

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

1. Date this sheet was completed/ updated:

March 2002

2. Country: BULGARIA

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Designation date

Site Reference Number

3. Name of wetland:

PODA

4. Geographical coordinates:

42°27'30"N / 27°27'00"E

5. Elevation: (average and/or max. & min.)

0 - 3 m ASL

6. Area: (in hectares)

306.63 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characteristics)

A marshy wetland, located at the seacoast. Originates as a part of the Burgas-Mandra firth. Later forms the easternmost lagoon part of Mandra Lake. Because of human interference the area changes its natural appearance after the 1960s, but later recovers. Presently a mosaic of different habitats – freshwater, brackish, saline, hyper-saline pools, flooded areas, etc. – has formed in spite of the site's small area. Poda is a typical representative example of a lagoon with natural habitats, although secondary evolved. The Ramsar site includes as well a shallow sea bay adjacent to the lagoon named Phoros.

The wetland is inhabited by more than 260 rare, vulnerable and endangered species of plants and animals, incl. 8 globally threatened species of birds: Dalmatian Pelican, Pygmy Cormorant, Red-breasted Goose, Red-breasted Goose, Ferruginous Duck, White-headed Duck, Spotted Eagle, Imperial Eagle and Corncrake.

8. Wetland Type (please circle the applicable codes for wetland types; in the present document, the "Ramsar Classification System for Wetland Type" is found on page 9)

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)

Please now rank these wetland types by listing them from the most to the least dominant:

A - J - E - K - 9

9. **Ramsar Criteria:** (Please circle the applicable Criteria; the *Criteria for Identifying Wetlands of International Importance* are reprinted beginning on page 11 of this document.)

1 • **2** • **3** • **4** • 5 • **6** • 7 • 8

Please specify the most significant criterion applicable to the site: **2**

10. Map of the site included? YES

(Please refer to the *Explanatory Note Guidelines* document for information regarding desirable map traits).

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

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12. Justification of the criteria selected under point 9, on previous page.

Criterion 1 – Poda is a particularly good representative example of a natural coastal wetland in the western Black Sea region.

Criterion 2 – Poda is inhabited by more than 260 rare, vulnerable and endangered species of plants and animals. The wetland supports:

- 8 globally threatened species of birds: Dalmatian Pelican (*Pelecanus crispus*), Pygmy Cormorant (*Phalacrocorax pygmeus*), Red-breasted Goose (*Branta ruficollis*), Ferruginous Duck (*Aythya nyroca*), White-headed Duck (*Oxyura leucocephala*), Spotted Eagle (*Aquila clanga*), Imperial Eagle (*Aquila heliaca*), Corncrake (*Crex crex*).

- 1 globally threatened mammal species – Otter (*Lutra lutra*)
- 236 species of birds and 19 species of other vertebrates included in the Bern Convention List
- 151 species of birds included in the Convention for Protection of the Migrating Wild Animals List
- 5 plant species and 78 animal species included in the Bulgarian Red Data Book

Criterion 3 – One of the richest sites in terms of bird species diversity on a unit of area, including 252 species on 1 km² (the size of Poda Protected Area). It is a hotspot not only for bird diversity, but it also supports (despite its small area) several species of fish, 5 species of amphibians, 9 species of reptiles, 16 species of mammals and 231 species of vascular plants. Some of the species with very limited distribution like Etruscan Shrew (*Suncus etruscus*) – Poda is the third place in the country where the species has been observed.

Criterion 4 – The site is an important stopover for migratory water bird species, mainly pelicans, egrets and herons, cormorants. During adverse winter conditions the site hosts high concentrations of waterfowl (Tufted Duck, White-headed Duck, etc.). It provides extremely important breeding ground for a mixed colony of spoonbills, glossy ibises and 5 species of egrets and herons. It is the only site along the Bulgarian Black Sea coast where spoonbills breed.

Criterion 6 – The wetlands regularly supports >1 % of the biogeographical populations of the following wintering species:

Dalmatian Pelican (*Pelecanus crispus*) - up to 203 ind. (8,1% of the Black Sea/Mediterranean population); Great White Egret (*Egretta alba*) - up to 244 ind. (2% of the Black Sea/Mediterranean population); Tufted Duck (*Aythya fuligula*) - up to 12,800 ind. (2,1% of the Central Europe/Black Sea/Mediterranean population); White-headed Duck (*Oxyura leucocephala*) - up to 183 ind. (1,6% of the E Mediterranean/Turkey/SW Asia population).

