

Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

May 2012

3. Country:

Denmark

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Nissum Fjord
(International No. 143, National No. 4)

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or
b) Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or
ii) the boundary has been extended ; or
iii) the boundary has been restricted**

and/or

If the site area has changed:

- i) the area has been measured more accurately ; or
- ii) the area has been extended ; or
- iii) the area has been reduced**

** **Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

No major changes to the ecological character of the site are known. Eutrophication remains a problem.

7. Map of site:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) a **hard copy** (required for inclusion of site in the Ramsar List): ;
- ii) an **electronic format** (e.g. a JPEG or ArcView image) ; Denmark_ramsar4.pdf

- iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** .

A comprehensive ESRI ArcView GIS 3.1 shapefile named DKRamsar_WGS84geo is submitted in conjunction with the Danish RIS 2008 update files. The shape is geo referenced and projected in datum WGS84. The shape is composed of five files:

- a. DKRamsar_WGS84geo.shp
- b. DKRamsar_WGS84geo.dbf
- c. DKRamsar_WGS84geo.shx
- d. DKRamsar_WGS84geo.sbn
- e. DKRamsar_WGS84geo.sbx

and is considered self-explanatory in its database fields.

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

All Danish Ramsar sites are also designated as Special Protection Areas for Birds (SPAs) under the EEC Birds Directive, and most of them as Special Areas of Conservation (SACs) under the EEC Habitats Directive, hence part of the Danish Natura 2000 network. Generally the delineation of the Ramsar-sites are identical to that of the SPAs, follow coastlines or lake shores, but also includes adjacent salt marshes.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

56°21'N, 08°14' E

9. General location:

Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

The site is an inlet on the migratory route along the West Coast of Jutland with connection to the North Sea through a lock system. The site is situated 20-30 km west of Holstebro city, in administrative Region Midtjylland, and municipalities of Holstebro and Lemvig.

10. Elevation: (in metres: average and/or maximum & minimum)

0-2 m

11. Area: (in hectares)

10,952 hectares

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Nissum Fjord is a very eutrophic brackish lagoon with connection to the North Sea through a lock system. Salt marshes, reed swamps and meadows surround the area.

13. Ramsar Criteria:

Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 2: The site is an important breeding area for waterbirds, including some species on the Danish red list (DMU 2007), e.g. Northern Pintail *Anas acuta* (VU), Black-tailed Godwit (*Limosa limosa*)(NT – IUCN, VU Denmark), Dunlin *Calidris alpina schinzii* (EN, Ann. I EU Birds Dir.), Ruff *Philomachus pugnax* (EN, Ann. I EU Birds Dir.), and Little Tern *Sterna albifrons* (NT, Ann. I EU Birds Dir.), and other species listed in Annex 1 of the EEC Birds Directive, i.e. Avocet (*Recurvirostra avocetta*), Arctic Tern (*Sterna paradisaea*) and Common Tern (*Sterna hirundo*).

Criterion 5: The site regularly holds well over 20,000 staging waterbirds, especially during autumn and spring. During normal winters most of the fjord freezes up. (For bird count numbers see justification of criterion 6 and table under point 22).

Criterion 6: The Ramsar site regularly supports more than 1% of the individuals in the populations of the following species (average of available count data tabulated below for 2004-2009 compared to WPE4):

Pink-footed Goose (*Anser brachyrhynchus*) 4,133 birds – 9.8% of the Svalbard/NW Europe population
 For Pink-footed Goose, which mainly feed on adjacent agricultural fields outside the Ramsar area, even higher proportions are likely to roost at night. (In Denmark swans and geese are monitored during daytime at feeding sites).

Barnacle Goose (*Branta leucopsis*) 5,755 birds – 1.4% of the Russia/Germany/Netherlands population
 Light-bellied Brent Goose (*Branta bernicla brota*) 490 birds – 7.0 % of the Svalbard/Denmark/UK population

Avocet (*Recurvirostra avocetta*) from the Western Europe and North-west Africa population. Average numbers of this species tabulated in section 22 below is 486 individuals equivalent to 0.86% of the fly-

ways population, but counts of the area most years falls to late in autumn to meet peak numbers. Three years have counts above or near the 1% criterion of 730 birds (700 in 2004; 920 in 2006, 966 in 2009).

