Information Sheet on Ramsar Wetlands (RIS)

2009-2012 version

Iezerul Calarasi

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

WWF – Programul Dunare Carpati Romania Str.Ioan Caragea nr.26, Corp A, sector 1, cod 010537 Tel: 004 021 317 49 96; fax: 004 021 317 49 97 <u>http://romania.panda.org/</u> cmunteanu@wwfdcp.ro Bucuresti ROMANIA



DD MM YY





2. Date this sheet was completed/updated:

15.02.2012

3. Country:

Romania

4. Name of the Ramsar site:

Lake Iezer Calarasi (Local name: - Iezerul Calarasi) Calarasi)" [DCP] corrected to: "Lake Calarasi (Iezerul

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

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site $X\square$; or
- b) Updated information on an existing Ramsar site \Box

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

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

If the site boundary has changed:

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

and/or If the site area has changed: i) the area has been measured more accurately ; or ii) the area has been extended ; or

iii) the area has been reduced**

7. Map of site:

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

i) hard copy (required for inclusion of site in the Ramsar List): yes

ii) digital (electronic) format (optional): yes

b) Describe briefly the type of boundary delineation applied:

The southern limit is set by the Danube valley. The western limit is a conventional one and includes the agricultural land near the town of Calarasi. The east limit is set by area of the Calarasi town and the national road DN3.

The total surface of 5001 ha covers the lake and its surroundings to the Danube, overlapping Nature 2000 ROSPA 0051 Iezerul Calarasi perimeter site (5001 ha surface).

8. Geographical coordinates (latitude/longitude):

44°11'24" N, 27°16'28" E

9. General location:

South Romania

Large administrative unit: Calarasi County. Local administrative units: Calarasi city.

The Lake Iezer Calarasi is situated in the south of Romania, in Calarasi County, at 6 km from Calarasi city (about 70,000 inhabitants). The area is divided between three local administrative units: Calarasi city (51%), Cuza-Voda village (42%) and Gradistea (7%).

10. Elevation (m):

Min: 0, Max 25, Med: 8.

11. Area: (in hectares)

5001 ha

wetland area: 656 ha (550 ha (lake surface; permanent))

12. Overview:

Calarasi County Council Decision 54/2001 designated parts of the area proposed as Ramsar site as natural reserve for bird species protection for the first time. Later, it was recognised as SPA by Governmental Decision 2151/2004 and was included in the Natura 2000 network by Governmental Decision 1284/2007. All these designations have as bases the important number of protected wild species, most of them being represented by aquatic birds, migratory or sedentary.

Before the Danube embankment, the area was covered by Ezer Lake (around 6000 ha), a natural wetland that was part of the Danube floodplain. In present, just 10% of the former lake have been preserved and directly linked with the river while the rest became agricultural land or fishponds.

However, the complex mosaic of natural and anthropic ecosystems: permanent freshwater lakes, permanent freshwater marshes, shrub dominated wetlands, fishponds, canals and drainage channels, seasonally flooded agricultural land, agricultural lands and forests allowed the development of many species of wild flora and fauna. Around 205 species of superior plants have been identified and among these two are strictly protected (*Trapa natans* and *Salvinia natans*), one species is of conservative interest (the orchids *Epipactis helleborine*) and other have special phytogeorgraphic significance (*Celtis australis, Periploca graeca, Cynanchum acutum*).

The natural lakes and the fishponds are populated by at least 14 fish species, 10 of them being of natural provenience and other 4 being originated by fishponds population with economical species.

Several species of amphibians live in the area: (only in fresh water parts) *Triturus dobrogicus, Hyla arborea, Bufo bufo, Pelobates fuscus* and *Bombina bombina*. Protected reptile species, such as *Emys orbicularis* and *Natrix tessellata* are also present. Iezer Calarasi Lake provides several important places for birds (breeding, resting and nesting). Iezer Calarasi Lake is sheltering around 271 bird species from which 170 are strictly protected under Bern Convention, 2 are globally endangered and 30 can be found on Annex I of Birds Directive. During winter season, it represents one of the main roosting places for thousands of geese and ducks. Several species of mammals were identified in the area: *Spermophilus citellus, Lepus europaeus, Microtus arvalis, Mustela putorius* most of them protected on the national level.