13. General location: (include the nearest large town and its administrative region)

Poda is located on the south Bulgarian Black Sea coast, next to the southern industrial zone of the city of Burgas (population of about 200,000). The site is within Burgas Municipality and Burgas District territory. It is an indivisible part of the Burgas wetlands complex, comprised of three big lakes: Atanasovsko, Vaya and Mandra. It comprises the easternmost lagoon part of Mandra Lake. Its border on the east is the Black Sea – Bourgas bay, on the west – the international road E87, on the north – the fence of the shipyards "Iliya Boyadjiev" and on the south – the canal connecting Mandra Lake with the sea.

14. Physical features: (e.g., geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth; water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

14.1. Geology

Poda belongs to the biggest Bulgarian firth – the Burgas-Mandra firth, which is 19 km long, 6,3 km wide and has an area of 108,6 km². The area is located over Holocene sediments up to 50m thickness along the beach. They contain two peat layers, one at a depth of 28-29m and the other – at 35-37m. The deeper layer contains methane, gravel and cultural remnants. Fossils have been discovered and those coming from over 10m are related with the ancient Black Sea transgression (the first phase of salting the bay).

The area is located over the Burgas syncline with the Burgas graben within it. In general the earth crust movements are related to the sinking of the Burgas lowland with 1,46 mm annually. The main rock is composed of Cenonic volcanic rocks and tuffs, with Neogene, Pleistocene and Holocene sediments over it. The beach in front of the protected area is composed of alevrite quartz sand.

14.2. Origins

In the past the Poda territory used to be marshy, almost all of it covered by aquatic vegetation (probably reed). The later intensive human activities within the area played a decisive role for shaping the present-day appearance of the site.

A barrier fishing device (guard) was constructed in 1928-29.

With the outset of the construction work on the oil processing refinery "NEFTOCHIM" in 1960, the Eastern part of the Mandra Lake was given up for the construction of a lake intended for oxidizing (later stabilizing) lakes intended for the factory waste water.

In 1963 a barrage was built turning a great part of the semi-saline Mandra Lake into a freshwater reservoir, collecting water from the rivers Izvorska, Fakiiska, Sredetska, (Groudovo) and Roussokastrenska. That part of the ex-lake remained to the East of the barrage retains its connection to the sea. It is now known as Uzungeren.

With the construction of the international road E87, in the early 70s, part of the fourth oxidizing lake was torn away. This alongside with the Burgas Shipyards fence brings about the final shaping of the future protected area in its present borders.

To shape the area's final appearance, the later intensive human activities contributed a lot. Owing to them, zones differing in shape, size and animal/plant composition were formed. Human activity was mainly expressed in passing two oil pipelines (the one is no longer used at present, and the other will soon be out of operation); water mains, power line; drainage canal collecting water from the Komloushka Lowland. Immediately along the western border of the site are placed technical devices (various types of cables). They are all buried underground past the international road E87. Some of the postal and telephone services devices pass through Poda as well.

All these activities in the area and adjacent basins exert a direct influence on the formation of specific plant communities and related birds and other animals inhabiting the area. On discharging water from the reservoir (and particularly, on overflowing due to spring high water) to the Southern part of Poda a quantity of freshwater is let flow. It 'dissolves' saline sea water in the South-east part of the area. This is also favoured by the remnants of the ex-guard serving as breakwater against the strong wave activities in the bay. With water freshened and natural shallow places in this part of the area, this helps the rapid growing of specific plant communities far into the sea - mainly reed massifs, and -at places- *Bolboschonus maritimus*.

14.3. Hydrology, water quality and quantity

Both the historical development of the Burgas-Mandra firth and various types of anthropogenic activities in the area provide a good illustration of the impact of nearby water quantities for shaping and maintaining the hydrological background of protected natural areas.

