

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

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

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Designation date

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Site Reference Number

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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.

Ringkøbing Fjord
(International No. 141; National No. 2)

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:

There are signs of generally improved water quality, return of submerged vegetation, and higher numbers of staging waterbirds in recent years (Meltofte & Clausen 2011). However, 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.

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_ramsar2.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°00'N, 08°15'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 northern boundary of the area is a line through the inlet from the south limit of Hvide Sande city to the south limit of Ringkøbing city. The administrative region is Ringkøbing Municipality.

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

0-4 m

11. Area: (in hectares)

27,652 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.

Ringkøbing Fjord is a big shallow, brackish inlet, surrounded by extensive areas of salt meadows. Most of the area (21,652 hectares) consists of salt/brackish water; a smaller part is moorland and salt meadows (6,050 hectares).

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
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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 a breeding site for several waterbirds listed on the current Danish Red List (DMU 2007), e.g. Spoonbill (*Platalea leucorodia*) (listed as VU on the Danish Red List, Ann. I of EEC Birds Dir.); Pintail (*Anas acuta*) (VU), Black-tailed Godwit (*Limosa limosa*) (NT – IUCN, VU Denmark), Baltic Dunlin (*Calidris alpina schinzii*) (EN, Ann- I, EU Birds Directive), Ruff (*Philomachus pugnax*) (EN, Ann- I, EU Birds Directive), occasionally Short-eared Owl (*Asio flammeus*) (EN, Ann. I, EU Birds Directive) and Golden Plover (*Pluvialis apricaria*) (CR, Ann. I, EU Birds Directive), Little Tern (*Sterna albifrons*) (NT, Ann. I, EU Birds Directive), and several other species listed in Annex 1 of the EEC Birds Directive, i.e. Bittern (*Botaurus stellaris*), Marsh Harrier (*Circus auruginosus*), Avocet (*Recurvirostra avocetta*), Arctic Tern (*Sterna paradisaea*), and Common Tern (*Sterna hirundo*).

Criterion 4: The Ramsar sites combination of large shallow watered areas, mudflats, salt and freshwater marshes attracts many breeding waterbird species. It holds the second largest breeding colony of Spoonbill *Platalea leucorodia*, and some of the largest concentrations of breeding dabbling ducks and waders in Denmark. The site has been known since the 1960s as being an outstanding important staging and wintering area for waterbirds, and only the Danish Wadden Sea is designated for more species on the EU Special Protection Areas for Birds (SPA) network of Denmark.

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):

Whooper Swan (*Cygnus cygnus*): 1,419 birds – 2.4% of the Northwest European population
Bewick's Swan (*Cygnus columbianus bewickii*): 353 birds – 1.8% of the Russian Arctic-Northwest European population

Pink-footed Goose (*Anser brachyrhynchus*) 6,803 birds – 16.2% 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*) 14,533 birds – 3.5% of the Russia/Germany/Netherlands population

Pintail (*Anas acuta*) 1,020 birds – 1.7% of the Northwestern Europe population

Avocet (*Recurvirostra avocetta*) 999 birds – 1.4% of the Western Europe and North-west Africa population.

For Mute Swan (*Cygnus olor*), three species of dabbling ducks (Wigeon *Anas penelope*, Teal *Anas crecca*, and Shoveler *Anas clypeata*), as well as Eurasian Coot (*Fulica atra*) the site was internationally important until the end of the 1970s when the vegetation collapsed, and occasionally in periods later in the 1980s and 1990s. During the period 2004-2009 average numbers for these species do not qualify as internationally important, but single years pass relevant 1% criteria for the flyway-populations involved, and numbers are improving compared to the extreme low numbers during the late 1990s.

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

For 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 294 km² shallow estuary (mean depth 1.9 meter) and is connected to the North Sea through a sluice. Geological the estuary is a bar-built estuary that was earlier open to the North Sea and thus has been influenced by high salinity and the changes in water levels. Since 1931, when the sluice was established, the water level has been controlled by man in intervals between 0.1 meter and 0.35 meter

above normal sea water level, though in rainy periods the water level can reach up to 0.7 meter. Also the salinity is controlled by use of the sluice, and it has varied from 4 to 15‰. Due to the high loads of nutrients the water quality has been poor with an autotroph biomass up to 2,000 µg C/l until 1995 when it was decided to restore a high salinity. The increase in salinity led to an improvement in the water quality with a 95% decrease in plankton biomass.

