Information Sheet on Ramsar Wetlands

(RIS) - 2009-2012 version

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1. Name and address of the compiler of this form: FOR OFFICE USE ONLY.
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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.
Lillebælt.
(International No. 154; National No. 15)
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
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a) Site boundary and area The Ramsar site boundary and site area are unchanged: □
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The Ramsar site boundary and site area are unchanged: □ or If the site boundary has changed:
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
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

If the site area has changed:

- i) the area has been measured more accurately X; or
- ii)ii) the area has been extended \(\siz\); 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.

During a review process in 1995 the area was extended to include more wetland areas. Furthermore, the area was delineated more accurately.

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. However, the site has been internationally important in the past for Scaup (Aythya marila), Common Goldeneye (Bucephale clangula) and Red-breasted Merganser (Mergus serrator) – but numbers recorded in recent surveys suggest this is not the case any longer (Pihl et al. 2001, Petersen et al. 2006b, Petersen et al. 2010).

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): \square ;
 - ii) an electronic format (e.g. a JPEG or ArcView image) ⊠; Denmark_ramsar15.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 2010 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.

55°21'N, 09°43'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 strait separating Funen (between the towns of Middelfart and Assens) and Jutland (between Kolding Fjord and the town of Haderslev). The administrative regions are Fyn and Sønderjylland Regions.

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

0-40 m

11. Area: (in hectares) 35,189 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.

A narrow strait containing islands and peninsulas on which cultivated land and some scattered habitations are found. Also coves, lagoons, salt marsh areas and reed swamps adjacent to the strait are characteristic landscape elements.

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.

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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 Corn Crake (Crex crex)(Annex I of EU Birds Directive; global threat status NT; IUCN 2007; listed at NT on the Danish Red List), and several other species on the current Danish Red List (DMU 2007), e.g. Pintail (Anas acuta)(VU), Teal (Anas crecca)(NT, occasional breeder), White-tailed Sea Eagles (Haliaetus albicilla)(VU, Ann. I EU Birds Directive), Spotted Crake (Porzana porzana)(Ann. I EU Birds Dir., NT), Little Tern (Sterna albifrons)(Ann. I EU Birds Dir., NT), and Short-eared Owl (Asio flammeus)(Ann. I EU Birds Dir., EN, occasional breeder), and several other species listed in Annex 1 of the EEC Birds Directive, i.e. Marsh Harrier (Circus aeruginosus), Avocet (Recurvirostra avocetta), Arctic Tern (Sterna paradisaea) and Common Tern (Sterna hirundo). The site also holds breeding populations of some species covered by Annex 2 of the EEC Habitats directive, Teilmann et al. (2008) thus records Lillebælt as one of the more important Danish sites for Harbour Porpoise (Phocoena phocoena).

Criterion 6: The site regularly supports more than 1% of the individuals in the populations of the following species (average of available count data tabulated below for 2003-2009 compared to WPE4):

Common Eider (Somateria molissima) 7,510 (1.0% of the Baltic, Wadden Sea population equals 7,600 ind.) Full coverage of the entire Ramsar site is only available from the two latest national mid-winter surveys in 2004 and 2008. Both years the Lillebælt area was counted by transects (Petersen et al. 2006b, Petersen et al. 2010), and the numbers recorded in these survey years (8713 in 2004 and 11680 in 2008) are

underestimates 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 in 2004 (Petersen et al. 2006b). In winter 2000 24,928 Common Eiders were recorded in Lillebælt using 'total count' survey methods (Pihl et al. 2001).

The site has been internationally important in the past for Scaup (Aythya marila), Common Goldeneye (Bucephale clangula) and Red-breasted Merganser (Mergus serrator) – but numbers recorded in recent surveys suggest this is not the case any longer (Pihl et al. 2001, Petersen et al. 2006b, Petersen et al. 2010). The site was also mentioned to support more than 1% of the individuals in the population of Greylag Goose (Anser anser) NW Europe/SW Europe population in last RIS, but this has not been observed during this reporting period.

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 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 listning 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 2007).
- 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 landscape is formed by glacial deposits. The average water depth of the strait is 20 meters but depths up to 40 meters are not unusual. The residence time of water in the strait is highly dependant on the water currents in the adjacent water bodies and varies from a few days to several weeks. As to tidal variation the amplitude is about 0.4 meters. The water in the strait is eutrophicated and dominated by phytoplankton blooms. As a result of high outlets of nitrogen and phosphorous from the catchment area, oxygen deficits often occur in the deeper parts of the strait.