Waters formed in an extensive area with high variety of physico-geographical conditions flow through the Poda into the sea. They constitute the catchment area of the Mandra reservoir. Many rivers flow in the reservoir, but three of them are of more considerable importance for its water balance: the Sredetska (Grudovska), the Fakiiska and the Rusokastrenska. They are formed over vast territory, defining the main part of the reservoir's catchment area – 2,047.9 km².

Additional, not established for the moment, quantity of waters flows through the canal dug in 1991 through the northern part of Poda to drain the Komloushka lowland. Waste waters from the nearby complex "Meden rudnik" and waters from Burgas Lake are accumulating in the latter.

In order to follow the fluctuations in the water levels, 4 piezometers and 7 poles for measuring the underground and surface water level have been constructed. The greatest fluctuations have been established in the pools "The Tern (Ribarkata)" - 83 cm, and "Basin 6" - 71 cm. Owing to the working regime of the Mandra reservoir and sea level fluctuations, the greatest dynamics in water constructions has been detected in the Uzungeren-Black Sea canal.

The fluctuations in the water levels of the "Spoonbill pool (Lopatarska)" are significant - 61 cm. At the same time mineralization remains almost constant. This effect is due to the water-resistant clay screen on the pool bottom placed there when the "Lukoil – Neftochim" settlers were built ("The Spoonbill Pool" (Lopatarskata lokva) used to be the southernmost part of the fourth settler).

To drain the high waters of the adjacent to Poda Komloushka lowland, threatening to flood the highway, a canal with a sluice was built through the northern part of Poda in 1991.

As the Poda area is an indivisible part of Uzungeren bay and is in direct contact with the Black Sea, the area's water regime is formed as a result of the processes going on in these two water basins, as well as in the Mandra reservoir. The working regimes of the reservoir floodgates are directly related to the changes in the salinity of Uzungeren during the year, respectively on Poda.

On the basis of the latest observations on the basins' general mineralization in the protected area, the following conclusions can be drawn:

Certain water aquatories have specific saline water composition, their mineralization ranging in very large limits, both in space and time;

Five water types can be conditionally defined:

- Fresh: 0.367 - 0.760 mS;
- Almost fresh: 1.42 - 2.72 mS (formed after sudden outflow of great water quantities from Mandra reservoir);
- Fairly saline (brackish): 4 - 8 mS;
- Considerably more saline: 10 - 19.6 - 26 mS;
- Hypersaline (hyperhaline): 30 -32 mS and more.

14.4. Soils

The soil composition of the protected area is to a certain extent artificial. The reason for this is the turning of almost the whole territory into oxidizing basins for oil products in the 1960, which on the one hand destroyed the natural soil composition and on the other - introduced soil elements from other places.

There is no information about the main soil types at present and their distribution on the territory of the Poda, as well as about the fertility and nutritious value of the different soil types.

14.5. Climate

The local climate is influenced first of all by the general climatic features of the country. One of them is the location of the country in the southern part of the moderate climatic belt, at the border with the sub-tropical one. This factor determines the continental and oceanic climatic influence. The climate is under the influence of the atmospheric circulation of marine arctic, moderate marine, arctic continental, moderate continental and tropical continental air masses. The average annual air temperature is 10,5°C, and the average annual amplitude - 24-26°C. North-Western and North-Eastern winds predominate in the country in general, the Black Sea coast being one of the most windy parts of Bulgaria. The average rainfall in the country is 670-700 mm. Concerning the snow cover, the Black Sea coast is one of the places where it stays for the shortest period (10-15 days), while in the high mountains it stays for 200-250 days.

An important factor for the forming of the local climate is the climatic region, where the Poda is located, and its peculiarities. This is the climatic region of the Burgas lowland – one of the three climatic regions of the Black Sea sub-province of the Continental-Mediterranean province.

The Black Sea appears to be the major factor responsible for the climatic peculiarities of the region. This water basin, immense in space and volume, exerts influence most of all on the temperature. Its warming effect can be felt since mid-October till the end of February. In summer and spring the effect has an adverse influence. All this presupposes the reduction of temperature amplitudes.

Poda lies in the borderline between the transitory-continental and subtropical types of rainfall in the direction of the village of Fakia and the Mandra Lake. The annual rainfall sum for the coastal part of the region is fluctuating between 520 and 580 mm. The highest rainfall is during June-November, and the smallest - during August-September.

