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[www.moew.government.bg](http://www.moew.government.bg)  
22, Maria Luiza Blvd.  
1000 Sofia, Bulgaria

[www.pudoos.bg](http://www.pudoos.bg)  
2 Triaditsa street, fl.1 and fl. 3  
1000 Sofia, Bulgaria

Ramsar Convention on Wetlands  
[www.ramsar.org](http://www.ramsar.org)

Ramsar Regional Initiative on Black Sea Coastal Wetlands - BlackSeaWet  
[www.blackseawet.org](http://www.blackseawet.org)



# DISCOVER BLACK SEA COAST 38 BLACKSEAWETlands to visit

Ramsar Regional Initiative on Black Sea Coastal Wetlands - BlackSeaWet



## Ramsar Convention on Wetlands

The Convention on Wetlands is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975, and it is the only global environmental treaty that deals with a particular ecosystem. The Convention's member countries cover all geographic regions of the planet.

### Mission of the Ramsar Convention

“the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world”.

### Wise use of wetlands

The wise use of wetlands is defined as “the maintenance of their ecological character, achieved through the implementation

of ecosystem approaches, within the context of sustainable development”. “Wise use” therefore has at its heart the conservation and sustainable use of wetlands and their resources, for the benefit of humankind.

### Contracting parties to the Convention:

The Ramsar Contracting Parties have committed themselves to implementing the “three pillars” of the Convention:

- to designate suitable wetlands for the List of Wetlands of International Importance (“Ramsar List”) and ensure their effective management;
- to work towards the wise use of all their wetlands through national land-use planning, appropriate policies and legislation, management actions, and public education; and to
- cooperate internationally concerning transboundary wetlands, shared wetland systems, shared species, and development projects that may affect wetlands.





*The Seagulls, Fotolia*

## Wetlands are

Areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

Lakes and rivers, swamps and marshes, wet grasslands and peatlands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans.

Photo: Ministry of Forestry and Water Affairs, Turkey



## Ramsar Regional Initiative on Black Sea Coastal Wetlands – BlackSeaWet

Partners of the BlackSeaWet Initiative are:

Ministries of Environment and Environmental NGO's from:

- Bulgaria
- Georgia
- Moldova
- Romania
- Russia
- Turkey
- Ukraine

Mission of the BlackSeaWet is:

To stop and reverse the loss and degradation of Black and Azov seas coastal wetlands and their biodiversity, catalyze of wetlands wise use in a context of sustainable development in the region through strengthening of international cooperation.

Vision of the BlackSeaWet:

In 20 years time the coastal wetlands of the Black Sea and Azov Seas are sustainably used, healthy ecosystems that provide the basis for conservation of wetland dependent biodiversity, support services for people and are equal in area and health to the current time.

The main strategic targets are:

- Stopping the loss and degradation of wetlands and their biodiversity in line with Ramsar Convention and Convention on Biological Diversity targets;
- Ensuring that wise use principles are integrated into coastal zone development;
- Involving local people in planning and decision-making;
- Completing the ecological network around the Black and Azov Sea coasts;
- Combining wetland conservation in integrated water resource management and integrated coastal zone management approaches;
- Promoting wetlands conservation in sectors whose activities are contributing to degradation.

BlackSeaWet governance and regional coordination

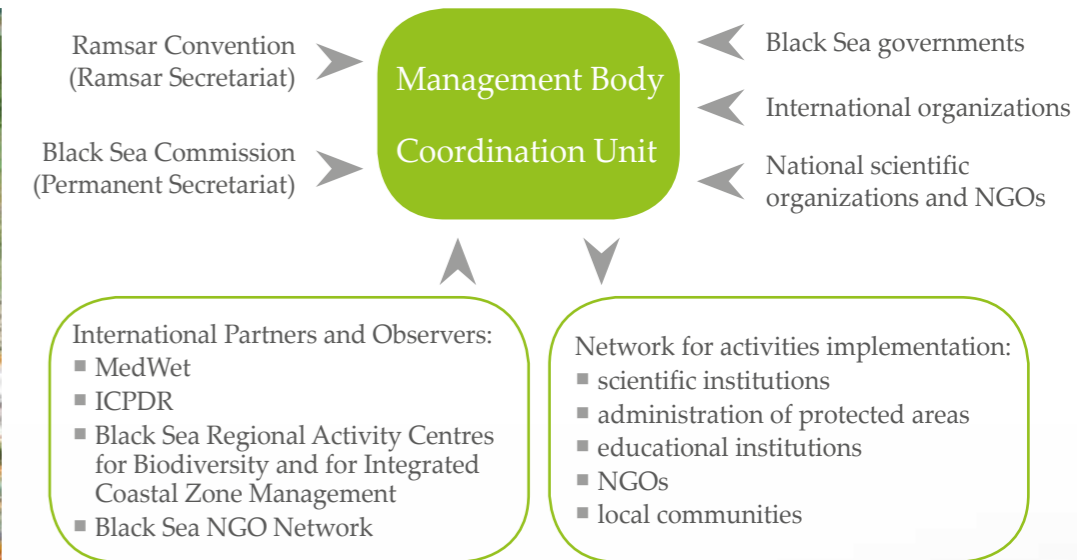
The implementing bodies of the BlackSeaWet Initiative are:

- The Management Body.
- The Coordination Unit.
- The National Working Groups.

*Photo: Project DIR-59318-1-2 "Mapping and assessment of the conservation status of the natural habitats and species – Phase 1"*



*Photo: Balkani Wildlife Society NGO*



# BULGARIA

In the list of Wetlands of International Importance Bulgaria is presently represented with 11 Ramsar sites with a surface area of 35,488 hectares.



VAYA LAKE

LAKE SHABLA

SREBARNNA

ATANASOVSKO LAKE

ROPOTAMO COMPLEX

PODA

IBISHA ISLAND

BELENE ISLANDS COMPLEX

POMORIE LAKE

DURANKULAK LAKE

DRAGOMAN MARSH

KARST COMPLEX



Durankulak Lake Photo: Nature Conservation Centre Durankulak, Durankulak Village



## Durankulak Lake

Designation date: 28/11/1984  
43°42'N 28°30'E

The lake is situated in eastern Bulgaria, 6 km from the Romanian border, east of the village of the same name, near the sea coast. It is a freshwater-brackish water liman of natural origin and with considerable vegetation cover. It lies in a former river valley, which is why the lake has a specific 'S' shape. The lake is surrounded by arable land and steppe territories. Between the lake and the sea lies a strip of sand dunes and beach. The water balance of the lake is determined mainly by groundwater and precipitation.

The main habitats are the open water surfaces and the large areas covered with higher aquatic vegetation in the northern part /Eagle Marsh/ and the southwestern part /the Vaklin Arm/, as well as the marsh to its southeast. Dominating species are



Curlew Sandpiper /Calthris ferruginea/ Photo: Tomjo Zahirov

Reed /*Phragmites australis*/, Narrow Leaf Cattail /*Typha angustifolia*/, Common Cattail /*Typha latifolia*/ and *Schoenoplectus triqueter*.

Various rare and endemic fish species occur at the site. The lake hosts various amphibian and reptile species such as the European Tree Frog /*Hyla arborea*/, European Pond Turtle /*Emys orbicularis*/, Grass Snake /*Natrix natrix*/, Dice Snake /*Natrix tessellata*/.

Lake Durankulak is a site of global importance for waterfowl in winter, mainly due to the large concentrations of geese. The White-Fronted Goose /*Anser albifrons*/ and the globally threatened Red-Breasted Goose /*Branta ruficollis*/ winter here in considerable numbers. Nearly the whole world population of the Red-Breasted Goose stays at Durankulak and Shabla Lake in January and February, which makes them two of the most significant wetland areas worldwide.

The numerous goose flocks regularly contain individuals of Lesser White-Fronted Goose /*Anser erythropus*/, which is globally threatened.

The lake is one of the sites in Bulgaria with large concentrations of Mallard /*Anas platyrhynchos*/ in winter. As the lake lies along the

migration path of Via Pontica and close to the Danube delta, it is one of the most important stations for bird migration along the Bulgarian Black Sea coast. The lake is used as a resting site during migration by the White Pelican /*Pelecanus onocrotalus*/, the Pygmy Cormorant /*Phalacrocorax pygmeus*/, as well as by individual Greater Spotted Eagles /*Aquila clanga*/ . During the migration, the Aquatic Warbler /*Acrocephalus paludicola*/, which is globally threatened, was also recorded. The lake is one of the most important feeding sites in the country for the Purple Heron /*Ardea purpurea*/, the Kentish Plover /*Charadrius alexandrinus*/, the Marsh Harrier /*Circus aeruginosus*/, the Collared Pratincole /*Glareola pratincola*/, the Little Crake /*Porzana parva*/, the Little Tern /*Sterna albifrons*/ and the Red-Footed Falcon /*Falco vespertinus*/ . The lake is the major breeding place on the Bulgarian Black Sea coast for the globally threatened Ferruginous Duck /*Aythya nyroca*/.

Of the mammals valuable species are the European Ground Squirrel /*Spermophilus citellus*/, the Otter /*Lutra lutra*/, the Weasel /*Mustela nivalis*/.



## Lake Shabla

Designation date: 19/03/1996

43°35'N 28°33'E

Two brackish, coastal lakes connected by an artificial canal. The lakes overlie a horizon of sand 4-5m thick deposited on top of a rich peat layer, evidence of a long marsh period. Limestone forms huge karst fields in parts of the wetland.

The lake is fed exclusively by groundwater. The banks of the lake are covered by large reedbeds */Phragmites australis/* with Narrow Leaf Cattail */Typha angustifolia/*, Common Cattail */Typha latifolia/*, *Carex riparia* etc. The reedbeds constitute the main habitat in the complex. There are also considerably large open water surfaces.

The site supports various species of breeding birds and endemic birds and the endangered plants *Cladium mariscus*, *Nuphar lutea*, *Nymphaea alba*.

Amphibians and reptiles of global conservation concern: Eastern Spadefoot */Pelobates syriacus/*, European Tree Frog */Hyla arborea/*, European Green Toad */Bufo viridis/*, Marsh Frog */Rana ridibunda/*, European Pond Turtle */Emys orbicularis/*, Dice Snake */Natrix tessellata/*.

The complex is of strategic importance to the globally threatened Red-Breasted Goose */Branta ruficollis/* in winter when together with lake Durankulak it hosts nearly the whole world population of the species. In this season there are also large concentrations of the White-Fronted Goose */Anser albifrons/* and individuals of the globally threatened Lesser White-Fronted Goose */Anser erythropus/*. In the complex there are two nesting globally threatened species - the Ferruginous Duck */Aythya nyroca/* and the Corncrake */Crex crex/*. The lake is one the most important sites in the country for the protection of the breeding Kentish Plover */Charadrius alexandrinus/*, Collared Pratincole */Glareola pratincola/*, Black-Winged Stilt */Himantopus himantopus/*, Little Tern */Sterna albifrons/* and Red-Footed Falcon */Falco vespertinus/*.

