Proposal for Fisheries Management Measures for the protection of reef structures (H1170) in Natura 2000 sites located in Danish territorial waters in western Baltic Sea

Draft submission to the European Commission

Draft proposal for Fisheries Management Measures under article 11 and 18 of Regulation (EU) No 1380/2013 of The European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC

Content

Summary

For the implementation of the EU Nature directives (Habitat- and Birds Directives), Denmark has designated 97 marine Natura 2000 sites in Danish territorial waters of the Western Baltic, Kattegat, Skagerrak and the North Sea. A total of 65 sites have been designated for the protection of reef structures with the following habitat codes: H1170 (reefs) and H1180 (submarine structures made by leaking gasses). In general, the conservation status of reef structures in the Danish Natura 2000 sites are classified as unfavorable due to physical disturbances and high nutrient content in the water column.

The overall aim of the present proposal is to ensure adequate protection of reef structures from fishery, and thereby contribute to the obligation of achieving favorable conservation status for these habitat types in accordance with Article 6 (2) of the Habitats Directive.

The present proposal entails fishery management measures for a total of three sites:

One Natura 2000 site is located in the Danish Exclusive Economic zone in the Baltic Sea (outside 12 nautical miles):

1. Adler Grund og Rønne Banke (EU site code: DK00VA261)

Two Natura 2000 sites are located in the Danish part of the western Baltic Sea between the baseline and 12 nautical miles:

2. Centrale Storebælt og Vresen (EU site code: DK008X190)
3. Flensborg Fjord, Bredgrund og farvandet omkring Als (EU site code: DK00VA254)

A range of the Baltic countries have fishing opportunities in the Danish part of the Western Baltic Sea (outside 12 nautical miles) – Sweden, Germany, Estonia, Poland, Lithuania, Latvia and Finland in some degree. Sweden and Germany also have fishing rights inside 12 nautical miles.

Fishing activity with mobile bottom contacting gear is proposed to be prohibited in areas mapped as reefs (habitat code H1170). The reef structures mapped in the Natura 2000 sites will be protected from impact from fishing activity by placement of buffer zones around the reef structures.

Scientific advice from Aarhus University (Danish Centre for Environment and Energy) and the Danish Technical University (Institute for Aquatic Resources) and ICES alongside the site specific Natura 2000 management plans and mapping of marine habitats, serve as the basis for the proposed fishery management measures. These measures supplement the fisheries management measures submitted to the EU Commission in March 2015 for protection of reef structures in 10 Danish Natura 2000 sites located in the Danish part of the Kattegat/North Sea and Western Baltic Sea within the 12 nautical mile zone. These proposals were submitted as joint recommendations by Denmark, Sweden and Germany and adopted as a delegated act in summer 2015. The Delegated Act came into force 1 January 2016.

The Danish part of the western Baltic Sea is an important fishing area for especially Denmark, Sweden and Germany, and to some extent also to Poland. However, analysis of fishery data show, that the proposed management measures will have a limited or no impact on current fishing activity when looking at the period 2011-2015.

In general, fishing activity does not take place in areas characterized as reefs in these sites. In 2011-2015, there have been no records of Swedish fishery in two of the three Natura 2000 sites. German fishery in the period 2010-2012 is primarily conducted with bottom contacting gear in all three sites*].* However, it is still important to ensure full protection of reef structures in the sites in accordance with the Habitats Directive, also for future fisheries. Polish fishery is limited in and around the site "Adler Grund og Rønne Banke". Estonian fishery is limited around the same site.

It is the intention of the Danish government (initiating Member State) to take measures i.a. with respect to fishing activities exercised by *all* vessels including fishing vessels carrying the flag of other Member States of the EU. In order to apply these measures to *all* vessels, Denmark, as the initiating Member State, has in accordance with EP/Council Regulation (EU) No 1380/2013 of the Common Fisheries Policy (Basic Regulation), consulted Sweden, Germany, Poland, Estonia, Finland, Latvia and Lithuania, the Baltic Sea Advisory Council (BSAC), ICES, the Commission, national fishermen associations/organizations and NGOs.