The average annual air temperature is between 12 °C and 13°C. This region is considered as the one with the mildest winter regime. Only about 20 days during the winter have negative average temperature.

Considering the location of Poda, the zonal western atmospheric transportation typical of the moderate geographic latitudes, could be underlined as a regularity. On the basis of this regularity, winds are inconsistent and non-periodical, determined by the nature of the circulation factor.

15. Hydrological value: (groundwater recharge, flood control, sediment trapping, shoreline stabilisation, etc.)

Not Described

16. Ecological features: (main habitats and vegetation types)

Poda represents a complex ecosystem of marshland character (an eutrophic marsh). It is composed of a complex mosaic including marine, litoral, freshwater, brackish and hypersaline ecosystem elements. The main habitats (7 habitats) are as follows:

- 11.12 Shelf and slope waters
- 16 Coastal sand dunes and sand beaches
- 22.4. Freshwater canal with a slow water flow
- 23.1. Unvegetated brackish and salt waters
- 23.2. Vegetated brackish and saline waters
- 53.111. Flooded *Phragmites* beds
- 53.112. Dry *Phragmites* beds

The biggest area is occupied by the reed (*Phragmites australis*) formation. The height, density, spreading rate and structure of the reed formations are very important for the forming the ornithofauna composition of the area (especially the nesting one).

The area bordering on the international road E87 and the dike covering the water-main is occupied by pure reed formations up to 1,6 - 1,8 m high. To the east of the dike, in direction of the sea, the reed is smaller in size and abundance. The western part of the protected area, starting from the Burgas Shipyards fence to the road, is occupied by *Phragmites australis* (Cav.) Trin. ex Steud + *Artemisia santonicum* L. + *Juncus maritimus* Lam.

The sand strip stretching along the sea is occupied by *Elymus sabulosus* + *Plantago scabra* + *Gypsophilla trichotoma* + *Salsola rutenica* + *Cakile maritima* + *Eryngium maritimum* + *Aster tripolium* + *Lactuca tatarica*.

The shallow saline wetlands in the western part of the protected area are occupied by *Salicornia europea* L. formations. The central part is occupied by the formation of *Atropis convoluta* Grsb.

The south-eastern part of Poda is occupied by *Juncus maritimus* Lam., *Bolboschonus maritimus* (L.) Palla., *Ruppia maritima* L. formations.

17. Noteworthy flora: (indicating, e.g., which species/communities are unique, rare, endangered, or biogeographically important, etc.).

231 vascular plant species have been recorded at the site. Five of them are included in the Bulgarian Red Data Book: *Gypsophilla trichotoma* Wend., *Silene euxina* Rupr., *Eryngium maritimum* (L.), *Lactuca tatarica* (L.), *Coryspermum nitidum* Kit.

18. Noteworthy fauna: (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, ect.).

Fish: 2 species – Caucasian Goby (*Knipowitschia caucasica*) and Three-spined Stickleback (*Gasterosteus aculeatus*) are species included in the Bulgarian Red Data Book.

Amphibians: 5 species – Eastern Spadefoot (*Pelobates syriacus balcanicus*), Lake Frog (*Rana ridibunda*), Green Toad (*Bufo viridis*), Great toad (*Bufo bufo*), European treefrog (*Hyla arborea*). 4

of them, excl. *Rana ridibunda*, are in the Bern Convention Lists. *P. syriacus balcanicus* is included in the Bulgarian Red Data Book.

Reptiles: 9 species – Hermann's tortoise (*Testudo hermanni*), Iberian tortoise (*Testudo graeca*), European pond turtle (*Emys orbicularis*), Green Lizard (*Lacerta viridis*), Balkan glass-snake (*Ophisaurus apodus*), Large Wipe Snake (*Coluber jugularis*), Four-lined snake (*Elaphe quatorlineata sauromates*), Grass snake (*Natrix natrix*) and Dice Snake (*N. tessellata*) are included in the Bern Convention Lists. 6 of them (*T. hermanni*, *T. graeca*, *E. orbicularis*, *Oph. apodus*, *C. jugularis*, *Elaphe quatorlineata sauromates*) are included in the Bulgarian Red Data Book.

