SCIENTIFIC ANALYSIS ON THE DESIGNATION OF NATURA 2000 SITES AND THE STATUS OF NATURE AND EFFORT

The Danish situation

Technical Report from DCE – Danish Centre for Environment and Energy No. 116 2018

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Data sheet

Series title and no.:	Technical Report from DCE – Danish Centre for Environment and Energy No. 116
Title:	Scientific analysis on the designation of Natura 2000 sites and the status of nature and effort
Subtitle:	The Danish situation
Authors:	Jesper Fredshavn[1], Bettina Nygaard[2], Jesper L. Bak[2], Jesper Bladt[2] and Gregor Levin[3]
Institutions:	Aarhus Universitet, [1]DCE - Danish Centre for Environment and Energy, [2] Department of Bioscience and [3]Department of Environmental Science
Publisher:	Aarhus University, DCE – Danish Centre for Environment and Energy ©
URL:	http://dce.au.dk/en
Year of publication:	March 2018
Editing completed:	March 2018
Referee:	Flemming Skov
Quality assurance, DCE:	Poul Nordemann Jensen
Financial support:	Environmental Protection Agency, Denmark
Please cite as:	Fredshavn, J., Nygaard, B., Bak, J.L., Bladt, J. and Levin, G. 2018. Scientific analysis on the designation of Natura 2000 sites and the status of nature and effort. The Danish situation. Aarhus University, DCE – Danish Centre for Environment and Energy, 34 pp. Technical Report from DCE – Danish Centre for Environment and Energy No. 116 http://dce2.au.dk/pub/TR116.pdf

Abstract: The purpose of the project is to compare the ammonia regulations in relation to the designated Natura 2000 sites and the EU Habitats Directive. This report represents the scientific analysis in Denmark. The scientific analysis focuses on the state of the designated Natura 2000 areas and the need to protect the ammonia-sensitive nature. The analysis describes the designation process and the location of the ammonia-sensitive areas in relation to agricultural activity and ammonia deposition, the monitoring and assessments of the natural habitats and the national objectives in ammonia regulations particularly in the Natura 2000 areas.

Keywords:	Ammonia regulations, Natura 2000 areas, Habitat directive
Layout:	Graphic Group, AU Silkeborg
Front page photo:	Jesper Fredshavn
ISBN:	978-87-7156-326-9
ISSN (electronic):	2245-019X
Number of pages:	34
Internet version:	The report is available in electronic format (pdf) at http://dce2.au.dk/pub/TR116.pdf

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Preface

This report is part of a comparative project initiated by the Danish Environmental Protection Agency, the Ministry of Environment and Food. The purpose of the project is to compare the ammonia regulations in relation to the designated Natura 2000 sites and the EU Habitats Directive. The project consists of three parts analysing the situation in Denmark, Schleswig-Holstein and the Netherlands from a legal perspective, an economic perspective and a natural science perspective. Department of Food and Resource Economics (IFRO), Copenhagen University is responsible for the economic and legal analysis, and Danish Center for Environment and Energy (DCE), Aarhus University is responsible for the scientific analysis.

This report represents the scientific analysis in Denmark. The scientific analysis focuses on the state of the designated Natura 2000 areas and the need to protect the ammonia-sensitive nature. The analysis describes the designation process and the location of the ammonia-sensitive areas in relation to agricultural activity and ammonia deposition, the monitoring and assessments of the natural habitats and the national objectives in ammonia regulations particularly in the Natura 2000 areas.

1 The designation of Danish Natura 2000 sites

a) Number of SAC's (land and sea) and the variation in sizes and number of habitat types in the sites

Denmark has designated 261 Special Areas of Conservation (SAC) consisting of 237 sites designated solely as Habitat sites plus 24 sites designated as both SAC and Special Protection Areas (SPA).

The variation in size and number of habitat types of the 261 SAC's are shown in Appendix 1. The variation in size varies between 1.6 ha up to 22,627 ha in land area and the number of habitat types in the sites varies between 1 and 39.

b) The total habitat area distributed in biogeographical regions

There are two terrestrial biographical regions in Denmark, the Atlantic and the Continental region. The total of 3,219 km^2 land area in the Habitat sites are distributed with 36 percent in the Atlantic region and 64 percent in the Continental biogeographical region. There is also two marine biogeographical regions, the Marine Atlantic and the Marine Baltic region.

c) The percentage of land area covered by Natura 2000 sites

261 Natura 2000 sites are designated as SAC, with a total land area of 3,219 km^2 and 113 sites are designated as Special Protection Areas (SPA) under the Bird Protection Directive with a total land area of 2,642 km^2. 24 of these sites are designated as both SAC and SPA giving a total of 350 Natura 2000 sites. With an overlap of 2,211 km^2, the total land area is 3640 km^2 equivalent to 8.5 percent of the Danish land area covered by Natura 2000 sites.

d) The percentage of the land area covered by SAC's

The 261 SAC's cover a total of 3,219 km^2 equivalent to 7.5 percent of the Danish land area (43051 km^2).

e) The percentage of the land area covered by Special protection areas (SPA)

The 113 SPA's cover a total of 2,642 km^2 equivalent to 6.1 percent of the Danish land area (43,051 km^2).

f) The percentage of Danish land area covered by natural, non-cultivated areas

The latest land cover update in Denmark (Levin et al 2016) shows that open nature areas (Paragraph 3 area) in Denmark are 4,494 km^2 including lakes, and 3,790 km^2 without lakes. That is equivalent to 10.4 percent and 8.8 percent resp. of the Danish land area. The forest area, comprising both natural areas and forested areas, is 14.1 percent.

g) Annex I habitats and Annex II species present on the designated sites

Appendix 1 gives an overview of the designated habitat sites with the number of Annex I habitat types and the number of Annex II species present in the designated sites. In all, there are 60 Annex I habitat types and 38 Annex II species present in the habitat sites. For each Annex I habitat type App. 2 shows the total land area and the number of designated sites and for each Annex II species Appendix 3 shows the total area and the number of designated sites (Source: Standard Data Form, DK 2016).

Table 1. Percentages of land cover classes in Denmark. Source: Danish Statistics, based on DCE-report TR95 (Levin et al 2017).

Land cover class	Percentage
Agricultural area	61.1 %
Forest	12.7 %
Lakes	2.2 %
Built up area	6.9 %
Infrastructure	5.8 %
Nature	8.6 %
Not mapped	1.7 %

h) Short description of the designation process and subsequent updates (update in designated sites and in species and habitats present)

The designation process has taken several steps in the period 1983 until today. In 1983 a preliminary designation of Bird protection sites were carried out, and in 1994 the final designation of the Bird protection sites were adopted. In 1992, Denmark signed the Habitat Directive with a deadline in 1995 to designate the Habitat sites. Based on the Bird protection sites and the available information from the former 14 Danish Counties, green NGO's, University experts etc. the Habitat Sites were drawn on topographical paper maps in scale 1:25,000. After a formal letter of notice from the EU commission a proposal on the terrestrial areas were finished in 1998 and the final Danish designation were adopted by the EU commission in 2004. The designation has later been supplemented by e.g. a number of marine sites in 2010 and the features for designation of habitat types and species have been updated during the period up until today.

The paper maps have been digitised and used in different Danish planning processes including the Natura 2000 management plans and shown to be too inaccurate in relation to precise boundaries etc. Consequently, a new digitising of the Natura 2000 sites based on the original paper maps have been in process over the last years. The finally digitized Natura 2000 sites including various changes will have to be adopted by the EU commission, who apparently will accept changes up to 5 % in the original designated sites.

i) The involvement of NGOs and the European Commission's reaction to the initial appointment

NGO's have been involved the designation process from the beginning. They have contributed with relevant knowledge to the proposed sites and all NGO's with input in designation process have been invited and consulted by the EU commission in their final adoption of the designated sites.

Before the 2004 adoption involving the majority of the sites the EU Commission had several iterations where the commission, based on information from e.g. NGO's, asked Denmark to reconsider the presence of habitat types and species and to designate further sites.

j) Total area with intensive agricultural production in each Natura 2000 site and in percentage of all Natura 2000 sites

Based on a GIS analysis of the Danish Digital Field Maps the area of intensive agricultural production, both in hectares and in percentages of the site area are shown for each designated area in Appendix 3. A total of 227 Natura 2000 sites

include land area, and the total area with intensive agricultural production is 466 km^2 equivalent to 14.4 percent of the land area of the Natura 2000 sites.

k) The percentage of area in a 100 meter buffer outside the Natura 2000 sites with intensive agricultural production

In a 100 m buffer outside the Natura 2000 sites the total land area is 788.4 km^2. 35.5 percent of this area (279.5 km^2) is with intensive agricultural production.

l) Number and total area of husbandry farms in the Natura 2000 sites and in a buffer of 1000 and 2000 meters outside the N2000 sites

In a buffer of 1000 m outside the Natura 2000 sites the total land area is 7031 km^2 and in a 2000 m buffer the land area is 13,932 km^2. The number of husbandry farms with a household of more than 15 animal units and the stable situated in the 1000 m buffer is 2215 and in the 2000 m buffer, the number is 4,450 farms. Only 202 husbandry farms have their stable inside the Natura 2000 sites.

The number of farms with intensive agricultural farm land within the Natura 2000 sites and in the 1,000 m and 2,000 m buffer is 2,691, 6,195 and 9,120 respectively. The total area of the intensive agricultural land use managed by husbandry farms with more than 15 animal units is 215 km^2 (6.6 percent) within the Natura 2000 sites, 1,670 km^2 (24 percent) in the 1,000 m buffer and 3,502 km^2 (25 percent) in the 2,000 m buffer.

