

**The Convention on Wetlands
(Ramsar, Iran, 1971)**

**Montreux Record - Questionnaire
(as adopted by the Conference of the Contracting Parties in Resolution VI.1)**

Section One

Information for assessing possible inclusion of a listed site in the Montreux Record

Essential items

- Name of site

“Lake of Seven Islands” Nature Reserve (Rezerwat przyrody “Jezioro Siedmiu Wysp”)

Ramsar Criteria for listing the site as internationally important (2, 3, 4, 6).

2. The wetland supports 28 species of birds endangered and vulnerable at European scale (Birds Directive Annex I) and 7 species listed in the Polish Red Data Book of Animals (Polish RDBA) including: bittern *Botaurus stellaris*, white-tailed eagle *Haliaeetus albicilla*, lesser spotted eagle *Aquila pomarina*, little crane *Porzana parva*, Ural owl *Strix uralensis*, white-backed woodpecker *Dendrocopos leucotos* and bearded tit *Panurus biarmicus*. The site supports 27 birds of the list of Species of European Conservation Concern (SPEC – Tucker and Heath 1994). Among the latter there are especially valuable species such as black stork *Ciconia nigra* and kingfisher *Alcedo atthis* in addition to the mentioned above: bittern *B. stellaris*, lesser spotted eagle *A. pomarina* and white-tailed eagle *H. albicilla* whose European populations do not exceed 50 thousand pairs.

3. The site contributes to the maintenance of animal populations important for the preservation of the country scale and regional biodiversity. Waters of the Oświn lake support vital population of endangered European crayfish *Astacus leptodactylus* and large swan mussel *Anodonta cygnea* which belongs to the most common in the lake. Both species are threatened with extinction at the country scale and vulnerable in the biogeographic region. Both species are listed by the Polish RDBA.

Moreover the site supports three fish species protected in Poland and Europe including bitterling *Rhodeus sericeus amarus* – listed in Annexes II and IV of Habitat Directive and having a status of vulnerable according to IUCN as well as spined loach *Cobitis taenia* and weatherfish *Misgurnus fossilis* – listed in Annexes II and IV to Habitat Directive and having a status of endangered according to IUCN. Bitterling and weatherfish are also on the Polish RDBA. Besides, the lake is a suitable breeding site for numerous fishes (22 altogether).

The site provides shelter for animal species embraced by Annexes II and IV of Habitat Directive such as firebellied toad *Bombina orientalis*, pond turtle *Emys orbicularis*, several species of bats *Chiroptera* and several mammal species – wolf *Canis lupus*, otter *Lutra lutra* and European beaver *Castor fiber*. In the site there occurs regularly about 2% of national population of white-backed woodpecker *Dendrocopos leucotos*.

4. The Lake Oświn supports many endangered species at fragile phases of their life cycles, e.g.– during migration, nesting and moulting, it is thus one of the most valuable site of European importance for waterfowl e.g. bluethroat *Luscinia svecica* and little crane *Porzana parva*.

6. The site is important as it regularly supports more than 5% of national population of little crane *Porzana parva*. For this species the wetland is one of 10 most important sites in Poland.

- Nature of the change in ecological character/potential for adverse changes

The lake Oświn is an eutrophic reservoir subject to terrestrialisation and classified as the pike-tench lake according to the fishery categorization. As a result of damaging, after the II World War, of a dam impounding water of Oświnka river flowing out of the lake and thus of importance for rising the water level in the lake, the process of terrestrialisation has been significantly accelerated. In 1993, a new dam was built to rise the water of Oświnka river this time on the land within the Polish jurisdiction (the old damaged dam was located in the area now belonging to the Russian Federation). Construction of the new impoundment led to the rise in the lake water level and increase in the number of local swamp and aquatic plants – both submerged and emerged species. At the same time, the coverage of the lake bottom by aquatic vegetation has increased more than twice; the community structure and numbers of plankton crustaceans dwelling in the lake underwent a significant change – currently the community structure of plankton crustaceans is characteristic of shallow, eutrophic and overgrown with macrophytes aquatic bodies of a pond type. Considering the fauna of plankton rotifers, the impoundment led to a change of the lake Oświn status from a heavily eutrophic “turbid” lake with strong episodes of algae blooming and domination of detritivorous rotifer forms into a lake of a macrophyte type wherein management of biophilous elements is controlled by submerged plants together with epiphytes which grow over the latter ones. The lake pelagial is now dominated by phytoplanktonivorous rotifers. Thus after the impoundment the restoration of the benthos structure has been observed to the current type characteristic of eutrophic polymictic lakes with submerged species taking a considerable share in the number and biomass of the lake assemblages. Moreover an important improvement has occurred, due to rising of the lake water level, in the biodiversity, biomass and the assemblage composition of local fishes and an improvement of the fish growth observed in most of the local fish species.