Birds: 252 bird species have been recorded at the protected area with a size of only 1 km², which makes the site one of those with highest species density in Europe. The only colony of Spoonbill (*Platalea leucorodia*) (max. 37 pairs), and Glossy Ibis (*Plegadis falcinellus*) (max. 30 pairs), along the Bulgarian Black Sea coast is harboured in Poda. Different herons also nest there: Little Egret (*Egretta garzetta*) (max. 30 pairs), Grey Heron (*Ardea cinerea*) (max. 40 pairs), Purple Heron (*Ardea purpurea*) (max. 20 pairs), Night Heron (*Nycticorax nycticorax*) (max. 25 pairs) and Squacco Heron (*Ardeola ralloides*) (max. 6 pairs). All the above mentioned bird species are protected by the Bulgarian Law. Of the established species **217** are under the protection of the Nature Protection Law and 71 are included in the Bulgarian Red Data Book. **137 species** of European Conservation Concern (SPECs), according to BirdLife International criteria (Tucker, Heath, 1994), **236 species** included in Annex II & Annex III of Bern convention, **151 species** included in Annex I (*Pelecanus crispus*, *Oxyura leucocephala*, *Haliaeetus albicilla*, *Numenius tenuirostris*) & Annex II of Bonn Convention, as well as **93 species** included in the list of threatened species of the Corine Biotopes Programme, determining the site as important on a European level, occur in the wetland.

Mammals: 16 species of large and small mammals. The small mammals prevail, the most interesting of them being the Etruscan shrew (*Suncus etruscus*), for which Poda is the third location in the country. Only the European River Otter (*Lutra lutra*) is included in the Bulgarian Red Book.

19. Social and cultural value: (e.g. fisheries production, forestry, religious importance, archeological site, etc.)

Phoros bay is used whole year round by local fishing brigades. Each fishing brigade includes 10 to 15 people. They fish from a boat and use drag-nets of up to 300-500 m long.

The hill south of the area and some other parts of the region belong to the forest fund, but no forestry activities are carried out there.

There are no cultural and historical finds and monuments on the territory of the site. At its southern border there are remnants of a medieval observation tower.

20. Land tenure /ownership of: (a) site (b) surrounding area

a) at the site

The site is state property.

b) surrounding area

State, municipality and private properties.

21. Current land use: (a) site (b) surroundings/catchment

a) at the site

Two former oil pipelines and a water one pass through the territory of the protected area. The later provides the city of Burgas with drinking water and is covered by a soil embankment, while the others are buried under the ground, but close to the surface. In 1991 the construction of a drainage canal collecting the Komlushka Lowland wastewater and leading it into the sea was accomplished. This canal is 4-5 m wide and cuts through the northern part of Poda Protected Area. Most of it is overgrown with reed and has merged with the area's natural appearance. Simultaneously it isolates the part of Poda on its northern side from the main part of the PA.

The old road (gravel and stone, at places overgrown with grass), joining in the past Burgas and Sozopol, passes through the territory of the protected area. Part of it lies in the eastern part of Poda. Occasional steel poles can be seen in the area - remainders of the electricity line once passing through Poda. They are 8, with height between 10 and 35 m.

There are no residential premises on the territory of Poda. The only building is that of the Conservation Centre. A special observation tower about 9 m tall is constructed in the northern part of the PA.

All water basins out of the site are used for angling and fishing. The marine aquatic area in front of Poda and Phoros bay is also used by fishermen. There are regularly up to 3 pound nets in Phoros bay and 2 in Uzungeren. Mainly *Atherina boyeri* and *Neogobius melanostromus* are caught in Uzungeren, the catch per season being 14 –15 tons (mainly *Atherina* sp.).

b) surroundings/catchment

The areas adjacent to Poda are the territories covering Bourgas bay, Uzungeren, Komlushka lowland, the stabilisation pools of "LUKOIL-Nephtochim", Mandra reservoir, the southern industrial zone of Burgas, Phoros cape and the region of the residential areas "Meden Rudnik" and "Kraymorie".

Poda is situated in the immediate vicinity of the densely populated region of the city of Burgas. This is the six-ranking Bulgarian city in terms of size and the second big along the Black Sea coast. Its population is 200,000 inhabitants, but in the summer season this number grows considerably. Nearest to the area are the residential complexes of Kraymorie and Meden Roudnik. The other settlements in the region are smaller, but right next to the protected area there are many single buildings or groups of buildings, where people leave permanently or only in summer.