13. Ramsar Criteria:



14. Justification for the application of each Criterion listed in 11 above:

Criterion 1:

Iezer Calarasi Lake has its origins from a natural lake. Several changes took place through the last decades for the purpose of fish farms development (embanking took place in 1960). Water surface covers 550 ha. The lake is supplied with Danube water and from artificial channels. Its perimeter is covered with reed and bulrush of over 4 ha. Several meadows, wetlands and ponds surround the lake, representing an important area for breeding and migratory birds (32000 to 60000 bird individuals can be encountered).

In the areas disconnected from the flood the following vegetal associations can be found:

- couch grass associations (Agropyretum repentis)
- Bermudagrass associations (Cynodondetum dactyloni)
- bent associations (Agrostis stolonifera)
- dry grasslands communities dominated by Chondrilla juncea and Agropyron cristatum
- dry grassland communities dominated by Bromus ramosus and Bromus sterilis

Typical wetland vegetation, is present along the canals (water alimentation canals for the fishponds, evacuation canals, drainage canals, irrigation canals) and in the marginal areas of lakes and ponds. The main vegetal communities in the wetlands area are:

- reed associations (Phragmitetum australis)
- reed and bulrush communities (Scirpo-Phragmitetum australis)
- communities dominated by burr-reed (Sparganietum ramosi)
- reedmace associations (Typhetum angustifoliae)
- associations with Bolboschoenetum maritime

In the temporary flooded areas, the small fishponds with variable water level, the vegetation forms a mosaic depending on the water coverage duration. The characteristic plant communities for this area are:

- communities with water pepper (*Polygonetum hydropiperi*) or with water pepper and water marigold (*Polygono hydropiperi-Bidentum*)
- communities with Cyperus flavescens-fusci
- communities with Cyperus michelianus and Heleochloa alopecuroides

The aquatic communities found in the lakes of Iezer Calarasi area are:

- communities with yellow floatingheart (Nymphoidetum peltatae)
- communities with Eurasian water milfoil (Myriophylletum spicati)
- communities with coontail (Ceratophylletum demersi)
- communities with duckweed (*Lemnetum minoris and Lemnetum trisulcae*)
- associations of duckweed with water fern (Lemno-Azolletum filiculoidis)
- associations dominated by spiny naiad (*Najas marina*)

The anthropic interventions and changes in the hydrological regime of the area reduced the floodplain characteristic plant communities to some small patches situated in the north of the Iezer Calarasi area. However, conservation of these patches is extremely important for they represent real centres for former floodplain communities' reconstruction.

Criterion 2:

The site supports the following species of the Bird Directive Annex I:

		Population (individuals)			
Scientific name	Common name	Breeding	Wintering	Migrants	
Phalacrocorax pygmaeus	Pygmy Cormorant	300-400		500 - 800	
Pelecanus onocrotalus	Great White Pelican			300 - 600	
Pelecanus crispus	Dalmatian Pelican		120-144	30 - 100	
Botaurus stellaris	Bittern	4 - 8			
Ixobrychus minutus	Little Bittern	24-40			

List of bird species with numbers from previous censuses (censuses during 1996-2010)