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 catchment area is 3,477 km² and the estuary receives up to 2,000 mio. m³ freshwater per year, on average 1,500 m³, as runoff from the catchment area and nearly 70% delivered through the Skjern Å river system.

The nutrient load from the catchment area has only partly decreased since the mid 1980s. The total phosphor load has decreased about 30% 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 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 • O • 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

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.

Shallow, brackish inlet, surrounded by salt marshes and meadows. The main submerged vegetation before 1995 (salinity between 4-8‰) was *Potamogeton pectinatus*. After 1995 the coverage of *Potamogeton pectinatus* decreased due to increase in salinity. *Ruppia maritima*, *Ruppia cirrhosa* and *Zostera marina* adapted for higher salinity have not yet colonized the estuary adequately, partly due to fluctuations in salinity. But the submerged vegetation's depth-limit has increased from 0.75 meter before 1995 to 1.5 meter in 2000 as a response to the improved water quality.

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.*

Luronium natans is on the national red list (NT category; DMU 2007).

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.*

The breeding birds on the Tipperne reserve are monitored annually. Other parts of the Ramsar site are only monitored occasionally, with variable focus on different species, depending on the NOVANA programmes target species for the year.

The Tipperne data are reported in annual newsletters – and the recent one witnesses continued problems with declining wader populations, which seems to be linked to a combination of high predation pressure and a five-year run of years with drought during the breeding seasons. The table given below is summarizing some of the data and the development since the 1970s (Thorup & Laursen 2011).

	Average numbers of breeding pairs in period				Breeding pairs in year	
	1975-1984	1985-1994	1995-2004	2005-2009	2010	2011
<i>Anas strepera</i>	3	4	2	1	2	4
<i>Anas platyrhynchos</i>	30	44	50	65	57	43
<i>Anas querquedula</i>	6	6	4	2	0-1	1
<i>Anas acuta</i>	15	18	6	1	2	2
<i>Anas clypeata</i>	16	31	7	4	6	2
<i>Circus aeruginosus</i>	1	2	2	1	2	2
<i>Haematopus ostralegus</i>	8	18	13	8	8	7
<i>Recurvirostra avocetta</i>	252	345	97	68	46	28
<i>Pluvialis apricaria</i>	0	0	0	0	0	1
<i>Vanellus vanellus</i>	112	192	128	128	100	114
<i>Calidris alpina schinzii</i>	15	115	82	33	22	25
<i>Philomachus pugnax</i>	93	160	75	40	32	20
<i>Philomachus pugnax</i>	55	78	30	20	10	11
<i>Gallinago gallinago</i>	15	16	4	4	2	2
<i>Limosa limosa</i>	81	153	101	72	67	74
<i>Numenius arquata</i>	0	0	1	5	3	3
<i>Tringa totanus</i>	98	507	515	174	74	103
<i>Larus ridibundus</i>	174	289	5	2	1	0
<i>Larus canus</i>	5	3	2	2	0	0
<i>Sterna paradiseae</i>	50	90	24	10	4	1

Breeding waterbirds: The table below gives the most recent information about breeding waterbirds in the whole 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>	2318	1919	1505	1974	2631	1834
<i>Botaurus stellaris</i>	3	4	2	3	7	3
<i>Platalea leucorodia</i>	6	7	14	17	21	21
<i>Circus aeruginosus</i>	4	6,5	3,5	1,5	2	3
<i>Porzana porzana</i>	1	1	1	1	1	1
<i>Crex crex</i>	0	0	0	0	1	1
<i>Recurvirostra avosetta</i>	130	117	62	43	63	129
<i>Calidris alpina</i>	68,5	45	40	58	0	0
<i>Philomachus pugnax</i>	60	55	50	11	51	37
<i>Sterna sandvicensis</i>	0	400	0	0	0	0
<i>Sterna paradisaea</i>	0	11	16	0	0	0
<i>Sterna albifrons</i>	0	0	0	0	0	0
<i>Asio flammeus</i>	0	0	0	0	0	0
<i>Luscinia svecica</i>	0	0	1	0	4	1

Note: this site has not been subject to intensive monitoring programmes for all species/all years. Missing tern *Sterna* numbers in table might thus represent missing coverage rather than absence of these species some years. “Half pairs” represents a range, 0,5 pair is this 0-1 pair.

