

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

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## 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

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## 3. Country:

Denmark

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## 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.

Horsens Fjord and Endelave. International No. 152; National No. 13

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## 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

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## 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.

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**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\_ramsar13.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.

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**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.

55°51'N, 10°10'E

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**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 located along the East coast of Jutland with fjord area and sea territory East of the town of Horsens. Administrative regions are Midtjylland Region.

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

0-34 m

**11. Area:** (in hectares)

42,737 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.

Shallow fjord and waters with shoals and sandbanks, salt marshes and lagoons. Three fairly large islands with cultivated land and scattered habitation.

**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 a breeding site for waterbirds, including several species listed in Annex 1 of the EEC Birds Directive, i.e. Marsh Harrier (*Circus auruginosus*), Avocet (*Recurvirostra avocetta*), Sandwich Tern (*Sterna sandvicensis*), Arctic Tern (*Sterna paradisaea*) and Common Tern (*Sterna hirundo*). The site also holds a breeding population of Common Seal *Phoca vitulina* covered by Annex 2 of the EEC Habitats directive. On the island of Vørsø many species of mushrooms on the Danish red list are found.

**Criterion 5:** The site regularly supports more than 20,000 waterbirds and up to 64,214 have been recorded 2004-2009.

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

Great Cormorant (*Phalacrocorax carbo sinensis*). The breeding populations found on Vørsø, Hov Røn and Svanegrunden (2826 pairs or 5652 breeding adults, average 2004-2009) represents 1.4% of the North, Central European – Mediterranean fly-ways population.

Common Eider (*Somateria molissima*) the average numbers 8,027, represents 1.1% of the Baltic, Wadden Sea population. Note that the recorded numbers were highest during 2004 (12,000 birds) and 2008 (18,159 birds), where the offshore parts of the Ramsar site was counted by transects. In 2004 the number is an underestimate of true numbers present; spatial modelling of Eiders for most of the Danish waters estimated that numbers counted along transect for Eiders had to be multiplied by 4.3 to estimate true numbers (Petersen et al. 2006b). Numbers in 2008 are spatially modelled (Petersen & Nielsen 2011). In winter 2000 11,509 Common Eiders were recorded in the Horsens Fjord and Endelave area using 'total count' survey methods (Pihl et al. 2001).

The site has been internationally important in the immediate past for wintering Greater Scaup (*Aythya marila*) and Common Goldeneye (*Bucephala clangula*) – but numbers recorded in recent surveys suggest this might not be the case at present (Pihl et al. 2001, Petersen et al. 2006b, Petersen et al. 2010).

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**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:**

Continental

**b) biogeographic regionalisation scheme** (include reference citation):

Biogeographical Region Europe, 2005, European Environment Agency

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**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 fjord landscape is formed by glacial deposits. The average water depth is 5 meters and the residence time of water in the fjord is about 20 days. As to tidal variations the amplitude is about 0.4 meters. The fjord is heavily eutrophicated and dominated by phytoplankton blooms.

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**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 around 500 km<sup>2</sup>.

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**18. Hydrological values:**

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

The shorelines are fairly stable except for the southern part of the island of Endelave where erosion of the coastline is constantly taking place due to wave action as a result of the prevailing south-west winds.

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**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.

A, E, B, H, J

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**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 consists of marine coastal ecosystems. There are three fairly large islands with cultivated land and scattered habitation. One of the most important plant community on the islands and along the East coast of Jutland is saltmarsh. The saltmarshes have a fine zonation with *Salicornia europaea* and in a few places *Spartina alterniflora*. Furthermore there are heaths, moors, meadows, and deciduous forests. The invasive plant species *Heracleum pubescens* has been introduced to Endelave.

### 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.*

On Vorsø many species of mushrooms on the national red list are found. On Endelave there is a population of the rare orchid *Orchis morio*.

