

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: Westerschelde en Verdrongen Land van Saeftinghe

4. Geographical coordinates: 51°23'N - 03°50'E

5. Altitude: (average and/or max. & min.) NAP -30 – 3 m

6. Area: (in hectares) 19,500

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

Tidal estuary of the River Schelde with mudflats, sandbanks and raised saltmarsh (Verdrongen Land van Saeftinghe, 3500 ha) - the only estuary in SW. Netherlands which will remain open. The estuary is 60 km long from the Belgian border till the North Sea, close to the Voordelta in the northwest.

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: FGH

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: 1

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 1: The "Verdrongen Land van Saeftinghe" (3500 ha) along the Westerschelde belongs to the largest and most intact examples of Atlantic salt marshes in Europe.

Criterion 2: The site has a high diversity of interesting plants and animal species including:

- *Salicornietum brachystachyae*; *Salicornietum dolichostachyae*; *Puccinellietum maritimae*; *Plantagini-Limonietum*; *Halimionetum portulacoidis*; *Puccinellietum distantis*;
- Mushroom species on the Red List: *Tricholoma fulvum*;
- Moss species on the Red List: *Campyllum polygamum*; *Rhizomnium pseudopunctatum*;
- Vascular plant species on the Red List: Parsley Water-dropwort *Oenanthe lachenalii*.

Criterion 4: The site is of special value as the habitat of animals at a critical stage of their biological cycle as an important moulting and pre-migratory fattening of waders (moulting concerns e.g. *Haematopus ostralegus*, *Charadrius hiaticula*, *Numenius arquata*, *Tringa erythropus*, *Arenaria interpres*) and as a moulting site for the Shelduck *Tadorna tadorna*.

Criterion 5: The site regularly supports more than 20,000 waterfowl: average peak 131,283 (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>Anser anser</i>	NW/ SW-Europe	2 000	5,8%
<i>Tadorna tadorna</i>	NW-Europe	3 000	1,7%
<i>Haematopus ostralegus</i>	Europe/ N&W-Africa	9 000	2,2%
<i>Recurvirostra avosetta</i>	W-Europe/ W-Mid. Zee	700	1,1%
<i>Charadrius hiaticula</i>	West/ South-Africa (win)	2 000	1,2%
<i>Pluvialis squatarola</i>	East Atlantic	1 500	2,5%
<i>C. canutus islandica</i>	NE-Canada/ NW-Euro	350 000	1,0%
<i>Calidris alba</i>	East Atlantic ...	1 000	1,3%
<i>Calidris alpina</i>	N-Siberia/ West-Africa	14 000	2,1%
<i>Limosa lapponica</i>	W-Paleartisch (win)	1 000	1,3%
<i>Numenius arquata</i>	Europe	3 500	1,1%
<i>Tringa totanus totanus</i>	East Atlantic (win)	1 500	1,3%
<i>Sterna sandvicensis</i>	W-Europe/ W-Africa	500 breeding pairs	4,2%
<i>Sterna hirundo</i>	South-/ West-Europe	600 breeding pairs	1,6%

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

Province of Zeeland, between Vlissingen and Antwerpen (Belgium).

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)

The Westerschelde is the only remaining estuary in the Delta area. The site transports water from the river Scheldt into the North Sea. The site also receives 200 million m³ drainage water a year from adjacent polders. With the tidal flow saline sea water enters the site. This water mixes with the freshwater, the salinity of the water decreases upstream. The eastern part of the Westerschelde is one of the most polluted areas in the Netherlands. The pollution is imported with the Scheldt-water from Belgium or originates from industrial areas near Vlissingen and Terneuzen. Deepening of the shipping lane to Antwerp (combined with sludge disposal elsewhere in the estuary) has affected geomorphological processes like erosion and sedimentation causing silting up of side channels.

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

The relatively well maintained estuarine system of the Westerschelde forms the connection between the river Scheldt in Belgium and the North Sea.

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

Water in sea-arms 77%, Intertidal mudflats 17%, Salt marshes 5%.

