

Information Sheet on Ramsar Wetlands

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

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

1. Date this sheet was completed/updated:

12-09-2002

FOR OFFICE USE ONLY.

DD	MM	YY

Designation date

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Site Reference Number

2. Country:

the Netherlands

3. Name of wetland: Markermeer

4. Geographical coordinates: 52°32'N - 05°15'E

5. Altitude: (average and/or max. & min.) NAP -8 - -1 m

6. Area: (in hectares) 61,000

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

A stagnant freshwater lake separated from Lake IJsselmeer by the closing of the Houtribdijk in 1975, in the east bordered by the reclaimed polders Oostelijk and Zuidelijk Flevoland (1957, 1968). The water level is kept higher during summer than in winter to provide water for farming. The lake is connected to lake IJmeer in the south. In the east it is adjacent to Oostvaardersplassen and Lepelaarsplassen in the reclaimed polder Zuidelijk Flevoland.

8. Wetland Type (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document.)

marine-coastal: A · B · C · D · E · F · G · H · I · J · K

inland: L · M · N · **O** · P · Q · R · Sp · Ss · Tp · Ts
· U · Va · Vt · W · Xf · Xp · Y · Zg · Zk

man-made: 1 · 2 · 3 · 4 · 5 · 6 · 7 · 8 · 9

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

9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page.)

1 · 2 · 3 · 4 · **5** · **6** · 7 · 8

Please specify the most significant criterion applicable to the site: 6

10. Map of site included? Please tick *yes* -or- *no*

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

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

National Reference Centre for Agriculture, Nature Management and Fisheries
PO Box 30, 6700 AA Wageningen, the Netherlands
tel.: +31 317 474800; fax: +31 317 427561

12. Justification of the criteria selected under point 9, on previous page. (Please refer to Annex II in the *Explanatory Note and Guidelines* document).

Criterion 5: The site (combined with the adjacent IJmeer) regularly supports more than 20,000 wintering waterbirds: average peak 155,007 (1991/92-1996/97).

Criterion 6, Average peak numbers of species meeting the 1% threshold (1992/93-1997/98):

Species	Biogeographical population	1% Biogeogr. Population	% at site
<i>Phalacrocorax carbo</i>	North-/ Central-Europe	2 000	2,6%

<i>Anas penelope</i>	W-Siberia/ NW-Europe	12 500	2,3%
<i>Anas strepera</i>	NW-Europe	300	1,3%
<i>Aythya ferina</i>	NW/ NE-Europe	3 500	1,7%
<i>Aythya fuligula</i>	NW-Europe	10 000	3,1%
<i>Aythya marila</i>	North-/ West-Europe	3 100	2,6%
<i>Mergus albellus</i>	NW-/ Central-Europe	250	4,4%
<i>Fulica atra</i>	NW-Europe (win)	15 000	1,4%
<i>Sterna hirundo</i>	South-/West-Europe	600bp	1,2%

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

Provinces of Flevoland and Noord-Holland, south of Enkhuizen, west of Lelystad and Almere, northeast of Amsterdam.

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)

Lake Markermeer was cut off from the lake IJsselmeer by the Houtribdijk in 1975. This dike was built for the purpose of land reclamation. This plan has never been carried out. Lake Markermeer is together with lake IJmeer a stagnant freshwater lake. The average depth is 3,9 meters, but in sand extraction areas the depth can be over 30 meters. For agricultural purposes the water level is high in summer (NAP – 0,20) and low in winter (NAP – 0,40 m). Water is supplied by several sources: rain, flow from the lakes Gooimeer and Eemmeer, water inlet for the lake IJsselmeer, discharge water from the provinces Flevoland and North-Holland and by the river Vecht. Lake Markermeer drains via Lake IJmeer and the North Sea Channel into the North Sea. Besides water is sluiced into the lake IJsselmeer. The soil mainly consists of clay. The lake shores concern mainly basalt dikes without vegetation.

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

The surrounding polders (located below sea level) drain into the IJmeer and Markermeer which are discharged into the North Sea Channel (to the North Sea) or to lake IJsselmeer.

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

Permanent freshwater lakes 100%.

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

Plant communities of European interest: *Nitellopsidetum obtusae*; *Ranunculo fluitantis-Potametum perfoliati*; Stoneworth species on the Red List: *Chara contraria*; *Nitellopsis obtusa*.

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

Note: Species included on Annex II of the EC Habitats Directive and bird species listed on Annex I of the EC Birds Directive have been indicated with an asterisk. In addition to those waterbirds listed under point 12, all waterbirds are mentioned occurring in numbers between 0,1 and 1,0% of their respective biogeographical populations Other non-waterbird species are included on the national Red List for the species group concerned.