2 The state of nature and effort

a) To what extend is the assessment of the state of the Natura 2000 sites based on data from the Danish monitoring programme

The assessment of conservation status of species and habitats in the Article 17 reporting is based on mapping and monitoring data from the National Monitoring and Assessment Programme for the Aquatic and Terrestrial Environments (NOVANA).

In the latest reporting (2013) the assessments of range and area was based on a national upscaling of the site-specific mapping of habitat sites in the Special Areas of Conservation (SACs) in 2010-2011 for all 44 terrestrial habitats (Nygaard & Ejrnæs 2017). For 18 of the 34 open habitats (Table 2) the assessment of structure and function was based on a "complete survey or a statistically robust estimate" from NOVANA monitoring data from the first programme period (2004-2010) (Nygaard et al. 2014). The assessment for the remaining 16 open habitats and the 10 forest types was based on "partial data with some extrapolation and / or modelling" from the habitat mapping in 2010-2011.

In the 2019 reporting all assessments of structure and function will be based on a "complete survey or a statistically robust estimate" from NOVANA monitoring data.

Table 2. Mapping and monitoring of the 44 Danish terrestrial habitat types in the first monitoring period (2004-10) and the second monitoring period (2011-2016) of the NOVANA programme. In the first period, 18 selected open and 10 forest habitat types were monitored. In the second period, all 34 open and 10 forest habitat types were monitored. * are prioritised habitat types.

			Mapping			Monitoring		
			2004-	2011-	2016-	2004-	2011-	2016-
Kode	Danish name	English name	10	15	21	10	15	21
1210	Strandvold med en-årige planter	Annual vegetation of drift lines		X	x		x	x
1220	Strandvold med flerårige planter	Perennial vegetation of stony banks		X	x		x	x
1230	Kystklint eller – klippe	Vegetated sea cliffs of the Atlantic and Baltic coasts		X	x		x	x
1310	Enårig strandengsveg-etation	Salicornia and other annuals colonising mud and sand		X	x		x	x
1320	Vadegræssamfund	Spartina swards (Spartinion maritimae)		x	x		x	x
1330	Strandeng	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	X	x	x	x	x	x
1340*	Indlandssalteng	Inland salt meadows	X	x	x	x	x	x
2110	Forklit	Embryonic shifting dunes		x	x		x	x
2120	Hvid klit	Shifting dunes along the shoreline with Ammoph-ila arenaria (white dunes)		x	x		x	x
2130*	Grå/grøn klit	Fixed coastal dunes with herbaceous vegetation (grey dunes)	x	x	x	x	x	x
2140*	Klithede	Decalcified fixed dunes with Empetrum nigrum	x	x	x	x	x	x
2160	Havtornklit	Dunes with Hippophae rhamnoides		x	x		x	x
2170	Gårisklit	Dunes with Salix repens ssp. argentea (Salicion arenariea)		x	x		x	x
2190	Klitlavning	Humid dune slacks	x	x	x	x	x	x
2250*	Enebærklit	Coastal dunes with Juniperus spp.	x	x	x	x	x	x
2310	Visse-indlandsklit	Dry sand heaths with Calluna and Genista	x	x	x		x	x
2320	Revling-indlandsklit	Dry sand heaths with Calluna and Empetrum nigrum	x	x	x		x	x
2330	Græs-indlandsklit	Inland dunes with open Corynephorus and Ag-rostis grasslands	x	x	x		x	x
4010	Våd hede	Northern Atlantic wet heaths with Erica tetralix	x	x	x	x	x	x
4030	Tør hede	European dry heaths	x	x	x	x	x	x
5130	Enebærkrat	Juniperus communis formations on heaths or cal-careous grasslands	x	x	x		x	x
6120*	Tørt kalksandsoverdrev	Xeric sand calcareous grasslands	x	x	x	x	x	x
6210	Kalkoverdrev	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia)	x	x	x	x	x	x
6230*	Surt overdrev	Species-rich Nardus grasslands, on siliceous substrates in mountain	x	x	x	x	x	x
6410	Tidvis våd eng	Molinia meadows on calcareous, peaty or clayey-siltladen soils (Molinion caeruleae)	x	x	x	x	x	x
7110*	Aktiv højmose	Active raised bogs	x	x	x	x	x	x
7120	Nedbrudt højmose	Degraded raised bogs still capable of natural re-generation	x	x	x		x	x
7140	Hængesæk	Transition mires and quaking bogs	x	x	x	x	x	x
7150	Tørvelavning	Depressions on peat substrates of the Rhyn-chosporion	x	x	x	x	x	x
7210*	Avneknippemose	Calcareous fens with Cladium mariscus and spe-cies of the Caricion davallianae	x	x	x	x	x	x

7220*	Kildevæld	Petrifying springs with tufa formation (Cratoneurion)	x	x	x	x	x	x
7230	Rigkær	Alkaline fens	x	x	x	x	x	x
8220	Indlandsklippe	Siliceous rocky slopes with chasmophytic vegetation		x	x		x	x
8230	Indlandsklippe med pionerplanter	Siliceous rock with pioneer vegetation of the Sedo-Scleranthion or of the Sedo albi-Veronicion dillenii		x	x		x	x
2180	Skovklit	Wooded dunes of the Atlantic, Continental and Boreal region	x			x	x	
9110	Bøg på mor	*Luzulo-Fagetum* beech forests	x			x	x	
9120	Bøg på mor med kristtorn	Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercinion robori-petraeae* or *Ilici-Fagenion*)	x			x	x	
9130	Bøg på muld	*Asperulo-Fagetum* beech forests	x			x	x	
9150	Bøg på kalk	Medio-European limestone beech forests of the *Cephalanthero-Fagion*	x			x	x	
9160	Ege-blandskov	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*	x			x	x	
9170	Vinteregeskov	*Galio-Carpinetum* oak-hornbeam forests	x			x	x	
9190	Stilkegekrat	Old acidophilous oak woods with *Quercus robur* on sandy plains	x			x	x	
91D0*	Skovbevokset tørvemose	Bog woodland	x			x	x	
91E0*	Elle- og askeskov	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)	x			x	x	

b) The indicator trends and overall development in conservation status of the terrestrial habitat types in the period 2004-2015 in the Natura 2000 sites

The overall development of the conservation status of the terrestrial habitat types in Denmark is presented in **Figure 1**.

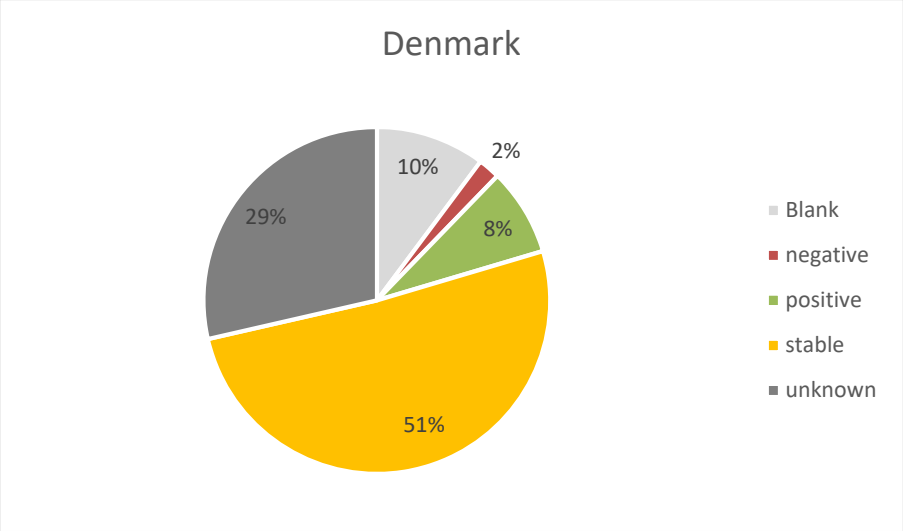

Figure 1. Trend in conservation status of the Danish terrestrial habitat types (1100 serie is excluded). Source: Article 17 report Habitat Directive period 2007-2012.

The trends in more than 300 indicators related to species composition, vegetation structure, nutrient status and hydrology in 18 habitat types were tested in the national reporting of the NOVANA monitoring data from 2004 to 2015 (Nygaard et al. 2016). The results are shown in Table 3.

The majority of the tested indicators are stable (64%, 197 out of 310), while 29 % shows a negative trend and 8 % shows a positive trend in the period. The negative trends are most pronounced in indicators related to the plant species composition and nutrient status, while a higher proportion of indicators related to vegetation structure (e.g. vegetation height, tree cover and occurrence of grazing) shows a positive trend.

Table 3. Overview of trends in indicators from the NOVANA monitoring program for open terrestrial habitats, in the period 2004-2015. For each habitat groups is listed the number of indicators where monitoring data shows a stable, a positive and a negative trend. The indicators are group after their relation to the species composition in the vegetation, distribution of invasive species, nutrient status, vegetation structure and hydrology.

Habitats	Kode	Change (2004-2015)	Species composition	Invasive species	Nutrient status	Vegetation structure	Hydrology	Grand Total
Saltmarshes	1330, 1340	Stable	3	1	2	5	3	14
		Negative	6		1		1	8
Coastal dunes	2130, 2140, 2190, 2250	Stable	31	7	7	14	1	60
		Positive		1		1	1	3
		Negative	11	2	4	9	2	28
Heathlands	4010, 4030	Stable	4	1	3	2		10
		Positive	1	3		3		7
		Negative	6	1	5	1		13
Dry grasslands	6120, 6210, 6230	Stable	15	3	1	10		29
		Positive			1	2		3
		Negative	6	1	4	3		14
Meadows	6410	Stable	6	1	1	4	1	13
		Negative	1				1	2
Bogs	7110, 7140, 7150	Stable	19	3	5	5	6	38
		Positive	3		1	4		8
		Negative	5		2	1	2	10
Fens and mires	7210, 7220, 7230	Stable	15	3	3	8	4	33
		Positive				1	2	3
		Negative	5		3	4	2	14
All habitats		Stable	93	19	22	48	15	197
		Increasing	4	4	2	11	3	24
		Decreasing	40	4	19	18	8	89
		Total	137	27	43	77	26	310

c) A table of low, medium and high pressure factors given rise to the changes in the habitat types

For Article 17 reporting *pressures* are factors, which are acting now or have been acting during the 6-year reporting period, while *threats* are factors expected to be acting in the future (12 years ahead). Pressures and threats are reported separately. The total list of pressures and threats used for the assessment can be found on the Article 17 Reference Portal (See http://bd.eionet.europa.eu/activities/Reporting/Article_17/reference_portal.).