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

Plant communities of European interest: *Salicornietum brachystachyae*; *Salicornietum dolichostachyae*; *Puccinellietum maritimae*; *Plantagini-Limonietum*; *Halimionetum portulacoidis*; *Puccinellietum distantis*;

Mushroom species on the Red List: *Tricholoma fulvum*;

Moss species on the Red List: *Campylium polygamum*; *Rhizomnium pseudopunctatum*;

Vascular plant species on the Red List: Parsley Water-dropwort *Oenanthe lachenalii*.

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.

Birds, Westerschelde (breeding): *Avocet *Recurvirostra avosetta*, Common Ringed Plover *Charadrius hiaticula*, Kentish Plover *Charadrius alexandrinus*, *Mediterranean Gull *Larus melanocephalus*, Lesser Black-backed Gull *Larus fuscus [graellsii]*, Herring Gull *Larus argentatus*, *Sandwich Tern *Sterna sandvicensis*, *Common Tern *Sterna hirundo*, *Little Tern *Sterna albifrons*; (non-breeding): Great Crested Grebe *Podiceps cristatus*, *Little Egret *Egretta garzetta*, *Eurasian Spoonbill *Platalea leucorodia*, Greylag Goose *Anser anser*, Common Shelduck *Tadorna tadorna*, Eurasian Wigeon *Anas [Mareca] penelope*, Gadwall *Anas strepera*, Mallard *Anas platyrhynchos*, Northern Pintail *Anas acuta*, Northern Shoveler *Anas clypeata*, Red-breasted Merganser *Mergus serrator*, *Peregrine Falcon *Falco peregrinus*, Eurasian Oystercatcher *Haematopus ostralegus*, *Avocet *Recurvirostra avosetta*, Common Ringed Plover *Charadrius hiaticula*, Kentish Plover *Charadrius alexandrinus*, *Eurasian

Golden-Plover *Pluvialis apricaria*, Grey Plover *Pluvialis squatarola*, Knot *Calidris canutus islandica*, Sanderling *Calidris alba*, *Calidris alpina alpina*, *Bar-tailed Godwit *Limosa lapponica*, Eurasian Curlew *Numenius arquata*, Spotted Redshank *Tringa erythropus*, Common Redshank *Tringa totanus totanus*, Turnstone *Arenaria interpres*; Mammals, Westerschelde: *Common Seal *Phoca vitulina*.

Birds, Verdrongen Land van Saefthinghe (breeding): *Western Marsh-Harrier *Circus aeruginosus*, *Spotted Crake *Porzana porzana*, *Mediterranean Gull *Larus melanocephalus*, Herring Gull *Larus argentatus*, *Common Tern *Sterna hirundo*, *Bluethroat *Luscinia svecica*; (non-breeding): *Little Egret *Egretta garzetta*, *Eurasian Spoonbill *Platalea leucorodia*, *Bewick's Swan *Cygnus bewickii*, White-fronted Goose *Anser albifrons*, Greylag Goose *Anser anser*, Common Shelduck *Tadorna tadorna*, Eurasian Wigeon *Anas [Mareca] penelope*, Gadwall *Anas strepera*, Common Teal *Anas crecca*, Northern Pintail *Anas acuta*, Northern Shoveler *Anas clypeata*, *Peregrine Falcon *Falco peregrinus*, *Avocet *Recurvirostra avosetta*, Common Ringed Plover *Charadrius hiaticula*, Grey Plover *Pluvialis squatarola*, *Calidris alpina schinzii*, *Bar-tailed Godwit *Limosa lapponica*, Eurasian Curlew *Numenius arquata*, Spotted Redshank *Tringa erythropus*, Common Redshank *Tringa totanus totanus*.

Molluscs; *Alderia modesta*; *Assimineia grayana*; *Leucophytia bidentata*; *Limapontia depressa*; *Ovatella myosotis*; *Cerastoderma glaucum*; *Ovatella denticulata*.

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

The salt marshes are partly owned by Staatsbosbeheer (430 ha), Natuurmonumenten (181 ha) and Zuidhollands Landschap (544 ha). The water area of the estuary is state owned.

Surrounding area: The water (North Sea) is state owned, on land several private owners.

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

Site: Dairy farming 5%, Boating 50%, Tourism and leisure 30%, Extractive operations 25%, Commercial fisheries 50%, Shipping traffic 25%, Conservation and research 11%.