Of the mammals there are species such as Otter */Lutra lutra/*, Edible Dormouse */Glis glis/*.



Pomorie Lake Photo: Green Balkans NGO





Sandwich Terns /*Sterna sandvicensis*/ Photo: Green Balkans NGO



## Pomorie Lake

Designation date: 24/09/2002

42°35'N 27°37'E

The site is a natural hypersaline coastal lagoon connected to the Black Sea by an artificial canal. The lagoon is associated with salt marshes, reed beds, salt pans and settling pools.

Current economic activities include salt production and the extraction of medicinal mud.

In Lake Pomorie there are specific plant communities of halophytes characteristic of hypersaline water bodies such as the Salt Wort /*Salicornia europaea*/ . Other dominant plant species are the Narrow Leaf Cattail /*Typha angustifolia*/ , the Common Cattail /*Typha latifolia*/ , the Reed / *Phragmites australis*/ , and Common Clubrush /*Schoenoplectus lacustris*/ .

The site is one of only two in Bulgaria where *Artemia sp.* is found naturally and recent studies identified the species as Brine Shrimps /*Artemia parthenogenetica*/ .

Populations of reptiles and amphibians are very limited. The lake is holding a national and international importance for birds due to its situation along the second largest European flyway - *Via Pontica*. 269 bird species are recorded for the site. Colonies of Sandwich, Common and Little tern /*Sterna sandvicensis*, *S. hirundo*, *S. albifrons*/ , avocets /*Recurvirostra avosetta*/ , Kentish plover /*Charadrius alexandrinus*/ and black-winged stilts /*Himantopus himantopus*/ nesting here are of national and regional importance. During migration the site plays important role as stopover for *Charadriiformes*, herons, storks, pelicans and raptors.

Ecosystem services provided by the lake include production of sea salts through evaporation and extraction of curative medicinal mud used widely in the specialized hospitals and spa centers in the region of Pomorie.



## Atanasovsko Lake

Designation date: 28/11/1984

42°34'N 27°28'E

Atanasovsko Lake is a hypersaline lake which resembles a liman to the north and a lagoon to the south. A considerable part of its surface is used for salt production with preserved primitive salt production methods.

Atanasovsko Lake includes a considerable variety of habitats. Most characteristic are the shallow saline ponds without higher vegetation, divided by dikes, and other areas which are free of vegetation or are covered with *Salicornia europaea*. There is occasional water vegetation of the type found in freshwater bodies, with prevailing Narrow Leaf Cattail */Typha angustifolia/*, Common Cattail */Typha latifolia/*, reedbeds */Phragmites australis/*.

Lake Atanasovsko is located along the migration path of Via Pontica and is a typical migration bottleneck for migrating soaring birds coming from a large part of Northern, Eastern and Central Europe. Up to 240 000 storks and 60 000 raptors visit the lake annually during the autumn migration. This is the place with the highest migration density of the White Pelican */Pelecanus onocrotalus/* and the Dalmatian Pelican */Pelecanus crispus/*, the Marsh Harrier */Circus aeruginosus/*, the Red-Footed Falcon */Falco vespertinus/* and is second after the Bosphorus in the concentration of Lesser Spotted Eagle */Aquila pomarina/*.

During this period the Pygmy Cormorant */Phalacrocorax pygmeus/* and the Spoonbill */Platalea leucorodia/* are often encountered in considerable numbers. During the migration period there was a sighting of the very rare and globally threatened species Slender-Billed Curlew */Numenius tenuirostris/*.

The lake hosts the larger part of the Bulgarian population of the Avocet */Recurvirostra avosetta/*, the Sandwich Tern */Sterna sandvicensis/* and the Kentish Plover, and thus it is the most important site for these species.

The site is a very popular destination for birdwatchers, photographers, scientists and bird ringers from nearby and abroad. The main human uses are salt production and extraction of curative mud.



Atanasovsko Lake



Vaya Lake

Lake Vaya hosts fish species such as the European Eel */Anguilla anguilla/*. Another species found in the lake is *Neogobius fluviatilis*. The lake is important for fishery - the Prussian Carp */Carassius gibelio/* and the Common Carp */Cyprinus carpio/* are the species of economic value.

Two amphibian and reptile species are included in the Red Data Book of Bulgaria - the Aesculapian Snake */Elaphe longissima/* and the European Legless Lizard */Ophisaurus apodus/*.



## Vaya Lake

Designation date: 11/11/2002  
42°30'N 27°25'E

Situated on the Black Sea coast, west of the city of Burgas, between the lakes Atanasovsko and Mandra. Vaya is the largest Bulgarian Black Sea coastal lake, an open firth */liman/* of Pleistocene origin.

Associations of Reed */Phragmites australis/*, Narrow Leaf Cattail */Typha angustifolia/* and Common Cattail */Typha latifolia/* occupy a significant area on the western and northwestern shores. Along the lake, swampy meadows and halophytic plant communities are present and arable lands. Despite the insignificant depth of the lake, there is no submerged vegetation apart from patches of Fennel Pondweed */Potamogeton pectinatus/* in the north, west and east of the lake.



Narrowleaf cattail *Typha angustifolia*

The Otter */Lutra lutra/* Photo: Edgar van der Grift



The lake is part of the Burgas lake complex - one of the three most significant wetland complexes for waterfowl concentrating along the Bulgarian Black Sea coast. 245 bird species have been recorded in the area of the lake. The lake is of particular importance as a resting site during migration for the Dalmatian Pelican */Pelecanus crispus/*, the White Pelican */Pelecanus onocrotalus/* and the Pygmy Cormorant */Phalacrocorax pygmeus/*. The globally threatened Corncrake */Crex crex/* was also recorded in the area as a migrating species. Lake Vaya is of global importance to the wintering of a considerable number of waterfowl, mainly of the Pygmy Cormorant */Phalacrocorax pygmeus/*, the Cormorant */Phalacrocorax carbo/*, the Whooper Swan */Cygnus cygnus/*, the White-Fronted Goose */Anser albifrons/*, the Pochard */Aythya ferina/* and the Tufted Duck */Aythya fuligula/*. Lake Vaya is the only place in Bulgaria supporting up to 7% of the Black Sea population of the White-Headed Duck */Oxyura leucocephala/*. The lake is one of the most important sites in the country and a site of European significance for the protection of the breeding Little Bittern */Ixobrychus minutus/*.

The lake is important site to the Otter */Lutra lutra/*.



Poda Lake Photo: Anton Kovachev, Poda Ecological Centre



## Poda

Designation date: 24/09/2002  
42°27'N 27°27'E

Situated on the Black Sea coast close to the south industrial zone of the city of Burgas. Poda is a complex marsh-like system /eutrophic marsh/. It includes elements of marine, litoral, freshwater, brakish and hypersaline ecosystems.

Most of the area is occupied by reed beds /*Phragmites australis*/. There are also mixed communities of Reed /*Phragmites australis*/, *Artemisia santonicum* and Sea Rush /*Juncus maritimus*/, as well as associations of *Elymus sabulosus*, *Plantago scabra*, *Gypsophila trichotoma*, Sea Holly /*Eryngium maritimum*/ and Blue Lettuce /*Lactuca tatarica*/.



Pond Turtle /*Emys orbicularis*/ Photo: Anton Kovachev, Poda Ecological Centre



Dalmatian Pelican /*Pelecanus crispus*/ Photo: Ivancho Zafirov

Valuable amphibian species are the Eastern Spadefoot Toad /*Pelobates syriacus balcanicus*/, the European Legless Lizard /*Ophisaurus apodus*/ and the Four-lined Snake /*Elaphe quatorlineata sauromates*/, included in the Bulgarian Red Data Book.

The most numerous reptile species are the European Pond Turtle /*Emys orbicularis*/ and the Balkan Green Lizard /*Lacerta trilineata*/.

Poda is one of the richest places in the country in terms of bird species variety. The site is home to 8 globally threatened species: Dalmatian Pelican /*Pelecanus crispus*/, Pygmy Cormorant /*Phalacrocorax pygmeus*/, Red-breasted Goose /*Branta ruficollis*/, White-headed Duck /*Oxyura leucocephala*/, Ferruginous Duck /*Aythya nyroca*/, Greater Spotted Eagle /*Aquila clanga*/, Imperial Eagle /*Aquila heliaca*/, and Corn Crane /*Crex crex*/. Poda holds one of the largest mixed colonies in the country /and the biggest on the Black Sea Coast/ of Spoonbill /*Platalea leucorodia*/, Glossy Ibis /*Plegadis falcinellus*/, Grey Heron /*Ardea cinerea*/, Little Egret /*Egretta garzetta*/, Night Heron /*Nycticorax nycticorax*/, and Purple Heron /*Ardea purpurea*/. Important site for Otter /*Lutra lutra*/.



Photo: Project DIR-59318-1-2 "Mapping and assessment of the conservation status of the natural habitats and species – Phase 1"



## Ropotamo Complex

Designation date: 24/09/1975

42°19'N 27°45'E

The site, on the southern Bulgarian Black Sea coast, represents a diverse mosaic of various habitats - river downstream and estuary, seasonally flooded riverine and broad-leaved deciduous forests, small freshwater and brackish lagoons, sand dunes, rocky shores and fjords, a sea bay, sea inlets.

A unique site in terms of biodiversity. Riverine forests are typical of the complex and unique europewide.

The Ropotamo Complex includes a considerable variety of biotopes. A significant element are the coastal marshes with hygrophytic vegetation dominated by Reed [*Phragmites australis*], Narrow Leaf Cattail [*Typha angustifolia*], Common Cattail [*Typha latifolia*], *Schoenoplectus litoralis* etc. As well as marshes with hydrophytic vegetation: White Waterlily [*Nymphaea alba*], European Frogbit [*Hydrocharis morsus-ranae*], Common Duckweed [*Lemna gibba*] etc. A characteristic part of the complex is the river liman of Ropotamo River with hygrophytic and hydrophytic vegetation including the abovementioned species, longose forests of Raywood Ash [*Fraxinus oxycarpa*], Field Elm [*Ulmus minor*], Black Elder

White Waterlily /Nymphaea alba/ Photo: Sonja Tomerka, IBER, BAS



Photo: Project DIR-59318-1-2 "Mapping and assessment of the conservation status of the natural habitats and species – Phase 1"

*/Alnus glutinosa/*, Hawthorn */Crataegus monogyna/* with considerable participation of lianas. The deciduous forests are mainly of Hungarian Oak */Quercus frainetto/* with Mediterranean elements or mixed with Pubescent Oak */Quercus pubescens/* and *Quercus virgiliana* etc. The coast is covered by dunes with psamophytic grass vegetation, mainly *Ammophila arenaria*, Sea Daffodil */Pancratium maritimum/* etc, secondary bush and grass communities dominated by Jerusalem Thorn */Paliurus spina-christi/*, Sea Wormwood */Artemisia maritima/*, Field Wormwood */Artemisia campestris/*, *Festuca vaginata* etc.