The settlement network in the region of the PA covers the southern industrial zone of Burgas, the residential area Meden Rudnik and Kraymorie and the villages Marinka and Tvurditsa. Generally, the network may be defined as such of medium density. There are certain settlement elements forming in the vicinity of Poda PA. Such are the fishermen buildings in Phoros bay, the incineration station, the economic complex Kraymorie, the radio-transmitter complex, the stray dogs refuge and a number of single buildings.

Poda's proximity to the former oxidizing (currently stabilization) pools of "LUKOIL – Neftochim" to the west is of great importance. The one closest to Poda is the fourth pool, the area itself forming a part of it until recently.

Though not in close proximity to the site, the Burgas Port infrastructure is also important. Because of the closed nature of the bay and its comparatively small size, it can have both indirect and direct impact on the site. Several times in stormy weather small ships and boats have got stranded on the beach of Poda.

There are not very extensive agricultural lands with cereal crop in the grounds of Kraymorie close to Foros bay. The uncultivated lands in the region are used as pastures. In the regions of Uzungeren and Foros bay there are private pig farms, which are located immediately on the banks of the water basins.

South of the PA, on the bank of the canal there is an abandoned stone quarry. Its bottom fills with water during rainfalls. When certain sections dry up in summer, favourable conditions for cattle grazing exist there.

In the bigger part of the described region (excluding the settlements) up to the borders of the PA hunting is practiced. Mainly birds and small mammals are subjected to hunting.

Summer recreation tourism is widely practiced in the region adjacent to the site. This applies especially to Burgas (including its residential areas Kraymorie and Meden Rudnik).

The Southern industrial zone of Burgas (the shipyards "Iliya Boyadjiev") touches on the border of the PA.

The Asphalt base – Burgas is located in the region of Uzungeren bay. The local incineration enterprise is situated on the Kafka hill. Its waste waters are deposited in Phoros bay, immediately after the PA.

Although located out of the region adjacent to the PA, the oil refinery works "LUKOIL – Neftochim" also influence it north-eastern winds carry the processed gases from the refinery to Poda.

22. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects: (a) at the site (b) around the site

a) at the site

The natural process of reedbed expansion and covering bigger and bigger areas of the open water surface threatens a number of species, ecologically connected with the open water. Besides, it results in decreasing the accessible nesting area for certain species. The succession depends directly on the water salinity and the eutrophication of the water basins.

After the oxydising pools in the area were abandoned, the area has been used as a waste deposit site for hard communal refuse for years. This waste still stays on the bottom of the basins. The sand strip in the eastern part of the area is especially affected, being used by the fishermen for camping

and because of the constant storm-driven refuse deposited by the sea. Once even a small ship was thrown on the beach by the waves. Later it was cut and removed (1995).

In case of damage in the water pipeline section passing through the PA the inevitable entering of people and machines would threaten seriously the colony of Spoonbills, Ibises and Herons, located nearby.

A number of activities related to the use of some resources of the PA have been carried out there until recently. They are illegal and after the construction of the Conservation Centre have been stopped or reduced to a minimum. The activities constituting the most serious threat are the following: cultivation of sections of the PA as vegetable gardens; sand extraction from the beach, other sandy areas, etc., favored by the proximity of the highway; grazing herds of sheep from the adjacent villages or goats belonging to the fishermen; anglers picking sludge worms for bait in the open muddy areas; collecting mussels, which, except for the illegal entering the PA, affects also certain elements of the ecosystem by lighting fires, disturbing the birds, etc.

b) surrounding/catchment

Poda's proximity to a international highway also enhance the pollution. Waste from the town of Bourgas is being thrown at different places, both along the western border of Poda close to the road and in the PA itself.

The proximity of the Port of Burgas provides a potential threat of pollution with oil products if incidents occur or oil refuse is thrown illegally.

To a certain extent air pollution from the oil refinery works may influence Poda if the wind direction allows it.

23. Conservation measures taken: (national category and legal status of protected areas – including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented)

Protected Area “Poda”, declared in 1989 with territory of 100,7 ha.