Nycticorax nycticorax	Black-crowned Night-heron	30 - 60			
Ardeola ralloides	Squacco Heron			20-200	
Egretta garzetta	Little Egret	70-150		60-200	
Egretta alba	Great White Egret	8 - 20		40-210	
Ardea purpurea	Purple Heron	30 - 36			
Platalea leucorodia	Spoonbill			190 - 310	
Plegadis falcinellus	Glossy Ibis				
Ciconia ciconia	White Stork	30 - 40		1500 - 2000	
Cygnus cygnus	Whooper Swan			120-143	
Branta ruficollis	Red-breasted Goose		1500	500 - 7000	
Mergus albellus	Smew			45-54	
Aythya nyroca	Ferruginous Duck	80-120		130-240	
Circus aeruginosus	Western Marsh-harrier	2 - 4			
Circus cyaneus	Northern Harrier			20-40	
Milvus migrans	Black Kite			2-4	
Himantopus himantopus	Black-winged Stilt	24-64		400 - 600	
Charadrius alexandrinus	Kentish Plover			26-40	
Philomachus pugnax	Ruff			1000 - 1500	
Sterna albifrons	Little Tern			12-50	
Sterna hirundo	Common Tern			700-800	
Chlidonias hybridus	Whiskered Tern	80-140		2000	
Chlidonias niger	Black Tern	10-30		200-400	
Porzana porzana	Spotted Crake	14-16			
Recurvirostra avosetta	Avocet			20-40	
Tringa glareola	Wood sandpiper			40-80	

Two of the globally threatened bird species occurring on this lake are: the Red-breasted Goose Branta ruficollis (EN, IUCN) and the Dalmatian Pelican Pelecanus crispus (VU, IUCN)

Other important species present on the lake and its nearby areas are: the Pygmy Cormorant *Phalacrocorax* pygmeus (LC, IUCN), the Common Pelican Pelecanus onocrotalus (LC, IUCN), and the Spoonbill Platalea leucorodia (LC, IUCN).

Scientific name	Common name	Winter visitor (individuals)	Passage migrant (individuals)	Global IUCN Red List Category	2004 Global IUCN Red List Criteria	Birds Directive	Bern Convention	Bonn Convention
Phalacrocorax	Pygmy			LC	A2c; A3c	Ι	II	II
pygmaeus	Cormorant	300-400	170-400					
Pelecanus crispus	Dalmatian	120-144		VU	A2c; A3c	Ι	II	I; II
_	Pelican							
Branta ruficollis	Red-breasted	1000-		EN	B2a+b(iii)	Ι	II	I; II
, i i i i i i i i i i i i i i i i i i i	Goose	5200						
Aythya nyroca	Ferruginous		130-240	NT	A2c,d;	Ι	III	I; II
	Duck				A3c,d			

The data presented above was collected between 2000 and 2010, referenced from the following bibliography:

- H.G. 971/2011 Hotarare de Guvern pentru modificarea si completarea H.G. nr. 1284/2007 privind declararea ariilor de protectie speciala avifaunistica ca parte integranta a retelei ecologice europene Natura 2000 în Romania;
- 2. "Romanian Ornithological Society" database;

The site additionally supports a number of species protected in Europe, including species listed in *the EU Habitat Directive*.

Amphibians: Bombina bombina (An. II, IV), Triturus dobrogicus (Annex II), Hyla arborea (IV), Bufo viridis (IV), Bufo bufo, Pelobates fuscus (An. IV), Rana dalmatina (Annex IV)
Reptiles: Natrix tesellata (Annex IV), Emys orbicularis (Annex II and IV)
Mammals: Spemophilus citellus (Annex II), Lutra lutra (Annex II and IV)

Vegetal associations and communities are supported by around 205 species of superior plants among which two are strictly protected under Berne Convention (*Trapa natans* and *Sahinia natans*), one species is of conservative interest (the orchids *Epipactis helleborine*) and other have special phytogeographic significance like: *Celtis australis* – mediteranean species, *Periploca graeca*, - submediteranean species and *Cynanchum acutum* – tropical and subtropical species).

Criterion 4:

Being located on a major migratory route, Iezer Calarasi territory represents an important area for resting and feeding of rare and very rare bird species. Protected bird species effectives were recorded as following:

a) Annex I Bird Directive species: 30;

b) Globally threatened species: 2;

The site is important for breeding populations of the following species: Aythya nyroca and Ardea purpurea. During migration, the site is important for the following species: Phalacrocorax pygmaeus, Cygnus cygnus, Branta ruficollis, Anser albifrons, Tringa glareola, Recurvirostra avosetta, Himantopus himantopus, Charadrius alexandrinus, Egretta garzetta, Philomachus pugnax, Ciconia ciconia, Egretta alba, Chlidonias niger, Mergus albellus and Sterna hirundo.