The site provides refuge to many nationally and internationally IUCN red-listed species of plants and animals. Rich endemic and relict flora and fauna are recorded in the site.

In the wetlands of the complex 39 higher aquatic plant species are recorded – around 20% of all such species found in Bulgaria such as Yellow Waterlily */Nuphar lutea/*, White Waterlily */Nymphaea alba/*, Water Chestnut */Trapa natans/*, *Wolffia arrhiza*, *Utricularia australis*.

55 fish species are recorded in the wetlands of the Ropotamo Complex. The Ropotamo Complex is one of the three richest regions in Bulgaria for reptile and amphibian species.

The amphibians include: Smooth Newt */Triturus vulgaris/*, Great Crested Newt */Triturus cristatus/*, European Fire-Bellied Toad */Bombina bombina/*, Common Toad */Bufo bufo/*, European Tree Frog */Hyla arborea/*, Eastern Spadefoot */Pelobates syriacus balcanicus/*, Marsh Frog */Rana ridibunda/* and Agile Frog */Rana dalmatina/*. The reptiles include: Spur-Tighed Tortoise */Testudo graeca graeca/*, Hermann's Tortoise */Testudo hermanni boettgeri/*, European Pond Turtle */Emys orbicularis/*, Legless Lizard */Ophisaurus apodus thracius/*, Balkan Green Lizard */Lacerta trilineata/*, Grass Snake */Natrix natrix/*, Dice Snake */Natrix tessellata/*, Aesculapian Snake */Elaphe longissima/*, *Elaphe quatuorlineata saurornates*.

Ropotamo is one of the most important nesting sites in the country for a group of species which are strongly dependent on the various habitat types on the territory – the Yelkouan Shearwater */Puffinus yelkouan/*, the Spotted Crake */Porzana porzana/*, Little Crake */Porzana parva/*, the Purple Heron */Ardea purpurea/*, the Squacco Heron */Ardeola ralloides/* and the Semicollared Flycatcher */Ficedula semitorquata/*. Ropotamo is one of the three breeding sites for the White-tailed Eagle along the Bulgarian Black sea coast. During the breeding season, during migration and the wintering period could be found at the complex the following globally threatened

species – the Pygmy Cormorant */Phalacrocorax pygmeus/*, the Dalmatian Pelican */Pelecanus crispus/*, the Marbled Duck */Marmaronetta angustirostris/*, the Ferruginous Duck */Aythya nyroca/*, the White-Tailed Eagle */Haliaeetus albicilla/*, the Pallid Harrier */Circus macrourus/*, the Greater Spotted Eagle */Aquila clanga/*, the Imperial Eagle */Aquila heliaca/*, the Lesser Kestrel */Falco naumanni/* and the Corncrake */Crex crex/*. The complex also plays a significant role as a resting station during migration and as a migration bottleneck, particularly for the White Stork */Ciconia ciconia/*, the Common Buzzard */Buteo buteo/* and some other raptors. Ropotamo



Common Spoonbill /Platanus leucorodialis/ Photo: Emil Todorov



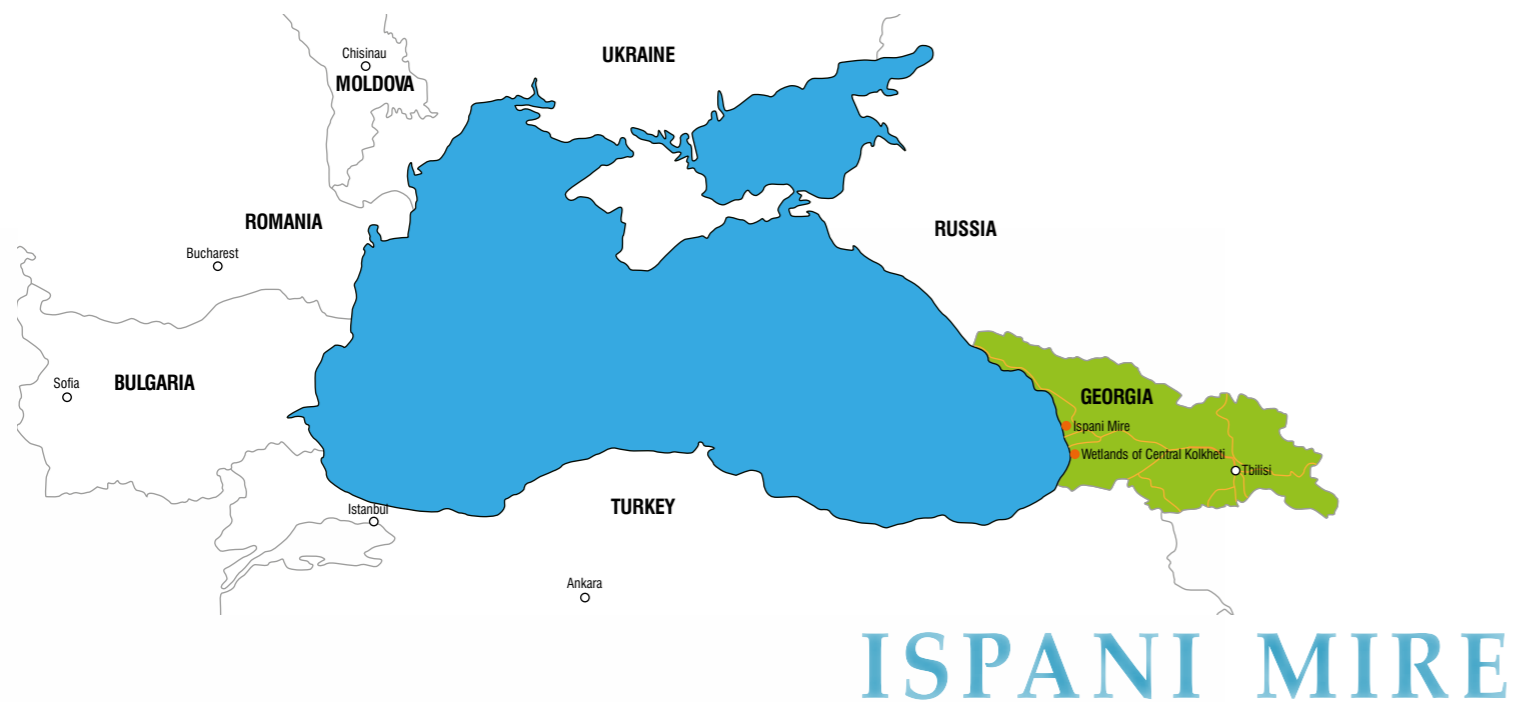
Sea Daffodil, Sand lily /Pancratium maritimum/ Photo: Project DIR-59318-1-2 "Mapping and assessment of the conservation status of the natural habitats and species – Phase 1"

maintains considerable wintering populations of the Black-Throated Diver */Gavia arctica/*, the Pochard */Aythya ferina/*, the Red-Crested Pochard */Netta rufina/* and the Gadwall */Anas strepera/*.

21 species of mammals have been recorded, including the following bat species: Lesser Horseshoe Bat */Rhinolophus hipposideros/*, Mediterranean Horseshoe Bat */Rhinolophus euryale/*, Blasius's Horseshoe Bat */Rhinolophus blasii/*, Bechstein's Bat */Myotis bechsteini/*, Geoffroy's Bat */Myotis emarginatus/*, Long-fingered Bat */Myotis capaccinii/*.

# GEORGIA

In the list of Wetlands of International Importance Georgia is presently represented with 2 Ramsar sites with a surface area of 34,480 hectares.



## ISPANI MIRE WETLANDS OF CENTRAL KOLKHETI



### Wetlands of Central Kolkheti

Designation date: 07/02/1997  
42°12'N 41°42'E

Located on both sides of the Rioni river mouth in the central part of the Black Sea eastern coast, in the Guria and Samegrelo Regions of Georgia, nearest town - Poti. A coastal alluvial plain, dissected by rivers with extensive peat wetlands and lakes. The territory is an area of discharge of surface and underground waters brought down from mountains and hills. Water level in wetlands -0,2-0,7 m; in lakes -0,5-3,0 m; in rivers -1-1,2 m. Water is hydrocarbonic (Contains Cl, Na, Mg, Ca). Climate is humid subtropical.

The site supports a wealth of relict and endemic flora and fauna species. Vegetation consists of typical bog and peatland species, with freshwater marshes supporting reedbeds and brackish areas supporting halophytic plants. The ecological features of the area includes: Marine sand-gravel coastal vegetation (sea daffodil *Pancreatium maritimum*), *Verbascum gnaphaloides*), grassspagnum bogs *Spagnum* spp./, bogs with *Juncus* spp. and *Carex* spp. (with dominant of *Carex* spp., *Juncus* spp., *Juncus feersiil* and *Juncus effusus*), marshes with Common Reed *Phragmites australis*/ and Common Cattail *Typha latifolia*/, shrab-grass bogs with Black Alder *Alnus barbata*/, swampy alder forests (absolute dominant is *Alnus barbata*), moist alder forests with oak *Quercus meretino*/, moist hornbeamalder forests with Common Rhododendron *Rhododendron ponticum*/.

Among the endemic species should be noted *Trapa colchica*, spread along canals, lakes and other reservoirs, bays of rivers and stagnant water places. *Habiscus ponticus* is rare endem, spread in peat wetlands. The Royal Fern *Osmunda regalis*/ and The Common Sundew *Drosera rotundifolia*/ are rare too. They are spreaded in peat wetlands. The Yellow Water-lily *Numphar luteum*/ is spread in stagnant waters.

Various species of waterbirds use the site for wintering. Nesting species in internationally important numbers include the White-tailed Eagle *Haliaetos albicilla*/ and the Osprey *Pandion haliaetus*/. Wintering birds in the area are the Gadwall *Anas strepera*/, Whooper Swan *Cygnus cygnus*/, Common Pochard *Aythya ferina*/, Greater Scaup *Aythya marila*/, Common Goldeneye *Bucephala clangula*/, Dalmatian Pelican *Pelecanus crispus*/, etc. Mammals of international importance are the



The Dolphin Photo: Wikipedia

Otter *Lutra lutra*/, Common Bottlenose Dolphin *Tursiops truncatus*/, Short-beaked common Dolphin *Delphinus delphis*/, Harbour porpoise *Phocoena phocoena*/, etc. Among the fishes the European sea Sturgeon *Acipenser sturio*/ should be noted. It's important as an area for rest of migratory waterbirds (Ciconiiformes, Anseriformes, Charadriiformes, etc.).