Immediately after the designation of the PA, the Bulgarian Society for the Protection of Birds (BSPB) undertakes activities for conservation of the area. In 1989 its borders were marked with the signs required by law (white and red lines) and later information boards were put as well. The marking has been maintained and renewed many times. Due to the periodical destruction of the boards, the latter have been renewed several times.

Together with representatives of Regional Inspectorate of Environment and Waters – Burgas the area has been controlled for violations. Since 1988 BSPB is carrying out monitoring of the birds and the conditions in the site at least twice a year – during the mid-winter waterfowl counts in January and in the beginning of the summer season (the end of May – the beginning of June). For two years the levels of underground and surface waters have been measured weekly. Different studies have been conducted in the area to clarify the conservation requirements of the birds and the other elements of the biodiversity, as well as to evaluate the throphic value of the water basins. The PA has been a subject of specialized conservation projects for protection of globally threatened bird species (Slender-billed Curlew, Ferruginous Duck), implemented by BSPB. In 1989 Poda, together

with the remaining part of Mandra Lake, is declared an Important Bird Area (IBA) by BirdLife International.

A number of field activities for improving the living conditions for the birds on the territory of the PA have been undertaken in different years. These include removing the illegal vegetable plantations on the territory of the PA, removing the lead bullets found, planting bushes along the most frequented routes in the area to provide tranquillity for the nesting bird species, etc.

Since one of the main problems has been the unregulated entering of cars, people and cattle in the PA, fencing outfit has been placed to limit the access.

Several times conservation brigades for cleaning the area and increasing the nesting space for some of the rare and threatened species have been organized. The successful experience of BSPB with Atanasovsko Lake has been applied and 4 standing islands with area 130 m² and 2 earth islands with area 105 m² have been built. Thirty artificial heron nests have been built in the reedbed in the area's south-eastern part and heron and spoonbill models were put to attract the birds. Stork nests were built on two of the non-functioning electric poles to attract the White Stork to nest in the area. Activities for restoring the habitat (removing ground vegetation) of the Collared Pratincole have been done in the northern part of the PA. Artificial nests for ducks and Bearded Tit have been set. A platform for roosting and nesting ducks and Pygmy Cormorants has been built.

To solve the problem with the illegal camping of the fishermen brigades in the PA, BSPB got the support of Burgas Municipality. On the basis of a Report by ATB Pomorie of 14.04.1995 (Order N. 901/20.07.1995) the Mayor of Burgas issued an order to remove the illegally built cottages and other equipment of the fishermen brigades. BSPB compensated the losses of the fishermen by providing the funds for removing their property and providing timber to satisfy some of their wants.

The most considerable contribution to the long-term conservation of Poda PA was the building of the BSPB Conservation Centre and the appointing of highly qualified specialists to work there.

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

The management plan for Poda PA is a result of the cooperation between the MoEW and BSPB, carried out in the framework of the Bulgarian-Swiss Biodiversity Conservation Programme (BSBCP). The Plan was elaborated during the first phase of the Programme (1994 – 1997), and updated in 1999 - 2000. It will be submitted to the Ministry of Environment and Waters for official adoption and endorsement.

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

The systematic and professional conservation of the PA became possible after the approval and financing of a BSPB project “Conservation and education in Poda PA”, developed in 1992. The management plan and the Poda Conservation Centre were established in the framework of this project. The project also won the international award “Henry Ford” for 1995/96. This way for the first time a Bulgarian organization took part in the annual initiative “Henry Ford European Conservation Awards”.

For developing the Management Plan systematic two-year studies have been carried out on abiotic and biotic factors of the area. Seasonal samples have been collected and processed to determine: water balance; water basin mineralization; qualitative and quantitative composition of phytoplankton, zooplankton and zoobenthos; the condition of higher flora and vegetation; species composition of invertebrate and vertebrate fauna, etc. More detailed studies on the birds were carried out in this and the following period.

Two diploma papers – “The Birds of Poda PA” (Forestry technical University) and “Tourism in Poda” (Tourism College – Bourgas) have been elaborated on the basis of information from the PA. Poda is a subject to biodiversity studies for PhD theses.