All these characteristics make the Lake Iezer Calarasi a major roosting site on southern part of Romania during winter season. Its deterioration would imply a major negative impact on the waterfowl.

Please see table under the justification of Criterion 2 for the list of bird species.

Criterion 5:

The Lake Iezer Calarasi represents an important staging area for most of migratory species on their way from Russia to Mediterranean and Africa. During migration on spring and autumn 20,000 - 30,000 birds can be recorded. In winter the number of *Anser albifrons* roosting on the lake varied from 8,000 individuals up to 29,000 individuals. Red-breasted Goose (*Branta ruficollis*) gathered in large number between 1,000 – 5,200 individuals especially in January. The number of 20,000 - 30,000 birds mentioned before is depending on the presence of *Anser albifrons* individuals but there are other species contributing significantly to criterion 5 (see Annex 1).

The data presented above was collected between 2000 and 2010, referenced from the following bibliography:

- H.G. 971/2011 Hotarare de Guvern pentru modificarea si completarea H.G. nr. 1284/2007 privind declararea ariilor de protectie speciala avifaunistica ca parte integranta a retelei ecologice europene Natura 2000 în Romania;
- 2. "Romanian Ornithological Society" database;

Criterion 6:

During winter, a large number of the Red-breasted geese (*Branta ruficollis*) are resting and feeding on the mentioned site. Around 1000 - 5200 individuals were encountered on the lake in 2010, which represents more than 1 % of the entire world population.

Greater White-fronted Goose (*Anser albifrons*) individuals from Iezer Calarasi Lake vary from 1500 up to 30000 individuals (over 1% of the Pontic/Anatolian population.)

Criterion 8:

The former Lake Ezerul Calarasi use to have around 21 fish species. In present times just 10 of this remained in the natural lake of the site: *Perca fluviatilis, Lepomis gibbosus, Leucaspius delineates, Esox lucius, Tinca tinca, Carassius auratus, Neogobius gymnotrachelus, Neogobius sp.* These species came from Danube by irrigation channels that maintain the link between Danube and the lake where they are feeding and spawning.

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

a) biogeographic region:

Europe: Stepic

World: West Palearctic

b) biogeographic regionalisation scheme (include reference citation):

Habitat Directive 92/43/EEC (1992) Donita, N., et al. (2005) Habitatele din Romania, Bucuresti

16. Physical features of the site:

Geology and geomorphology: The Ramsar site is laid-down on the Moesic platform, which includes the morphological units recognised as Campia Romana (Romanian Plain). Moesic platform has two structural levels: the basement and the sedimentary covering. Crystalline schist impregnated with granitic massive and "green schist" emerging in the Central Dobruja Massive represent the basement of the platform, while the southern part is dominated by crystalline schist palazu type.

Over the basement, along the different geological times, old sediments represented by lime, clay, bitter spar and calcareous marl had deposited structuring the sedimentary covering. Above the Levantine deposits, during lower Pleistocene, a horizon of gravel and send known as "Fratesti strata" is shaping. Petrographic, "Fratesti strata" are made in the upper part of fine-grained sand and sometimes coarse micaceous rocks and towards the base sand and pebbles in quartz, mica, marble, limestone and calcareous tuffs are dominant. The thickness of "Fratesti strata" is 15-25 m in South reaching 120 - 170 m in the North of Calarasi County. Over these, in medium-Pleistocene, marl, clay and sand strata, known as the Marl complex, have been deposited in succession being followed by upper-Pleistocene horizon represented by yellow medium and fine sands with calcareous and ferruginous concretions. The lower and upper- Holocene strata are represented by coarse alluviums and loess deposits in the first Danube Terrace and by coarse and fine alluviums in the floodplain.

Geomorphological, the Ramsar site is situated in the medium altitude floodplain developed by Danube between Mostistea and upstream Galatui, inside of whereto, lower areas with lobate contour appear representing the former lake basins drained in XIX century.