At the same time, significant changes have been observed over the last several years in the number and population numbers of birds nesting within the site including a decrease in numbers or decline of some birds and an increase in numbers or appearance of some other bird species. The number of geese and cranes resting within the site has decreased. Reasons for the abovementioned changes can not be precisely defined – they have to be seen in the broader scale. Probably there are several factors coming into play including those of local importance such as change in land use in the adjacent area, predation of American mink and raccoon and the continental scale changes in bird populations.

- Reason(s) for adverse change or potential adverse change in ecological character

In general, the changes which take place within the site after impounding the Oświnka river shall be considered as positive. They result also from the extensive enlargement in 2004 of the Reserve designated as Ramsar site, with concomitant change in the use of the adjacent land formerly managed for agricultural purposes and now embraced by protection. Along

with the Reserve extension its object of protection has been changed which is presently defined as follows:

Lake Oświn ecosystem;

Ecosystem of Oświnka river along with its entire valley embracing an intercept from the outflow from the lake Oświn to the state boundary;

Mosaic of terrestrial ecosystems within the limits of the Reserve.

According to the Management Plan for the Seven Islands Lake Reserve, the strategic goals of the site protection include:

- Maintenance of conditions and processes occurring in the lake Oświn in the course of terrestrialisation;
- Maintenance of conditions and processes occurring in the Oświnka river and in its valley;
- Preservation of mosaic of terrestrial ecosystems;
- Preservation of valuable plant communities;
- Preservation of valuable plant and animal populations.

According to the Management Plan for the Seven Islands Lake Reserve, the operational goals of the site protection include:

- Maintenance of the set water level in the lake Oświn;
- Reduction of biogen influx carried by river water into the lake Oświn;
- Preservation of the settled fish assemblage in the lake Oświn;
- Maintenance of the lake Oświn isolation from the aquatic system of the Great Masurian Lakes;
- Preservation of natural succession of forest communities;
- Maintenance of open meadows and pastures;
- Control of numbers of large herbivorous mammals;
- Control of numbers of predatory mammals;
- Monitoring the status of natural resources of the Reserve and the efficiency of the protective measures undertaken;
- Rendering the Reserve accessible for educational purposes;
- Installing the permanent surveillance in the Reserve.

Additional items which may be included

The initial Information Sheet on Ramsar Wetlands was submitted in 1984, update has been made in 2007.

- Date and source of Information Sheet updates (e.g. National Reports, national wetland inventory, specific survey)
 - Gromadzki M. (red.) 2004. Ptaki. Poradnik ochrony siedlisk i gatunków Natura 2000 - podręcznik metodyczny. Ministerstwo Środowiska, Warszawa. Tom 7 (część I), Tom 8 (część II) (Birds. Manual of species and site protection. Natura 2000 Methodical Manual).
 - Gromadzki M., Wiśniewski R. J. (red.). 2005. Jezioro Oświn i okolice. Monografia przyrodniczo-kulturowa. Zakład Ornitologii Polskiej Akademii Nauk.

Bogucki Wydawnictwo Naukowe. Poznań, 2005 (Oświn lake and its surroundings. A Natural and Cultural Monograph).

- Sidło P.O., Błaszczowska B., Chylarecki P. (red.) 2004. Ostoje ptaków o randze europejskiej w Polsce. Ogólnopolskie Towarzystwo Ochrony Ptaków, Warszawa (Important Bird Areas in Poland).
- Information obtained from the Voivodeship Nature Conservator of the Warmińsko-Mazurskie Voivodeship.
- The Management Plan for the Seven Islands Lake Reserve – Gromadzki M. et al. Gdańsk 2007.

- Benefits and values derived from the site

The site creates a vast tract of land with the Reserve of more than 1 600 ha and 150 ha of the so-called “ecological utility land” (low category designated area) in its immediate vicinity, managed for the protection of wetland ecosystems in the first place for many decades already. Restoration of the former hydrological relationships allowed for the restoration of the lake Oświn and for a significant extension of area covered by swampy plant communities which secure shelter for numerous plant and animal species of special care. The Reserve surface provides for its regional role as a special area for invertebrate protection, whose fauna has not so far been recognized in detail though preliminary data indicate that it contains numerous special care species of European importance. The site is of importance for the preservation and restoration of natural conditions and processes including, to a large extent, the conditions and processes dependent upon the wetland environment, for educating on nature, as well as for studying and monitoring the existing conditions and ongoing processes.