The proposed fisheries management measures supplement regulation of e.g. extraction of sand and gravel (regulated through art 6.3) as well as on-going initiatives to reduce nutrient flow from terrestrial sources, as these are estimated to be the main pressures to the conservation status for reef structures in Danish waters.

[*The present proposal is submitted to the European Commission jointly by Denmark, Sweden and Germany for the two sites located within the 12 nautical mile zone and by all BALTFISH Member States for the site located in the EEZ, in* accordance with the Basic Regulation, Article 11 and 18]. A similar proposal for fisheries management measures for protection of reef structures have been formulated for 4 Natura 2000 sites in the Danish part of the Kattegat.

Sammenfatning

Danmark har som led i implementeringen af EU's naturdirektiver (habitat- og fuglebeskyttelsesdirektivet) udpeget 97 marine Natura 2000 områder i den danske del af den vestlige Østersø, Kattegat og Skagerrak. Der er i alt udpeget 65 Natura 2000 områder for rev med habitatkoderne H1170 (rev) og H1180 (boblerev med udsivende metangas fra undergrunden). Revs bevaringsstatus er ifølge områdernes naturplaner generelt angivet som ugunstig som følge af fysisk påvirkning og højt næringsstofindhold i vandsøjlen.

Den overordnede målsætning med nærværende forslag er, i overensstemmelse med habitatdirektivets artikel 6, stk. 2, at sikre tilstrækkelig beskyttelse af revstrukturer i forhold til fiskeri som led i opnåelsen af gunstig bevaringsstatus for disse habitattyper.

Nærværende forslag omfatter fiskeriregulering i tre Natura 2000 områder.

Et område er lokaliseret udenfor 12 sømil grænsen i den dansk eksklusive økonomiske zone (EEZ):

1. Adler Grund og Rønne Banke (EU site code: DK00VA261)

To områder er lokaliseret mellem basislinjen og 12 sømilegrænsen:

2. Centrale Storebælt og Vresen (EU site code: DK008X190)
3. Flensborg Fjord, Bredgrund og farvandet omkring Als (EU site code: DK00VA254)

Forslag til fiskeriregulering omfatter forbud mod anvendelse af bundgående redskaber i områder kortlagt som rev (habitatkode H1170). De kortlagte revstrukturer sikres beskyttelse mod fiskeriaktiviteter ved placering af en bufferzone omkring revene.

Videnskabelig rådgivning fra Danmarks Tekniske Universitet (Institut for Akvatiske Ressourcer), Aarhus Universitet (Nationalt Center for Miljø og Energi) samt ICES danner sammen med områdernes naturplaner og kortlægning, grundlaget for de fremlagte forslag til fiskeriforanstaltninger. De foreslåede fiskeriforanstaltninger supplerer de forslag, som blev fremsendt til EU Kommission i marts 2015 for beskyttelse af rev i 10 Natura 2000 områder i forhold til fysisk påvirkning som følge af fiskeri med bundslæbende redskaber. Områderne er placeret i den danske del af Kattegat/Nordsøen og vestlige Østersø indenfor 12 sømilegrænsen. De danske forslag blev fremsendt til EU Kommissionen i form af en fælles henstilling fra Danmark, Sverige og Tyskland, og blev vedtaget som en delegeret retsakt sommeren 2015.

Sverige, Tyskland, Estland, Litauen, Polen (og i nogen grad også Letland og Finland) har fiskerirettigheder i den danske del af den vestlige Østersø. Sverige og Tyskland har også fiskerirettigheder indenfor 12 sømil fra den danske kyst. Østersøen er et vigtigt område for især dansk og tysk fiskeri. Analyser af fiskeriaktiviteter i Østersøen for perioden 2011-2015 viser dog, at de foreslåede fiskeriforanstaltninger ikke vil have betydende effekt på den måde fiskeri udøves i området. Der er i perioden 2011-2015 ikke registreret svensk fiskeri i de tre områder. Tysk fiskeri i perioden 2011-2015 med bundgående redskaber i alle tre Natura 2000 områder.. Polsk fiskeridata viser fiskeri omkring området "Adler Grund og Rønne Banke", dog ikke i områder kortlagt som rev. Estiske fiskeridata viser fiskeri omkring samme område. Generelt set fiskes der ikke i områderne kortlagt som rev. I henhold til habitatdirektivet er det midlertidigt vigtigt, at kortlagte revstrukturer sikres fuld beskyttelse mod fysisk påvirkning, også i forhold til fremtidige aktiviteter.