Soil type and chemistry range: The soils were created from Danube's alluvial grounds, also influenced by regularly flooding, depth of phreatic water and climate. The most common soil is typical alluvial protosoil.

Hydrology: The level of phreatic water in Iezer Calarasi site depends on the Danube water level. Usually, in Danube floodplain it is situated at 2-5 m depth but in lacustrine basins, the hydrostatic level can go to less than 2 m depth. During the spring and autumn Danube floods, phreatic water may reaches to the surface, flooding the agricultural land in the surrounding of the fishponds.

Water surfaces from the present site are represented by: Iezer Calarasi Lake, artificial ditches and wetlands from agricultural areas.

Water quality: The water in Iezer Calarasi Lake and artificial ditches is eutrophic to hyper-eutrophic, however allowing the growth for many fish species and maintaining biological diversity of the area.

Depth, fluctuations and permanence of water:

Maximum depth: 12.5 m; medium depth: 4 m.

Permanent water area: 550ha

Climate:

The climate is continental with aridity influence featuring warm summers and cold winters. The average temperature (per year) is 12°C. Yearly rainfalls have a medium value of 500mm; between April-October a value around 300mm is recorded. The main wind is "Crivat", causing frequent low temperature drops during winter season. Baltaretul is a local warm and wet wind specific to this area.

17. Physical features of the catchment area:

Area: Calarasi County

Geological characteristics: Calarasi County is laid-down on the Moesic platform, which includes the morphological units recognised as Campia Romana (Romanian Plain). Moesic platform has two structural levels: the basement and the sedimentary covering. Crystalline schist impregnated with granitic massive and "green schist" emerging in the Central Dobruja Massive represent the basement of the platform, while the southern part is dominated by crystalline schist palazu type.

Over the basement, along the different geological times, old sediments represented by lime, clay, bitter spar and calcareous marl had deposited structuring the sedimentary covering. Above the Levantine deposits, during lower Pleistocene, a horizon of gravel and send known as "Fratesti strata" is shaping. Petrographic, "Fratesti strata" are made in the upper part of fine-grained sand and sometimes coarse micaceous rocks and towards the base sand and pebbles in quartz, mica, marble, limestone and calcareous tuffs are dominant. The thickness of "Fratesti strata" is 15-25 m in South reaching 120 - 170 m in the North of Calarasi County. Over these, in medium-Pleistocene, marl, clay and sand strata, known as the Marl complex, have been deposited in succession being followed by upper-Pleistocene horizon represented by yellow medium and fine sands with calcareous and ferruginous concretions. The lower and upper- Holocene strata are represented by coarse alluviums and loess deposits in the first Danube Terrace and by coarse and fine alluviums in the floodplain.

Beside the floodplain, the relief of the catchment area is formed also by Danube Terraces.

Soil type: chernozym and levigated chernozym (installed on loess)

Climate: The same as in surrounding lake area

18. Hydrological values:

The site has importance for flood prevention and groundwater recharge.

19. Wetland Types

a) presence:

Inland:



Human-made:



b) dominance: O, Tp, W, 9, 4, 1, 2

O – Permanent freshwater lakes - 14.%

- Tp Permanent freshwater marshes/pools 5%
- W Shrub-dominated wetlands 5%
- 9 Canals and drainage channels 3%
- 4 Seasonally flooded agricultural land 2%
- 1 Aquaculture ponds 1.6 %
- 2 Ponds 1%

20. General ecological features:

The dominant lake vegetation is represented by reed and bulrush species (*Phragmites spp.*), as well as lilies (*Nymphaea alba, Nuphar lutea*) and protected aquatic plants: *Trappa natans, Salvinia natans.*

On shores and agricultural fields, several species of shrubs can be found (*Crataegus ssp.*, Rosa canina), representing a great source of food and shelter for wild birds.

21. Noteworthy flora: no

22. Noteworthy fauna: no

23. Social and cultural values:

Sport fishing and recreational activities during the weekends distinguish the social value of the site. Fish represents also a source of food for local townspeople.

