

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.

Ulvedybet and Nibe Bredning
(International No. 146; National No. 7)

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:

Recent declines in submerged vegetation in the shallow waters and cessation of grazing in several salt marshes have had negative effects on formerly common species such as Mute Swan, Eurasian Wigeon and Eurasian Coot. Water management plans for reducing nutrients in Danish inland waters have been endorsed for implementation.

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_ramsar7.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.

57°02' N, 09°35' 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 a part of the Limfjord sound, immediate west of Ålborg city. Administrative region is Region Nordjylland.

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

0-2 m

11. Area: (in hectares)

18,575 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 areas with islets, small lakes. The Ulvedybet area, a brackish lagoon surrounded by meadows and reed swamps, is isolated from the Limfjord by a dam. Agricultural land with 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 an important breeding, staging, feeding, moulting and wintering area for waterbirds, including species on the Danish red list (DMU 2007), e.g. Common Spoonbill *Platalea leucorodia* (VU, Ann. I EU Birds Dir.), Northern Pintail *Anas acuta* (VU), Montagu's Harrier *Circus pygargus* (EN, Ann. I EU Birds Dir.), Dunlin *Calidris alpina schinzii* (EN, Ann. I EU Birds Dir.), Ruff *Philomachus pugnax* (EN, Ann. I EU Birds Dir.), and Little Tern *Sterna albifrons* (NT, Ann. I EU Birds Dir.).

Criterion 4: The site is an important breeding, staging, feeding, moulting and wintering area for waterbirds.

Criterion 5: The site regularly supports more than 20,000 waterbirds and up to 57,2230 have been recorded 2004-2009.

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*) 986 – 1.7% of the Northwest Mainland Europe population
 Pink-footed Goose (*Anser brachyrhynchus*) 4,647 – 7.4% of the Svalbard/NW Europe population
 Light-bellied Brent Goose (*Branta bernicla brota*) 2,591 – 34.5% of the Svalbard/Denmark/UK population

For the two first mentioned species, which mainly feed on adjacent agricultural fields outside the Ramsar area, even higher proportion are likely to roost at night. (In Denmark swans and geese are monitored during daytime at feeding sites).

Previously mentioned internationally important numbers of Bewick's Swan (*Cygnus bewickii*) from the W Siberia/NE & NW Europe population have not been recorded in recent years, but this might represent lack of count coverage during late winter, when most Bewick's are found in this region of the country.

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

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.

No specific information.

17. Physical features of the catchment area:

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

No specific information.

18. Hydrological values:

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

No specific information.

19. Wetland Types

a) presence:

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

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

Inland: L • M • N • 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, B, H, G, E

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 ecosystems surrounded by meadows and reed swamps. The Ulvedybet lake area is isolated from the Limfjord by a dam.

21. Noteworthy flora:

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

No specific information.

22. Noteworthy fauna:

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

The site is a very important breeding, staging and wintering area for aquatic birds.

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

Species \ Year	Breeding population (in pairs)					
	2004	2005	2006	2007	2008	2009
<i>Phalacrocorax carbo</i>	710	509	940	524	476	650
<i>Botaurus stellaris</i>	3	1	1	1	3	1
<i>Platalea leucorodia</i>	16	14	19.5	27	31.5	30
<i>Circus pygargus</i>	0	0	0	0	1	1
<i>Recurvirostra avosetta</i>	69	0	42	48	138	276
<i>Calidris alpina</i>	5	8.5	2.5	2.5	0	0
<i>Philomachus pugnax</i>	0	0	1	0	0	0
<i>Sterna sandvicensis</i>	10	15	6	0	0	0
<i>Sterna paradisaea</i>	119	6	19	0	0	0
<i>Sterna albifrons</i>	0	0	0	0	0	0

Note: this site has not been subject to intensive monitoring programmes. Absence of e.g. Spotted Crake (*Porzana porzana*) and Marsh Harrier (*Circus auruginosus*) in the table might thus represent missing coverage rather than absence of these species. 'half pair' represents an average of a range, i.e. 19,5 = 19-20 pairs.

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>Podiceps cristatus</i>	0	0	0	0	135	171	153
<i>Podiceps grisegena</i>	0	0	2	4	7	1	4
<i>Podiceps auritus</i>	0	0	0	0	1	1	1
<i>Phalacrocorax carbo</i>	68	37	200	135	360	496	216
<i>Ardea cinerea</i>	4	2	0	4	4	2	3
<i>Platalea leucorodia</i>	9	2	1	7	112	89	37
<i>Cygnus olor</i>	1600	1500	1222	1270	1100	1100	1299
<i>Cygnus columbianus</i>	92	44	40	21	105	21	54
<i>Cygnus cygnus</i>	1352	646	713	1007	935	1264	986
<i>Anser fabalis</i>	0	0	11	7	30	0	16
<i>Anser fabalis rossicus</i>	1	0	0	0	0	0	1
<i>Anser brachyrhynchus</i>	1400	126	4250	7360	7000	7750	4648
<i>Anser albifrons albifrons</i>	0	0	47	0	0	0	47
<i>Anser anser</i>	800	1900	3000	3500	3689	2450	2557
<i>Branta canadensis</i>	476	25	246	433	17	162	227
<i>Branta leucopsis</i>	21	1	28	580	2500	1865	833
<i>Branta bernicla</i>	0	0	0	0	35	0	35
<i>Branta bernicla bernicla</i>	108	340	0	250	201	83	196
<i>Branta bernicla brota</i>	1438	2493	2178	4000	2712	2730	2592
<i>Tadorna tadorna</i>	326	51	0	43	850	514	357
<i>Anas penelope</i>	10446	7000	4000	6000	5139	2905	5915
<i>Anas strepera</i>	3	0	0	1	0	0	2
<i>Anas crecca</i>	750	700	1750	1600	3000	2368	1695
<i>Anas platyrhynchos</i>	3500	2000	1500	1000	2500	1095	1933
<i>Anas acuta</i>	52	30	29	14	18	28	29
<i>Anas clypeata</i>	151	110	105	142	58	82	108
<i>Aythya ferina</i>	136	56	52	30	7	1	47
<i>Aythya fuligula</i>	3800	3000	800	530	210	60	1400
<i>Aythya marila</i>	15	0	1	1	9	2	6
<i>Somateria mollissima</i>	80	0	16	230	575	1040	388
<i>Bucephala clangula</i>	3025	1100	600	1800	2170	1040	1623