Bar-tailed Godwit (*Limosa lapponica*) 6,053 birds. It is uncertain to which population these birds belong, but the average counts would qualify both for the *tajmyrensis* Siberian (breeding) - West & South-west Africa (nonbreeding) population (1% criterion = 6000 birds) and the Northern Europe and Western Siberia (breeding) Western Europe (nonbreeding) population (1% criterion = 1200 birds)

The site was also internationally important in the immediate past for Greylag Goose (*Anser anser*) from the NW Europe/SW Europe population, but internationally important numbers of this species (>5000 birds) have not been recorded during 2004-2009.

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Biogeographical Regions Europe, 2005, European Environment Agency

or Criterion 2, species are listed either:

- i) with reference to their presence on the International lists of species of conservation concern, i.e. listed on the most recent IUCN Red list and according to most recent criteria for conservation concern (IUCN 2007).
- ii) or with reference to their presence on the National lists of species of conservation concern. The latter are under transition from published information to online information which means that for some taxa older IUCN criteria for red listing have been applied (e.g. fish, Stoltze & Pihl 1998), while for other taxa the most recent IUCN criteria are adopted (e.g. birds, amphibians DMU 2008).
- iii) or with reference to their presence on Annex 1 of the EEC Birds Directive, or Annex 2 of the EEC Habitats Directive, and are considered threatened in the European Union

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

The site is a shallow 76 km² estuary (mean depth 1.0 meter) connected to the North Sea through a sluice. Geomorphologically the estuary consists of 3 connected basins. The Storå river has its outfall in the inner basin, and therefore the 3 basins have a salinity gradient from the inner basin (0-4‰) to the outer basin (1-25‰). Since 1868, when the sluice was established, the water level and salinity have been controlled by man. Due to the high loads of nutrients the water quality is poor with a yearly average autotroph biomass up to 1,500 µg C/l in the inner basin and up to 700 µg C/l in the central basin. In the late 1980s the yearly average biomass was even higher, up to 2,500 µg C/l.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

The nutrient load from the catchment area has only partly decreased since the mid 1980s. The total phosphorus load has decreased about 50% since the mid 1980s due to improved wastewater treatment from household and industries. The total nitrogen load, that mainly derives from open land areas, does not show a statistical significant decrease compared to the level in the mid 1980s despite regional and national efforts to reduce the nitrogen load.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

No specific information.

19. Wetland Types

a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • Q • P • Q • R • Sp • Ss • Tp Ts • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

J, O, H, 4, E, F

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The site is a shallow, brackish fjord including saltmarshes and reed swamps. The submerged vegetation varies considerably from the inner basin, where it is almost absent due to the poor water quality, to a relative good coverage in the outer basin with connection to the North Sea. The depth-limit has overall increased significantly from 0.7 meter in the mid 1980s to 1.0 meter in 2000, probably due to a decrease in the phosphor load.

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

No specific information.

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Breeding area for many fresh- and salt marsh birds including: *Botaurus stellaris*, *Anas strepera*, *Anas querquedula*, *Anas acuta*, *Anas clypeata*, *Circus aeruginosus*, *Limosa limosa*, *Calidris alpina*, *Philomachus pugnax*, *Recurvirostra avosetta*, *Larus fuscus*, *Sterna sandvicensis*, *Sterna hirundo*, *Sterna paradisaea*, *Sterna albifrons*.

The duck and gull population count data have not been analyzed (but a forthcoming breeding bird status report will deal with these, Christensen & Østergaard in prep.), and numbers will be reported in the next RIS. Available count data for the other species are tabulated below.