24. Land tenure/ownership:

(a) within the Ramsar site:

The local forests are in the property of the Romanian state and administrated by Directia Silvica Calarasi. The lake is also state's property and granted to several companies implying fish assets. The agricultural fields are owned by private holders, while the ditches and access roads belong to Romanian state.

(b) in the surrounding area:

Most lands from site's surroundings are private properties or owned by the Romanian state.

25. Current land (including water) use:

(a) within the Ramsar site:

The land surrounding the lake is cultivated with cereals: winter wheat, maize and sunflower. People gathered in associations and they work their land together. The quantity of pesticides used in agriculture had decreased in the past years, because of high price. Other human activities in the site are related with fishing and aquaculture.

(b) in the surroundings/catchment:

The main economic activity in the area surrounding the lake is the agriculture so the lands are cultivated with winter wheat, maize, sunflower, barley, clover and rape. Also near the lake are grass lands used by the local stock-breeders for sheep, goat and cattle farming.

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

(a) within the Ramsar site:

In the former years, an intensive agricultural activity took place, based on pesticides that had their mark on the environment. A potential negative effect on the site may be disorganised tourism and static fishing. So far, no great project with a significant environmental impact was proposed.

b) in the surrounding area:

Intensive agriculture and crop changing may have a major negative impact on this site.

27. Conservation measures taken:

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

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

The Ramsar Site (5001 ha) covers the lake and its surroundings to the Danube, overlaping Nature 2000 ROSPA 0051 Izzerul Calarasi perimeter site. This area is larger than the natural reserve for bird protection designated by Calarasi County Counsil in 2001 for which the surface is 3105 ha.

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

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

c) Does an officially approved management plan exist; and is it being implemented?:

In 2001, the natural reserve for bird protection designated by the Calarasi County Counsil (3105 ha), was given in custody to SC Piscicola Calarasi SA which developed the regulation for the area and in 2002, during the project "Control of agricultural pollution" financed by World Bank and GEF, the management plan has been established. In 2011, SC Piscicola SA drop out the custody of site in the favour of Unesco ProNatura association.

In November 2011, HG nr. 971/2011 regarding the modification and completion of HG 1284/2007 regarding the declaration of Special Protected Areas as part of Natura 2000 network raised the surface of protected area from 4024 ha to 5001 ha. The Nature 2000 site ROSPA0051 Iezerul Calarasi was given in custody in April 2011, in order to review and complete the management plan. Conservation measures will be considered and described in the management plan of avian protected area APSA Iezer Calarasi.

d) Describe any other current management practices:

28. Conservation measures proposed but not yet implemented:

The main conservation measures foreseen are referring to:

- no reed burn in the area;
- no disturbance in the birds breeding season (interdiction of using motor boats and shoots to scare the fisheating birds etc);
- interdiction of shooting the birds;
- reduction of the chemicals use in the agricultural land;
- posibilities of eco-turism development in the area.

29. Current scientific research and facilities:

Protected flora and fauna monitoring is a continuous activity, being held by various scientists and Nature 2000 SPA Iezer Calarasi custodian.

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

A information centre belonging to Iezer Calarasi avian protected area is present, yearly visited by hundreds of tourists and scientists, from country or abroad, mainly for bird watching activities. Also, educational programs for students and teachers take place, for environment preserving and protection.

31. Current recreation and tourism:

The site offers recreational and visiting possibilities especially on week-ends, by town folks from Calarasi city. The frequency grows during summer for fishing or recreation.

However, occasional bird watching schedules are taking place for migratory waterfowl.