### 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 aquatic and salt marsh birds including species mentioned above under paragraph 14. and *Cephus grylle*. National Red Listed Baltic Dunlins (*Calidris alpina schinzii*) and Ruff (*Philomachus pugnax*) all bred in the area in the past, but seem to have disappeared (Thorup 2004), the same appears to have happened for Little Terns (*Sterna albifrons*)(Vejle Amt & Århus Amt 2007). The latter source lists tables with current numbers of the other species mentioned under paragraph 14. Breeding numbers of most species are highly variable, and the information given does not indicate to which extent all potential breeding areas have been surveyed.

Vorsø in the past has one of the biggest and most stable colonies of *sinensis* Cormorant in Europe, but this is now declining. Two other colonies of Cormorant is found on Svanegrund and Hov Røn.

Møllegunden is the most important locality for Common Seal in the southern part of the Kattegat.

On Endelave an isolated population of Agile Frog (*Rana dalmatina*) is found. Management of breeding sites has improved their conservation status and they are now thriving (Vejle Amt & Århus Amt 2007).

The site is an important staging area for Bar-tailed Godwits (*Limosa lapponica*)(annual records of several flocks >1,000 birds, and for Golden Plover (*Pluvialis apricaria*)(annual records of several flocks >5,000 birds). Co-ordinated counts covering all important areas within the site simultaneously is being developed under the NOVANA programme, mentioned below. With the recent split of sub-species/fly-way populations of both species, assignment of numbers recorded to specific fly-way population, and estimation of international importance requires a novel in depth analysis of timing of migration of the two species (with two sub-species each), a task beyond this RIS.

**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.

	<b>Breeding population - pairs</b>
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Species \ Year	2004	2005	2006	2007	2008	2009
<i>Phalacrocorax carbo</i>	3572	3632	3089	2675	1929	2059
<i>Circus aeruginosus</i>	0	0	0	0	1	0
<i>Recurvirostra avosetta</i>	26	34	40	24	40	49
<i>Sterna sandvicensis</i>	0	0	105	0	25	356
<i>Sterna paradisaea</i>	274	225	168	40	255	1
<i>Sterna albifrons</i>	0	0	0	0	0	0
<i>Cephus grylle</i>	16	12	9	10	10	0

Note: this site has not been subject to intensive monitoring programmes for all species/all years. Missing Marsh Harrier (*Circus aeruginosus*) and tern *Sterna* numbers in table might thus represent missing coverage rather than absence of these species some years.

**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. Offshore species (\*) have been counted using transect surveys in 2004 and 2008. Numbers mentioned from 2004 are actual counted numbers, true numbers are probable 3-5 times higher (as demonstrated by Petersen et al. 2006b using spatial modelling for selected species). Numbers for 2008 have been spatially modelled (Petersen & Nielsen 2011).

Species \ Year	Annual Maxima						Average
	2004	2005	2006	2007	2008	2009	
<i>Gavia stellata</i>	0	1	0	0	1	0	1
<i>Gavia arctica</i>	1	0	0	0	0	0	1
<i>Gavia immer</i>	0	0	0	0	1	0	1
<i>Podiceps cristatus</i>	10	0	0	0	30	76	39
<i>Podiceps grisegena</i>	9	3	17	5	17	9	10
<i>Podiceps auritus</i>	1	5	6	3	1	0	3
<i>Podiceps nigricollis</i>	0	0	0	0	6	9	8
<i>Phalacrocorax carbo</i>	526	250	400	400	477	1014	511
<i>Ardea cinerea</i>	4	3	0	1	4	2	3
<i>Platalea leucorodia</i>	0	1	0	1	2	0	1
<i>Cygnus olor</i>	170	125	132	70	90	90	113
<i>Cygnus columbianus</i>	1	0	3	0	0	0	2
<i>Cygnus cygnus</i>	411	190	660	365	425	570	437
<i>Anser fabalis</i>	0	0	7	0	0	0	7
<i>Anser brachyrhynchus</i>	0	0	0	0	1	0	1
<i>Anser anser</i>	1230	1749	2115	3520	2150	1452	2036
<i>Branta canadensis</i>	0	0	0	0	8	29	19
<i>Branta leucopsis</i>	0	236	32	51	313	57	138