Breeding waterbirds: Table giving the most recent information about breeding waterbirds in the Ramsar site. Published and unpublished data from the NOVANA programme of the Ministry of Environment and DCE, supplemented with data from the Birdlife Denmark citizen science portal DOFbasen on selected breeding species covered by the EEC Birds Directive Annex 1. Numbers given are annual breeding populations of the species listed. Counting intensity varies over the years. Note: 0 does not necessarily mean the species was absent – rather not counted/reported

Species \ Year	Breeding population (in pairs)					
	2004	2005	2006	2007	2008	2009
<i>Phalacrocorax carbo</i>	0	0	105	143	149	22
<i>Botaurus stellaris</i>	2	0	1	3	16	3
<i>Recurvirostra avosetta</i>	71	27	0	38	15	7
<i>Charadrius alexandrinus</i>	0	0	0	0	0	0
<i>Calidris alpina</i>	6	5	4,5	8	0	0
<i>Philomachus pugnax</i>	0,5	0	1	2	0	0
<i>Sterna sandvicensis</i>	0	0	0	0	0	0
<i>Sterna hirundo</i>	1	0	0	0	0	0
<i>Sterna paradisaea</i>	0	10	0	0	0	0
<i>Sterna albifrons</i>	9	0	0	0	0	0

Note: this site has not been subject to intensive monitoring programmes. Absence of e.g. Spotted Crake (*Porzana porzana*) and Marsh Harrier (*Circus auruginosus*) in the table might thus represent missing coverage rather than absence of these species.

The site has been known since the 1960s as being an important staging and wintering area for waterbirds:

Migratory waterbirds: Table giving the most recent information about staging waterbirds in the Ramsar site. Published and unpublished data from the NOVANA programme of the Ministry of Environment and DCE, supplemented with data from the Birdlife Denmark citizen science portal DOFbasen on migratory species of national responsibility (for details see Miljø- og Energiministeriet, Skov- og Naturstyrelsen 1999), and selected migrant species (e.g. some raptors and *Charadrius morinellus*) covered by the EEC Birds Directive Annex 1. Numbers given are annual maxima of the species listed. Counting intensity varies over the years. Note: 0 does not necessarily mean the species was absent – rather not counted/reported. Averages are thus computed based on years with numbers reported.

Species \ Year	Annual Maxima						Average
	2004	2005	2006	2007	2008	2009	
<i>Tachybaptus ruficollis</i>	0	0	0	0	2	0	2
<i>Podiceps cristatus</i>	112	138	152	237	60	87	131
<i>Podiceps auritus</i>	0	0	0	0	1	0	1
<i>Phalacrocorax carbo</i>	205	730	546	1092	926	1784	881
<i>Botaurus stellaris</i>	0	0	2	0	1	0	2
<i>Ardea cinerea</i>	10	0	0	0	57	0	34
<i>Platalea leucorodia</i>	0	1	2	0	12	5	5
<i>Cygnus olor</i>	337	500	300	209	405	342	349

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<i>Cygnus columbianus</i>	66	428	38	16	30	52	105
<i>Cygnus cygnus</i>	561	258	112	259	340	365	316
<i>Anser fabalis</i>	2	2	0	1	12	0	4
<i>Anser fabalis rossicus</i>	0	6	2	0	0	20	9
<i>Anser brachyrhynchus</i>	2900	6170	2190	4360	4200	4975	4133
<i>Anser albifrons albifrons</i>	7	1	165	2	0	0	44
<i>Anser anser</i>	1930	4604	3601	4500	4355	2032	3504
<i>Anser caerulescens</i>	0	2	0	1	0	0	2
<i>Branta canadensis</i>	0	0	0	0	13	0	13
<i>Branta leucopsis</i>	2500	6000	3150	9000	10000	3880	5755
<i>Branta bernicla</i>	0	0	0	0	0	1	1
<i>Branta bernicla bernicla</i>	8	272	11	125	50	2	78
<i>Branta bernicla brota</i>	264	636	593	516	550	379	490
<i>Branta ruficollis</i>	0	0	1	0	0	0	1
<i>Tadorna tadorna</i>	49	163	298	283	299	212	217
<i>Anas penelope</i>	2307	1770	2800	830	532	898	1523
<i>Anas strepera</i>	2	20	0	0	5	3	8
<i>Anas crecca</i>	2820	3061	4245	2396	2570	1992	2847
<i>Anas platyrhynchos</i>	1864	787	1162	1524	3000	1138	1579
<i>Anas acuta</i>	120	170	248	251	200	212	200
<i>Anas chpeata</i>	22	57	9	3	4	9	17
<i>Aythya ferina</i>	250	46	25	7	197	75	100
<i>Aythya fuligula</i>	248	1	1390	158	350	200	391
<i>Aythya marila</i>	0	15	0	4	0	2	7
<i>Somateria mollissima</i>	0	0	6	1	0	0	4
<i>Melanitta nigra</i>	0	0	80	90	2000	5	544
<i>Melanitta fusca</i>	0	0	0	0	35	0	35
<i>Bucephala clangula</i>	2001	1500	1964	1370	1984	351	1528
<i>Mergus albellus</i>	25	0	2	2	2	9	8
<i>Mergus serrator</i>	18	29	6	78	61	2	32
<i>Mergus merganser</i>	942	230	50	109	287	70	281
<i>Haliaeetus albicilla</i>	2	1	0	1	0	2	2
<i>Circus aeruginosus</i>	9	4	9	3	10	3	6
<i>Circus cyaneus</i>	5	5	5	3	5	3	4
<i>Pandion haliaetus</i>	1	1	2	1	3	1	2
<i>Falco columbarius</i>	1	1	1	1	1	1	1
<i>Falco rusticolus</i>	0	1	1	0	0	0	1
<i>Falco peregrinus</i>	1	2	2	2	1	2	2
<i>Fulica atra</i>	331	11	375	120	1250	285	395
<i>Haematopus ostralegus</i>	1	2	0	3	0	0	2