Human activities include tourism, small scale fishing, agriculture, timber cutting, peat extraction and hunting. Bronze Age artifacts are found at the site.



Photo: Fotolia

The gulls Photo: Fotolia



## Ispani Mire

Designation date: 07/02/1997

41°52'N 41°50'E

The site is located on West Georgia, Kolkheti Lowland, Ajara Autonomous Republic, Kobuleti district, eastern of the town Kobuleti and the boundary of the Ramsar site is the same as of the existing Kobuleti protected areas and their national protection status: Kobuleti State Nature Reserve and Kobuleti Managed Reserve. Quaking bogs, distinguished by a unique floral composition including elements of boreal and high alpine communities.

The landscape in the Ramsar site is divided into two parts. Its northern part is occupied by Ispani II. In the southwest part the Ispani I is located. Ispani II is impassable and only its margin areas was used for cattle grazing and wood cutting. Due to that this peat land preserved in a nearly pristine stage. In the Ispani I peat land peat extraction and drainage works took place since the 1930s. Despite its degradation autonomous regeneration with former peatland vegetation like *Sphagnum* species partly occurs.

The site includes peat bogs, swamps, fens and forested peatlands set on a coastal alluvial plain. Vegetation consists of grass-Sphagnum bogs and swampy alder forests.

The Ispani I and Ispani II peat land complex is important with its floristic composition too. The peat lands vegetation assembles with high percentages of cover of peat moss */Sphagnum/*







Photo: Balkani Wildlife Society NGO

Area is not rich with herpetofauna, which is presented mainly by: European pond turtle /*Emys orbicularis*/, Aesculapian Snake /*Elaphe longissima*/, Sand Lizard /*Lacerta agilis*/ and Medium Lizard /*Lacerta media*/, Dice Snake /*Natrix tessellata*/ and Grass Snake /*Natrix natrix*/ . From amfibiebeans are found *Triturus vulgaris*, the Northern crested newt /*Triturus cristatus*/, Tree frog /*Hyla arborea*/ . The following species of fish are represented Wels catfish /*Siluris glanis*/, Chub /*Leuciscus cephalus*/, Common carp /*Cyprinus carpio*/ . Various habitats support rather large amount of invertebrates.

Common Sundew /*Drosera rotundifolia*/ Photo: Wikimedia



species and low density of vascular plant species. The existence of boreal (tundra and taiga) flora elements like Common Sundew /*Drosera rotundifolia*/, *Sphagnum imbricatum* which is rather unusual phenomenon for subtropical latitudes, as well as Colchic flora elements like Common Rhododendron /*Rhododendron ponticum*/, Yellow Azalea /*Rhododendron luteum*/ is another feature of the uniqueness of that peat lands.

Various species of migratory waterbirds occur in internationally important numbers, and the nesting Osprey /*Pandion haliaetus*/ are supported. The Ispani I and Ispani II peatland and the adjacent areas serve as a good refuge for the birds: The Hen Harrier /*Circus cyaneus*/, Little Egret /*Egretta garzetta*/, European Bee-eater /*Merops apiaster*/, Jack Snipe /*Lymnocyrtus minimus*/, Red-footed Falcon /*Falco vespertinus*/, Common Crane /*Grus grus*/, Great Egret /*Egretta alba*/, White-tailed Eagle /*Haliaeetus albicilla*/.

Despite a small size of the area and the near vicinity of an urbanized zone, The Ispani I and Ispani II peat land complex and its adjacent areas still provide a habitats to Otter /*Lutra lutra*/ (species of Georgian Red List), Golden Jackal /*Canis aureus*/, Wildcat /*Felis silvestris*/, Nutria /*Myocastor coypus*/, European badger /*Meles meles*/, Lesser mouse-eared bat /*Myotis blythii*/, Common pipistrelle /*Pipistrellus pipistrellus*/.



The Little Egret /*Egretta garzetta*/ Photo: fotolia

Artifacts of the Bronze and Antique periods are found at the site. Human activities include small-scale cattle grazing, mowing, forestry, and peat extraction.

# MOLDOVA

In the list of Wetlands of International Importance Moldova is presently represented with 3 Ramsar sites with a surface area of 94,705 hectares.



# LOWER PRUT LAKES

## UNGURI - HOLOSNITA

## LOWER DNIESTER (NISTRU DE JOS)





## Lower Dniester (Nistru de Jos)

Designation date: 20/08/2003

46°34'N 29°49'E

Situated in Stefan Voda, Causeni and Slobozia Districts, with an area of 60,000 ha.

Nature Reserves; Landscape Reserve; Nature Monuments (paleontological). The site covers local catchment area of the Dniester River right bank and limited by the River with its Turunciuc Branch. Situated on the bird migratory way along the Dniester River in a zone of confluence with Azov - Black Sea migratory mainline.

The designation of this part of the Dniester River in southeastern Moldova helps to complete the conservation of transboundary wetland the Dniester delta, with two Ramsar sites downstream in Ukraine. This complex of relict and transformed habitats of the Dniester floodplain includes meandering zones with almost closed river loops typical for the northwest of the Black Sea basin, lakes and oxbows formed by river roaming, specific ash communities and unique old stand floodland poplar forest, *Fraxineto-Populeta (albae)*.

The site supports many globally endangered and vulnerable bird species among which 2 are nesting (Corncrake /*Crex crex*/ and Pygmy Cormorants /*Phalacrocorax pygmaeus*/), 4 are present on migration (Red-Breasted Goose /*Branta ruficollis*/, Ferruginous Duck /*Aythya nyroca*/, The Pale /*Circus macrourus*/, White-Tailed Eagle /*Haliaeetus albicilla*/), 1 regular visitor (Dalmatian Pelican /*Pelicanus crispus*/), and fish such as the Danube Salmon /*Hucho hucho*/, the European Mud-minnow /*Umbra krameri*/ and various species of sturgeons. The wetland is an important site for freshwater migratory fish as it supports more than 90% of the species of the region and offers a high diversity of biotopes: riverbed spawning ground, areas of pelagic spawning and nursery.

However, the construction of dams in the Dniester valley has affected the terrestrial, aquatic and intermediate ecosystems and large areas of important meadow spawning grounds were lost. Grazing is also considered as an important disturbance. The site has recognized paleontological and archaeological value since the discovery of fossils and places such as tumuli, Cimmerian, Ghetic, Sarmatic and Slavic memorials.



Lower Dniester Photo: A. Bondarenko



## Lower Prut Lakes

Designation date: 20/06/2000

45°42'N 28°11'E

Situated in Cahul District with an area of 19,152 ha.

The River Prut forms the western border of the site as well as the state border with Romania, and the site extends to the river's confluence with the Danube.

Situated on the bird migratory way along the Prut River in a zone of confluence with Azov - Black Sea migratory mainline Lakes Belev and Manta are unique ecosystems, described as the last natural floodplains in the lower Danube region. The system is important for groundwater recharge, flood control, and sediment trapping, and it supports an imposing list of rare and threatened species of flora and fauna. A number of heritage sites can be seen in the area, including some of Roman Emperor Trajan's wall (ca.100 A.D.).

Fish harvests have been decreasing markedly in recent years, forests are generally seen to be deteriorating, and quite a few adverse conservation factors have been listed as requiring attention.



## Unguri – Holosnita

Designation date: 14/09/2005

48°17'N 28°03'E

Situated in Soroca, Ocnita and Dondiuseni Districts with an area of 15,553 ha.

Landscape Reserve, Nature Monument. High rocky, crumbling-sloughing slopes and narrow flood-land of the Dniester River's left bank, in northeastern Moldova near the border with Ukraine. Situated on the bird migratory way along the Dniester River.

The Dniester includes wide, shallow segments here with little islands, small rivers and short creeks feeding the stream and forming steep canyons. Fluvial forests are formed by poplar associations with an admixture of willows, ash and elm, with riparian willow formations. The most numerous waterfowl and waders during forage and seasonal migrations are ducks, e.g. Mallard /*Anas platyrhynchos*/, Garganey /*Anas querquedula*/ and Gadwall /*Anas strepera*/, which also predominate amongst wintering birds.

Agriculture provides the main sources of economic life, supplemented by livestock farming and traditional fishing, which is losing its economic value as fish resources became scarce as a result of strong variations of discharge levels from the Novodnestrovsk hydropower station. There are more than sixty sites of cultural, geological, paleontological and archeological interest in the area, along with a settlement of Old Believers in the village of Pocrovca.



Unguri – Holosnita Photo V. Postolache

# ROMANIA

In the list of Wetlands of International Importance Romania is presently represented with 19 Ramsar sites with a surface area of 1,156,448 hectares.



SMALL ISLAND OF BRAILA  
DANUBE DELTA  
JIU-DANUBE CONFLUENCE  
DANUBE ISLANDS-  
BUGEAC-IORTMAC  
BISTRET

OLD DANUBE - MACIN ARM  
BORCEA ARM  
BLAHNITA MURES FLOODPLAIN  
OLT-DANUBE CONFLUENCE  
POIANA STAMPEI PEAT BOG  
IRON GATES NATURAL PARK  
LAKE TECHIRGHIOL SUHAIA  
DUMBRAVITA FISHPOND COMPLEX  
CANARALELE DE LA HORSOVA  
CALAFAT-CIUPERCENI-DANUBE  
COMANA NATURAL PARK  
LAKE CALARASI



Danube Delta Photo: Danube Delta Biosphere Reserve Authority (DDBRA)



## Danube Delta

Designation date: 21/05/1991

45°10' N 29°15' E

Danube Delta Biosphere Reserve is located in the South-Eastern part of Romania, covering the entire Romanian part of the Danube Delta, from a few kilometres upstream of the city of Tulcea, to the Black Sea coast, the Black Sea coastal area till 20 m depth, the Razim-Sinoie Lake Complex including the sand dunes of Chituc, Saele and Lupilor, covering a total surface of about 647,000 ha. The northern part of the site adjoins the border with Ukraine (adjacent or close to the Ukrainian Ramsar sites Kyliiske Mouth, Yagorlytska Bay, Tendrivska Bay and the Ukrainian Danube Delta: Danube Biosphere Reserve).

