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3PL003

Information Sheet on Ramsar Wetlands  
Świdwie Lake

1. Country: Poland
2. Date: 26 August 1991
3. No ref.: P003
4. Name and address of compiler:
5. Name of wetland:  
Świdwie Lake
6. Date of Ramsar designation:  
3 January 1984
7. Geographical coordinates:  
53° 34' N      14° 22' E
8. General location: 5 km east of Polish-German frontier, 8 km of the nearest town - Tanowo, northwest of Szczecin, northern Poland.
9. Area:  
Reserve - 891.28 ha  
Strict reserve - 382.03 ha
10. Wetland type:  
Eutrophic lake gradually overgrown by aquatic vegetation  
O S X
11. Altitude:  
12.3 a.s.l.
12. Overview:  
Eutrophic lake, nearly 75% of the lake surface is overgrown by reedbeds of *Phragmites communis* and bulrush (*Scirpus lacustris*) and stands of reeds (*P. communis* and reed mace (*Typha latifolia*) divide the lake surface into several small areas of open water. These shallow (0.7 - 1.5 m) relict water bodies are rapidly silting up with organic debris, and are covered by water plants, predominantly water soldier *Stratiotes aloides*. The lake is fed by channels and drainage ditches draining from the adjacent wet meadows, fields and forests (Wkrzańska Forest) to the north of the lake. The lake surroundings are underlain by sands. The water flows seasonally in spring and autumn. A temporarily drying ditch provides connection to the Stolsko lake situated on the frontier. Gunica River is the only outflow.
13. Physical features:  
The lake basin is shallow, of the pond type, the water receiving heavy loads of organic matter of autochthonic origin and,

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additionally, by allochthonic substances. On the basis of water analyses the lake is classified to the III purity class, the water pH ranging from 7.52 to 8.5. The water was found to contain the increased amounts of chlorides and has a great buffering capacity and high value of hardness. Water oxygenation oscillated between 113.34% in winter and 13.6% in summer. The surface of the lake is 358.32 ha and of reedbeds - 270 ha. The average depth - 0.7 m while maximum - 1.7 m. The catchment area takes 40.02 km<sup>2</sup>, the lake water influencing the area of 824.75 ha.

Geology: the lake with its neighbourhood is underlain by fine sands down to the depth of 8m, the peat layer width is 0.5 to 2 m while the impermeable layer is at the depth of 8 m.

Climate: W and NW winds predominate with the average speed of 4 - 8 m sec, the average air temperature is +18°C in July and -1°C in January, the average precipitation - 561 mm.

#### 14. Ecological features:

Main vegetation types of the landward section of the reserve range from alder carr (*Carici elongatae-Alnetum*), willow shrub (*Salici-Franguletum*) to reedbeds, bulrush and sweetgrass communities (*Scirpo-Phragmitetum*, *Glycerietum maximae*) to associations of high sedges (*Magnocaricion*). Associations of submerged vegetation comprise *Myriophyllo-Nupharetum*, *Hydrochari-Stratioetum* composed of plants rooted in the lake bottom. Also frequently encountered are duckweed associations (*Lemnetalia*).

In the partially protected part of the reserve there are fresh coniferous forests, mixed forest, dry coniferous forest and alder carr with *Alnus glutinosa*, in addition to dry and wet meadow habitats and sedge meadows.

#### 15. Land tenure/ownership of:

- a site: State owned
- b surrounding area: State owned

#### 16. Conservation measures taken:

The Świdwie Reserve comprises two parts:  
- a strict reserve set up on 14 January 1962, where all econo-

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mic activities are prohibited, and  
- a partial reserve with boundaries established on 7 November 1988, where forest management, farming and hunting are allowed upon previous agreement with the Provincial Nature Conservator.

17. Conservation measures proposed but not yet implemented:

It is necessary to elaborate a management plan identifying options for land use of some parts of the reserve, especially its forested portions. Possibility of using the reserve surroundings for tourism, construction of observation tower and guided tours for visitors along the marked paths are also considered.

Following the extension of the reserve area planned in the near future the reserve conservation will be strengthened since hunting and farming activities move further off its boundaries.

18. Current land use: principal human activities in:

- a/ site: all economic activities are exempted from the reserve
- b/ surroundings catchment:

The surroundings including the partial reserve are, since 1989, extensively used for agricultural purposes. Farming equipment is being used as well as minimal amounts of fertilizers or no chemicals at all, some fields have been set aside as fallow or waste grounds, there is a gradual withdrawal of agriculture from the reserve surroundings.

19. Disturbances/threats, including changes in land use and major development projects:

a/ at the site: In order to prevent the lake from becoming totally overgrown it is necessary to clear and maintain the drainage ditches every several years to ensure a better water movement. Upon modernizing the flood-gate it is recommended to raise and lower the water level temporarily for "rinsing" organic substances from the lake what would check the reedbed expansion.

b/ in the surroundings/catchment: The abandoning of agricultural activity in the surroundings poses a threat to waterfowl survival in the reserve as feeding and breeding grounds, necessa-

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ry for some birds, entirely disappear. It has been observed that crane /*Grus grus*/; greylag goose /*Anser anser*/; bean goose /*A. fabalis*/; and white-fronted goose /*A. albifrons*/ are no longer interested in the areas formerly used as pastures by all these species. It is expected that in the nearest future some species either entirely disappear or will be reduced in numbers including: lapwing /*Vanellus vanellus*/; corncrake /*Crex crex*/; yellow wagtail /*Motacilla flava*/; meadow pipit /*Anthus pratensis*/; whinchat /*Saxicola rubetra*/; partridge /*Perdix perdix*/ and quail /*Coturnix coturnix*/.