<i>Recurvirostra avosetta</i>	700	93	920	118	116	966	486
<i>Charadrius morinellus</i>	0	0	0	48	4	13	22
<i>Pluvialis apricaria</i>	3400	8500	5000	8600	3780	1830	5185
<i>Pluvialis squatarola</i>	95	11	5	8	15	32	28
<i>Vanellus vanellus</i>	2260	1624	1597	1178	2513	1971	1857
<i>Calidris canutus</i>	50	9	24	180	4	44	52
<i>Calidris alba</i>	47	0	85	320	20	375	169
<i>Calidris ferruginea</i>	1	0	3	0	0	0	2
<i>Calidris alpina</i>	4303	6921	6000	5460	1830	3345	4643
<i>Philomachus pugnax</i>	102	52	31	40	12	43	47
<i>Gallinago gallinago</i>	165	39	6	16	12	23	44
<i>Gallinago media</i>	0	0	0	1	0	0	1
<i>Limosa limosa</i>	0	1	0	0	0	0	1
<i>Limosa lapponica</i>	9100	940	10990	4910	3152	7224	6053
<i>Numenius phaeopus</i>	0	3	0	0	1	3	2
<i>Numenius arquata</i>	116	139	241	163	245	195	183
<i>Tringa erythropus</i>	0	0	3	1	4	0	3
<i>Tringa totanus</i>	10	41	41	234	71	73	78
<i>Tringa nebularia</i>	21	62	28	60	36	159	61
<i>Sterna caspia</i>	2	0	0	0	1	1	1
<i>Alca torda</i>	0	0	0	1	0	0	1
Sum of annual maxima	40293	46060	48519	48896	45626	35696	

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

No specific information.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

a) within the Ramsar site:

Territorial waters, private, the State represented by the Ministry of Environment and the Ministry of Food, Agriculture and Fisheries.

b) in the surrounding area:

As most other Danish Ramsar-sites, this site is surrounded by a rural landscape composed of a mixture of private owned agricultural areas and forests.

25. Current land (including water) use:

a) within the Ramsar site:

reed harvesting and cattle grazing

b) in the surroundings/catchment:

Farmland. There are no larger urban developments (>25,000 people) within 10 km from the site.

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

a) within the Ramsar site:

Eutrophication has reduced the number of birds on passage, one of the reasons is that a large part of the underwater vegetation has disappeared.

b) in the surrounding area:

27. Conservation measures taken:

a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

The whole Ramsar site is protected under EU legislation, and included in:

Natura 2000-site No. 65

Special Protection Area for Birds (SPA) No. 38, and

Special Area of Conservation (SAC) No. 58.

Part of the Ramsar site (Bøvling Fjord) is a shooting-free wildlife reserve that was enlarged during the 1990s (Madsen et al. 1998, Clausen et al. 2004).