The reported pressures on the Danish habitat types are listed in Table 4. The relative importance of the pressures are ranked in one of three categories: High impact (H), medium impact (M) and low impact (L). The assessments are based on analyses of monitoring data (NOVANA) and expert judgements. The main pressures on the open terrestrial habitats identified in the Article 17 reporting in 2013 were airborne nitrogen pollution (high or medium importance for 26 out of 33 open terrestrial habitats), lack of grazing (19), invasive species (18), coastal protection (13), fragmentation (12) and drainage (11) (EIONET 2013) (Table 4).

Table 4. Overview of the pressures on the open terrestrial habitats reported to the European Commission in 2013 as part of the Danish Article 17 report (EIONET 2013, Fredshavn et al. 2014, Nygaard et al. 2014). The pressures are ranked by their relative importance for each of the 33 open terrestrial habitat types: High importance/impact (H), medium importance/impact (M) and low importance/impact (L). "Insignificant" indicates that the pressure has an insignificant effect or acts over extremely small areas. According to the EU guidelines, the number of entries with high rank is limited to a maximum of five data entries for each habitat type.

Pressures		Insignificant	Low	Medium	High
Agriculture					
A01.	Cultivation		20	13	0 0
A04.03	Abandonment of pastoral systems, lack of grazing		13	1	17 2
A06	Annual and perennial non-timber crops		28	5	0 0
A07	Use of biocides, hormones and chemicals		19	14	0 0
A08	Fertilisation		12	12	9 0
E. Urbanisation, residential and commercial development					
E01	Urbanised areas, human habitation		16	13	4 0
G. Human intrusions and disturbances					
G01	Outdoor sports and leisure activities, recreational activities		27	6	0 0
H. pollution					
H01	Pollution to surface waters (limnic, terrestrial, marine & brackish)		20	6	7 0
H02	Pollution to groundwater (point sources and diffuse sources)		24	1	8 0
H04	Air pollution, air-borne pollutants		0	7	10 16
Invasive, other problematic species and genes					
I01	Invasive non-native species		0	15	18 0
I02	Problematic native species		27	1	5 0
J. Natural System modifications					
J02.01.02	Reclamation of land from sea, estuary or marsh	28	5	0	0
J02.04	Flooding modifications	30	0	3	0
J02.05	Modification of hydrographic functioning, general	17	5	11	0
J02.12	Dykes, embankments, artificial beaches, general	15	5	13	0
J03.02	Anthropogenic reduction of habitat connectivity	16	5	10	2
K. Natural biotic and abiotic processes (without catastrophes)					
K02	Biocenotic evolution, succession		29	2	2 0
M. Climate change					
M01	Changes in abiotic conditions		11	17	5 0
M01.07	Sea-level changes		27	5	1 0

The main pressures on the five lake habitats identified in the Article 17 reporting in 2013 were "diffuse pollution to surface waters due to agricultural and forestry activities" and "agricultural intensification" (high importance for all five habitat types), and "landfill, land reclamation, drying out, general" (four medium) and "air pollution, air-borne pollutants" (two medium) (EIONET 2013) (Table 5). In

addition "pollution to surface waters by storm overflows", "other point source pollution to surface water", "diffuse pollution to surface waters due to household sewage" and waste waters and "water abstractions from groundwater" are pressures of low importance for all five lakes habitat types.

Pollution due to airborne nitrogen is the most frequently reported high-ranked pressures to Danish terrestrial habitats, accounting for 80 % each of all reported high-ranked pressures. Reports from across the European biogeographical regions show that 'nitrogen deposition' presents the greatest pollution pressure in north-west Europe (EEA 2015).

In coastal habitats modification of natural conditions including dykes, natural erosion etc. is reported as medium importance for 13 out of the 15 habitat types (beaches, saltmarshes and coastal dunes). Changes in hydraulic conditions, modifications of hydrographic functioning and water abstraction from groundwater affects 6 of the 8 wet terrestrial habitats.

Table 5. Overview of the pressures on the five lake habitats reported to the European Commission in 2013 as part of the Danish Article 17 report (EIONET 2013, Fredshavn et al. 2014). The pressures are ranked by their relative importance for each of the five habitat types: High importance/impact (H), medium importance/impact (M) and low importance/impact (L). "Insignificant" indicates that the pressure has an insignificant effect or acts over extremely small areas. According to the EU guidelines, the number of entries with high rank is limited to a maximum of five data entries for each habitat type.

Pressures		Insignificant	Low	Medium	High
Agriculture					
A02.01	Agricultural intensification	0	0	0	5
H. pollution					
H01.02	Pollution to surface waters by storm overflows	0	5	0	0
H01.03	Other point source pollution to surface water	0	5	0	0
H01.05	Diffuse pollution to surface waters due to agricultural and forestry activities	0	0	0	5
H01.08	Diffuse pollution to surface waters due to household sewage and waste waters	0	5	0	0
H01.09	Diffuse pollution to surface waters due to other sources not listed				
H04	Air pollution, air-borne pollutants	3	0	2	0
J. Natural System modifications					
J02.01	Landfill, land reclamation and drying out, general	1	0	4	0
J02.07	Water abstractions from groundwater	0	5	0	0

d) A table/description of the data and methods used to assess the need for actions (under the Natura 2000 management plans) or other measures

For the Natura 2000 Network, Denmark has set up a management planning system targeted for the species and habitats for which the sites are designated (se also question 2h). This planning system is the framework for identifying site conservation objectives and the management needs in each Natura 2000 site as a basis for prioritizing financial means to the implementation of the plans.

In the first planning period (2010-2015) the management efforts aimed to address some of the high ranking pressures (Table 4): Abandonment of pastoral systems, lack of grazing (A04.03), invasive non-native species (I01), problematic native species (I02), modification of hydrographic functioning, general (J02.05) and anthropogenic reduction of habitat connectivity (J03.02) (http://svana.dk/media/197469/nationalnatura2000plan.pdf). The specific aims were to introduce grazing or haycutting on 110.000 ha, improve the hydrological conditions for 14-16.000 ha raised bogs, rich fens and saltmarshes,

establish new habitats and bufferzones (about 4.300 ha), stop the negative development for selected threatened species and increase the area with threatened habitats (rich fens, dry grassland and raised bogs).

In the second planning period (2016-2021) the management efforts aims to complete the planned efforts from the first period and mainly securing grazing and haycutting on the open habitats. Furthermore, the Natura 2000-plans aim to improve and secure the quality of the most vulnerable habitats by connecting fragmented areas. Finally, a special effort will be initiated to improve the conditions for threatened breading birds and against invasive non-native species.

e) Nitrogen / ammonia sensitivity in relationship to ammonia regulation:

i) Which nature classification systems are used categorizing ammonia sensitive habitat types: Habitat Directive Annex 1, EUNIS, national systems?

Two different nature classification systems are used in Danish regulation: 1) Annex 1 habitat types defined in the Habitat directive, but with a Danish interpretation manual, and 2) habitat types defined in the Danish Nature Protection Act (§ 3): lakes, streams, bogs, meadows, salt marshes, heathland, and dry grasslands.

The classification systems overlap in the sense that the Annex 1 classification is more detailed than the § 3 classification, but also narrower. In the Danish classification, (§ 3) heathland can e.g. be subdivided into Annex 1 dry heath (4030), wet heath (4010), and heathland which are not considered Annex 1 habitats. The total area of Annex 1 habitats is 329,000 ha of which 40 % is located inside the SAC sites. The Annex 1 habitat types include 10 terrestrial habitats (1220, 1310, 1320, 1330, 1340, 3260, 3270 and 6430), which are not considered nitrogen sensitive in the regulation. Of these, however, only 1330 (salt meadows), 3260 (watercourses) and 6430 (tall herb fringe communities) constitute a significant area nationally.

The § 3 habitat types are nationally defined, but based on CORINE classes. The area protected by § 3 habitat types in 2016 is 444.000 ha (or 10.3 % of the Danish land area). Only the habitat types bogs, heathland and dry grassland (and two smaller habitat types, raised bogs and oligotrophic lakes) are considered nitrogen sensitive in the regulation. The area of these habitat types, excluding the area that is also Annex 1 habitats, is 162.000 ha.

In addition to the mentioned habitat types, 218,000 ha of forest out of the total 625,000 ha of forest area is considered nitrogen sensitive as well. The part considered not sensitive is mainly production forest.

ii) Which nitrogen sensitivity assessments (e.g. critical loads) are used for the different habitat types or areas?

A manual to the Danish counties from 2003 recommended the use of mass-balance (SMB) methods for the calculation of critical loads on a site basis, supplemented with the use of empirical critical loads, where data for local calculations were not available (Bak 2003). There has not been conducted a nationwide mapping of critical loads and exceedances based on local data, and as a consequence, empirical critical loads have been used in different national assessments (Bak & Albrektsen 2010). In 2013, methods to derive critical loads for biodiversity was developed, and values calculated for selected Annex 1 habitat types based on monitoring data from the national monitoring program NOVANA (Bak 2013).