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 1,200 km² on the Jutland side of the strait.

18. Hydrological values:

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

The shorelines of the strait are fairly stable and generally not eroded.

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: $\underline{A} \cdot \underline{B} \cdot C \cdot D \cdot \underline{E} \cdot F \cdot G \cdot \underline{H} \cdot I \cdot \underline{I} \cdot K \cdot Zk(a)$

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

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

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, H, B, E, 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.

Marine/coastal ecosystems. Salt marsh, reed swamps, cultivated land.

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.

Fyns Amt (2006) and Sønderjyllands Amt (2006) both provide some information on flora found within the site, and mentions a few rare species.

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 several rare species listed above in paragraph 14. Fyns Amt (2006) and Sønderjyllands Amt (2006) both provide some information on numbers involved.

The site holds the second-oldest nest of White-tailed Sea Eagles (*Haliaetus albicilla*) from the recently recovered Danish breeding population, and they have breed all but one year in the current reporting period (average of 1.7 fledged chicks/year 2003-2009), as second pair started to breed in 2008 and have bred successfully in both 2008 and 2009, and more than five White-tailed Sea Eagles were recorded within the area at the latest winter survey in 2009 (Petersen & Ehmsen 2010).

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The site is an important resting and feeding area for waterbirds, and the table below is giving the most recent information about staging waterbirds in the Lillebælt area. Counting intensity varies over the years, with most comprehensive coverage 2008-09. For offshore species marked by * the 2004 and 2008 total count from data presented by Petersen *et al.* (2006b, 2010) are the only comprehensive count available from the period 2003-2009.

		Annual Maxima										
Species \ Year	2003	2004	2005	2006	2007	2008	2009					
Gavia spp.	0	3	0	0	0	0	427	215				
Tachybaptus ruficollis	12	42	34	14	40	28	5	25				
Podiceps cristatus	4	132	17	6	26	24	10	31				
Podiceps griseigena	0	5	0	0	0	2	7	5				
Phalacrocorax carbo	21	242	16	20	26	1010	613	278				
Ardea cinerea	0	13	5	0	11	29	3	12				
Cygnus olor	12	245	56	42	46	396	180	140				
Cygnus cygnus	109	867	57	83	183	1350	134	398				
Anser fabalis	0	108	0	0	0	0	0	108				
Anser fabalis rossicus	0	0	0	16	1	0	0	9				
Anser brachyrhynchus	5	0	0	0	0	0	0	5				
Anser albifrons	0	1	0	12	0	0	0	7				
Anser anser	1390	2906	1410	2171	1149	1324	1245	1656				
Tadorna tadorna	24	98	6	0	26	122	54	55				
Anas penelope	45	407	247	48	131	483	780	306				
Anas strepera	0	1	0	0	4	15	0	7				
Anas crecca	75	153	107	150	89	100	43	102				
Anas platyrhynchos	475	1362	601	612	452	893	566	709				
Anas acuta	0	0	2	2	5	2	0	3				
Anas clypeata	0	0	0	0	6	0	0	6				
Aythya ferina	0	380	7	25	164	454	0	206				
Aythya fuligula	25	1748	13	2340	438	2660	280	1072				
Aythya marila	0	965	0	3502	49	5701	0	2554				
Somateria mollissima	0	8713	20	0	0	11680	9627	7510	*			
Clangula hyemalis	0	13	0	0	0	16	7	12	*			
Melanitta nigra	0	28	0	0	0	232	1050	437	*			
Melanitta fusca	0	5	0	0	0	10	3	6	*			
Bucephala clangula	130	1045	390	327	175	876	401	478	*			
Mergus albellus	0	4	7	125	3	15	0	31				
Mergus serrator	26	167	14	1	4	240	51	72	*			
Mergus merganser	2	6	0	7	23	18	87	24	*			
Haliaeetus albicilla	0	2	0	0	1	0	1	1				
Circus cyaneus	0	0	0	0	0	1	1	1				
Fulica atra	40	1820	198	440	40	2465	790	828				
Pluvialis apricaria	15	1	0	0	0	2020	621	664				
Vanellus vanellus	28	4	30	0	2	480	356	150				
Calidris alpina	0	44	80	1	0	69	56	50				
Limosa lapponica	0	0	0	0	0	16	8	12				
Numenius arquata	0	3	1	10	0	210	245	94				
Sum of annual maxima	2438	21533	3318	9954	3094	32941	17657		 			

Notes: - 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. Numbers mentioned 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).