Nature conservation: Bøvling Fjord and Krogshede Enge, about 1,060 ha in 1975.

Conservation of Bøvling Klit and Holmen in 1984 - 700 ha - led to restrictions on public access to salt marshes and limitations on agricultural use of grassland and marshes. These measures will gradually improve natural conditions for staging geese, ducks and breeding waders.

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?:

For all Danish Ramsar sites, being part of the Danish Natura 2000 network, conservation status base-line reports were finalised in 2006 by the former counties, and published by the regional Environment Centres of the Agency for Spatial and Environmental Planning in 2007. In 2011 Natura 2000 plans were issued by the Danish Ministry of Environment/Danish Nature Agency setting up site-specific nature goals and priorities for all Danish Natura 2000 sites, including all Danish Ramsar sites. Parallel to this initiative on Natura 2000 sites, river basin management plans were likewise issued by the Danish Ministry of the Environment/ Danish Nature Agency for all Danish river basins in 2011, aimed at meeting demands from the EU Water Framework Directive, hence to improve water quality and ecological status in wetland catchments and coastal areas.

National Ramsar site No. 4 is covered by Natura 2000 plan No. 65 (Naturstyrelsen 2011a) and river basin management plan No. 1.4 (Naturstyrelsen 2011b).

d) Describe any other current management practices:

Regulated reed harvesting and cattle grazing in Felsted Kog (the south-eastern part of Nisum Fjord) have improved this area as a breeding site for dabbling ducks and waders.

On the marshes on the isthmus along the North Sea five big fences have been established for grazing cattle in order to improve the conditions for breeding and migrating waterbirds. These areas comprise private as well as state-owned areas.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

During 2012 the Government and Municipalities will develop site-specific management action plans to meet the goals of the Natura 2000 and river basin management plans.

29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

In 2003 Denmark launched the NOVANA programme. This programme forms the basis for future nature and water quality assessments in Denmark, and as such also supports the administration of the Ramsar site networks. NOVANA is an acronym that could be translated to English as NMWANA (**N**ew **M**onitoring programme for **W**ater quality and **N**ature), and aims at fulfilling the Danish obligations with regards to reporting conservation status of species and habitats covered by the EEC Birds and Habitats Directives annexes, as well as water quality and associated target species covered by the National 3rd Action Plan for the Aquatic Environment (Vandmiljøplan 3) as well as the EEC Water Framework Directive. The programme is described by Bijl et al. (2007). A first 'pre'-NOVANA assessment of the national conservation status of birds was published in 2003, and translated to English in 2006 (Pihl et al. 2006). National criteria for assessing favourable conservation status for the listed species and habitats were likewise published in 2003, and translated to English in 2007 (Søgaard et al. 2007), except for marine habitats, published solely in Danish (Dahl et al. 2005a). First assessments of reference conditions and development of Ecological Quality Objectives (EQOs) related to the Water Framework Directive were published in 2005-2006 (Dahl et al. 2005b, Petersen et al. 2006). Water bird monitoring programmes involves complete national mid-winter surveys every third year (e.g. Petersen et al. 2006b), and annual complete counts of selected species groups (e.g. swans, geese, dabbling ducks, rare breeding birds, e.g. e.g. Søgaard et al. 2006, 2007). The dabbling duck monitoring programme is built upon the much more

comprehensive reserve monitoring programme from 1994-2001 (Clausen et al. 2004). Annual assessments of water quality are also available (latest summary report, Nordemann Jensen et al. 2010).

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

A brochure on the wildlife reserve.

Guided tours are frequently arranged to raise the public awareness about the value of the site for breeding and migratory birds. The municipality has established a nature school at the site to facilitate school visits. Two bird observation platforms and public foot paths and bicycle paths have been established in order to give public access to experience the site at close range without disturbing the birds.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

See point 30.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

National legislation on Nature Conservation and Hunting regulations, as well as national administration of the Ramsar Convention and EEC Birds and Habitats Directives: *Ministry of the Environment*.

National legislation on Agriculture and Fisheries: *Ministry of Food, Agriculture and Fisheries*.