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>Gavia stellata</i>	0	6	1	1	0	1	2
<i>Gavia arctica</i>	0	1	0	1	1	0	1
<i>Gavia immer</i>	0	0	0	0	1	0	1
<i>Podiceps cristatus</i>	151	206	344	357	218	160	239
<i>Podiceps grisegena</i>	2	3	1	2	2	14	4
<i>Podiceps auritus</i>	7	0	0	1	0	1	3
<i>Phalacrocorax carbo</i>	477	2643	2509	3270	5604	2478	2830
<i>Botaurus stellaris</i>	1	1	1	1	0	2	1
<i>Ardea cinerea</i>	42	5	1	8	24	1	14
<i>Platalea leucorodia</i>	41	72	54	64	114	92	73
<i>Cygnus olor</i>	1461	1164	1422	1292	1276	2032	1441

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<i>Cygnus columbianus</i>	290	508	500	200	372	250	353
<i>Cygnus cygnus</i>	1040	2251	2000	1396	1123	701	1419
<i>Anser fabalis</i>	2	10	45	0	18	6	16
<i>Anser fabalis rossicus</i>	2	0	29	0	0	8	13
<i>Anser brachyrhynchus</i>	8500	6082	8380	7055	5500	5300	6803
<i>Anser albifrons albifrons</i>	0	0	272	59	92	229	163
<i>Anser albifrons flavirostris</i>	1	0	0	0	0	0	1
<i>Anser erythropus</i>	0	1	0	0	0	0	1
<i>Anser anser</i>	3605	2113	2975	2090	3353	3909	3008
<i>Branta canadensis</i>	3	100	161	72	32	2	62
<i>Branta leucopsis</i>	7000	15000	10000	30000	12200	13000	14533
<i>Branta bernicla</i>	0	0	0	23	1530	1	518
<i>Branta bernicla bernicla</i>	932	780	711	873	1530	572	900
<i>Branta bernicla brota</i>	1	2	6	300	1	5	53
<i>Branta ruficollis</i>	1	1	0	0	0	3	2
<i>Tadorna tadorna</i>	400	433	144	165	283	330	293
<i>Anas penelope</i>	10442	12614	18342	9401	3410	5019	9871
<i>Anas strepera</i>	51	94	100	126	25	8	67
<i>Anas crecca</i>	6131	4278	5136	5307	2175	5005	4672
<i>Anas platyrhynchos</i>	3108	2678	2336	2307	2120	1080	2272
<i>Anas acuta</i>	1094	731	1015	1434	1009	835	1020
<i>Anas querquedula</i>	3	0	2	0	2	3	3
<i>Anas clypeata</i>	374	506	538	248	213	200	347
<i>Aythya ferina</i>	195	200	613	250	243	262	294
<i>Aythya fuligula</i>	480	330	1070	455	1000	998	722
<i>Aythya marila</i>	42	3	150	10	17	17	40
<i>Somateria mollissima</i>	0	3	2	7	0	4	4
<i>Melanitta nigra</i>	5	300	8	12	1	21	58
<i>Melanitta fusca</i>	0	15	0	0	0	3	9
<i>Bucephala clangula</i>	1150	1035	1950	716	1310	530	1115
<i>Mergus albellus</i>	31	20	41	21	22	29	27
<i>Mergus serrator</i>	515	730	425	264	895	1100	655
<i>Mergus merganser</i>	219	60	84	80	134	59	106
<i>Haliaeetus albicilla</i>	4	3	4	1	3	4	3
<i>Circus aeruginosus</i>	6	9	8	4	7	10	7
<i>Circus cyaneus</i>	24	11	30	13	16	14	18
<i>Circus pygargus</i>	0	1	0	0	0	0	1
<i>Pandion haliaetus</i>	2	3	1	1	4	5	3
<i>Falco vespertinus</i>	0	0	1	0	0	0	1
<i>Falco columbarius</i>	4	3	2	2	1	3	3