Den danske regering ønsker (som initiativtagende medlemsstat), at gennemføre fiskeriforanstaltninger, som gælder *samtlige* fartøjer, herunder fartøjer fra andre flagstater, som udøver fiskeri i de pågældende Natura 2000 områder. For at de foreslåede foranstaltninger kan omfatte *samtlige* fartøjer, har Danmark i overensstemmelse med EP/Rådsforordning nr. 1380/2013 om den fælles fiskeripolitik (Grundforordningen), konsulteret Sverige, Tyskland, Estland, Polen, Letland, Finland, Litauen, det

Rådgivende Råd for Østersøen (BSAC), ICES, EU Kommissionen, nationale fiskeriforeninger/organisationer og NGO´er.

Den foreslåede fiskeriregulering supplerer andre tiltag i relation til fx råstofindvinding og klapning samt reduktion af udledning af næringsstoffer fra terrestriske kilder.

[*Nærværende forslag er fremsendt til EU Kommissionen i form af fælles henstilling af de danske, svenske og tyske fiskerimyndigheder for de to områder indenfor 12 sømilegrænsen og af alle de baltiske lande under BALTFISH samarbejdet for området i den danske EEZ. Fremsendelsen sker således i overensstemmelse med artikel 11 og 18 i Grundforordningen*]. Et tilsvarende forslag til fiskeriforanstaltninger for beskyttelse af rev i 4 Natura 2000 områder i den danske del af Kattegat er ligeledes udarbejdet.

1. Introduction

1.1 General remarks

This document contains a proposal for regulation of fishing activities in the Danish part of the western Baltic Sea for the protection of reef structures designated under the Habitats Directive.

For the implementation of the EU Nature directives (Habitat[1] and Birds Directives[2]), Denmark has designated 97 marine Natura 2000 sites in Danish territorial waters in the western Baltic, Kattegat, Skagerrak and the North Sea, see Annex A for map of the Danish marine Natura 2000 network. A total of 65 Natura 2000 sites have been designated for reef structures (habitat code: H1170 - reefs and H1180 – submarine structures made of leaking gasses, also known as bubbling reefs).

The present proposal entails fisheries management measures in three Natura 2000 sites located in the western part of the Baltic Sea:

One Natura 2000 site located in the Danish Exclusive Economic zone in the Baltic Sea (outside 12 nautical miles):

1. Adler Grund og Rønne Banke (EU site code: DK00VA261)

Two Natura 2000 sites located in the Danish part of the western Baltic Sea between the baseline and 12 nautical miles:

2. Centrale Storebælt og Vresen (EU site code: DK008X190)
3. Flensborg Fjord, Bredgrund og farvandet omkring Als (EU site code: DK00VA254)

A similar proposal for fisheries management measures have been formulated for protection of reef structures in four Danish Natura 2000 sites located in the Danish part of the Kattegat/North Sea.

According to EP/Council Regulation (EU) No 2072/2015 Annex I, Sweden and Germany have fishing opportunities within 12 nautical miles in the Danish part of the western Baltic Sea. Council Regulation (EU) No. 106/2015, Sweden, Germany, Poland, Latvia, Lithuania, Estonia and Finland have fishing opportunities in the Danish EEZ of the Western Baltic Sea. It is the intention of the Danish government (initiating Member State) to take measures i.a. with respect to fishing activities exercised by *all* vessels including fishing vessels carrying the flag of other Member States of the EU.

This document covers the 11 information items of the Commission's guidelines from 2008 concerning development of proposals for fisheries management measures in marine Natura 2000 areas within the scope of the Common Fisheries Policy (see Annex D for an overview of how the present proposal has covered the information 11 items).