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:

Near Seljum at Sønder Stenderup there is a historical interesting place with old earthwork.

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 \square 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:
- 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.

b) in the surrounding area:

Territorial waters. 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:

Farmland, forestry, grazing, recreational activities (sailing)

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:

Intervention and sanctions have diminished industrial pollution (CaSO4) and discharge of oxygen-consuming materials affecting the ecological balance in the Little Belt by environmental authorities.

Potential threats are pollution, eutrophication and disturbance from hunting activities. Fyns Amt (2006) and Sønderjyllands Amt (2006) both list overgrowth of saltmarshes as a major problem. Cease of grazing is an increasing problem.

Recreational activities (e.g. sailing and stray dogs) influence the waterbirds in the area. In 1996 the fox arrived at the island of Årø over the ice, and has lived there since then. The number of breeding birds has been negatively influenced by the foxes.

At present the main factors adversely affecting the site's ecological character are eutrophication of saltmarshes and marine areas from surrounding farmland areas, environmentally harmful substances in the marine fauna, overgrowing of open areas, dikes, disturbances from recreational activities, and predation.

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: Stenderup Hage 30 hectares.

Parts of the Ramsar site are Wildlife reserves. At the islands of Bastholm (19 ha), Linderum (13 ha), and Årø Kalv (138 ha), and on the marshes of Nørremaj between Bankel Sø and Lillebælt (117 ha) there is no public access during the breeding season of the waterbirds. Reserves with complete shooting bans are found at Gamborg Inddæmning (120 ha) and Hejlsminde Nor (183 ha). Between the Wedellsborg Peninsula, Funen and Bågø a Ministerial order established a 5133 ha offshore reserve in 2001, where shooting of birds from motorboats is prohibited, and approx. 2/3 of this is found within the Ramsar site. This reserve was established as parts of the new Danish hunting-free network of reserves (Madsen et al. 1998, Clausen et al. 2004).

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

Natura 2000-site No. 112

Special Protection Area for Birds (SPA) No. 47, and most of it in

Special Area of Conservation (SAC) No. 96 (22 ha not included in the SAC but included in the Ramsar Site and SPA is an agricultural area near Stenderup skovene).

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	LI;	Η	LI;	III	LI;	ΙV	□ ;	V	」 ;	VI	Ш
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c) Does an officially approved management plan exist; and is it being implemented?:

The Forest and Nature Agency has developed a management plan for the state owned areas of the island of Årø.

For all Danish Ramsar sites, being part of the Danish Natura 2000 network, concervation 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. 15 is covered by Natura 2000 plan No. 112 (Naturstyrelsen 2011a) and river basin management plans Nos. 1.11 and 1.12 (Naturstyrelsen 2011b, 2011c).

d) Describe any other current management practices:

Part of the Ramsar site is included in the EU funded LIFE project regarding coastal lagoons Rehabilitation of the Baltic Coastal Lagoon Habitat Complex 2005) which amongst other aims at preventing the extinction of the Ruff (*Philomachus pugnax*) and of the Baltic Dunlin (*Calidris alpina schinzii*) from the Baltic Sea region.

At Føns Vang and at Wedellsborg Hoved (inside the Ramsar site), and at Solkær Enge (adjacent to the Ramsar site), wetlands have been restored in former agricultural areas as part of the National 2nd Action Plan for the Aquatic Environment. The restorations according to this plan both have a nature restoration component as well as having to function as buffer areas, where surplus nutrients from upstream agricultural areas should be mineralised in the wetlands, rather than discharged to the downstream coastal areas (in this case Lillebælt). Hoffmann et al. (2006) gives a status for nutrient retainment, flora and waterbird responses in some of the restored 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 tanslated 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).

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.

An information brochure for the island of Årø has been published by Haderslev Municipality and the Forest and Nature Agency. Walking trails have been marked on the island, and information is given with information boards about the island, the wildlife reserve etc. There is a bird observation tower on the island, too.