The Danube Delta is famous as one of the greatest wetlands of the earth. The wonderful natural habitats formed here offer good living conditions for an impressive number of plants and animals. Among these, reeds form one of the largest single expanses in the world, and Letea and Caraorman forests represent the northern limit for

Danube Delta Sacalin Island Photo: Danube Delta Biosphere Reserve Authority (DDBRA)



Danube Delta Sulina Town Photo: Danube Delta Biosphere Reserve Authority (DDBRA)



two rare species of oak that are more frequently met in the south of the Italian and Balkan peninsulas. Together with the great number of aquatic and terrestrial plants, there are also many important colonies of pelicans and cormorants, which are characteristic of the Danube Delta, as well as a variety of other waterbirds which reside in or visit the delta for breeding or wintering. The large number of fish is also notable, with species of both high economic and ecological value.

Until the mid '70s of the last century, the water bodies in the Danube Delta could be classified as mesotrophic since the nutrient load was rather low. The water was clear, macrophytes were frequent and provided shelter for the predatory pike. The extended vegetation near the embankments provided breeding and nursing places for tench and pike. After the mid-1970s the phosphorus load increased gradually until it reached a very high level of 0.1-0.15 mg/litre. The water turned green because of the high quantity of algae present; oxygen deficits arose and fish deaths were observed. The turbidity of the water reduced the penetration of sunlight so the submerged vegetation disappeared. The water system favoured by pike and tench was destroyed and bream, roach, Prussian carp (in low number) zander became dominant in the system. They represents a new level of ecological equilibrium that will be as expensive to reserve as it was to achieve.

The flora is represented by rich aquatic flora includes species such as Water Chestnut *Trapa natans*, *Salvinia natans*, Yellow Floating-Heart *Nymphoides peltata*, Tape grass *Vallisneria spiralis*, Arrowhead *Sagittaria sagittifolia*, Bur-reed *Sparganium ramosum*, Reed *Phragmites australis*, Cattail *Typha* spp., Common Club-rush *Schoenoplectus lacustris* and Sedges *Carex* spp. The levee forests (mainly in the fluvial zone) are dominated by White Willow *Salix alba*, Crack Willow *Salix fragilis*, White Poplar *Populus alba* and Grey Poplar *Populus canescens*.

The site supports a rich flora, fish fauna (75 species), and important populations of several mammals. The area is internationally important for breeding, staging and wintering waterbirds. Nesting species include internationally important numbers of cormorants and pelicans.



Danube Delta traditional house Photo: Danube Delta Biosphere Reserve Authority (DDBRA)

The Danube Delta Biosphere Reserve supports a rich fauna of about 3,800 species including fish fauna (75 species representing 22 families), bird populations (about 331 species) and several mammals (e.g. European mink *Mustela lutreola*, Otter *Lutra lutra* and European wildcat *Felis sylvestris*) are the most important.

The Danube Delta Biosphere Reserve remains famous for its birds, with a total of 331 species (apart from the 520 species inventoried in Western Europe). The area is worldwide recognized as nesting place for many bird populations like the White Pelican *Pelecanus onocrotalus*, the Dalmatian Pelican *Pelecanus crispus* and the Pygmy Cormorant *Phalacrocorax pygmeus*. There are also important colonies of Spoonbill *Platalea leucorodia* and several nesting species of White-tailed Eagle *Haliaeetus albicilla*. The Danube Delta area is a major halting place (during spring and autumn) for millions of birds, especially ducks, white storks *Ciconia ciconia* and numerous predators. During winter, the Danube Delta hosts huge groups of swans and geese, including almost the entire world population of Red-breasted Goose *Branta ruficollis*.

Although the human population of the Romanian part of the Delta dropped notably in the past few decades, there are many scattered villages whose inhabitants have developed unique cultural links with the delta ecosystem. Human activities in the delta include fishing (the DD&RS accounts for half of Romania's freshwater fish harvest), reed harvesting, forestry, small-scale cultivation, and tourism.

The main threats are represented by impact of polders made during the last decades of the last century that affected the natural spawning areas of the ciprinides species drainage, canalisation and dredging, wetland infilling and pollution. Additional threats include overfishing, disturbance from increasing traffic of navigation, unauthorized vegetation fires, over grazing and other agricultural practices.

Danube Delta Biosphere Reserve has an important economic and social value. The economic potential is mainly based on the use of the natural resources: fish, reed, land for agriculture, pasture for cattle breeding and the landscape.



Danube Delta channel Photo: Danube Delta Biosphere Reserve Authority (DDBRA)





Techirghiol Lake. Photo: Danube Delta Biosphere Reserve Authority (DDBRA)



## Techirghiol Lake

Designation date: 23/03/2006  
44°03' N 28°38'E

Because the high salinity of waters in the lake can survive only species with large eurihalinity limits, the characteristics of flora and fauna being the deficit of superior species. The lake vegetation, except the backside, where coming freshwater sources, and it is growing macrophytes clusters, is represented almost exclusively by alga - especially *Cladophora crystalline* and bacteria.

Techirghiol lake is used mainly for its mud and water therapeutically qualities. On the lake border exist three establishments for cold and warm bathes (Techirghiol, Eforie Sud and Eforie Nord).

The marine salt characteristics of the lake support brine shrimp *Artemia salina*, a small crustacean which produces the biogenic silt sapropel which is used for medical therapeutic activities.

The water of the lake doesn't freeze because of the salt dissolved, so there are optima conditions for the birds which are staying in winter. There are a lot of trophic resources on the neighbourhood fields, so in winter there are big population of White-fronted Goose *Anser albifrons* and Red-breasted Goose *Branta ruficollis*. In winter there can be found international or national protected species such as Pygmy Cormorant *Phalacrocorax pygmeus*, Whooper Swan *Cygnus Cygnus*, White-headed Duck *Oxyura leucocephala* and Little Gull *Larus minutus*.



Danube Delta swans. Photo: Danube Delta Biosphere Reserve Authority (DDBRA)

# TURKEY

In the list of Wetlands of International Importance Turkey is presently represented with 14 Ramsar sites with a surface area of 184,487 hectares.



AKYATAN LAGOON  
LAKE KUS (MANYAS)  
NEMRUT CALDERA

LAKE KUYUCUK  
KIZOREN OBROUK

LAKE BURDUR  
LAKE SEYFE

GEDIZ DELTA  
MEKE MAAR

YUMURTALIK LAGOONS

SULTAN MARSHES

LAKE ULUABAT

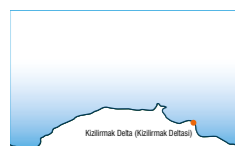
KIZILIRMAK DELTA

GOKSU DELTASI





Kizilirmak Delta Photo: Serhan Cagirankaya



## Kizilirmak Delta (Kizilirmak Deltası)

Designation date: 15/04/1998  
41°40'N 36°05'E

Kizilirmak Delta is the biggest wetland in Black Sea Region, as well as being one of the largest and the richest wetlands of Turkey in terms of ecological system. Situated in Samsun District, with an area of 21,700 ha Kizilirmak Delta was formed by the alluvions carried by the longest river of Turkey, Kizilirmak, meandering to the Black Sea. The delta lies in the borders of Ondokuzmayis, Bafra and Alacam districts of Samsun province, where Kizilirmak River flows into Black Sea, at the north of the Samsun - Sinop Highway.

The site includes dunes, beaches, shallow lakes, seasonal marshes, and wooded areas. Dominant vegetation includes vast reedbeds and seasonally flooded forest. Numerous species of waterbirds breed at the site, several of which are globally threatened. Over 92,000 waterbirds of various species winter at the site.

Kizilirmak Delta Photo: Serhan Cagirankaya



### Habitats

There are 3 main habitat types in Kizilirmak Delta which are classified as threatened according to Bern Convention criteria: Auxin saline swamps, South Black Sea permanent dunes, Southeast Europe ash-oak forests. There are 14 habitat types identified as a result of studies undertaken in the frame of Kizilirmak Delta Management Plan Sub-Projects.

**Brackish water lake:** Balik, Uzun, Cernek, Liman, Karabogaz and Mulk Lakes have been classified as bitter lakes by salt ratio. In Liman Lake, there is rich vegetation of rock plants from Characeae family.

**Freshwater lake:** Tatli and Gici lakes are freshwater lakes. Many species of Potamogeton Family and other water plants are very rare at the east lakes of Delta. In coastal sides of lakes, *Phragmites australis* and *Thypha* sp. or *Juncus acutus* are seen.

**Wet meadows:** Some periods of the year, wet meadow land close to the lakes are accumulated with water. That is *Paspalum*



Kizilirmak Delta Photo: Ministry of Forestry and Water Affairs, Turkey

*paspalodes* meadow land. Apart from this species, some of the plant species live in the salt and freshwater wetlands. These meadows have high importance due to being one of the main resources for livestock grazing.

**Mixed wide leaved forests:** Generally, *Quercus robur* and *Carpinus betulus* species form these forests.

**Marshlands:** This habitat group includes *Phragmites australis* and *Typha angustifolia*, in patches *Schoenoplectus lacustris* groups.

**Salty swamps:** *Juncus littoralis* - *Artemisia santonicum* - *Tamarix* - *Vitex agnus-castus* and in saltier areas *Salicornia europaea* are dominant species.

**Mixed wide leaved mangrove forest:** In Geleric Forest, *Fraxinus angustifolia* - *Frangula alnus* - *Quercus robur* - *Smilax excelsa* are composed seasonally mangrove forest. *Fraxinus angustifolia* is the dominant species.

**Coastal dunes:** Sand dunes at western part are larger and higher according to the sand dunes at eastern part. Surroundings of Cernek Lake is the place where the largest eastern sand dunes located. The dominant plant species of the sand dunes are *Euphorbia* sp., *Pancratium maritimum*, *Verbascum* sp. and *Cyperus capitatus*. The dominant plant species of the gravelous sand dunes (primer dunes) are *Euphorbia paralias*, *Medicago marina*, *Eryngium maritimum*, *Xanthium strumarium*, *Pancratium maritimum*, *Juncus acutus*, *Salsola kali*, *Tournefortia sibirica*.

**Shrub community in dunes:** The shrub communities consists of species of *Hippophae rhamnoides* - *Paliurus spina-christii* in high sand dunes and *Rubus sanctus* - *Juncus littoralis* in sand dunes. Additionally, there is a coppice area where 6-8 metres long *Laurus nobilis* is dominant species in the location between Cernek Lake and the coast.



Merders Delta Photo: Serhan Ceylan



**Herbaceous communities at inner dunes:** There are herbaceous sand dunes, apart from the sand dunes with bushes and shrubs, covering the flat areas formed between the woody areas, especially nearby Cernek Lake. Herbaceous communities, with rich composition of annual plants, grow on drier soil.

#### Wildlife

##### Flora

Kizilirmak Delta is an important area for plants with 355 species, in Turkey. Delta is designated as one of the 122 Important Plant Areas due to its rare plant species.