Local administration and implementation of Nature Conservation: Municipalities listed below under point 33.

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Municipalities

Holstebro Kommune
Rådhuset
Kirkestræde 11
7500 Holstebro

Lemvig Kommune
Rådhusgade 2
7620 Lemvig

Local unit of the Nature Agency

Naturstyrelsen, Vestjylland
Sønderby, Gl. Landevej 35, Fabjerg
7620 Lemvig
Tel: +45 7254 3000
E-mail: ves@nst.dk

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Bijl, L. van der, Boutrup, S. & Nordemann Jensen, P. (ed.) (2007): NOVANA. Det nationale program for overvågning af vandmiljøet og naturen. Programbeskrivelse 2007-09 - del 2. Danmarks Miljøundersøgelser, Aarhus Universitet. - Faglig rapport fra DMU 615: 120 pp. <http://www2.dmu.dk/Pub/FR615.pdf>

Christensen, J.O. & Østergaard, E. (in prep.). Ynglende kyst- og engfugle ved Nissum Fjord 1983-2010. Draft manuscript for Dansk Ornitologisk Forenings Tidsskrift.

- Clausen, P., Bøgebjerg, E., Hounisen, J.P., Jørgensen, H.E. & Petersen, I.K. (2004): Reservatnetværk for trækkende vandfugle. En gennemgang af udvalgte arters antal og fordeling i Danmark 1994-2001. Danmarks Miljøundersøgelser. - Faglig rapport fra DMU 490: 144 pp. http://www2.dmu.dk/1_viden/2_Publikationer/3_fagrapporter/rapporter/FR490.PDF
- Dahl, K., Petersen, J.K., Josefson, A.B., Dahllöf, I. & Søgaard, B. (2005a): Kriterier for gunstig bevaringsstatus for EF-habitatdirektivets 8 marine naturtyper. Danmarks Miljøundersøgelser. - Faglig rapport fra DMU 549: 39 pp. http://www2.dmu.dk/1_viden/2_Publikationer/3_fagrapporter/rapporter/FR549.PDF
- Dahl, K.(ed.), Andersen, J.H.(ed.), Riemann, B.(ed.), Carstensen, J., Christiansen, T., Krause-Jensen, D., Josefson, A.B., Larsen, M.M., Petersen, J.K., Rasmussen, M.B. & Strand, J. (2005): Redskaber til vurdering af miljø- og naturkvalitet i de danske farvande. Typeinddeling, udvalgte indikatorer og eksempler på klassifikation. Danmarks Miljøundersøgelser. - Faglig rapport fra DMU 535: 158 pp.
- DMU (2007). *Den danske rødliste / Fagdatacenter for Biodiversitet og Terrestrisk Natur (B-FDC)*. - *Danmarks Miljøundersøgelser, [2004]*. <http://redlist.dmu.dk>. Accessed 1 March 2008.
- Grell, M.B. (1998): Fuglenes Danmark. – Dansk Ornitologisk Forening, Gads Forlag, Copenhagen. 825 pp.
- IUCN (2007): 2007 IUCN Red List of Threatened Species. <http://www.iucnredlist.org/> Accessed 5 March 2008.
- Madsen, J., Pihl, S. & Clausen, P. (1998): Establishing a Reserve Network for Waterfowl in Denmark. A Biological Evaluation of Needs and Consequences. - *Biological Conservation* 85: 241-255. [http://dx.doi.org/10.1016/S0006-3207\(97\)00172-9](http://dx.doi.org/10.1016/S0006-3207(97)00172-9)
- Miljø- og Energiministeriet, Skov- og Naturstyrelsen (1996): EF-fuglebeskyttelsesområder og Ramsarområder. Kort og områdebeskrivelser, status 1995. [With an English summary](*national report on delineation of and species found within the Danish SPA and Ramsar site network*). 273 pp.
- Miljø- og Energiministeriet, Skov- og Naturstyrelsen (1999): Birds of Danish SPAs – trends in occurrence. (*national report on the status of species found within the Danish SPA and Ramsar site network*). 119 pp. <http://www.sns.dk/natur/netpub/birds/hcelepubl.pdf>