- Extent to which values and benefits derived from the site have decreased or changed

The extent of values and benefits for the protection of biodiversity of the site has been extended in view of the extension of the Reserve surface and the improvement in the conservation conditions as was described above. Simultaneously the study on nature of the Reserve has been intensified and their results provided for the elaboration of the monitoring programme to survey the nature of the site.

- Monitoring programme in place at the site, if any (technique(s), objectives, and nature of data and information gathered)

The Department of Ornithology of the Polish Academy of Sciences has developed the Management Plan for the Seven Islands Lake Reserve. The Plan proposes a monitoring system which should be successively implemented over the coming years. According to the Plan the monitoring shall be conducted in the following time intervals:

Every year:

Monitoring of vegetation using the method of plant sociological releves performed on fixed 100 m² plots randomly selected; with separate random selection of releve plots for forest, meadow and swamp communities;

Monitoring of flora – registration of stands of special care plant species;

Monitoring of breeding birds – registration of all breeding stands of selected bird species (great crested grebe, bittern, white stork, greylag goose, gadwall, all species of claw birds, spotted crake, little crake, crane, black-headed gull, all species of terns, all species of woodpeckers, Savi’s warbler, great red warbler,

barred warbler, red-backed shrike, wood lark); the determination of breeding degree is to be done according to the criteria listed by the Polish Ornithological Atlas;

Monitoring of breeding birds – list of breeding birds of the Reserve along with information on locations and sites where they are encountered; the determination of breeding degree is to be done according to the criteria listed by the Polish Ornithological Atlas; distribution of birds against the background of 1x1 km quadrangle network to obtain baseline information; the monitoring shall also be conducted outside the Reserve up to the distance of 5 km from its boundaries;

Monitoring of migratory birds – registration of waterfowl flocks resting within the site (species composition and numbers) during spring and autumn migration as well as of flocks arriving in summer in the Reserve;

Monitoring of ungulate mammals – trace counting on snow; registration of mating/fighting sites, with the information on numbers of participating males and females;

Monitoring of predatory mammals – counting of occupied dens of foxes, badgers, raccoon dogs; registration of all appearances of wolf; registration of sites of occurrence of otter and American mink;

Monitoring of beaver – counting of all occupied beaver lodges;

Monitoring of fishes;

Monitoring of amphibians and reptiles.

Every five years:

Monitoring of distribution and surface area of vegetation patches – on the base of remote sensing - air photographs;

Monitoring of hydrological status – standard set of measurements.

- Assessment procedures in place, if any (how is the information obtained from the monitoring programme used)

No new procedures of assessment of the lake status are in place at the time being.

- Ameliorative and restoration measures in place or planned (if any) so far

Ameliorative measures in place:

- Impoundment of water level in lake Oświn;
- Removal of hawthorn *Crataegus* sp. shrubs and of other bushes from the areas intended for maintenance as open meadow or pasture ecosystems;
- Mowing of tall herbaceous vegetation on areas intended for maintenance as open meadow or pasture ecosystems;
- Grazing of bred animals (the Polish tarpan like horses bred under conditions of semi-free breeding) on areas intended for maintenance as open meadow or pasture ecosystems;
- Establishing a buffer zone for the Reserve to include the fragments of the immediate catchment of lake Oświn which still remain outside the Reserve boundaries incl. catchments of Osiecka Struga and Ruda rivers and that portion of the catchment of Rawda river which lies below lakes Rydzówka and Węgielsztyńskie together with the catchment of Czarna river. Within the buffer zone activities shall be undertaken to improve the quality of water flowing into the lake Oświn:

- Abandonment of drainage of local depressions filled in with wetlands and small aquatic bodies which are important for water retention, contribute to improving local hydrology and have a buffer role as reservoirs trapping biogens and preventing them from getting into the lake;
- Conducting activities to reduce the influx to the lake of sediment material, organic matter and pollution taken away from the catchment surface. To this end it is necessary to introduce or maintain isolation belts build of vegetation trapping the contamination. Another effective action would be to successively abandon agricultural use of the land adjacent to water courses and switch to meadow and pasture management;
- Change of tillage type on hills – tillage shall be conducted in parallel to the slope and not along the runoff line;
- Avoiding the cleaning of water courses especially cleaning of draining ditches, and in particular avoiding deepening of the Rawda river bed from its mouth upstream to the mouth of Czarna river; both rivers constitute settling reservoirs for substances migrating from the catchment and polluting the lake;
- Reduction of surface and ground water pollution through land sanitation – improvement of waste and waste water management. Building of wastewater treatment plants at farms located within the catchment is desirable.