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 (B -); Dredging and canalization (A -); Industrialization and urbanization (A - industrial discharges/ polluted sediments, wind turbines, harbour extension); Infrastructure (C - tunnel construction, deepening of the channel); Recreation/ tourism (B -); 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)

Westerschelde: Nature Conservation Act (1973, 99 ha); Nature Conservation Act (1975, 28 ha); Nature Conservation Act (1977, 92 ha); Nature Conservation Act (1978, 1 ha); Special Protection Area (Birds Directive 79/409/EEC, 2/4/2000, 16000 ha); Wetland of International Importance (2000; 16000 ha).

A policy plan covers the whole estuary (Beleidsplan Westerschelde, 1990), the salt marshes managed as nature reserves are subject to management plans.

Saefthinghe: Nature Conservation Act (1976, 3500 ha); Special Protection Area (Birds Directive 79/409/EEC, 1995, 3500 ha), Wetland of International Importance (1995, 3500 ha). Management available for this site.

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

Westerschelde: Proposed Site of Community Interest (Habitats Directive 92/43/EEC, 12909 ha).

Saefthinghe: Proposed Site of Community Interest (Habitats Directive 92/43/EEC, 3347 ha).

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

Most of the topics studied at in the Wadden Sea (ecology of seals, birds (numbers, distribution, foraging, breeding), fish, invertebrates, seagrass, sediment) are also studied and monitored in the Delta by the Institute for Coast and Sea (RIKZ, Middelburg, www.rikz.nl) and Center for Marine and Estuarine Ecology (NIOO/CEMO, www.nioo.nl) in Yerseke. The long term studies also include the effects on the ecosystem of the closure of the Oosterschelde with a half-open dam and monitoring the macrobenthic fauna of the estuarine area in the Delta region, in particular related to environmental impact assessment of land reclamation schemes (SLUFTER) and deepening of the Westerschelde. Also monitoring of functional and structural variables of the ecosystems at regular intervals during at least 10 years. Aim is to assess the extent and causes of long-term changes in ecosystems and biodiversity, to indicate threats to a system, to obtain basic data for models, and to indicate forcing factors in the systems. Further research: Biogeochemical processes in estuarine systems, Animal-sediment relations on tidal flats, Influence of rising sea level on ecosystem dynamics of salt marshes, The morphodynamical development of intertidal mudflats, The influence of climatic change on coastal sediment erosion (NIOO, www.nioo.nl).

26. Current conservation education: (e.g. visitors centre, hides, information booklet, facilities for school visits etc.)

Visitor centre, excursions, hide.

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.

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

Territorial: Municipalities of Hontenisse, Oostburg, Terneuzen, Borsele; Kapelle, Reimerswaal; 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)

Westerschelde: Rijkswaterstaat (Ministerie van Verkeer en Waterstaat), Directie Zeeland, PO Box 5014, 4330 KA Middelburg, the Netherlands, +31 118 672200

Saeftinghe: Stichting het Zeeuwse Landschap PO Box 25, 4450 AA Heinkenszand, the Netherlands, tel. +31 113 569110

30. Bibliographical references: (scientific/technical only)

- Beleidsplan Westerschelde. 1991. Bestuurlijk Klankbordforum Westerschelde. Middelburg.
- Bisseling C.M., Draaijer L.J., Klein M., Nijkamp H. 1994. Ecosysteemvisie Delta. Rapport IKC Natuurbeheer nr. 7. Informatie- en Kenniscentrum Natuurbeheer, Wageningen
- Meininger P.L., Berrevoets C.M. & Strucker R.C.W. 1993. Watervogels in de Zoute Delta 1987-91. Dienst Getijdewateren, Middelburg.
- Osieck E.R. & Borggreve C.M. 1999. National Inventory of Ramsar sites in the Netherlands. IKC Natuurbeheer, Wageningen.
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- Stuart J.J., Meininger P.L. & Meire P.M. 1990. Watervogels van de Westerschelde, 1-2. Rijksuniversiteit Gent, Gent/ Dienst Getijdewateren, Middelburg.

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