There are nine endangered species among the plant species of the Delta. *Rhaponticum serratuloides*, one of the “Endangered” (EN) species, lives only in Sakarya River valley and the Delta in Turkey. One of the other important plant species of the Delta is “Endangered” (EN) sea lily *Pancreatium maritimum*, because of gathering the bulbs and tourism activities in the sand dunes, used to have a wide range in Mediterranean and West Black Sea regions. “Vulnerable” *Jurinea kilaea*, lives in the Delta and in a very few coastal areas of the Black Sea, in Turkey. Another “Vulnerable” (VU) species of the Kizilirmak Delta is *Leucojum aestivum* known with its medicinal importance.

##### Fishes

Kizilirmak Delta is an important area for many fish species. There are 29 fish species, belonging to 11 family, identified in the Delta. Sturgeons *Acipenseridae sp.*, one of the “Critically Endangered” (CR) fish species, is the most important one among those fish species of the Kizilirmak Delta. Knowing that Kizilirmak Delta with only two remaining areas is the last habitats for sturgeons highlights the importance of the Kizilirmak Delta to stop extinction of the species. There are records for Russian Sturgeon *Acipenser gueldenstaedti*, Ship Sturgeon *Acipenser nudiiventris*, Star Sturgeon *Acipenser stellatus* and Giant Sturgeon *Huso huso* in the Kizilirmak Delta.

##### Amphibians and Reptiles

There are 150 amphibians and reptiles in Turkey. Almost 14% of these species (9 amphibians, 12 reptiles) live in Kizilirmak Delta. Reptiles in the Delta have a distribution in various areas from deciduous forests and scrubs to dry rocky areas, as well as from wet soils at the cost of the rivers to grasslands in the steppe areas above the forest level.

2 species of the 9 amphibian species are salamanders where the rest 7 species are frogs. Southern Banded Newt *Triturus vittatus*, Southern Crested Newt *Triturus karelinii*, Common Toad *Bufo bufo*, European Green Toad *Bufo viridis*, Levant Water Frog *Rana bedriagae*, Agile Frog *Rana dalmatina* and Long-legged Wood Frog *Rana macrocnemis* are the main species of the Delta.

There are 2 tortoises, 5 lizards and 5 snakes out of 12 reptiles in the Kizilirmak Delta. These are listed as follows; Globally “Vulnerable” (VU) Spur-thighed Tortoise *Testudo graeca*, “Near threatened” (NT) European pond tortoise *Emys orbicularis*, Rock Lizard *Lacerta saxicola*, European Green Lizard *Lacerta viridis*, Balkan Green Lizard *Lacerta trilineata*, Slow Worm

*/Anguis fragilis/*, Sheltopusik or European Legless Lizard */Ophisaurus apodus/*, Cat Snake */Telescopus fallax/*, Caspian Whipsnake */Coluber caspius/*, Grass Snake */Natrix natrix/*, Dice Snake */Natrix tessellata/*, Nose-horned Viper */Vipera ammodytes/*

#### Birds

It is known that there are 469 bird species in Turkey. Kizilirmak Delta is extremely important in terms of bird species. 321 bird species, 68% of the birds in Turkey, have been recorded in the Delta.

Kizilirmak Delta has an important location not only for the wintering and breeding birds but also for the migratory birds. More than 10,000 shorebirds also migrate over the Delta. It was recorded that almost 100,000 of water birds winter in the Delta. Delta holds rare and endangered bird species, as well as wintering and migratory species congregating at big numbers. Especially water birds benefit from the Delta during the wintering period. Delta is very special in terms of bird species and their density at regional scale */Western Palearctic/*. Kizilirmak Delta is also very important for the bird species migrating at autumn and spring. There are pygmy cormorants */Phalacrocorax pygmeus*, max. 88/, little egret */Egretta garzetta*, max. 3200/, glossy ibis */Plegadis falcinellus*, max. 590/, white-headed duck */Oxyura leucocephala*, max. 1240/, little gull */Larus minutus*, max. 41.000/ and white-winged tern */Chlidonias leucopterus*, max. 3000/ recorded in the Delta. In addition, more than 10,000 shorebirds migrate over the Delta.

#### Mammals

More than 160 mammal species recorded in Turkey. Studies undertaken in Kizilirmak Delta showed that 33 mammal species (20% of the species in Turkey) live in the Delta. One of these species is Mediterranean Monk Seal */Monachus monachus/*, globally important species */Critically Endangered - CR/* which known as extinct in the Black Sea region and Kizilirmak Delta. “Vulnerable” Geoffroy’s Bat */Myotis emarginatus/* is one of the most important species in the Delta. In addition, there are “Near threatened” (NT) Blasius’s Horseshoe Bat */Rhinolophus blasii/*, Greater Horseshoe Bat */Rhinolophus ferrumequinum/*, Caucasian Squirrel */Sciurus anomalus/* and Gray Dwarf Hamster */Cricetulus migratorius/* living in the Delta. Finally, Eurasian otter */Lutra lutra/* is another “Near threatened” (NT) species living in the Delta.

There are lots of archeological and cultural monuments reflecting the historical summation of the civilizations and periods of settlement history in and around the Kizilirmak Delta.

Ikiztepe ruin, known as an important one in terms of Anatolia and even civilization history, is the main archeological value in the Delta. In the investigations carried out in Ikiztepe ruins located in Ikiztepe Village of Bafra District, 57 tumuluses, 6 plain settlement areas, 48 tumuluses, five rock graves, one bath, one bridge, and 25 findings belonging to the ancient age and just after it, have been found.

Human activities include cattle grazing, reed cutting, fishing, and agriculture. In recent years, eutrophication, deforestation, illegal constructions, and coastal erosion have become increasingly problematic.



Ulubat Lake Photo: Serhan Çağırnıkcı

# UKRAINE

In the list of Wetlands of International Importance Ukraine is presently represented with 33 Ramsar sites with a surface area of 744,651 hectares.



AQUATIC-CLIFF COMPLEX OF CAPE KAZANTYP

BERDA RIVER MOUTH AND BERDIANKA SPIT

SHATSK LAKES AND BERDIANSKA BAY

AQUATIC-CLIFF COMPLEX OF KARADAG

DESNA RIVER FLOODPLAINS

KARTAL LAKE

DNIPRO RIVER DELTA

YAGORLYTSKA BAY

BIG CHAPELSK DEPRESSION

BILOSARAISKA BAY AND BILOSARAISKA SPIT

DNIPRO-ORIL FLOODPLAINS

KARKINITSKA AND DZHARYLGATSKA BAYS

KUGURLUI LAKE

KYLIISKE MOUTH

KRYVA BAY AND KRYVA SPIT

PRYPIAT RIVER FLOODPLAINS

SHAGANY-ALIBEI-BURNAS LAKES SYSTEM

LOWER SMOTRYCH RIVER

NORTHERN PART OF THE DNIESTER LIMAN

OBYTOCHNA SPIT AND OBYTOCHNA BAY

STOKHID RIVER FLOODPLAINS

PEREBRODY PEATLANDS BAKOTSKA BAY

AQUATIC-COASTAL COMPLEX OF CAPE OPUK

EASTERN SYVASH TYLIGULSKYI LIMAN

DNIESTER-TURUNCHUK CROSSRIVERS AREA

SASYK LAKE LAKE SYNEVYR

TENDRIVSKA BAY CENTRAL SYVASH

MOLOCHNYI LIMAN

POLISSIA MIRES



## Aquatic-cliff complex of Cape Kazantyp

Designation date: 29/07/2004

45°28' N 35°51' E

Located on the Autonomous Republic of Crimea, Leninsky Rayon (Lenino District) with an area of 251 ha, Nature Reserve. Coastal area of the Sea of Azov composed of pebble and detritus-coquina bays with thickets of macrophytic algae *Cystoseira barbata* and vascular plants horned pondweed *Zannichellia major* and eelgrass *Zostera noltii*. It is an important spawning ground for crustaceans and rare fish species, such as the Great Sturgeon *Huso huso ponticus*, and maintains a significant proportion of indigenous fish species. The site is used as a nesting and migration stop-over, especially for the Ruddy Shelduck *Tadorna ferruginea*, and bird populations of the Great Cormorant *Phalacrocorax carbo*, Gull-billed Tern *Gelochelidon nilotica* and Slender-billed Gull *Larus genei* regularly present on the site. Marine mammals (harbour porpoise *Phocoena phocoena*, bottlenose dolphin *Tursiops truncatus*) visit the area. During hot summer sometimes, fish kill occurs due to abrupt decrease of the oxygen content. Fishing, navigation, agriculture (mainly plowing of lands and grazing) and recreation.



## Aquatic-cliff complex of Karadag

Designation date: 29/07/2004

44°56' N 35°14' E

Located at the southeastern part of the Autonomous Republic of Crimea, the aquatic-cliff complex of Karadag comprises sublittoral marine areas up to 6 metres depth, bays, a narrow strip of pebble-boulder coast and coastal cliffs up to 120 m high, with an area of 224 ha, Nature Reserve. It is an important place for birds, notably during migrations, and other vulnerable animal species such as the bats *Rhinolophus hipposideros* and *Myotis emarginatus*, colonies of which settle in the grottoes. The marine area with nationally rare algae and seagrass meadows constitutes a good spawning habitat for many fish species and supports, among others, the Great Sturgeon *Huso huso ponticus*. The colony of the fish-eating bird species, Shag *Phalacrocorax aristotelis* is characteristic, as well as nesting areas of birds of prey Peregrino *Falco peregrinus* and Saker *Falco cherrug*. Non-freezing shoals, which are protected by the Crimean Mountains from the northerly winds, are refuges from bad weather and habitats of such rare bird species as Squacco Heron *Ardeola ralloides*, Glossy Ibis *Plegadis falcinellus*, Ferruginous Duck *Aythya nyroca*, Stone Curlew *Burhinus oedipnemus*, Black-winged Stilt *Himantopus himantopus*, and Oystercatcher *Haematopus ostralegus*. Numerous cliffs and the stony bottom are covered with brown algae *Cystoseira crinita* and *C. barbata*, marine vascular plants *Zostera marina* and *Z. nana*, and colonies of mussels, which create good conditions for fish reproduction. Dolphins approach the coast periodically. Ecological trails and a nature centre are near the site. At the Administration of Karadag Nature Reserve (Kurortne village) there are two dolphinariums, the library, and the ecological Visitors Center, which includes the wildlife expositions (live animals and plants) and museum collections of fish, reptiles, and birds.