- Naturstyrelsen 2011a: Natura 2000-plan 2010-2015. Nissum Fjord. Natura 2000-område nr. 65. Habitatområde H58. Fuglebeskyttelsesområde F38 - Miljøministeriet, Naturstyrelsen. All Natura 2000 plans are available at: http://www.naturstyrelsen.dk/Naturbeskyttelse/Natura2000/Natura_2000_planer/Se_Planerne/
- Naturstyrelsen 2011b: Vandplan 2010-2015. Nissum Fjord. Hovedvandopland 1.4. Vanddistrikt: Jylland og Fyn. - Miljøministeriet, Naturstyrelsen. All river basin management plans are available at: http://www.naturstyrelsen.dk/Vandet/Vandplaner/Se_vandplanerne/
- Nordemann Jensen, P., Boutrup, S., Bijl, L. van der, Svendsen, L.M., Grant, R., Wiberg-Larsen, P., Jørgensen, T.B., Ellermann, T., Hjorth, M., Josefson, A.B., Bruus, M., Søgaard, B., Thorling, L. & Dahlgren, K. 2010: Vandmiljø og Natur 2008. NOVANA. Tilstand og udvikling. Danmarks Miljøundersøgelser, Aarhus Universitet. 106 s. – Faglig rapport fra DMU nr. 767. <http://www2.dmu.dk/Pub/FR767.pdf>
- Petersen, J.K., Andersen, J.H., Dahl, K., Hansen, O.S., Josefson, A.B., Karlsson, J., Loo, L.-O., Magnusson, J., Moy, F. & Nilsson, P. (2006a): Reference conditions and EQOs for aquatic vegetation and macrozoobenthos. Copenhagen: Nordic Council of Ministers. - *TemaNord* 2006:510 : 138 pp.
- Petersen, I.K., Pihl, S., Hounisen, J.P., Holm, T.E., Clausen, P., Therkildsen, O.R. & Christensen, T.K. (2006b): Landsdækkende optælling af vandfugle januar-februar 2004. Danmarks Miljøundersøgelser. - Faglig rapport fra DMU 606: 76 pp. <http://www2.dmu.dk/Pub/FR606.pdf>
- Pihl, S., Clausen, P., Laursen, K., Madsen, J. & Bregnballe, T. (2006): Conservation status of bird species in Denmark covered by the EU Wild Birds Directive. National Environmental Research Institute. - NERI Technical Report 570: 128 pp. <http://www2.dmu.dk/Pub/FR570.pdf>
- Stoltze, M. & Pihl, S. (1998): RØDLISTE 1997 over planter og dyr i Danmark. - Miljø- og Energiministeriet 1998, Danmarks Miljøundersøgelser og Skov- og Naturstyrelsen. <http://www.sns.dk/1pdf/rodlis.pdf>
- Søgaard, B., Pihl, S. & Wind, P. (2006): NOVANA Arter 2004-2005. Danmarks Miljøundersøgelser. - Faglig rapport fra DMU 582: 148 pp. http://www2.dmu.dk/1_viden/2_Publikationer/3_fagrapporter/rapporter/FR582.pdf
- Søgaard, B., Skov, F., Pihl, S., Nygaard, B., Laursen, K., Fredshavn, J.R., Ejrnæs, R., Clausen, P., Bregnballe, T., Madsen, J., Baattrup-Pedersen, A., Lauridsen, T.L., Søndergaard, M., Aude, E., Riis-Nielsen, T., Buttenschön, R.M., Møller, P. & Nielsen, K.E. (2007): Criteria for favourable conservation status in Denmark. - Natural habitat types and species covered by the EEC

Habitats Directive and birds covered by the EEC Birds Directive. National Environmental Research Institute, University of Aarhus. - NERI Technical Report 647: 92 pp. <http://www2.dmu.dk/Pub/FR647.pdf>

Søgaard, B., Pihl, S. & Wind, P. (2007): Arter 2006. NOVANA. Danmarks Miljøundersøgelser, Aarhus Universitet. - Faglig rapport fra DMU 644: 88 pp. <http://www2.dmu.dk/Pub/FR644.pdf>

Vandmiljøplan 3. – see <http://www.vmp3.dk/>

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