List of attachments provided by the Contracting Party (if applicable)

The book: Gromadzki M., Wiśniewski R. J. (eds). 2005. Oświn lake and its surroundings. Natural and cultural monograph. Bogucki Wydawnictwo Naukowe, Poznań, 448 pp. (in Polish with English abstracts and captures to Tables, Figures and Photos).

Section Two

Information for assessing possible removal of a listed site from the Montreux Record

- Success of ameliorative, restoration or maintenance measures (describe if different from those covered in Section One of this questionnaire)

Building of the impoundment as a basic restoration measure led to the rise in the lake water level and significant improvement of hydrological conditions of the Reserve. The changes prove to be durable – and are seen in the increase in the number of swamp and aquatic plants and changes in the community structure and numbers of plankton crustaceans in the lake. The impoundment led to a change of the lake status from a heavily eutrophic „turbid” lake with episodes of algae blooming and domination of detritivorous rotifer forms into a lake of a macrophyte type wherein management of biogens is controlled by submerged plants and epiphytic species. At present there occurs the restoration of benthos structure towards the one which is characteristic of eutrophic polymictic lakes with submerged species taking a considerable share in the number and biomass of the lake assemblages. As a result of impoundment an important improvement has occurred in the biodiversity, biomass and the assemblage composition of local fishes and an improvement of the fish growth observed in most of the local fish species. At the same time, the community structure and numbers of plankton crustaceans in the lake has been significantly improved – at present they resemble those of the overgrown by macrophytes shallow eutrophic lakes of the pond type.

The remaining restoration measurements such as removing of hawthorn and other shrubs from the areas intended to be kept as open meadow and pasture ecosystems, mowing of tall herbaceous vegetation on these areas and grazing of bred animals (Polish tarpan like horses under conditions of semi-free breeding) on the lake shores brought about positive trends and resulted in maintenance of open areas required by migratory bird species.

- Proposed monitoring and assessment procedures (describe if different from those in Section One of this questionnaire)

The monitoring procedures have been described under separate Paragraph above.

- Extent to which the ecological character, benefits and values of the site have been restored or maintained (provide details)

The initial hydrological system (existing before the II World War) has been fully restored in the lake Oświn and its surroundings. The restoration of the mosaic of habitats characteristic of the area is currently under way. Over the last decades the site area underwent positive changes linked in the first place with restoration of the lake Oświn and adjacent swampy areas, extension of the Reserve surface and ensuring its integrity in a new compact shape, abandonment of agricultural management within the semicircle area of the former shape of the Reserve territory. The forest, game and fishery management within the protected area have been settled according to guidelines of the Reserve Management Plan recently elaborated. Actions were undertaken to actively protect open ecosystems and the matters of the Reserve management have been arranged. The elimination of the border village Zielony Ostrów is also to mention as another positive change. This enabled to enlarge the protected area and contributed to a decrease in human penetration within the site. It has also allowed for undertaking active protection of open and aquatic ecosystems on a much broader scale.

- Rationale for removing the site from the Montreux Record (refer to Guidelines for operation of the Montreux Record, together with Section One of this questionnaire)

The main reason for inclusion of the Reserve in the Montreux Record were negative changes in local ecosystems resulting from the decrease in water level of the lake. This reason has now ceased to exist. The initial hydrological system (existing before the II World War) has been restored both in the lake Oświn and its surroundings. The restoration of the mosaic of habitats characteristic of the area is currently under way. Over the last decades there have been many positive changes within the site. They are due to the restoration of the lake Oświn and its immediate neighbourhood – areas of swamps where groundwater level has also increased. The Reserve has been extended and was given a roundish compact shape. Additional positive change is the elimination of the border village Zielony Ostrów what contributed to a decrease in human penetration within the protected area. The comprehensive Management Plan for the Reserve and a mechanism for its implementation have been elaborated and agreed with local groups of interests therefore it can be suggested that the reasons for including the site into the Montreux Record are no longer valid.

Department of Nature Conservation
Ministry of the Environment
Warsaw, Poland

October 2007