These values have subsequently been used for Annex 1 habitats in national assessments of nature consequences of changes in regulation.

Denmark participates in the scientific work under the UNECE Air Convention, WGE, but Denmark did not submit national data for the last calls for data. Background data from CCE has therefore been used for Denmark in the development of the revised Gothenburg protocol and NEC directive.

iii) How are these classification systems and sensitivity assessments used in the national ammonia regulation in relationship to the Habitat Directive, and other EU and national regulations related to the protection of ammonia sensitive habitat types

Effects of ammonia on sensitive nature are regulated through the Danish Livestock Act. The livestock act differentiates between three classes of habitat types. Category 1 habitats are the Annex 1 habitat types, which are considered sensitive (described under (i)), inside the Natura 2000 areas, and supplemented with § 3 heatland and dry grassland inside the Natura 2000 areas. Category 2 is raised bogs and oligotrophic lakes, and (§ 3) heathland areas larger than 10 ha and § 3 dry grassland areas larger than 2.5 ha outside the Natura 2000 areas. Category 3 is § 3 heat, bogs and dry grasslands outside Natura 2000, which are not category 1 or 2, and ammonia sensitive forest areas. The derivation of the different classes of habitat types in the ammonia regulation is partly based on critical loads in the sense that the habitat types excluded in most cases are habitat types that can withstand high critical loads.

For category 1 habitat types, the allowable total deposition from a single farm is 0.2, 0.4 or 0.7 kg N ha^{-1}, depending on the number (0, 1 or > 1) of additional farms nearby. For category 2, the allowable total deposition is 1.0 kg N ha^{-1} and for category 3, an acceptable limit for extra deposition is based on concrete assessment. However, the lower limit is 1 kg N ha^{-1} and requirements can only be made, when a number of criteria are met for the affected nature area, e.g. that the critical load is exceeded. Furthermore, the requirements for total disposition are subject to some exceptions.

It is presumed in the Natura 2000 management plans that the ammonia regulation will protect the areas against adverse effects of nitrogen deposition, and consequently the Natura 2000 plans does not include measures to mitigate effects of too high nitrogen deposition.

f) In what year was the Danish monitoring programme implemented?

The national monitoring programme (NOVANA) with a comprehensive and systematic monitoring of the terrestrial environment was initiated in 2004. Prior to this, there existed no nationwide monitoring programme for the terrestrial environment. NOVANA covers habitats and species listed in Annex I, II and IV of the Habitat Directive and Annex I with reference to article 4.2 of the Bird Directive. The species are monitored regularly, however, at different intervals.

The monitoring of the 44 terrestrial habitat types (Annex I) encompasses registration in six years' cycles of a number of indicators related to the current state and trends in range, area and structure and function. In each monitoring cycle, the Special Areas of Conservation (SAC) are mapped and each location with open or forest habitat types are digitised and its current status is assessed. The monitoring programme is designed by DCE, Aarhus University, and monitored by the Danish Environmental Agency.

First monitoring period (2004-2010)

In the first period, the NOVANA programme for terrestrial habitats aimed at monitoring 18 of the 35 open terrestrial habitats. 202 intensive stations were sampled yearly and 763 stations were sampled once in the period. From 2007, the 10 forest types were sampled yearly at 122 monitoring stations. At each monitoring station 20, 40 or 60 sample plots were randomly laid out dependent on the size and complexity of the site. 50 percent of the monitoring stations are positioned inside and 50 percent outside the Special Areas of Conservation (SACs). The SACs have been designated with the aim of covering the largest and most valuable occurrences of natural habitat types in Denmark. They are relatively overrepresented by state-owned land and prioritised in the present and future national and local nature management plans, including the Danish Natura 2000 management plans.

In 2004 and 2005 areas with the 18 open habitat types were mapped and digitised within the Natura 2000 sites. Each area was characterised by up to 20 structural indicators and the species composition and a biological index between 0 and 1 were calculated. In 2006 and 2007 the forest types were mapped in the Natura 2000 sites and similar index calculated. The mapped open and forest areas and their indicators and index is the scientific basis for the site-specific actions in the Natura 2000 management plans.

Second monitoring period (2011-2016)

In the second monitoring period, all terrestrial habitat types were monitored. The 44 open and forest habitat types were sampled in random plots clustered in a total of 2523 open monitoring sites and 284 forest monitoring sites representing the variation in the national and the two biogeographical regions of Denmark. Each site is sampled once in each monitoring period and the number of sample plots on each site is reduced to 8-12 plots.

In 2010 and 2011 the remapping of all open habitat types took place within the Natura 2000 sites.

Third monitoring period (2017-2021)

In the third monitoring period, the same open and forest monitoring sites will be used. Small changes in the technical manuals will ensure a better comparison over time and the first calculations on trends over the monitoring periods are expected. The third mapping of open habitats and the second mapping of forest habitats in the Natura 2000 sites take place in 2016-18.

g) In what year was the Danish Natura 2000 Natura Management Plans implemented?

According to Article 6.1 in the Habitats Directive, Member States are obligated to adopt conservation measures with appropriate management plans and other measures which correspond to the ecological requirements of the habitat types and species. In Denmark the first management plans for each of the 252 Natura 2000 sites where implemented in 2009.

In each Natura 2000 plan there is a baseline analysis and specified conservation objectives for the species and habitat type of both the Habitat and Bird Directive for which the site has been designated. The site-specific objectives are to be met in order to make sure that each site contributes in the best possible way to achieving the overall conservation targets of the Habitats Directive.

The Natura 2000 Plans are revised every sixth years for open habitat types and every 12 years for Natura 2000 forests. Revised baseline studies for each site will be prepared two years in advance of the revision. The first generation of management plans were valid for 2009-2015 and the second for 2016-2021. The Natura 2000 plans are available in Danish at the Danish Environmental Protection Agency website (http://mst.dk/natur-vand/natur/natura-2000/natura-2000-planer/). Prior to the draft of the 252 management plans a national plan with prioritized measures ("sigtelinjer") were developed and the actions in the individual Natura 2000 plans refer to these measures (http://svana.dk/media/194182/national-plan.pdf).

In Denmark, The Ministry of Environment is responsible for the Natura 2000 plans, while relevant state and municipality authorities are responsible for follow up action plans. The Natura 2000 plans and the action plans have been in public hearings.

Other efforts are undertaken towards lowering the load of nutrients in Natura 2000 sites and improving the water environment in general through water plans and revised regulations.

h) Is it possible to document a biological effect of the Natura 2000 management plans in the monitoring data in the period 2004-2015, and if not, when is this effect expected to be significant?

In the second monitoring period (2010-2015) the majority of monitoring stations were invented in the first four years. As the first Natura 2000 plans were adopted in 2011 and the first conservation measures, based on the management plans have subsequently been initiated, it has not been possible to see the effects in the monitoring data in the period 2004-2015.

In the first generation of Natura 2000 plans (2009-2015) the national priority has been to reintroduce grazing or hay cutting on 110.000 ha open habitats. The conservation measures have been funded by the Danish Rural Development Programme (Landdistriktsprogram) from 2014-2020, and the management was initiated on a significant proportion of the 110.000 ha in 2014-2016.

These implemented conservation measures will mainly counteract the pressures "Abandonment of pastoral systems, lack of grazing", "Invasive non-native species" and "Problematic native species". The monitoring stations in the NOVANA program are visited every six years and the effects of the management will be monitored in the period 2018-2021. We expect to see immediate changes in the indicators related to vegetation structure (e.g. canopy height, cover of trees and scrubs) and a significant positive development within the Natura 2000 sites will probably show up in data after the fourth monitoring period in 2024-2027.

Measures have been taken to improve water quality of water bodies and the physical conditions in watercourses, to reduce of the impact from harmful substances (e.g. pesticides), to reduce the deposition of nutrients etc. It is unknown if these measures are sufficient to counteract high-ranked pressures like "pollution to surface waters (limnic, terrestrial, marine & brackish)", "pollution to groundwater (point sources and diffuse sources)", "air pollution" and "modification of hydrographic functioning" (see Table x) and have a significant positive effect on the conservation status of habitats and species.

i) Is it possible to document a reduction in the total deposition in Natura 2000 areas in the period 2004-2015, both due to the general reduction in deposition and due to change in location of husbandry farms and as a result of the national ammonia regulation in relationship to the Habitat Directive?
The present ammonia regulation dates back to 2006. Danish ammonia emissions have decreased by 16.9 % from 2005 to 2015. 28 percent of Danish ammonia emissions are deposited on the Danish land area, where Danish ammonia emissions contribute to 29 % of the total nitrogen deposition. Furthermore, emissions in other countries have also declined in the period. It is, however, not possible to detect a decline in nitrogen deposition in the period 2005 to 2015 based on national deposition calculations. This can be due to year to year variation in climate and to other changes in atmospheric chemistry. It is, however, also not possible to detect a decline in measured ammonia concentrations from 2007 to 2015 for 17 monitoring stations placed at nature areas (Ellermann *et al*. 2016).

Danish agriculture has undergone a large structural development from 2005 to 2015. The number of livestock farms has, in the period, decreased from 51,800 to 22,800, whereas the overall production has been fairly stable. The production has thus been concentrated on a smaller number of larger farms, and a large number of farms have significantly enlarged their production. A statistical analysis between the group of (larger) farms that have been affected by local ammonia regulation and the group that has not, show a significant difference between the groups both in frequency and size of enlargements. Roughly 10 % (500 – 1000) of the larger farms can be shown to have been affected by the specific ammonia regulation in the period. The regulation has affected a total emission of 4,100 t N in areas close to sensitive nature. The calculated gross effect of the regulation has been a protection of 12,000 ha of habitat areas from exceedance of critical loads, and a 138 t less yearly accumulated exceedance (Bak 2017).