<i>Falco rusticolus</i>	1	0	0	1	0	0	1
<i>Falco peregrinus</i>	3	4	3	2	3	4	3
<i>Fulica atra</i>	2200	2400	2810	4200	2400	4340	3058
<i>Haematopus ostralegus</i>	12	7	25	9	11	12	13
<i>Recurvirostra avosetta</i>	948	779	628	466	2020	1150	999
<i>Charadrius morinellus</i>	7	46	25	58	28	73	40
<i>Pluvialis apricaria</i>	7600	8500	4200	10000	5800	10600	7783
<i>Pluvialis squatarola</i>	58	85	5	31	38	24	40
<i>Vanellus vanellus</i>	1637	1508	1225	953	1378	1163	1311
<i>Calidris canutus</i>	540	496	682	323	331	121	416
<i>Calidris alba</i>	12	134	143	89	77	100	93
<i>Calidris ferruginea</i>	7	25	2	3	2	2	7
<i>Calidris alpina</i>	6300	4000	2447	3600	4950	5350	4441
<i>Philomachus pugnax</i>	41	16	19	55	119	134	64
<i>Lymnocyptes minimus</i>	0	0	1	0	0	0	1
<i>Gallinago gallinago</i>	247	29	245	43	169	71	134
<i>Gallinago media</i>	1	0	0	0	0	0	1
<i>Limosa limosa</i>	26	52	37	30	30	15	32
<i>Limosa lapponica</i>	1490	1094	3352	2066	1900	2180	2014
<i>Numenius phaeopus</i>	14	9	82	1	35	161	50
<i>Numenius arquata</i>	67	44	237	64	155	88	109
<i>Tringa erythropus</i>	43	34	72	25	22	61	43
<i>Tringa totanus</i>	912	865	758	363	376	301	596
<i>Tringa nebularia</i>	285	1178	829	556	626	833	718
<i>Phalaropus lobatus</i>	1	1	2	1	2	1	1
<i>Sterna caspia</i>	3	1	3	6	7	4	4
<i>Sterna sandvicensis</i>	1	0	0	0	0	0	1
<i>Sterna hirundo</i>	7	0	1	25	5	1	8
<i>Sterna paradisaea</i>	0	0	0	3	0	0	3
Sum of annual maxima	70302	76316	79247	90862	65730	71095	

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:

Recreational fishing and hunting areas.

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:

24,000 hectares of the area is state-owned and protected as a nature reserve by a ministerial order, the rest is privately owned.

b) in the surrounding area:

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

25. Current land (including water) use:

a) within the Ramsar site:

grazing, reed harvesting, farmland

b) in the surroundings/catchment:

mainly farmland

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:

Since the establishment of the sluices at Hvide Sande in 1931, the mean water level and salinity have dropped in Ringkøbing Fjord. After the regulation of the Skjern River in the 1960's increased sedimentation in the southern part of the fjord has occurred.

The water quality deteriorated through the 1980's. This led to a decline of the flora and fauna, and all underwater vegetation disappeared in 1979. Numbers for many waterbird species peaked in 1970s before this first collapse in the submerged vegetation community caused a cascade effect affecting many groups of waterbirds negatively (Meltøfte & Clausen 2011). The water quality has improved since, and new vegetation has appeared locally. In 1996 it was decided to restore a higher salinity of the water, in order to allow recruitment of a *Mya arenaria* mussel community. Initially this seemed successful, with immense settling of the mussels, but there were initial problems with maintaining a stable salinity level, and all the submerged vegetation nearly disappeared again during 1996-99. The increased salinity within the lagoon has caused a

regime shift (Petersen et al. 2008), and there are signs of generally improved water quality, return of submerged vegetation, and higher bird numbers in recent years (Meltofte & Clausen 2011).

However, 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

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.

Nature conservation: In 1985 the fjord and the state-owned areas (about 24,000 hectares) were protected as Ringkøbing Fjord nature reserve by a Ministerial Order. The scientific sanctuaries Tipperne and Klægbanken have already been protected since 1928 with restrictions on hunting and public access.

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

Natura 2000-site No. 69

Special Protection Area for Birds (SPA) No. 43, and

Special Area of Conservation (SAC) No. 62.

Most of the area is also a Wildlife and Nature reserve, with large areas where shooting of waterbirds have been phased out both on shallow waters, salt and freshwater marshes (see detailed maps in Meltofte & Clausen 2011).