Freshwater molluscs: *Theodoxus fluviatilis*; *Viviparus viviparus*; *Pseudanodonta complanata subsp. elongata*;

Freshwater fishes: *River Lamprey *Lampetra fluviatilis*; *Bitterling *Rhodeus sericeus amarus*; *Spined Loach *Cobitis taenia*; *Bullhead *Cottus gobio*; Orfe *Leuciscus idus*;

Birds (breeding): *Common Tern *Sterna hirundo*; (non-breeding): Great Crested Grebe *Podiceps cristatus*, Great Cormorant *Phalacrocorax carbo*, *Little Egret *Egretta garzetta*, *Eurasian Spoonbill *Platalea leucorodia*, Mute Swan *Cygnus olor*, *Bewick's Swan *Cygnus bewickii*, Eurasian Wigeon *Anas [Mareca] penelope* (2,3%), Gadwall *Anas strepera*, Northern Shoveler *Anas clypeata*, Red-crested Pochard *Netta rufina*, Common Pochard *Aythya ferina*, Tufted Duck *Aythya fuligula*, Greater Scaup *Aythya marila*, Common Goldeneye *Bucephala clangula*, *Smew *Mergus albellus*, Common Merganser *Mergus merganser*, Common Coot *Fulica atra*, Little Gull *Larus minutus*, *Black Tern *Chlidonias niger*;

Mammals: *Pond bat *Myotis dasycneme*.

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

See 21. Current land use.

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

Small part of the site is owned by Staatsbosbeheer (3 ha), the water is state owned.

Surrounding area: the water (IJmeer, IJsselmeer) is state owned, on land several private owners.

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

Boating 100%, Tourism and leisure 5%, Extractive operations 20%, Commercial fisheries 90%, Shipping traffic 20%, Conservation and research 1%, Water management 100%.

Surroundings/ catchment: –

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

Site (A = serious threat covering large part of the area; B = moderate threat or local threat; C = minor threat): Aquaculture/ fisheries (A -); Lake Aquaculture/ fisheries (B - entanglement in fish nets); Extraction industry (mining) (C - sand); Industrialization and urbanization (B - wind turbines and several building plans); Infrastructure (C - commuter transport); Recreation/ tourism (B - pleasure navigation and increase of cycle paths); Pollution (not Industrial discharge) (A - eutrophication).

Around the site: –

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)

Special Protection Area (Birds Directive 79/409/EEC, 2000, 61000 ha); Wetland of International Importance (2/4/2000, 61000 ha). Management plan: Ministerie VW, LNV, VROM. 1992. Integraal Beheersplan IJsselmeer en Markermeer. Ministerie VW, Lelystad.

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

Construction of islets and foreshores to create breeding and feeding areas for birds and spawning grounds for fish.

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

Most research and monitoring is carried out by the Institute for Inland Water Management and Waste Water Treatment (RIZA, www.riza.nl) of the Ministry of Transport, Public works and Watermanagement. The research is organised in four topics: *Wetland development and restoration*: research and advice on the restoration of wetlands to their natural state; *Water systems*: research and advice on the integrated management of inland waters; *Water pollution control*: research and advice on waste water treatment and emission levels; *Information and measurement technology*: collection and processing of data and research in specialist laboratories. Relevant research is also carried out the Institute for River Research, which is part of the Institute for Hydraulic Engineering (IHE, www.ihe.nl) in Delft, and focuses mainly on floodplain research. The Center for Limnology (NIOO-CL, www.nioo.nl) in Nieuwersluis studies plant-bird interactions in several large freshwater lakes as part of general limnological research programmes. Also regular bird counts.

26. Current conservation education: (e.g. visitors centre, hides, information booklet, facilities for school visits etc.) none

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

See 21. Current land use. Number of visitors not known, boating c. 3400 landing places.

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

Territorial: Municipalities of Lelystad, Almere, Waterland, Edam-Volendam, Zeevang, Hoorn, Stedebroec, Venhuizen, Enkhuizen; Functional jurisdiction (conservation purposes): Ministerie van Landbouw, Natuurbeheer en Visserij.

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

Rijkswaterstaat (Ministerie van Verkeer en Waterstaat), Directie IJsselmeergebied, PO Box 600, 8200 AP Lelystad, the Netherlands, +31 320 299111

30. Bibliographical references: (scientific/technical only)

- Interprovinciaal beleidsplan Markermeer. 1994. Provincie Flevoland/Provincie Noord-Holland
- Lammens, E. 1998. Het voedselweb van het IJsselmeer en Markermeer. Trends, gradiënten en stuurbaarheid. RizaNota nr. 98.003. RIZA, Lelystad.
- de Leeuw, J. 1997. Demanding divers. Ecological energetics of food exploitation by diving ducks. Rijkswaterstaat, Directie IJsselmeergebied, Lelystad.
- Ministerie V&W, Ministerie LNV, Ministerie VROM 1992. Integraal Beheersplan IJsselmeer en Markermeer

- Osieck E.R. & Borggreve C.M. 1999. National Inventory of Ramsar sites in the Netherlands. IKC Natuurbeheer, Wageningen.
 - Platteeuw M. 1995. De ecologische draagkracht van IJsselmeer en Markermeer in relatie tot het gebruik door de watersport. (Intern rapport 1995-9Lip) Directie IJsselmeergebied Rijkswaterstaat, Lelystad.
 - van Roomen M.W.J, et. al. 2000. Belangrijke vogelgebieden in Nederland, 1993-97. Actueel overzicht van Europese vogelwaarden in aangewezen en aan te wijzen speciale beschermingszones en andere belangrijke gebieden. SOVON-informatierapport 2000/01. SOVON Vogelonderzoek Nederland, Beek-Ubbergen.
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Please return to: **Ramsar Convention Bureau, Rue Mauverney 28, CH-1196 GLAND, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: ramsar@hq.iucn.org