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Appendix 1

Designated sites of Special Areas of Conservation (SAC) with total area, land area and number of Annex I habitat types and number of Annex II species present in the site.

Site no.	Designated Site	Total area, ha	Land area, ha	No. of Habitats	No. Species
1	Skagens Gren og Skagerrak	270296	732	12	2
2	Råbjerg Mile og Hulsig Hede	4483	4444	18	2
3	Jerup Hede, Råbjerg og Tolshave Mose	4043	4043	25	1
4	Hirsholmene, havet vest herfor og Ellinge Ås udløb	9502	279	19	7
5	Uggerby Klitplantage og Uggerby Å's udløb	721	624	18	3
6	Kærsgård Strand, Vandplasken og Liver Å	443	431	20	6
7	Rubjerg Knude og Lønstrup Klint	294	255	7	0
8	Åsted Ådal	125	125	11	2
9	Strandenge på Læsø og havet syd herfor	67293	4063	32	3
10	Holtemmen, Højsande og Nordmarken	716	710	23	0
11	Solsbæk	33	33	10	0
12	Store Vildmose	1860	1860	15	3
13	Svinkløv Klitplantage og Grønne Strand	1099	1085	27	1
14	Ålborg Bugt, Randers Fjord og Mariager Fjord	68880	5346	35	9
15	Nibe Bredning, Halkær Ådal og Sønderup Ådal	18991	5778	30	8
16	Løgstør Bredning, Vejlerne og Bulbjerg	44956	13297	37	6
17	Navnsø med hede	103	103	9	1
18	Lille Vildmose, Tofte Skov og Høstemark Skov	7857	7857	28	3
19	Øster Lovnkær	97	97	1	0
20	Rold Skov, Lindenborg Ådal og Madum Sø	8786	8786	26	11
21	Lundby Hede, Oudrup Østerhede og Vindblæs Hede	941	941	13	3
22	Kielstrup Sø	511	508	20	4
23	Vullum Sø	133	133	8	1
24	Hanstholm Reservatet, Nors Sø og Vandet Sø	5763	5744	23	4
25	Vangså Hede	1414	1414	13	3
26	Ålvand Klithede og Førby Sø	842	842	9	1
27	Hvidbjerg Å, Ove Sø og Ørum Sø	1578	1578	14	5
28	Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø	25691	2813	26	7
29	Dråby Vig	1685	262	13	4
30	Lovns Bredning, Hjarbæk Fjord og Skals, Simested og Nørre Ådal, Skravad Bæk	23613	14261	34	12
31	Kås Hoved	398	394	17	2
32	Sønder Lem Vig og Geddal Strandenge	1120	1117	10	2
33	Tjele Langsø og Vinge Møllebæk	679	679	15	4
34	Brandstrup Mose	53	53	6	0
35	Hald Ege, Stanghede og Dollerup Bakker	1530	1530	16	6
36	Nipgård Sø	50	50	10	1
37	Rosborg Sø	75	75	10	6
38	Bredsgård Sø	173	173	10	5
39	Mønsted og Daugbjerg Kalkgruber og Mønsted Ådal	742	742	20	6
40	Karup Å	1113	1113	10	4

41	Hjelm Hede, Flyndersø og Stubbergård Sø	2179	2179	20	4
42	Anholt og havet nord for	13423	1838	17	3
43	Eldrup Skov og søer og moser i Løvenholm Skov	156	156	10	0
44	Stubbe Sø	782	782	10	2
45	Gudenå og Gjern Bakker	818	818	15	5
46	Tved Kær	6	6	4	1
47	Begtrup Vig og kystområder ved Helgenæs	1779	451	20	3
48	Salten Å, Salten Langsø, Mossø og søer syd for Salten Langsø og dele af Gu	4488	4488	22	5
49	Sepstrup Sande, Vrads Sande, Velling Skov og Palsgård Skov	5594	5594	27	6
50	Yding Skov og Ejer Skov	131	131	9	1
51	Stavns Fjord, Samsø Østerflak og Nordby Hede	15730	808	22	4
52	Horsens Fjord, havet øst for og Endelave	46010	3272	29	4
53	Skørsø	12	12	1	1
54	Skånsø og Tranemose	85	85	9	0
55	Venø, Venø Sund	2938	135	13	3
56	Sønder Feldborg Plantage	121	121	8	0
57	Heder og klitter på Skovbjerg Bakkeø	1726	1726	12	4
58	Nissum Fjord	11012	4699	25	7
59	Stadil Fjord og Vest Stadil Fjord	6932	6932	11	4
60	Borris Hede	4769	4769	21	4
61	Skjern Å	2591	2591	14	8
62	Ringkøbing Fjord og Nymindestrømmen	27797	6262	22	7
63	Mose ved Karstoft Å	26	26	8	0
64	Harrild Hede, Ulvemosen og heder i Nørlund Plantage	2359	2359	16	3
65	Store Vandskel, Rørbæk Sø og Tinnet Krat	2230	2230	18	6
66	Uldum Kær, Tørring Kær og Ølholm Kær	1053	1053	6	2
67	Skove langs nordsiden af Vejle Fjord	2552	2542	25	3
68	Munkebjerg Strandskov	308	308	8	0
69	Højen Bæk	181	181	11	1
70	Øvre Grejs Ådal	889	889	16	4
71	Randbøl Hede og klitter i Frederikshåb Plantage	962	962	11	0
72	Blåbjerg Egekrat, Lyngbos Hede og Hennegårds Klitter	697	694	13	0
73	Kallesmærsk Hede, Grærup Langsø, Fiilsø og Kærgård Klitplantage	11682	11631	28	1
74	Hedeområder ved Store Råbjerg	626	626	15	1
75	Vejen Mose	463	463	11	1
76	Nørrebæk ved Tvilho	42	42	7	3
77	Nørholm Hede, Nørholm Skov og Varde Å øst for Varde	1000	1000	23	8
78	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde	135297	22627	34	10
79	Sneum Å og Holsted Ådal	573	573	13	6
80	Kongeå	808	808	7	6
81	Pamhule skov og Stevning Dam	1095	1095	11	2
82	Lindet skov, Hønning Mose, Hønning Plantage og Lovrup Skov	2334	2334	19	0
83	Rinkenæs Skov, Dyrehaven og Rode Skov	867	867	15	1
84	Hostrup Sø, Assenholm Mose og Felsted Vestermark	1327	1327	15	3
85	Bolderslev Skov og Uge Skov	154	154	8	1
86	Brede Å	36	36	1	3
87	Frøslev Mose	410	410	11	0

88	Kongens Mose og Draved Skov	786	786	11	1
89	Sølsted Mose	156	156	9	1
90	Vidå med tilløb, Rudbøl Sø og Magisterkogen	605	594	3	7
91	Fyns Hoved, Lillegrund og Lillestrand	2191	228	16	3
92	Æbelø, havet syd for og Nærå	11330	1540	26	4
93	Havet mellem Romsø og Hindsholm samt Romsø	4232	159	18	1
94	Odense Fjord	5068	843	22	2
95	Røjle Klint og Kasmose skov	178	171	13	1
96	Lillebælt	35181	6784	30	5
97	Urup Dam, Brabæk Mose, Birkende Mose og Illemose	102	102	10	3
98	Odense Å med Hågerup Å, Sallinge Å og Lindved Å	662	662	10	8
99	Østerø Sø	57	55	6	0
100	Centrale Storebælt og Vresen	62311	57	0	0
101	Kajbjerg Skov	295	294	7	1
102	Søer ved Tårup og Klintholm	36	36	6	2
103	Storelung	28	28	6	0
104	Skove og søer syd for Brahetrolleborg	1973	1973	15	3
105	Arreskov Sø	474	474	0	0
106	Store Øresø, Sortesø og Iglesø	16	16	8	0
107	Bøjden Nor	114	112	9	0
108	Maden på Helnæs og havet vest for	2053	346	19	4
109	Vestlige del af Avernakø	124	121	8	2
110	Stenrev sydøst for Langeland	1490	0	2	1
111	Sydfynske Øhav	45169	8077	0	0
112	Hesselø med omliggende stenrev	4213	71	12	3
113	Gilbjerg Hoved	41	40	10	2
114	Teglstrup Hegn og Hammermølle Skov	896	896	20	5
115	Gurre Sø	450	450	13	0
116	Rusland	249	249	20	0
117	Gribskov	6073	6073	0	0
118	Arresø, Ellemose og Lille Lyngby Mose	4772	4772	16	4
119	Tisvilde Hegn og Melby Overdrev	2055	2049	24	4
120	Roskilde Fjord	13540	3048	27	7
121	Kattehale mose	8	8	8	2
122	Bøllemose	20	20	6	0
123	Øvre Mølleådal, Furesø og Frederiksdal Skov	1996	1996	17	5
124	Vasby Mose og Sengeløse Mose	109	109	10	3
125	Brobæk Mose og Gentofte Sø	46	46	9	1
126	Saltholm og omliggende hav	7256	1822	7	3
127	Vestamager og havet syd for	6212	2209	12	2
128	Ejby Ådal og omliggende kystskrænter	36	35	11	1
129	Hejede Overdrev, Valborup Skov og Valsølille Sø	1336	1336	16	1
130	Ølsemagle Strand og Staunings Ø	541	237	10	0
131	Køge Å	60	60	5	1
132	Tryggevælde Ådal	349	348	13	3
133	Jægerspris Skydeterræn	571	479	18	3
134	Havet og kysten mellem Hundested og Rørvig	4022	113	16	3
135	Sejerø Bugt og Saltbæk Vig	44112	5059	36	11