A visitors centre exists in the harbour of Bågø.

An information board communicates the rules for Gamborg wildlife reserve.

31. Current recreation and tourism:

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

There are some tourism activities on the larger inhabited islands. On Årø more summer cottages have been planned.

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	Local units of the Nature Agency					
Kolding Kommune Axeltorv 1 6000 Kolding	Naturstyrelsen, Trekantsområdet Gjøddinggård Førstballevej 2					
Haderslev Kommune Gåskærgade 26-28 6100 Haderslev	7183 Randbøl Naturstyrelsen, Sønderjylland Felstedvej 14 Egene 6300 Gråsten					
Middelfart Kommune Østergade 9-11 5500 Middelfart	Naturstyrelsen, Fyn Sollerup Sollerupvej 24 5600 Faaborg					

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

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. http://redlist.dmu.dk. Accessed 1 March 2008.

Fyns Amt (2006): Natura 2000 basisanalyse. Habitatområde H96, EF-Fuglebeskyttelsesområde 47 Lillebælt, 76 pp. http://www2.blst.dk/download/ode/Habitatomr_pdf/H96Lillebælt.pdf

Grell, M.B. (1998): Fuglenes Danmark. - Dansk Ornitologisk Forening, Gads Forlag, Copenhagen. 825 pp.

Hoffmann, C.C., Baattrup-Pedersen, A., Jeppesen, E., Amsinck, S.L. & Clausen, P. 2006: Overvågning af Vandmiljøplan II Vådområder 2005. Danmarks Miljøundersøgelser. 128 s. - Faglig rapport fra DMU nr. 576. http://www2.dmu.dk/1_viden/2_Publikationer/3_fagrapporter/rapporter/FR576.PDF

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

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.

Miljo- 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/helepubl.pdf

Naturstyrelsen 2011a: Natura 2000-plan 2010-2015. Natura 2000-plan 2010-2015. Lillebælt. Natura 2000-område nr. 112 Habitatområde H96 Fuglebeskyttelsesområde F47. - Miljøministeriet, Naturstyrelsen. All Natura 2000 plans are available at: <a href="http://www.naturstyrelsen.dk/Naturbeskyttelse/Natura2000/Nat

Naturstyrelsen 2011b: Vandplan 2010-2015, Lillebælt/Jylland. Hovedvandopland 1.11. Vanddistrikt: Jylland og Fyn. - Miljøministeriet, Naturstyrelsen. All river basin management plans are available at: http://www.naturstyrelsen.dk/Vandet/Vandplaner/Se-vandplanerne/

Naturstyrelsen 2011c: Vandplan 2010-2015, Lillebælt/Fyn. Hovedvandopland 1.12. 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

Pedersen, P. & E. Ehmsen (2010): Projekt Ørn - Årsrapport 2009. Dansk Ornitologisk Forening. http://viewer.webproof.com/pageflip/336/18821/index.html

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

Information Sheet on Ramsar Wetlands (RIS), page 12

Petersen, I.K., Nielsen, R.D., Pihl, S., Clausen, P., Therkildsen, O., Christensen, T.K., Kahlert, J. & Hounisen, J.P. (2010): Landsdækkende optælling af vandfugle i Danmark, vinteren 2007/2008. Danmarks Miljøundersøgelser, Aarhus Universitet. – Arbejdsrapport fra DMU nr. 261.78 s. http://www2.dmu.dk/Pub/AR261.pdf

Pihl, S., Petersen, I.K., Hounisen, J.P. & Laubek, B. (2001): Landsdækkende optællinger af vandfugle, vinteren 1999/2000. Danmarks Miljøundersøgelser. - Faglig rapport fra DMU 356: 46 pp. http://www2.dmu.dk/1_viden/2_Publikationer/3_fagrapporter/FR356_samlet.asp

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/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., Buttenschøn, 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

Sønderjyllands Amt (2006): Habitat- og fuglebeskyttelsesområder – Lillebælt (H96, F47, R15), 17 pp. http://www.naturstyrelsen.dk/NR/rdonlyres/C4694B1D-097E-40D8-8672-F1264DDFE9F9/0/N112 H96 Lillebælt bas.pdf

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

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