of MOIP, Biology Department, Issue 1-2. - 139-146. (in Russian).

Yerokhov S.N. (2004). Observations of Birds on the Northern Shore of the Aral Sea // Kazakhstan Ornithological Bulletin 2003. Almaty. - 40-41. (in Russian).

Appendix 1: Dynamics of change of main parameters of Lesser Aral Sea

| Main parameters | Units | Before regulation project realisation | Projected change of the parameters | | | |
|--|-------------------|---------------------------------------|---|----------------------------------|--|----------------------------------|
| | | | After realisation of Stage I of the project | Increasing (+) or decreasing (-) | After realisation of Stage II of the project | Increasing (+) or decreasing (-) |
| Water surface altitude | meters a.s.l. | 38.8 | 42.0 | +4.0 | 46.0 | +8.0 |
| Water surface area | square km | 2414 | 3288 | +874 | 3812 | +1398 |
| Water volume | cubic km | 15.6 | 27.1 | +11.5 | 28.4 | +12.8 |
| Mineralisation (salinity) of water | gr/l | 23 | 17 | -6 | 15 | -8 |
| Fisheries catching | thousands of tons | 0.4 | 11.7 | +11.3 | | |
| Time of the sea filling | years | | 1.5 | | 0.5 | |
| Distance between shoreline and Aralsk city | km | 75.0 | 12.0 | -63 | 0 | -75.0 |
| Average annual water income to Lesser Aral for last 10 years | cubic km | 6.7 | | | | |
| Water income to Lesser Aral in 2004-2010 | cubic km | around 10.0 | | | | |