136	Udby Vig	384	249	11	3
137	Store Åmose, Skarresø og Bregninge Å	3415	3415	19	4
138	Åmose, Tissø, Halleby Å og Flasken	3276	3246	22	4
139	Allindelille Fredskov	114	114	4	0
140	Bagholt Mose	14	14	10	2
141	Nordlige del af Sorø Sønderskov	82	82	4	1
142	Sø Torup Sø og Ulse Sø	119	119	2	0
143	Skælskør Fjord og havet og kysten mellem Agersø og Glænø	17435	3745	30	3
144	Skove ved Vemmetofte	163	163	5	1
145	Holmegårds Mose	329	329	15	3
146	Rådmandshave	65	65	4	2
147	Havet og kysten mellem Præstø Fjord og Grønsund	32103	3485	39	10
148	Havet og kysten mellem Karrebæk Fjord og Knudshoved Odde	16983	2546	28	5
149	Kirkegrund	1761	0	2	0
150	Klinteskoven	1005	1003	16	4
151	Lekkende Dyrehave	33	33	2	1
152	Smålandsfarvandet nord for Lolland, Guldborg Sund, Bøtø Nor, Hylle-krog-Røds	78195	8543	28	8
153	Maltrup Skov	2	2	4	1
154	Horreby Lyng	258	258	11	1
155	Krenkerup Haveskov	20	20	3	1
156	Maribosøerne	3823	3823	17	4
157	Halsted Kloster Dyrehave	5	5	2	1
158	Nakskov Fjord	8229	617	19	1
159	Spællinge Ådal, Døndal og Helligdomsklipperne	119	119	19	1
160	Hammeren og Slotslyngen	552	550	27	1
161	Gyldenså	14	14	3	0
162	Almindingen, Ølene og Paradisbakkerne	6129	6129	23	5
163	Kystskrænter ved Arnager Bugt	20	19	5	0
164	Dueodde	255	227	10	0
165	Kims Top og den Kinesiske Mur	26217	0	2	1
166	Herthas Flak	1387	0	3	1
167	Lysegrund	3173	0	2	1
168	Læsø Trindel og Tønneberg Banke	8660	0	3	1
169	Store Middelgrund	2147	0	3	2
170	Mejl Flak	3923	0	2	1
171	Gilleleje Flak og Tragten	15110	7	2	1
172	Ryggen	439	0	2	1
173	Flensborg Fjord, Bredgrund og farvandet omkring Als	65170	34	0	0
174	Hatter Barn	636	0	1	0
175	Broen	591	0	2	1
176	Havet omkring Nordre Rønner	18623	11	11	3
177	Mågerodde og Karby Odde	499	328	12	1
178	Kimmelkær Landkanal	3	3	0	1
179	Stege Nor	572	62	4	0
180	Oreby skov	29	28	8	1
181	Silkeborgskovene	1461	1461	17	5
182	Nordby Bakker	631	629	12	1

183	Holtug Kridtbrud	5	5	2	1
184	Klitheder mellem Stenbjerg og Lodbjerg	2931	2894	13	1
185	Lild Strand og Lild Strandkær	752	747	12	0
186	Mols Bjerge med kystvande	2928	2562	30	4
187	Korsø knude	20	20	6	1
188	Husby Sø og Nørresø	353	353	4	2
189	Lilleskov og Troldsmose	105	105	8	2
190	Esrum Sø, Esrum Å og Snævret Skov	1895	1895	14	4
191	Nedre Mølleådal	43	43	4	1
192	Busemarke Mose og Råby Sø	242	242	12	1
193	Ejstrup klit og Egvands Bakker	1301	1300	9	1
194	Suså med Tystrup-Bavelse Sø og Slagmosen	1685	1685	19	6
195	Røsnæs, Røsnæs Rev og Kalundborg Fjord	5689	322	15	5
196	Lønborg Hede	354	354	11	1
197	Husby klit	495	495	8	0
198	Vallø Dyrehave	62	62	9	4
199	Kongens Lyng	2	2	4	0
200	Augustenborg Skov	32	32	4	0
201	Mandbjerg Skov	59	59	7	0
202	Lønstrup Rødgrund	9324	0	2	1
203	Knudegrund	751	0	1	1
204	Schultz og Hastens Grund samt Briseis Flak	20833	0	2	1
205	Munkegrunde	1334	0	2	1
206	Stevns Rev	4668	9	2	1
207	Klinteskov kalkgrund	2004	2	2	0
208	Bøchers Grund	1098	0	1	1
209	Davids Banke	844	0	1	0
210	Ertholmene	1265	35	6	1
211	Hvideodde Rev	836	0	1	0
212	Bakkebrædt og Bakkegrund	301	0	2	0
213	Randkløve Skår	37	36	12	0
214	Tolne Bakker	172	172	9	0
215	Tislum Møllebæk	58	58	7	1
216	Bangsbo Ådal og omliggende overdrevsområder	881	881	15	2
217	Nymølle Bæk og Nejsum Hede	70	70	9	2
218	Hammer Bakker, østlig del	109	109	9	1
219	Lien med Underlien	1050	1050	24	0
220	Hanstholmknuden	389	370	8	0
221	Risum Enge og Selde Vig	324	153	15	0
222	Villestrup Ådal	540	539	23	6
223	Kastbjerg Ådal	1130	1084	26	7
224	Flynder Å og heder i Klosterhede Plantage	566	566	17	2
225	Idom Å og Ormstrup Hede	495	495	9	3
226	Kongenshus Hede	1577	1577	10	4
227	Hessellund Hede	1128	1128	13	2
228	Stenholt Skov og Stenholt Mose	342	342	13	0
229	Bjerre Skov og Haslund Skov	192	192	12	0
230	Kaløskovene og Kaløvig	749	489	20	4

231	Kobberhage kystarealer	795	56	10	1
232	Lillering Skov, Stjær Skov, Tåstrup Sø og Tåstrup Mose	135	135	10	2
233	Brabrand Sø med omgivelser	523	523	5	3
234	Giber Å, Enemærket og Skåde Havbakker	168	168	17	2
235	Holtum Ådal, øvre del	168	168	12	2
236	Bygholm Ådal	51	51	7	3
237	Ringive Kommuneplantage	145	145	10	0
238	Egtved Ådal	1047	1047	16	2
239	Alslev Ådal	459	459	14	6
240	Svanninge Bakker	126	126	10	1
241	Rødme Svinehaver	41	41	8	0
242	Thurø Rev	163	35	9	0
243	Ebbeløkke Rev	141	0	1	1
244	Bjergene, Diesebjerg og Bollinge Bakke	453	453	13	1
245	Kyndby Kyst	361	71	19	1
246	Ryegård Dyrehave, Bramsnæs og Garveriskov	46	45	18	1
247	Egernæs med holme og Fuglsø	151	85	15	0
248	Saltum Bjerge	164	164	7	0
249	Ovstrup Hede med Røjen Bæk	486	486	7	3
250	Svanemose	176	176	12	1
251	Jægersborg Dyrehave	847	847	13	3
252	Listrup Lyng	15	15	5	2
253	Sandbanker ud for Thyborøn	6352	0	1	1
254	Sandbanker ud for Thorsminde	6391	0	1	1
255	Sydlige Nordsø	247314	0	1	3
256	Thyborøn Stenvolde	7837	0	1	1
257	Jyske Rev, Lillefiskerbanke	24194	0	1	1
258	Store Rev	10939	0	2	1
259	Gule Rev	47261	0	1	1
260	Femern Bælt	11504	2	0	1
261	Adler Grund og Rønne Banke	32124	0	2	1

Appendix 2

Annex I habitat types with total designated area and number of designated SAC's.

Habitat code	Habitat name	Area (Ha)	No of N2000 sites
1110	Sandbanks which are slightly covered by sea water all the time	252530	61
1130	Estuaries	2021	4
1140	Mudflats and sandflats not covered by seawater at low tide	57873	28
1150	Coastal lagoons	35883	51
1160	Large shallow inlets and bays	153437	40
1170	Reefs	209760	67
1180	Submarine structures made by leaking gases	13051	8
1210	Annual vegetation of drift lines	1003	62
1220	Perennial vegetation of stony banks	976	59
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	322	42
1310	Salicornia and other annuals colonizing mud and sand	587	37
1320	Spartina swards (Spartinion maritimae)	222	5
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	28422	69
1340	Inland salt meadows	91	6
2110	Embryonic shifting dunes	312	49
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	1704	47
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	9605	67
2140	Decalcified fixed dunes with Empetrum nigrum	15020	45
2160	Dunes with Hippophaë rhamnoides	433	24
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	570	29
2180	Wooded dunes of the Atlantic, Continental and Boreal region	629	21
2190	Humid dune slacks	5003	43
2250	Coastal dunes with Juniperus spp.	819	21
2310	Dry sand heaths with Calluna and Genista	489	14
2320	Dry sand heaths with Calluna and Empetrum nigrum	1864	20
2330	Inland dunes with open Corynephorus and Agrostis grasslands	126	15
3110	Oligotrophic waters containing very few minerals of sandy plains	961	26
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea	7615	67
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	11233	95
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition	5919	150
3160	Natural dystrophic lakes and ponds	335	96
3260	Water courses of plain to montane levels	784	117
3270	Rivers with muddy banks with Chenopodion rubri p.p. and Bidention	2	11
4010	Northern Atlantic wet heaths with Erica tetralix	3070	62
4030	European dry heaths	9974	94
5130	Juniperus communis formations on heaths or calcareous grasslands	509	49
6120	Xeric sand calcareous grasslands	78	22
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates	1345	107
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas	4643	148
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils	2429	125
6430	Hydrophilous tall herb fringe communities of plains and of the montane	31	66

7110	Active raised bogs	2532	26
7120	Degraded raised bogs still capable of natural regeneration	1291	34
7140	Transition mires and quaking bogs	746	100
7150	Depressions on peat substrates of the Rhynchosporion	191	39
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	86	14
7220	Petrifying springs with tufa formation (Cratoneurion)	1594	106
7230	Alkaline fens	2997	148
8220	Siliceous rocky slopes with chasmophytic vegetation	128	5
8230	Siliceous rock with pioneer vegetation of the Sedo-Scleranthion	7	4
8330	Submerged or partially submerged sea caves	0	1
9110	Luzulo-Fagetum beech forests	3316	74
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus	839	24
9130	Asperulo-Fagetum beech forests	5339	87
9150	Medio-European limestone beech forests of the Cephalanthero-Fagion	290	18
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests	2098	92
9170	Galio-Carpinetum oak-hornbeam forests	81	3
9190	Old acidophilous oak woods with Quercus robur on sandy plains	1729	63
91D0	Bog woodland	3600	93
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior	3200	131

Appendix 3

Annex II species with species group, total designated area and the number of designated SAC's.