26. Current conservation education (e.g. visitors center, hides, info booklet, facilities for school visits, etc.

On the territory of the protected area there is only one building – the one of Poda Conservation Centre. It is a one-floor massive building with constructed area 210 m², built by BSPB in the framework of the above mentioned project for the needs of the conservation of the protected area. The building has a meeting hall, a library, an office for the PA administration, a bedroom for volunteers, toilets, bathrooms and stores. It is located at a key site, allowing the control and regulation of the access to the PA, which was one of the main problems before constructing the building. The Conservation Centre has the necessary equipment to fulfill its main functions of protection of the PA.

With the establishing of the Conservation Centre the education activities were systematised further. The diverse flora and fauna of the area is used by the Centre officers and the volunteers from the local BSPB branch to carry out various initiatives (talk-, video- and slide shows, observations, workshops, etc.). The schools use the PA to carry out facultative training classes and other forms of out-of-classroom activities. Trips for acquiring skills of observing and identifying typical bird species are carried out. The permanent exposition and the library of the CC are actively used. Training workshops of different organisations (BSPB, NEPIAST, etc.) and conservation programs (BSBCP) take place in the Centre. A practice of annual conservation brigades, where young people from Bourgas and other places in the country and abroad carry out practical conservation activities in the field, has been introduced. Until now 23 schools and other educational institutions from Bourgas and 24 from other parts of the country have been attracted to the PA. Some of the conservation education activities in the PA have been implemented jointly with the Ministry of Environment and Waters and the Ministry of Education and Science.

After the building of the Conservation Centre and the beginning of its functioning the public information about the PA considerably increased. The dozens of publications in the local, national and international mass media contributed to this. The big number of distributed promotion materials about Poda and the promotion and indication boards put on the busy highway Burgas – Sozopol attracted many visitors. An indication of the high public awareness is the sharp increase of the number of visitors in the PA. While in the year of opening of the Conservation Centre, 1998, Poda has been visited by 2,704 people, the number of visitors in 1999 increases to 7,935, 2000 – 8,244, and 2001 – to 14,333 people.

A special observation tower about 9 m tall is constructed in the northern part of the PA.

27. Current recreation and tourism: (state if wetland is used for recreation/ tourism; indicate type and frequency / intensity)

The construction of the Conservation Centre and the establishing of administration allowed the implementation of ecological tourism. It is done on the basis of a strategy, developed by the Centre officers, which strictly regulates the tourist flow, the time and sites for visiting. Most of the tourists concentrate in the region of the building itself and observe from the terraces.

Although the sand beach consists mostly of mussel shells, due to its vicinity to the city the section in the north-eastern part of the PA is sometimes used for sunbathing and promenades, especially during the summer months. Usually these are individual visitors or small groups of 3-4 people. With the building of the Conservation Centre Poda short recreation stays (1-2 hours) are possible both on the terrace of the building itself and on the established tourist route.

The only services provided on the territory of the PA are those of the Conservation Centre. They include guided tours in the area, use of the observation tower and accommodation in the building of the Centre. Soft drinks are also offered there.

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

The territory of the Poda PA is under the general jurisdiction of the Burgas District Management Administration.

From functional point of view:

The management of the territory is officially assigned to BSPB with Act No. 2372/22.11.2001 of the Burgas District Governor.

The control on applying the legislation is done by MoEW, notably by its regional division, the Regional Inspection of Environment and Waters (RIEW) – Burgas.

29. Management authority: (name and address of local body directly responsible for managing the wetland)

Bulgarian Society for the Protection of Birds/BirdLife Bulgaria

Address: Nature Conservation Centre PODA, P.O.Box 361, BG-8000 Burgas, Bulgaria

30. Bibliographical references: (scientific/ technical only)

Dimitrov, M., K. Niagolov, A. Kovachev, P. Iamkov, L. Profirov. 1997. Mandra – Poda Complex. In: Important Bird Areas in Bulgaria. BSPB Conservation Series. Book 1. Kostadinova, I. (comp.). BSPB, Sofia, BG, 109-112 pp.

Bulgarian Society for the Protection of Birds. (2001). Draft Management plan for PODA PROTECTED AREA. BSPB, Burgas, BG, 74 pp.

A comprehensive reference list is available in the Draft Management Plan for Poda Protected Area.