## Aquatic-cliff complex of Cape Opuk

Designation date: 29/07/2004

45°01' N 36°12'E

The site is located on the Autonomous Republic of Crimea, Leninskyi Rayon (Lenino District), coast of the Black Sea with an area of 775 hectares, Nature Reserve. Combination of steep limestone rocks on the seaside (marine boundary lines along 6 meter isobath), sandy-coquina spits, and a salt lake. Thousands of birds winter in the wetland complex or stop during their migrations, especially the White-fronted Goose *Anser albifrons*, Mallard *Anas platyrhynchos*, Garganey *Anas querquedula*, and Coot *Fulica atra*. Threatened species such as the Eastern Imperial Eagle *Aquila heliaca* or the Bat *Rhinolophus ferrumequinum* occur within the area. Thickets of macrophytic algae provide a suitable habitat for protected species such as the Great Sturgeon *Huso huso ponticus* and the Black Sea Salmon *Salmo trutta labrax Pallas* and constitute an important spawning ground for many other fish species. Dolphins and porpoises *Phocoena phocoena*, *Tursiops truncatus* are observed periodically. Environmental education activities and scientific researches are carried out annually. There are no socio-cultural objects within the site limits, except for the remnants of ancient buildings (Antiquity) in the site of the ancient settlement of Kimmerik (or Cimmeric, borders of the ancient Bosphorus Empire). Fishing within the site is not conducted, though commercial fishery activities occur nearby.



## Berda River Mouth and Berdianska Spit and Berdianska Bay

Designation date: 23/11/1995

46°44' N 36°48'E

This site with an area of 1,800 hectares is the shallow bay of the Azov Sea and mouth of the small river and accumulative islands and spit, includes accumulative islands, a spit, dunes, and saline lakes. Berdianska Bay is the bay of the Azov Sea. Mouth of Berda River is in 7 km north-east of Berdiansk City in Zaporizka Oblast of Ukraine, Berdianska Spit and Berdianska Bay on the south of this city. Vegetation includes emergent and submergent species and saline floodplain swamps supporting numerous

nationally threatened or endemic plant species. About 5000 pairs of waterfowl nest there. Seasonal conglomerations of birds by numbers of 30 000 - 40 000 individuals are on the bay and spit. Usual species of birds are Mallard *Anas platyrhynchos*, Ferruginous Duck *Aythya nyroca*, Greater Scaup *Aythya marila*, Common Pochard *Aythya ferina* etc. There are also Great Egret *Egretta alba* and Little Egret *Egretta garzetta*.

There are fish species from the Red Data Book of Ukraine as Ombrine *Umbrina cirrosa*, relic Great Sturgeon *Huso huso ponticus* and also other relic Starry Sturgeon *Acipenser stellatus* (the item of commercial fishery).

Human activities include conservation education, recreation, fishing, aquaculture, and hunting.



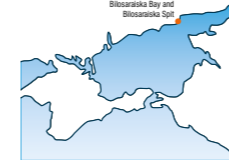
## Big Chapelsk Depression

Designation date: 29/07/2004

46°29' N 33°51'E

The wetland site "Big Chapelsk Depression" was established in a steppe shallow depression (such depressions are called pod in Ukrainian). Area of water of the Big Chapelsk Depression fluctuates from 4 to 1300 ha with periodicity of 12 years, depending on precipitation (snow and rain) as well as partly on artificial filling from artesian wells. Located on the Khersonska Oblast (Kherson Region), Chaplynskyi Rayon with an area of 2,359 hectares.

Hundreds of thousands of birds use the depression during autumn and spring migrations. Among them, large flocks of White-fronted Goose *Anser albifrons*, Crane *Grus grus*, Red-breasted Goose *Branta ruficollis*, and Ruddy Shelduck *Tadorna ferruginea* feed during the daytime on the steppe and agricultural lands of the surroundings and come back to rest at night in the site. In the eastern part of the site, artificial non-freezing ponds of the Askania-Nova Zoo (13 ha) is located, being the places of concentration for thousands of migratory birds, especially in winter.



## Bilosaraiska Bay and Bilosaraiska Spit

Designation date: 23/11/1995

46°54' N 37°20'E

Bilosaraiska Bay is the bay of the Azov Sea. Wetland site 'Bilosaraiska Bay and Bilosaraiska Spit' is situated in South of Pershotravneve Town (centre of administrative district) in Donetsk Oblast of Ukraine. The Ramsar site has an area of 2,000 ha and this wetland site is the sandy-shell spit and the shallow bay of the Azov Sea with shallow lakes, dunes and silt islands. Vegetation consists of saltmarshes and meadows, swampy areas, reed and rush thickets. Numerous endemic and nationally rare plant species and relic fish species occur. The site is important for several thousand wintering *Anseriformes* and up to 3,000 pairs of nesting waterfowl. Human activities include conservation education, recreation, fishing, aquaculture, and hunting.



## Central Syvash

Designation date: 23/11/1995

46°07' N 34°15'E

Central Syvash is situated partly in the Novotroytskyi Rayon (administrative district) of the Khersonska Oblast, and partly in the Dzhankoytskyi Rayon of the Crimean Autonomic Republic (Crimean Peninsula). Syvash Bay is cut off from the Azov Sea by the 100 km long Arabatskaya Strelka peninsula. It is connected with the Sea of Azov by a strait near the town of Genichesk. Central Syvash includes four mainland islands of alluvial origin: the large Kuiuik-Tuk (255 ha) and Churiuk (924 ha), and the smaller Matrynyachi (7 ha) and Kitai (3 ha) with an area of 80,000 ha, National Nature Park. Part of an extremely large lagoon, the site includes spits, islands, saline lowlands, and peninsulas along the Azov Sea.

The brackish to saline lagoons of the Syvash Bay have a vegetation that is restricted to salt-tolerant species only. One of the few species that can be found is the brine shrimp *Artemia salina*. The generally flat and windswept coastal area is covered with halophytic grasses. The lagoons are fringed by extensive areas of steppe. The high salinity of the water confines the aquatic flora and fauna to salt tolerant species. Their high productivity under the existing eutrophic conditions forms a valuable source of food for birds.

On the plateaux and slopes of the hills of the large islands, wormwood *Artemisia* - sheep's fescue *Festuca* steppe vegetation with xerophytic undershrub and turf grasses is found. On the small islands secondary vegetation is formed as a result of the activity of colonial birds and small rodents.

This wetland is of great importance to nesting, moulting and for migrating birds. Numerous ducks *Anatidae* and waders *Charadriiformes* migrate through the area, including Shelduck *Tadorna tadorna* and Ruff *Philomachus pugnax*. There are nesting waterbirds of 20 species including Shelduck, Greater Black-backed sandwich Tern *Sterna sandvicensis*, Little Tern *S.*

*Albifrons* and Caspian Tern *S. Caspia*. Other nesting waterfowl are Black-crowned Night Heron *Nycticorax nycticorax*, Squacco Heron *Ardeola ralloides*, Little Egret *Egretta garzetta*, Great Egret *E. alba*, Purple Heron *Ardea purpurea*, Glossy Ibis *Plegadis falcinellus*, Demoiselle Crane *Anthropoides virgo*, Pied Avocet *Recurvirostra avosetta*, Great Black-headed Gull *Larus ichthyaeus*, Mediterranean Gull *L. Melanocephalus*, Slender-billed Gull *L. Genet*, Herring Gull *L. Argentatus*, Gull-billed Tern *Gelocheudon nilotica*, Red-breasted Goose *Branta ruficollis*, Slender-billed Curlew *Numenius tenuirostris* and Broad-blued Sandpiper *Limicola falcinellus*. Breeding raptors include White-tailed Eagle *Haliaeetus albicilla*, Great Bustard *Gas tarda*, Little Bustard *Tetrax tetrax* and Lesser Kestrel *Falco naumanni*. Syvash Bay is one of the primary moulting sites for Mute Swan *Cygnis olor* and for Shelduck within the territory of the former USSR. Nesting wetland birds consist of 10,000 pairs, and up to 1,000,000 waders and waterbirds molt, stage and winter at the site. Human activities include fishing, recreation, and hunting.



## Dniester-Turunchuk Crossrivers Area

Designation date: 23/11/1995

46°28' N 30°13'E

The area is the Dniester River delta with two arms (main - Dniester, second - Turunchuk) and flood-plain lakes, consist of islands of floodplain forests, numerous scroll ridges, deep lakes, and floating bogs, with an area of 76,000 ha in Odeska Oblast. Vegetation includes reed thickets, shrubs, and floating plant communities. Internationally important numbers of Great Egret *Egretta alba* and Glossy Ibis *Plegadis falcinellus* nest at the site, and over 50,000 birds winter here. Various species of nationally rare flora and fauna occur in the area - *Aldrovanda vesiculosa*, *Epibacis palustris*, Spring Snowflake *Leucojum aestivum*, *Orchis palustris*, *Salvinia natans* and *Trapa natans*. Lower Dniester is important place for spawning of valuable fish species. Human activities include conservation education, recreation, hunting, fish-breeding and fishing, recreation, and scientific research. The site serves as an important source of irrigation and drinking water.



## Dnipro River Delta

Designation date: 23/11/1995  
46°34' N 32°29'E

Ramsar site 'Dnipro River Delta' is a delta of third largest river of Europe, with an area of 26,000 ha in Khersonska Oblast. It is very important site for biodiversity conservation, includes swampy areas, floodplain forests, sandy ridges, and a lake complex. The diverse vegetation consists of hydrophilic communities, islands of floodplain forest, and reed thickets and includes endemic, relic and nationally rare species. Internationally important numbers of Great Egret */Egretta alba/* breed, and large numbers of numerous species of waterbirds molt at the site. An important source of drinking and irrigation water, the site provides the largest water transport artery between the Ukraine and Black Sea countries. Human activities include hunting, aquaculture, fishing, and recreation.



## Eastern Syvash

Designation date: 23/11/1995  
45°40' N 35°00'E

The site, part of a large coastal lagoon, is a shallow saltwater bay near the Azov Sea and includes numerous spits, islets, saline lowlands, and peninsulas with an area of 165,000 ha, located in Khersonska Oblast. Vegetation consists of halophytic grasses fringed by extensive areas of steppe. One of the few species that can be found is *Artemia salina*. The area serves as an important nesting, wintering, molting and staging area for internationally important numbers of various species of waterbirds and waders (about 2,000,000 individuals). Numerous ducks (Anatidae) and waders (Charadriiformes) migrate through the area, including Shelduck */Tadorna tadorna/* and Ruff */Philomachus pugnax/*. Human activities include fishing, recreation, and hunting.



## Karkinitzka and Dzharylgatska Bays

Designation date: 23/11/1995  
46°00' N 33°05'E

An embayment of the Black Sea, the site includes several islands and surrounding waters, with an area of 87,000 ha, located in Khersonska Oblast. Vegetation includes steppe and coastal communities consisting of reedbeds, vast aquatic meadows, salt-tolerant plants and grasses. The site is important for nesting (up to 14,000 pairs), migrating, and wintering waterbirds, especially ducks (endemic species Red-breasted Goose */Branta ruficollis/*) and waders. Marine mammals include three species of dolphin (Bottlenosed dolphin */Tursiops truncatus ponticus/*, the Common dolphin */Delphinus delphin ponticus/* and the Harbour porpoise */Phocaena phocaena relicta/*) all nationally rare, as well as several nationally rare and relic fish species. Human activities include commercial and recreational fishing, hunting, livestock grazing, irrigation, rice and grape cultivation.