Species Group	Species name	Designated Area (Ha)	No of N2000 sites
Amphibians	*Bombina bombina*	128984	7
	Triturus cristatus	526654	83
Fish	*Alosa alosa*	96267	2
	Alosa fallax	296297	9
	Cobitis taenia	14889	8
	Coregonus oxyrhynchus	138222	7
	Lampetra fluviatilis	296592	17
	Lampetra planeri	344165	63
	Misgurnus fossilis	758	2
	Petromyzon marinus	342562	21
	Salmo salar	191820	12
Invertebrates	*Anthrenochernes stellae*	1795	3
	Dytiscus latissimus	14832	2
	Euphydryas aurinia	42921	10
	Graphoderus bilineatus	12869	4
	Leucorrhinia pectoralis	71629	11
	Margaritifera margaritifera	991	1
	Ophiogomphus cecilia	42604	13
	Osmoderma eremita	92606	11
	Unio crassus	2332	2
	Vertigo angustior	312592	30
	Vertigo geyeri	100175	14
	Vertigo moulinsiana	216191	32
Mammals	*Barbastella barbastellus*	114665	5
	Halichoerus grypus	787883	16
	Lutra lutra	565618	76
	Myotis bechsteinii	6084	1
	Myotis dasycneme	200021	21
	Phoca vitulina	1286039	33
	Phocoena phocoena	1685477	65
Plants	*Botrychium simplex*	43912	1
	Buxbaumia viridis	15681	3
	Cypripedium calceolus	8748	1
	Hamatocaulis vernicosus	85693	15
	Liparis loeselii	165205	12
	Luronium natans	48489	6
	Najas flexilis	5738	1
	Saxifraga hirculus	75896	9

Appendix 4

Designated Natura 2000 sites with land area. For each site, the total land area in square kilometers and the area with intensive agriculture are shown as well as the percentage of total area occupied with intensive agriculture.

Designated site	Total area, km²	Intensive area km²	Percentage intensive area
Æbelø, havet syd for og Nærå	15,5	6,4	41,3
Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø	29,0	0,6	2,0
Ålborg Bugt, Randers Fjord og Mariager Fjord	54,6	19,2	35,2
Allindelille Fredskov	1,1	0,0	0,1
Almindingen, Ølene og Paradisbakkerne	61,1	3,3	5,5
Alslev Ådal	4,6	0,2	3,6
Ålvand Klithede og Førby Sø	8,4	0,1	1,2
Åmose, Tissø, Halleby Å og Flasken	32,8	3,5	10,6
Anholt og havet nord for	18,4	0,0	0,0
Arreskov Sø	6,6	0,4	6,4
Arresø, Ellemose og Lille Lyngby Mose	47,7	0,9	1,8
Åsted Ådal	1,2	0,1	6,9
Augustenborg Skov	0,3	0,0	0,0
Bagholt Mose	0,1	0,0	0,0
Bangsbo Ådal og omliggende overdrevsområder	8,8	3,1	35,4
Begtrup Vig og kystområder ved Helgenæs	4,5	0,6	13,0
Bjergene, Diesebjerg og Bollinge Bakke	4,5	0,3	7,0
Bjerre Skov og Haslund Skov	1,9	0,5	26,9
Blåbjerg Egekrat, Lyngbos Hede og Hennegårds Klitter	6,9	0,0	0,0
Bøjden Nor	1,1	0,2	18,1
Bolderslev Skov og Uge Skov	1,5	0,1	7,6
Bøllemose	0,2	0,0	0,0
Borris Hede	47,8	0,5	1,0
Brabrand Sø med omgivelser	5,2	0,1	1,2
Brandstrup Mose	0,5	0,0	0,3
Brede Å	0,4	0,0	7,7
Bredsgård Sø	1,7	0,1	4,9
Brobæk Mose og Gentofte Sø	0,5	0,0	0,0
Busemarke Mose og Råby Sø	2,4	0,5	19,0
Bygholm Ådal	0,5	0,0	4,6
Dråby Vig	2,7	0,5	18,5
Dueodde	2,3	0,0	0,0
Egernæs med holme og Fuglsø	0,9	0,0	0,0
Egtved Ådal	10,5	2,2	21,2
Ejby Ådal og omliggende kystskrænter	0,4	0,0	1,2
Ejstrup klit og Egvands Bakker	13,0	0,1	0,6
Eldrup Skov og søer og moser i Løvenholm Skov	1,6	0,0	0,0
Esrum Sø, Esrum Å og Snævret Skov	18,2	0,0	0,1
Flynder Å og heder i Klosterhede Plantage	5,7	0,1	1,4
Frøslev Mose	4,1	0,7	16,5
Fyns Hoved, Lillegrund og Lillestrand	2,3	0,0	1,5

Giber Å, Enemærket og Skåde Havbakker	1,7	0,0	0,2
Gilbjerg Hoved	0,4	0,1	32,9
Gribskov	61,7	1,8	3,0
Gudenå og Gjern Bakker	8,2	0,1	1,3
Gurre Sø	4,5	0,0	0,0
Gyldenså	0,1	0,0	7,2
Hald Ege, Stanghede og Dollerup Bakker	15,3	0,8	5,0
Halsted Kloster Dyrehave	0,1	0,0	0,0
Hammer Bakker, østlig del	1,1	0,0	0,0
Hammeren og Slotslyngen	5,5	0,3	5,9
Hanstholm Reservatet, Nors Sø og Vandet Sø	57,5	1,3	2,2
Hanstholmknuden	3,7	0,1	2,5
Harrild Hede, Ulvemosen og heder i Nørlund Plantage	23,6	0,1	0,3
Havet mellem Romsø og Hindsholm samt Romsø	1,6	0,0	0,6
Havet og kysten mellem Hundested og Rørvig	1,1	0,0	0,0
Havet og kysten mellem Karrebæk Fjord og Knudshoved Odde	25,6	9,0	35,3
Havet og kysten mellem Præstø Fjord og Grønsund	35,2	4,4	12,6
Hedeområder ved Store Råbjerg	6,3	0,7	11,2
Heder og klitter på Skovbjerg Bakkeø	17,3	0,0	0,2
Hejede Overdrev, Valborup Skov og Valsølille Sø	13,4	0,2	1,2
Hessellund Hede	11,3	0,1	0,8
Hesselø med omliggende stenrev	0,7	0,0	0,0
Hirsholmene, havet vest herfor og Ellinge Å's udløb	2,8	0,0	0,0
Hjelm Hede, Flyndersø og Stubbergård Sø	21,8	0,3	1,4
Højen Bæk	1,8	0,0	2,2
Holmegårds Mose	3,3	0,0	0,0
Holtemmen, Højsande og Nordmarken	7,1	0,0	0,0
Holtug Kridtbrud	0,0	0,0	0,5
Holtum Ådal, øvre del	1,7	0,1	8,5
Horreby Lyng	2,6	0,5	19,6
Horsens Fjord, havet øst for og Endelave	32,8	15,6	47,5
Hostrup Sø, Assenholm Mose og Felsted Vestermark	13,3	2,2	16,8
Husby klit	5,0	0,0	0,0
Husby Sø og Nørresø	3,5	0,0	0,8
Hvidbjerg Å, Ove Sø og Ørum Sø	15,8	1,7	10,7
Idom Å og Ormstrup Hede	5,0	0,9	18,7
Jægersborg Dyrehave	8,5	0,2	2,4
Jægerspris Skydeterræn	4,8	0,0	0,0
Jerup Hede, Råbjerg og Tolshave Mose	40,5	8,6	21,1
Kærsgård Strand, Vandplasken og Liver Å	4,3	0,0	0,0
Kajbjerg Skov	2,9	0,0	0,4
Kallesmærsk Hede, Grærup Langsø, Fiilsø og Kærgård Klitplantage	116,4	6,7	5,8
Kaløskovene og Kaløvig	4,9	0,4	8,2
Karup Å	11,1	1,3	11,2
Kås Hoved	3,9	0,0	0,0
Kastbjerg Ådal	10,9	0,7	6,2
Kattehale mose	0,1	0,0	0,0
Kielstrup Sø	5,1	0,7	13,3