Feeding conditions have also deteriorated for other species such as harriers /*Circus spp.*/; lesser-spotted eagle /*Aquila pomarina*/; buzzards /*Buteo spp.*/ and owls /*Strigidae*/. Consequently, there is a necessity for reinstatement of farming activities, at least of some of them, both within and outside the reserve boundaries, including an extensive breeding of cattle, haymaking and sowing of grain.

The amounts and ways of appliance of fertilizer and plant protection means within the catchment should be subject to a strict control. It is also necessary to regulate the waste water management within the catchment considering settlements and big cattle breeding farms and to establish measurement points for the soil and water quality monitoring.

## 20. Hydrological and physical values:

In 1980 one of the oldest and richest stands of the Old Stone Age culture in Poland/ and reputable in Europe/ was found by Jerzy Giergielewicz. Several thousands of arrowheads, tools, etc. were found among other things. This stand is a relic of the ancient reindeer hunters that dwelled at the then valley of the Odra River in the late paleolithic period, i.e. 10 - - 12 thousand year B.C. The investigations performed by the Institute of Prehistory of the Adam Mickiewicz University in Poznań will be continued until 1993.

## 21. Noteworthy fauna:

The studies conducted at the Świdwie Ornithological Station in the years 1990 - 1991 have shown that about 170 bird species are encountered in the reserve. The area supports 116 breeding

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bird species. The site is of primary importance for rare birds, some of which are very uncommon in Poland and others have their important populations in the Świdwie Reserve, including /number of pairs in parentheses/:

- Eurasian bittern *Botaurus stellaris* /10 - 12/;
- greylag goose *Anser anser* /to 70/;
- gadwall *Anas strepera* /to 10/;
- marsh harrier *Circus aeruginosus* /about 7/;
- lesser-spotted eagle *Aquila pomarina* /1/;
- hobby *Falco subbuteo* /1/;
- honey buzzard *Pernis apivorus* /1/;
- quail *Coturnix coturnix* /1 - 2/;
- spotted crake *Porzana porzana* /2 - 4/;
- little crake *Porzana parva* /3 - 4/;
- crane *Grus grus* / to 10/;
- snipe *Gallinago gallinago* / to 30/;
- green sandpiper *Tringa ochropus* /4 - 5/;
- bluethroat *Luscinia svecica* /5 - 7/;
- bearded tit *Panurus biarmicus* /to 30/;
- red-crested flycatcher *Ficedula parva* /1/
- shrike *Lanius excubitor* /1 - 2/.

The reserve is a night rest and moulting site for cranes, 70 to 230 birds stay there from March to October. Important populations of geese /greylag /*Anser anser*/, bean goose/*A. fabalis*/ and white-fronted goose /*A. albifrons*/ have staging post and night rest place there; 2,000 to 10,000 were counted from October to April. The site is also a night rest place for starling /*Sturnus vulgaris*/ - about 40,000 specimens, barn swallow /*Hirundo rustica*/ - about 7,000 specimens and a moulting place of ducks: mallard /*Anas platyrhynchos*/ - 200 birds, gadwall /*A. strepera*/ - to 200 birds, northern shoveler /*A. clypeata*/ - to 60 birds, teal /*A. crecca*/ - to 80 birds, and of greylags /*Anser anser*/ - to 150 birds. Regular visitors include wigeon /*Anas penelope*/ - to 300 birds in April. Wintering species include: coot /*Fulica atra*/; mallard /*Anas platyrhynchos*/; gadwall /*A. strepera*/; mute swan /*Cygnus olor*/; tufted duck /*Aythya fuligula*/; common merganser /*Mergus mer-*

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ganser/- altogether 200 to 2,500 birds stay until lakefreezes.

## 23. Noteworthy flora:

The lake is gradually being overgrown by aquatic vegetation with dominating reeds /*Phragmites communis*/, bulrush /*Scirpus lacustris*/ and reedmace /*Typha latifolia*/ while watersoldier /*Stratiotes aloides*/ - grows in the open water.

## 24. Current scientific research and facilities:

Current research on bird fauna is conducted by the Świdwie Ornithological Station of the Polish Academy of Sciences in Szczecin, the latest work on the reserve avifauna is being prepared summarizing the results from the years 1990 - 1991. Permanent monitoring of selected breeding bird species is under way along with counts of cranes, counting of birds on the lake and studies on geese population dynamics.

## 25. Current conservation education:

An information brochure about the reserve is scheduled for the near future. Every year, up to 20 excursion have been received in the reserve. There is a steady research in the reserve in cooperation with Ornithological Circle from Szczecin.

## 26. Current recreation and tourism:

A new place has been rendered accessible for visitors, the so called Old Station wherefrom the lake can be seen. The intensity of touristic visits is irregular, more busy from May to August.

## 27. Management authority:

Provincial Nature Conservator in Szczecin

Forested areas belong to the State Forest Administration.

Farmland belongs to Dobra and Police Communities, and to the State Land Fund.

## 28. Jurisdiction:

The Świdwie Reserve lies on the area of Dobra and Police Communities.

## 29. Bibliographical references:

Noskiewicz J., Starobrzańska J., Wysocki R. - Birds of the Świdwie Reserve and its surroundings. In Polish.

Sobolewska E. - Preliminary characteristics of selected environmental parameters of the Świdwie Lake and its tributaries in the years 1987 - 1988. In Polish.

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Tadajewski A., - Securing water requirement of the Świdwie Reserve considering the interests of farming and forestry. In Polish.

Scientific Circle Of Geology Students in Olaszyn - Photo-documentation.