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<i>Branta bernicla bernicla</i>	199	300	219	246	225	420	268	
<i>Branta bernicla brota</i>	0	2	22	6	78	71	36	
<i>Tadorna tadorna</i>	38	44	0	25	275	199	116	
<i>Anas penelope</i>	460	690	918	1400	911	775	859	
<i>Anas strepera</i>	0	0	0	0	4	0	4	
<i>Anas crecca</i>	86	317	480	125	563	320	315	
<i>Anas platyrhynchos</i>	2290	1485	1770	2158	2430	2260	2066	
<i>Anas acuta</i>	3	30	8	13	8	3	11	
<i>Anas chryseata</i>	3	4	11	3	11	4	6	
<i>Aythya ferina</i>	0	0	13	0	0	22	18	
<i>Aythya fuligula</i>	18	0	0	8	29	43	25	
<i>Aythya marila</i>	1100	18	1600	600	700	600	770	
<i>Somateria mollissima</i>	12000	5000	5500	3503	18159	4000	8027	*
<i>Clangula hyemalis</i>	15	0	0	0	3	0	9	*
<i>Melanitta nigra</i>	238	5	12	70	3197	11	589	*
<i>Melanitta fusca</i>	0	0	0	2	19	1	7	*
<i>Bucephala clangula</i>	864	600	1030	1060	1030	1460	1007	
<i>Mergus albellus</i>	0	8	8	0	0	25	14	
<i>Mergus serrator</i>	149	185	295	263	383	510	298	
<i>Mergus merganser</i>	11	14	66	21	25	150	48	
<i>Haliaeetus albicilla</i>	1	2	2	2	2	2	2	
<i>Circus aeruginosus</i>	0	0	0	0	3	0	3	
<i>Circus cyaneus</i>	2	1	3	2	2	3	2	
<i>Pandion haliaetus</i>	2	1	1	1	3	3	2	
<i>Falco columbarius</i>	0	0	1	1	0	1	1	
<i>Falco peregrinus</i>	1	2	1	1	2	2	2	
<i>Fulica atra</i>	300	195	355	130	38	110	188	
<i>Haematopus ostralegus</i>	149	40	0	30	330	78	125	
<i>Recurvirostra avosetta</i>	48	46	40	23	45	15	36	
<i>Charadrius morinellus</i>	0	0	1	0	0	0	1	
<i>Pluvialis apricaria</i>	5000	4500	10000	5212	8000	10700	7235	
<i>Pluvialis squatarola</i>	0	0	0	0	1	17	9	
<i>Vanellus vanellus</i>	0	0	0	80	1210	450	580	
<i>Calidris canutus</i>	227	30	55	33	101	52	83	
<i>Calidris alba</i>	3	0	0	1	1	0	2	
<i>Calidris ferruginea</i>	0	0	0	0	2	1	2	
<i>Calidris alpina</i>	4000	930	1465	1920	2350	1350	2003	
<i>Philomachus pugnax</i>	0	0	0	0	30	16	23	
<i>Gallinago gallinago</i>	0	0	0	0	7	4	6	
<i>Limosa lapponica</i>	3900	1700	3600	5000	5460	3110	3795	

<i>Numenius arquata</i>	88	57	110	60	542	346	201
<i>Tringa erythropus</i>	0	0	0	0	1	0	1
<i>Tringa totanus</i>	105	110	225	134	142	134	142
<i>Tringa nebularia</i>	34	93	190	50	89	45	84
<i>Phalaropus lobatus</i>	0	0	0	0	1	0	1
<i>Larus ridibundus</i>	101	230	90	0	2	0	106
<i>Larus canus</i>	122	330	40	0	0	0	164
<i>Larus argentatus</i>	289	125	75	0	89	0	145
<i>Larus marinus</i>	5	2	0	0	6	0	4
<i>Sterna sandvicensis</i>	0	0	0	0	1	87	44
<i>Alca torda</i>	0	0	0	57	2	0	30
Sum of annual maxima	34214	19659	31578	26656	50038	30708	

### 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:

On Hjarnø there is a protected area with 10 larger and smaller “stone ships” from the Viking period. On Endelave another archaeological site is found.