Klinteskov kalkgrund	0,0	0,0	0,0
Klinteskoven	10,0	0,4	3,7
Klitheder mellem Stenbjerg og Lodbjerg	29,0	0,1	0,5
Kobberhage kystarealer	0,6	0,0	0,7
Køge Å	0,6	0,0	1,8
Kongeå	8,1	0,5	6,0
Kongens Lyng	0,0	0,0	0,0
Kongens Mose og Draved Skov	7,9	1,2	14,7
Kongenshus Hede	15,8	1,6	10,2
Korsø knude	0,2	0,0	2,4
Krenkerup Haveskov	0,2	0,0	0,0
Kyndby Kyst	0,7	0,0	4,7
Kystskrænter ved Arnager Bugt	0,2	0,0	18,3
Lekkende Dyrehave	0,3	0,0	0,0
Lien med Underlien	10,5	0,5	4,6
Lild Strand og Lild Strandkær	7,5	0,0	0,0
Lille Vildmose, Tofte Skov og Høstemark Skov	78,6	9,8	12,4
Lillebælt	70,5	33,5	47,5
Lillering Skov, Stjær Skov, Tåstrup Sø og Tåstrup Mose	1,4	0,0	1,8
Lilleskov og Troldsmose	1,0	0,0	0,1
Lindet skov, Hønning Mose, Hønning Plantage og Lovrup Skov	23,4	2,8	12,1
Listrup Lyng	0,1	0,0	0,0
Løgstør Bredning, Vejlerne og Bulbjerg	133,6	27,9	20,8
Lønborg Hede	3,5	0,0	1,1
Lovns Bredning, Hjarbæk Fjord og Skals, Simested og Nørre Ådal, Skravad Bæk	142,8	35,5	24,9
Lundby Hede, Oudrup Østerhede og Vindblæs Hede	9,4	0,3	2,8
Maden på Helnæs og havet vest for	3,5	0,0	0,1
Mågerodde og Karby Odde	3,3	0,1	4,5
Maltrup Skov	0,0	0,0	0,0
Mandbjerg Skov	0,6	0,0	0,1
Maribosøerne	38,2	12,2	31,9
Mols Bjerge med kystvande	25,6	5,3	20,8
Mønsted og Daugbjerg Kalkgruber og Mønsted Ådal	7,4	0,9	12,3
Mose ved Karstoft Å	0,3	0,0	0,5
Munkebjerg Strandskov	3,1	0,0	1,4
Nakskov Fjord	6,2	2,1	33,8
Navnsø med hede	1,0	0,0	1,9
Nedre Mølleådal	0,4	0,0	0,0
Nibe Bredning, Halkær Ådal og Sønderup Ådal	64,1	20,0	31,2
Nipgård Sø	0,5	0,0	2,4
Nissum Fjord	47,6	16,7	35,1
Nordby Bakker	6,3	0,4	6,5
Nordlige del af Sorø Sønderskov	0,8	0,0	0,0
Nørholm Hede, Nørholm Skov og Varde Å øst for Varde	10,0	0,1	1,4
Nørrebæk ved Tvilho	0,4	0,0	0,6
Nymølle Bæk og Nejsum Hede	0,7	0,0	3,3
Odense Å med Hågerup Å, Sallinge Å og Lindved Å	6,6	0,2	2,6

Odense Fjord	8,5	0,9	11,0
Ølsemagle Strand og Staunings Ø	2,5	0,0	1,1
Oreby skov	0,3	0,0	0,0
Øster Lovnkær	1,0	0,0	1,2
Østerø Sø	0,6	0,0	0,0
Øvre Grejs Ådal	8,9	0,2	1,7
Øvre Mølleådal, Furesø og Frederiksdal Skov	20,0	0,1	0,6
Ovstrup Hede med Røjen Bæk	4,9	0,0	0,7
Pamhule skov og Stevning Dam	11,0	1,5	13,4
Råbjerg Mile og Hulsig Hede	44,5	0,7	1,6
Rådmandshave	0,7	0,0	0,0
Randbøl Hede og klitter i Frederikshåb Plantage	9,6	0,0	0,1
Randkløve Skår	0,4	0,0	2,5
Ringive Kommuneplantage	1,5	0,0	0,7
Ringkøbing Fjord og Nymindestrømmen	63,2	11,8	18,7
Rinkenæs Skov, Dyrehaven og Rode Skov	8,7	0,7	7,8
Risum Enge og Selde Vig	1,6	0,0	0,2
Rødme Svinehaver	0,4	0,0	1,9
Røjle Klint og Kasmose skov	1,7	0,8	44,3
Rold Skov, Lindenborg Ådal og Madum Sø	87,9	3,3	3,8
Rosborg Sø	0,7	0,0	0,0
Roskilde Fjord	30,6	4,3	14,0
Røsnæs, Røsnæs Rev og Kalundborg Fjord	3,2	0,1	3,7
Rubjerg Knude og Lønstrup Klint	2,6	0,0	1,3
Rusland	2,5	0,6	23,7
Ryegård Dyrehave, Bramsnæs og Garveriskov	0,5	0,0	0,0
Salten Å, Salten Langsø, Mossø og søer syd for Salten Langsø og dele af Gudenå	44,9	1,2	2,6
Saltholm og omliggende hav	18,9	0,0	0,0
Saltum Bjerge	1,6	0,3	18,0
Sejerø Bugt og Saltbæk Vig	50,6	4,5	9,0
Sepstrup Sande, Vrads Sande, Velling Skov og Palsgård Skov	56,0	2,4	4,3
Silkeborgskovene	14,6	0,0	0,0
Skælskør Fjord og havet og kysten mellem Agersø og Glænø	37,8	15,9	42,1
Skagens Gren og Skagerak	7,2	0,0	0,0
Skånsø og Tranemose	0,8	0,0	0,3
Skjern Å	25,8	0,6	2,3
Skørsø	0,1	0,0	0,0
Skove langs nordsiden af Vejle Fjord	25,4	2,5	10,0
Skove og søer syd for Brahetrolleborg	19,7	1,2	6,1
Skove ved Vemmetofte	1,6	0,1	4,3
Smålandsfarvandet nord for Lolland, Guldborg Sund, Bøtø Nor, Hylle-krog-Rødsand	85,6	40,1	46,9
Sneum Å og Holsted Ådal	5,7	0,3	6,1
Sø Torup Sø og Ulse Sø	1,2	0,0	0,0
Søer ved Tårup og Klintholm	0,4	0,0	3,2
Solsbæk	0,3	0,0	0,0
Sølsted Mose	1,6	0,0	0,7

Sønder Feldborg Plantage	1,2	0,0	0,0
Sønder Lem Vig og Geddal Strandenge	11,2	2,2	19,6
Spællinge Ådal, Døndal og Helligdomsklipperne	1,2	0,0	4,0
Stadil Fjord og Vest Stadil Fjord	69,4	29,1	41,9
Stavns Fjord, Samsø Østerflak og Nordby Hede	8,1	1,1	14,1
Stege Nor	0,6	0,0	1,8
Stenholt Skov og Stenholt Mose	3,4	0,3	7,8
Stevns Rev	0,0	0,0	0,0
Store Åmose, Skarresø og Bregninge Å	34,2	6,4	18,8
Store Øresø, Sortesø og Iglesø	0,2	0,0	0,0
Store Vandskel, Rørbæk Sø og Tinnet Krat	22,3	4,3	19,2
Store Vildmose	18,6	0,2	1,1
Storelung	0,3	0,0	3,1
Strandenge på Læsø og havet syd herfor	41,2	1,3	3,3
Stubbe Sø	7,8	0,1	0,9
Suså med Tystrup-Bavelse Sø og Slagmosen	16,9	1,1	6,5
Svanemose	1,8	0,1	3,5
Svanninge Bakker	1,3	0,0	2,3
Svinkløv Klitplantage og Grønne Strand	10,9	0,0	0,5
Sydfynske Øhav	81,1	37,3	46,0
Teglstrup Hegn og Hammermølle Skov	9,0	0,0	0,1
Thurø Rev	0,4	0,0	0,0
Tislum Møllebæk	0,6	0,0	6,3
Tisvilde Hegn og Melby Overdrev	20,5	0,1	0,4
Tjele Langsø og Vinge Møllebæk	6,8	0,3	3,9
Tolne Bakker	1,7	0,0	0,1
Tryggevælde Ådal	3,5	0,1	2,4
Tved Kær	0,1	0,0	4,5
Udby Vig	2,5	0,5	20,6
Uggerby Klitplantage og Uggerby Å's udløb	6,3	0,0	0,0
Uldum Kær, Tørring Kær og Ølholm Kær	10,5	0,9	8,2
Urup Dam, Brabæk Mose, Birkende Mose og Illemose	1,0	0,0	2,4
Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde	230,9	9,0	3,9
Vallø Dyrehave	0,6	0,0	2,2
Vangså Hede	14,1	0,0	0,1
Vasby Mose og Sengeløse Mose	1,1	0,0	2,5
Vejen Mose	4,6	0,5	9,8
Venø, Venø Sund	1,4	0,0	1,1
Vestamager og havet syd for	22,1	0,0	0,0
Vestlige del af Avernakø	1,2	0,3	22,0
Vidå med tilløb, Rudbøl Sø og Magisterkogen	6,1	0,0	0,6
Villestrup Ådal	5,4	0,4	6,5
Vresen	0,5	0,0	0,0
Vullum Sø	1,3	0,0	0,8
Yding Skov og Ejer Skov	1,3	0,0	0,2
Sum	3.242,6	465,9	14,4
Whole country	3.242,6	465,9	14,4

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SCIENTIFIC ANALYSIS ON THE DESIGNATION OF NATURA 2000 SITES AND THE STATUS OF NATURE AND EFFORT

The Danish situation

The purpose of the project is to compare the ammonia regulations in relation to the designated Natura 2000 sites and the EU Habitats Directive. This report represents the scientific analysis in Denmark. The scientific analysis focuses on the state of the designated Natura 2000 areas and the need to protect the ammonia-sensitive nature. The analysis describes the designation process and the location of the ammonia-sensitive areas in relation to agricultural activity and ammonia deposition, the monitoring and assessments of the natural habitats and the national objectives in ammonia regulations particularly in the Natura 2000 areas.

ISBN: 978-87-7156-326-9
ISSN: 2245-019X