<i>Mergus albellus</i>	6	10	2	9	4	7	6
<i>Mergus serrator</i>	1100	2000	57	36	349	136	613
<i>Mergus merganser</i>	82	62	50	36	44	280	92
<i>Haliaeetus albicilla</i>	0	0	0	0	1	1	1
<i>Circus aeruginosus</i>	0	0	0	0	2	2	2
<i>Circus cyaneus</i>	4	3	2	2	2	3	3
<i>Pandion haliaetus</i>	2	5	5	4	6	4	4
<i>Falco columbarius</i>	1	1	1	0	1	1	1
<i>Falco peregrinus</i>	2	1	2	1	4	3	2
<i>Fulica atra</i>	3568	3000	5000	1500	2922	3120	3185
<i>Haematopus ostralegus</i>	0	0	0	0	26	3	15
<i>Recurvirostra avosetta</i>	297	159	171	250	234	205	219
<i>Pluvialis apricaria</i>	5400	4000	3000	1000	4488	20390	6380
<i>Pluvialis squatarola</i>	0	0	0	0	36	235	136
<i>Vanellus vanellus</i>	0	0	0	1500	2691	3411	2534
<i>Calidris canutus</i>	17	15	35	46	16	27	26
<i>Calidris alba</i>	0	1	0	8	2	3	4
<i>Calidris ferruginea</i>	0	0	0	0	3	1	2
<i>Calidris alpina</i>	500	3120	2000	2000	4530	1150	2217
<i>Philomachus pugnax</i>	0	0	0	0	13	1	7
<i>Gallinago gallinago</i>	0	0	0	0	41	40	41
<i>Limosa lapponica</i>	14	92	480	320	22	104	172
<i>Numenius phaeopus</i>	0	0	0	0	0	1	1
<i>Numenius arquata</i>	69	0	0	0	346	422	279
<i>Tringa erythropus</i>	0	0	0	0	10	3	7
<i>Tringa totanus</i>	95	93	70	210	280	209	160
<i>Tringa nebularia</i>	70	28	43	28	112	145	71
<i>Larus ridibundus</i>	57	0	0	0	0	0	57
<i>Larus argentatus</i>	117	0	0	0	0	0	117
<i>Sterna sandvicensis</i>	0	0	0	0	0	2	2
<i>Sterna paradisaea</i>	0	0	0	0	0	1	1
<i>Alca torda</i>	0	0	0	1	0	0	1
Sum of annual maxima	41054	33753	31709	36920	49664	57230	

23. Social and cultural values:

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

No specific information.

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

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

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

a) within the Ramsar site:

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

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, farmland

b) in the surroundings/catchment:

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:

Especially salt marsh areas, e.g. on the islands, are increasingly overgrown because of cessation of grazing (Kjeldsen & Nielsen 2009).

Nutrient loadings and resulting eutrophication in the aquatic environment have caused a major collapse and 90% reduction in the surface area of the submerged *Zostera marina* beds of Nibe and Gjøl Bredninger, and this has been followed by notable reductions in numbers of e.g. feeding Mute Swans *Cygnus olor*, Eurasian Wigeon *Anas penelope*, and Eurasian Coot *Fulica atra* (Clausen & Holm 2011).

b) in the surrounding area:

Nutrients in the aquatic environment

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: Skt. Nikolaj Bjerg (23 ha).

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

Natura 2000-site No. 15

Special Protection Area for Birds (SPA) No. 1, and

Special Area of Conservation (SAC) No. 15.

Parts of the Ramsar site are wildlife reserves (with shooting-free areas in Ulvedybet and Gjøl Bredning, and restrictions on mobile hunting activities in most of the Ramsar site)(Madsen et al. 1998, Clausen et al. 2004).

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

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

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

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

National Ramsar site No. 7 is covered by Natura 2000 plan No. 15 (Naturstyrelsen 2011a) and river basin management plan No. 1.2 (Naturstyrelsen 2011b).

d) Describe any other current management practices:

In relation to a national action plan for threatened meadow birds, an overgrown area with reedbeds in Ulvedybet has been restored to meadows by fencing and grazing.

28. Conservation measures proposed but not yet implemented:

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

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

29. Current scientific research and facilities:

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

In 2003 Denmark launched the NOVANA programme. This programme forms the basis for future nature and water quality assessments in Denmark, and as such also supports the administration of the Ramsar site networks. NOVANA is an acronym that could be translated to English as NMWANA (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.

A bird observation tower has been raised in the southwestern corner of Ulvedybet.

31. Current recreation and tourism:

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

No specific information.

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

Aalborg Kommune
Boulevarden 13
Postbox 462
9100 Aalborg
Tel: +45 99313131
E-mail: aalborg@aalborg.dk

Local unit of the Nature Agency

Naturstyrelsen Thy
Søholtvej 6
9700 Thisted
Tel: +45 72543000
E-mail: thy@nst.dk

Jammerbugt Kommune

Toftevej 43
9440 Aabybro
Tel: +45 72577777
E-mail: raadhus@jammerbugt.dk

34. Bibliographical references:

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

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

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

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