#### INFORMATION SHEET ON RAMSAR WETLANDS

**Country:** Germany

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# Name and address of compiler:

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Name of wetland: Starnberger See

Date of Ramsar designation: 15.02.76

Geographical coordinates: 47.45'N 11.18'E

General location: Bundesland Bayern, ca. 25 km SW of Munich

**Area:** 5,720 ha

Wetland type: 0

Altitude: 584 m above sea level

**Overview:** Natural freshwater lake with intensive recreational use, important leisure area for the nearby urban area of Munich. The shore areas are largely developed (settlements, leisure facilities); there are only few areas with natural shore vegetation (mainly sedges).

**Physical features:** The lake lies in a former glacial valley and is surrounded by end-moraine-dams on the western-, northern- and eastern shores. The lake draws its water from numerous streams and ground water sources, precipitation is also important. Maximum water depth 127 m, mean depth 53 m. Freshwater with a pH of 7.5-8.2. Amplitude of fluctuations in the water level 25 cm, maximum of 131 cm. Highest water level in spring, especially however in summer (August), lowest water level mostly in February and March. Long-term average annual precipitation 1,100 mm/m²; average yearly temperature  $7-8\circ C$ .

Ecological features: Extensive water body, largely free of vegetation; the developed shore areas are also devoid of vegetation. On some small stretches along the shore there is still vegetation typical of hydro-seral areas. Phragmites communis is dominant, with occasionally Schoenoplectus lacustris and Phalaris arundinaceus.

#### Land tenure/ownership of

a) site: water body 100% state owned; shoreline 53.7% state owned, 46.3% privately owned.

**b) surrounding area:** agricultural areas in private ownership, woods in private and state ownership.

Conservation measures taken: Landscape Reserve "Starnberger See and western shore areas" designated 24.05.1982 covering 9,463 ha. Nature Reserve "Karpfenwinkel" designated 01.05.85 covering 33.5 ha. Surrounding area: Nature Reserve "Leutstettener Moor" designated 01.01.85 covering 180 ha. Drainage and intensified use of the pasture land are prohibited; access is restricted, localized fishing is temporally restricted. There are 6 spawn-protection sites for fish, which are legally protected from any access between 15 March and 30 September.

Conservation measures proposed but not yet implemented: Creation of protected areas on the lake for wintering waterbirds, where hunting and water sports are prohibited from 01. November to 31 March. The proposal has been submitted to the responsible authorities.

## Current land use: principal human activities in

- a) site: Recreational activities: swimming, surfing, boating and mainly sailing. Fishing, hunting, gastronomy.
- **b)** surroundings/catchment: agriculture and forestry, hunting, further development of the area.

# Disturbances/threats, including changes in land use and major development projects

- a) at the site: Pressure on the whole lake and surroundings from massive recreational use, especially at weekends. The shore areas are the worst affected and suffer, for example, threats and damage to the last remaining reed beds on the shore through leisure activities (boating and surfing) and through waves (boat traffic). This disturbance also affects animals in the reed bed areas (mainly birds).
- b) in the surroundings/catchment: no information available.

Hydrological and physical values: not applicable.

**Social and cultural values:** Particular importance as local and regional leisure area. Important recreational area for the large city of Munich. Three large leisure complexes. Also important water body for fishing.

Noteworthy fauna: Internationally important resting and wintering area for waterbirds. The lake is also important as a refuge when other water bodies are frozen; Starnberger See itself does not freeze. The lake is a particularly important wintering site for *Gavia stellata*, *Gavia arctica*; Starnberger See, together with Bodensee, is one of the most important sites within Germany for *Podiceps cristatus* and *Podiceps grisegena*. No importance as a breeding site for *Podiceps* spp., with a maximum of 50 pairs of *Podiceps cristatus*.

Examples for maximum day counts of waterbirds: November 1986, total number of waterbirds: 24,795; Fulica atra 13,544, Aythya fuligula 7,080.

Noteworthy flora: The endemic variety of Myosotis rehsteineri can only be found in the Bodensee and in Starnberger See areas. On the eastern shore of Starnberger See, only ca. 200 individual plants survive and these are threatened with extinction because of recreational pressure.

Current scientific research and facilities: International waterfowl counts are carried out.

Current conservation education: not applicable.

Current recreation and tourism: Particular importance as local and regional leisure area. Important recreational area for the large city of Munich. Three large leisure complexes. Leisure activities: Swimming, surfing, boating and mainly sailing.

Management authority: no information supplied

Jurisdiction: no information supplied

### Bibliographical references:

- Müller, A., Lange, A. & Pilstl, F. (1989): Der Starnberger See als Rast- und Ueberwinterungsgewässer für See- und Lappentaucher (Teil I). Anz. orn. Ges. Bayern 28: 85-115. (Starnberger See as resting and wintering area for Podiceps spp. and Gavia spp. part I)
- Müller, A., Pilstl, F. & Lange, A. (1990): Der Starnberger See als Rast- und Ueberwinterungsgewässer für See- und Lappentaucher (Teil II). Anz. orn. Ges. Bayern 29: 97-138. (Starnberger See as resting and wintering area for *Podiceps* spp. and *Gavia* spp. part II.)

Reasons for inclusion: 1a); 2d); 3a), 3b), 3c).

Map of site: 1:50,000 enclosed.