32. Jurisdiction:

Ministry of Environment and Forests B-dul.Libertatii nr.12, sector 5, Bucuresti

33. Management authority:

Clubul ecologic UNESCO Pro Natura Emilian Burdusel Calea Plevnei nr. 61, Bucuresti Tel/Fax: 0040 21 3152542; Email: <u>office@pronatura.ro</u>

34. Bibliographical references:

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

- 1. BirdLife Interational, 2001, Important Bird Areas and potential Ramsar sites in Europe, BirdLife International, Wageningen, The Netherlands.
- 2. Black, J.M. & Madsen, J. (1993) Red-breasted goose: research and conservation needs. *IWRB* Goose Research Group Bulletin, 4, 8-15.
- 3. Ciochia, V. & Hafner, H. (1969) Observations sur quelques especes d'oiseaux qui hivernent sur le litorel de la mer Noire et dans le delta du Danube. *Lucr. Stat. Cerc. Mar.* 3, 307-313.
- Dereliev, S. (2000) Results from the monitoring of wintering geese in the region of Shabla and Durankulak Lakes for the period 1995 – 2000. Bulgarian – Swiss Biodiversity Conservation Programme & Bulgarian Society for the Protection of Birds/BirdLife Bulgaria. Report. Sofia, 79 pp.
- Dijksen, A.J., Lebret, T., Ouweneel, G.L. & Philippona, J. (1973) Ornithological observations on the logoons of the Dobrogea, Rumania, in autumn and winter of 1969, 1970 and 1971. *Ardea*, 61, 159-178.
- H.G. 971/2011 Hotarare de Guvern pentru modificarea si completarea H.G. nr. 1284/2007 privind declararea ariilor de protectie speciala avifaunistica ca parte integranta a retelei ecologice europene Natura 2000 în Romania
- 7. Hulea, G.D., 2002, Winter feeding ecology of the Red-breasted Goose (*Branta ruficollis*), Ph.D Thesis, University of East Anglia, Norwich, UK
- Hunter, J.M. & Black, J.M. (1996) International action plan for the Red-breasted goose (Branta ruficollis). In Heredia, B., Rose, L. & Painter, M. Globally threatened birds in Europe - Action plans. Council of Europe Publishing, Strasbourg.
- 9. INCDDD, 2002, Planul de management pentru consevarea Rezervatiei Naturale Iezer Calarasi, Report.
- 10. Johnson, A. & Biber, O. (1971) IWRB goose research group mission to eastern Europe December 1970. *IWRB Bulletin*, 31, 43-51.
- 11. Johnson, A. & Hafner, H. (1970) Winter wildfowl counts in south-east Europe and western Turkey. *Wildfowl*, 21, 22:36.
- Kiss, J.B., Ballon, E. Ionascu, N. (1992) Efectele ingrijoratoare ale utilizarii insecticidelor pe baza de carbofuran, pe teritoriul RBDD. *Analele Stiintifice ale Institutului Delta Dunarii*, 253-255 (in Romanian).

- 13. Lebret, T. (1975) Geese counts in the Dobrogea, Rumania, IWRB Bulletin, 39/40, 49.
- 14. Munteanu, D., Toniuc, N., Weber, P., Szabo, J. & Marinov, M (1989) Evaluarea efectivelor pasarilor acvatice in cartierele lor de iernare din Romania (1988, 1989). *Ocrot. Nat.* 33, 105-112.
- 15. Patterson, I.J.,1991, Conflict between geese and agriculture; does goose grazing cause damage to crops. Ardea, 79, 179-186.
- 16. Puscariu, V. (1977) Roumanie. IWRB Bulletin 43/44, 32-33.
- 17. "Romanian Ornithological Society" database;
- 18. Scott, P. (1970) Redbreasts in Rumania. Wildfowl, 21, 37-41.
- 19. Sutherland, W.J. & Crockford, N.J. (1993) Factors affecting the feeding distribution of Redbreasted geese *Branta ruficollis* wintering in Romania. *Biological Conservation*, 63, 61-65.
- 20. Tolvanen, P., Pynnonen, P., 1997, Monitoring the autumn migration of Lesser White-fronted Goose *Anser erythropus* and other geese in NW Kazahstan in October 1996, Finish Lesser White-fronted goose conservation project, Annual report 1997. WWF Finland, Report 9, 19-20.
- 21. Vangeluwe, D. & Snethlage, M. (1992) Rapport des investigations sur l'ecologie et la conservation de la Bernache a cou roux Branta ruficollis en Dobroudja (Roumanie & Bulgarie), Janvier. *Institut Royal des Sciences Naturelles de Belgique*.