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. Part of Endelave is owned by the municipality of Vejle.

b) in the surrounding area:

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

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**25. Current land (including water) use:**

a) within the Ramsar site:

Mainly farmland, grazing on salt marshes

b) in the surroundings/catchment:

Mainly farmland.

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**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 1930s sedimentation around the islands and shoals has increased as a result of the disappearance for a number of years of eel-grass (*Zostera spp.*) North of Alrø Island, as a result of the construction of a causeway connecting the island to the mainland, sedimentation of silt is taking place. In the past years the grazing of the saltmarshes on Endelave has been reduced due to smaller numbers of grazing cattle. The taller vegetation is negative for the birds nesting and feeding there.

b) in the surrounding area:

No specific information.

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**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: Four areas with a total acreage of 286 ha (Vejle Amt & Århus Amt 2007), two of which are notable areas for waterbirds, at Øvre on Endelave and at Horsnæs-Gyllingnæs.

Parts of the Ramsar site are Wildlife and Nature reserves. There is no public access to Vorsø, Horskær, Søby Rev, Hov Røn, Møllegunden and Svanegrund in the breeding season of birds and seals. An existing wildlife reserve at Vorsø was enlarged to include additional shallow wetland areas around the island of Vorsø in 1994 (total 887 ha), and two new reserves were established at Alrø (in 1994, 869 ha) and at Endelave (in 1999, 191 ha). The three reserves covers the three most important mudflat areas in the Ramsar site, and all reserves has shooting restrictions, involving areas with complete shooting bans, areas with restrictions on any mobile hunting activities, as well as restrictions on wind-surfing activities and speed boating. All reserves were enlarged/established as parts of the new Danish hunting-free network of reserves (Madsen et al. 1998, Clausen et al. 2004).

By a Ministerial Order, hunting from motor boats has been prohibited in Horsens Fjord west of the island of Alrø in order to reduce hunting pressure on and disturbance of waterbirds. Approx. ½ of the 5372 ha reserve is inside the Ramsar site.

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

Natura 2000-site No. 56

Special Protection Area for Birds (SPA) No. 36, and almost identical to

Special Area of Conservation (SAC) No. 52 (11 ha is not included in the SAC but included in the Ramsar Site; Vejle Amt & Århus Amt 2007).

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 state owned island of Vorskø has a management plan, which is 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. 13 is covered by Natura 2000 plan No. 56 (Naturstyrelsen 2011a) and river basin management plan No. 1.9 (Naturstyrelsen 2011b).

d) Describe any other current management practices:

Grazing on saltmarshes has been reintroduced on Endelave, and grazing has been optimised on saltmarshes on Hjarnø as a part of the EU LIFE project for Baltic Cosats.

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#### 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.

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#### 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 3<sup>rd</sup> 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 seals is also included in NOVANA programme mentioned above.

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### 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.

On Vorskø there is a small exhibition and an information booklet of the island. Up to 30 guided excursions are allowed on Vorskø, mainly outside the breeding season.

Information brochures about Hjarnø and Endelave have been published. Reserve pamphlets are available for all shooting free reserves. On Alrø there is a bird observation tower.

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### 31. Current recreation and tourism:

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

Endelave Harbour has a capacity for about 60 boats. There are local plans for enlarging the harbour.

Rabbit hunting is a popular activity on Endelave, often with help from ferrets.

Both on Hjarnø and Endelave there are camping facilities.

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### 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.

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### 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	Local units of the Nature Agency
Odder Kommune Rådhusgade 3 8300 Odder	Naturstyrelsen, Søhøjlandet Vejlbo Vejsøvej 12 8600 Silkeborg Tel: +45 72543000 E-mail: <a href="mailto:shl@nst.dk">shl@nst.dk</a>
Hedensted Kommune Niels Espes Vej 8 8722 Hedensted	Naturstyrelsen, Trekantsområdet Gjøddinggård, Førstballevej 2 7183 Randbøl Tel: +45 72543000 E-mail: <a href="mailto:tre@nst.dk">tre@nst.dk</a>
Horsens Kommune Løvenørnsvej 21 8700 Horsens	

### 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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