## Kartal Lake

Designation date: 23/11/1995  
45°18' N 28°31'E

Kartal Lake is situated at the Danube River, near Izmail City in Odeska Oblast of Ukraine, near the Romanian border, closed to Ramsar wetland site "Kugurlui Lake", with an area of 500 ha. A system of small, interconnected floodplain lakes set in the lower Danube basin. Vegetation consists of emergent and submergent plant communities. Numerous species of rare and protected species of plants occur. The site is important for migrating, breeding, and molting birds, and supports internationally important numbers of nesting Pygmy Cormorant */Phalacrocrax pygmeus/*. It provides important breeding and nursery areas for fish and amphibians. The Kartal Lake is important for ecological education, recreation and scientific research. It is also traditional place of fishing for the local population. The site has an important archaeological value (excavations of ancient burial sites).



## Kryva Bay and Kryva Spit

Designation date: 23/11/1995  
47°03' N 38°08'E

Kryva Bay is the bay of the Azov Sea. Ramsar site 'Kryva Bay and Kryva Spit' is situated in South-west of Novoazovsk Town in Donetsk Oblast of Ukraine, with an area of 1,400 ha. A bay of the Azov Sea made up of a sandy-shell spit, beaches, silt islands, and shallow lakes. The site supports reed thickets, saline meadows, and swamps and includes emergent */Phragmites australis*, *Scirpus tabernaemontani*, *Bolboschoenus maritimus/* and submergent plants */Ruppia maritima*, *Zostera marina/* and short grasses. Several thousand *Anseriformes* winter and up to 15,000 pairs of waterfowl nest at the site. Several endemic and nationally rare plant and fish species occur at the site. Human activities include conservation education, recreation, fishing, aquaculture, and hunting.



## Kugurlui Lake

Designation date: 23/11/1995  
45°17' N 28°40'E

Kugurlui Lake is situated at the Danube River, near Izmail City in Odeska Oblast of Ukraine, near the Romanian border, closed to Ramsar wetland site "Kartal Lake", with an area of 6,500 ha. Vegetation consists mainly of emergent species (mainly *Phragmites australis*, *Typha angustifolia*, *Scirpus lacustris*, *Butomus umbellatus*). The site supports internationally important numbers of various species of migrating, breeding and molting waterbirds (up to 30,000 individuals). It is also important as a breeding and nursery area for fish and amphibians. Human activities include environmental education, recreation, hunting, fish-rearing, and livestock grazing.



## Kyliiske Mouth

Designation date: 23/11/1995  
45°23' N 29°36'E

Kyliiske Mouth (Kyliiske Hyrlo) is the delta of Kyliiskyi Arm (Kyliiska Delta) of the Danube River. It is situated along the Black Sea near border Ukraine with Romania, with an area of 32,800 ha. This wetland comprises a lot of arms, islands, fresh water lakes and sandy spits, which enclose bays on the seaward side of the delta. The wetland is important site for biodiversity conservation including wintering, migrating, breeding and moulting birds as well as breeding and nursery places for fish and amphibians. Vegetation includes hydrophilic communities, reed and sedge marshes, and dune communities. The site supports numerous rare, relict and endemic plant species. The threatened waterbirds Dalmatian Pelican */Pelecanus crispus/* and Ferruginous Duck */Aythya nyroca/* nest at the site, and the threatened Red-breasted Goose */Branta ruficollis/* winters in the area. The site provides habitat for large numbers of many species of wintering, migrating, breeding and molting waterbirds, as well as breeding and nursery places for fish and amphibians. Human activities include hunting, fishing, livestock grazing, haymaking, and recreation.



## Molochnyi Liman

Designation date: 23/11/1995  
46°32' N 35°22'E

Molochnyi Liman is the estuary of the Molochna River near the Azov Sea, includes sandy-shell islands and peninsulas, coastal breakages, coastal reeds, saltings etc. with an area of 22,400 ha in Zaporizka Oblast. Vegetation includes reedbeds, saline meadows, and marshes. The site provides conditions for nest of several thousands pairs and wintering more than 20 000 individuals of birds of wetland complex, important site for breeding of Great Egret */Egretta alba/*. Human activities include conservation education, recreation, aquaculture, fishing, and hunting.



## Northern Part of the Dniester Liman

Designation date: 23/11/1995

46°22' N 30°12'E

The site includes the Dniester River delta, streams, floodplain lakes, and part of the Dniester Liman, with an area of 20 000 ha, situated in Odeska Oblast of Ukraine in border with Moldova. Vegetation consists of floating vegetation, reed thickets, and floodplain forest supporting various nationally threatened plant species. An important area for wintering *Anseriformes*, *Gruiformes* and *Pelecaniformes* and for breeding, wintering and migrating birds *Anseriformes*, *Charadriiformes* and *Ciconiiformes*. The site supplies water for domestic use and agricultural irrigation and serves as an important water transport artery. Human activities include environmental education, recreation, hunting, and fishing.



## Obytochna Spit and Obytochna Bay

Designation date: 23/11/1995

46°35' N 36°12'E

Ramsar site Obytochna Bay is the bay of the Azov Sea, situated in Zaporizka Oblast, and the site has an area of 2,000 ha. The site supports internationally important numbers of nesting Great Egret *Egretta alba* and wintering Greater Scaup *Aythya marila*, among various other species of waterbirds. Various relic fish and endemic plant species occur at the site. Human activities include conservation education, recreation, fishing, aquaculture, and hunting



## Sasyk Lake

Designation date: 23/11/1995

45°40' N 29°41'E

Sasyk Lake is a freshed reservoir near the Danube Delta and the Black Sea, situated in Odeska Oblast with an area of 21,000 ha. Vegetation consists of emergent and submergent plants and salt meadows and includes nationally rare and relic species. The wetland is important for numerous species of migrating, breeding (25,000 pairs), and molting waterbirds and supports seasonal concentrations of up to 100,000 individuals. Large numbers of the threatened species White Pelican *Pelecanus onocrotalus* and Red-breasted Goose *Branta ruficollis* occur at the site. Numerous species of fish also occur. Human activities include an important fishery, forestry, livestock grazing, environmental education, recreation, and scientific research.



## Shagany-Alibei-Burnas Lakes System

Designation date: 23/11/1995

45°48' N 29°55' E

Shagany and Alibei and Burnas Lakes are Black-Sea half-closed shallow limans (brackish lagoons) of the small rivers, situated in Odeska Oblast with an area of 19,000 ha. The lakes are separated from the sea by a sandy spit. The site includes a sandy shell bar, peninsulas, and islands. Vegetation consists of salt meadows and numerous species of aquatic plants. The site supports internationally important numbers of Red-breasted Goose *Branta ruficollis* and is an important staging, breeding and wintering area for numerous species of waterbirds Kentish Plover *Charadrius alexandrinus*, Collared Pratincole *Glarola pratincola*, White-tailed Eagle *Haliaeetus albicilla*, Black-winged Stilt *Himantopus himantopus* and White Pelican *Pelecanus onocrotalus*. Human activities include conservation education, traditional fishing, recreation, and scientific research.



## Tendrivska Bay

Designation date: 23/11/1995

46°14' N 31°56' E

Tendrivska Bay is salt-water lagoon, separated from the Black Sea by low, narrow and sandy spits. The bay is adjoined by numerous small lakes and temporary waterbodies, situated in Khersonska Oblast with an area of 38,000 ha. Vegetation is characterized by brackish and saltwater associations, kelpbeds, reedbeds, a rich aquatic vegetation, and abundant crustaceans and mollusks. Large numbers of numerous species of waterfowl nest and stage, and up to 700,000 individuals (including the globally threatened duck Ferruginous Duck *Aythya nyroca* and Red-breasted Goose *Branta ruficollis*) winter at the site such as notably Shelduck *Tadorna tadorna*, Gadwall *Anas strepera*, Red-breasted Merganser *Mergus serrator*, Redshank *Tringa totanus*, Mediterranean Gull *Larus melanocephalus*, Slender-billed Gull *Larus genei* and Sandwich Tern *Thalasseus sandvicensis*. Human activities include commercial fishing, recreation, hunting, and conservation education.

Photo: Balkani Wildlife Society NGO





Photo: Green Balkans NGO



## Tyligulskyi Liman

Designation date: 23/11/1995  
46°50' N 31°10'E

Tyligulskyi Liman is a liman of half-closed type and is connected with the Black Sea by canal, situated in Odeska and Mykolaevska Oblasts with an area of 26,000 ha. In its upper there is the delta of Tyligul River, in the lower there are accumulative islands, salt meadows. Shores are cuted up, in some sites – abrupt, with sandy peninsulas. Vegetation consists of various species of hydrophilic plants and reedbed sand includes several endemic species. The site supports wintering, nesting, and autumn and spring migrating waterbirds, several species of which are nationally or internationally threatened such as Black-winged Stilt /*Himantopus himantopus*/, Kentish Plover /*Charadrius alexandrinus*/, Spoonbill /*Platalea leucorodia*/, Glossy Ibis /*Plegadis falcinellus*/, Pygmy Cormorant /*Phalacrocorax pygmaeus*/, Over 25% of the European Great Egret /*Egretta alba*/ population winters at the site. Human activities include fishery, hunting, livestock grazing, recreation, and environmental education. Ancient Greek archeological settlements occur on the site.



## Yagorlytska Bay

Designation date: 23/11/1995  
46°24' N 31°53'E

Yagorlytska Bay is salt-water lagoon and is adjoined by numerous small lakes and temporary Waterbodies, situated in Khersonska and Mykolaevska Oblasts with an area of 34,000 ha. Vegetation consists of brackish and saltwater associations made up of emergent and submergent species and marsh communities. Yagorlytska Bay provides nesting places for large numbers of waterfowl – Common Eider /*Somateria mollissima*/, Caspian Gull /*Larus cachinnans*/, Common Tern /*Sterna hirundo*/, Great Cormorant /*Phalacrocorax carbo*/.

On the wet meadows along the shores of the fresh water lakes and on the temporary water areas, the following species breed Northern Lapwing /*Vanellus vanellus*/, Black-winged Stilt /*Himantopus himantopus*/ and Redshank /*Tringa totanus*/, Large numbers of Mute Swan /*Cygnus olor*/ moult in the area. Numerous nationally rare fish species occur at the site. Human activities include fishing, recreation, and hunting.