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?:

The Skjern River project (east of the Ramsar site), aiming at the reestablishment of the selfpurification effect of the former Skjern River Delta has improved the water quality (see point 14 and 22). The western part of the project was finished in 2001. It has had the consequence that former agricultural fields within the RAMSAR area have been transformed to reed-beds and meadows. It is planned to manage these areas so as to improve the habitat for breeding waders and migrating waterbirds in general.

The site is on the Montreux Record: By Notification 1994/7 the Ramsar Convention directed the attention to Ringkøbing Fjord, and the Bureau invited Denmark to submit information on the ecological situation of the fjord to the Standing Committee of the Ramsar Convention. In 1994 the Danish Ministry of Environment informed the Standing Committee about the current situation and ecological conditions of the fjord.

Changes in the operation of the North Sea sluices and the restoration project for the River Skjern and catchment are anticipated to enhance the ecological character of the fjord including important breeding and staging sites for waterbirds on islands and adjacent marshlands.

In September 1996 the Ramsar Bureau on invitation of the Danish Forest and Nature Agency visited Ringkøbing Fjord in order to assist in a procedure, with the view to eventual removal of the fjord from the Montreux Record.

The Management Guidance Procedure made the following recommendations in order to have the site

removed from the Montreux Record:

1. a revised Information Sheet for the site should be submitted to the Ramsar Bureau
2. an eventual extension of the Ramsar Site should be considered to include the River Skjern restoration project area, e.g. after a successful implementation of the project
3. efforts should be made to strengthen exchange of information between different actors
4. an integrated monitoring project should be incorporated into a management plan for the river
5. monitoring of the site should, if possible, include resumption of regular aerial waterbird surveys
6. experiences gained from Ringkøbing Fjord should be used as a case study for use at other sites, and
7. the STRP should be invited to review the report at a coming meeting in order to provide further guidance to the Danish authorities and the Ramsar Bureau on the removal of the site from the Montreux Record.

So far, the recommendations under 1, 3, 4, 5, and 6 have been fully implemented.

Concerning the recommendations under 2 Denmark has designated the River Skjern restoration project area as EU Special Area of Conservation (SAC) No. 61. Together with the Special Area of Conservation (SAC) No. 62, the EU Special Protection Area for Birds (SPA) No. 43, and the National Ramsar Site No. 2 at Ringkøbing Fjord, the whole area is now included in the Natura 2000 network (No. 69).

Concerning the recommendations under 7 the STRP can be invited to review a future report when the ongoing restoration projects and initiatives have been fully implemented and the effects monitored and reported.

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. 2 is covered by Natura 2000 plan No. 69 (Naturstyrelsen 2011a) and river basin management plan No. 1.8 (Naturstyrelsen 2011b).

A management plan for the Tipperne reserve in the area is being implemented. The Tipperne is managed by hay moving and grazing with the aim to optimize the conditions for breeding meadow birds. Predators such as foxes are regulated.

d) Describe any other current management practices:

28. Conservation measures proposed but not yet implemented:

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

All the necessary permissions have been given to restore better freshwater conditions in the Tipperne reserve in order to improve the breeding conditions for waders and ducks.

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 (New Monitoring programme for WAter quality and NAture), 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).

Monitoring of waterbirds is currently carried out from the Government owned field station on the Tipperne peninsula.

The Danish Nature Agency during 2009-2010 funded a research project aimed at describing the development in the water quality, salinity, vegetation, invertebrate fauna and staging waterbirds for the period 1929-2007. This was published in a monograph by Meltøfte & Clausen (2011).

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.

There are two exhibitions in the area, several observation towers, and an information brochure. Nature education and tour information see: <http://www.skovognatur.dk/>, <http://www.visitvest.dk/>,

31. Current recreation and tourism:

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

Tourists are visiting the area in relatively large numbers. About 40,000 persons per year are visiting the exhibition about the area at the Northern Barn.

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.

Municipality

Ringkøbing-Skjern Kommune
Ved Fjorden 6
6950 Ringkøbing

Local unit of the Nature Agency

Skov- og Naturstyrelsen, Blåvandshuk
Ålholtvej 1
6840 Oksbøl
Tel: +45 72543000
E-mail: blh@nst.dk

34. Bibliographical references:

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

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