In order to apply these measures to *all* vessels, Denmark, as the initiating Member State, has in accordance with EP/Council Regulation (EU) No 1380/2013 of the Common Fisheries Policy (Basic Regulation), consulted Sweden, Germany, Poland, Estonia, Latvia, Finland, Lithuania, the Baltic Sea Advisory Council, ICES and the Commission, as described in section 3.2. *The present proposal is submitted to the European Commission jointly by the BALTFISH Member States (Denmark, Sweden and Germany for* the sites located within the 12 nautical mile zone and for all Member States for the site in the Danish EEZ in accordance with the Basic Regulation, Articles 11 and 18.

[1] Council Directive 92/43/EEC, of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1992L0043:20070101:EN:PDF

[2] Directive 2009/147/EC of the European Parliament and of the Council, of 30 November 2009 on the conservation of wild birds: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:en:PDF

1.2 Overall aim of the present proposal

The overall aim of the present proposal is to ensure adequate protection of designated reef structures from fishing activities and thereby to contribute to the obligation of achieving favorable conservation status for the habitat type H1170 in accordance with art. 6 (2) of the Habitats Directive, stating that Member States shall take appropriate steps to avoid the deterioration of natural habitats and the habitats of species as well as disturbance of the species for which the areas have been designated.

According to the Natura 2000 plans for the sites concerned, fishing activities with mobile bottom contacting gear is specified as a threat to reef structures[3]. In the site specific management plans, conservation status of the reef structures is given as 'unfavorable' due to physical disturbances and a relatively high level of nutrients in the water column[4]. It is generally agreed that fishing activity with mobile bottom contacting gear has an impact on reef structures – both in terms of physical disturbance to the reef structure itself as well as to the biodiversity found at the reef (Freese et al. 1999; Kaiser et al. 2002; ICES 2009; Howarth et al. 2015 and physical disturbance likely caused by trawling are also reported from a reef in Danish water; Dahl 2005)[5]. A detailed description of the three Natura 2000 sites is given in section 5.1.

Denmark (The Danish AgriFish Agency) is therefore proposing to restrict fishing activities with mobile bottom contacting gear in areas mapped as reefs (H1170). The content of the proposed fisheries management measures is explained in more detail in section 5.2. The proposed restrictions are identical and supplementary to fisheries management measures in four coastal Natura 2000 sites under Danish sovereignty, which came into force on 1 September 2013 and the delegated act, (EU) 2015/1778, concerning fisheries management measures in ten Natura 2000 sites in Danish waters. The proposals for fisheries management measures was sent to the EU Commission on 15 March 2015 in the form of joint recommendations by Denmark, Sweden and Germany. The Delegated Act came into force on 1 January 2016.

The present proposal has been peer reviewed by The Danish Technical University and Aarhus University (see section 3.1.4).

[3] Link Management Plans: http://www.naturstyrelsen.dk/Naturbeskyttelse/Natura2000/Natura_2000_planer/Se_Planerne/

[4] Adler Grund: management plan to be adopted during 2016 – also here reefs will be given in unfavorable conservation status.

[5] Freese, et al. 1999 – Effects of trawling on seafloor habitat and associated invertebrate taxa in the Gulf of Alaska. Marine Ecology-Progress series 182: 119-126; Dahl, K. 2005: Effekter af fiskeri på stenrevs algevegetation. Danmarks Miljøundersøgelser. 16 s. – Faglig rapport fra DMU nr. 526; Kaiser, M. J., Collie, J. S., Hall, S. J., Jennings, S. and Poiner, I. R. (2002), Modification of marine habitats by trawling activities: prognosis and solutions. Fish and Fisheries, 3: 114–136; ICES. 2009. Report of the EMPAS project (Environmentally Sound Fisheries Management in Protected Areas), 2006-2008, an ICES-BfN project. 123 pp.; ICES. 2006. Report of the Working Group on Ecosystem Effects of Fishing Activities
(WGECO), 5 12 April 2006 , ICES Headquarters, Copenhagen. ACE:05. 174 pp; Howarth et al. 2015 – Sessile and mobile components of a benthic ecosystem display mixed trends within a temperate marine reserve. Marine Environmental Research 107: 8-23.

1.3 Recommendations to be implemented

The present proposal applies to:

- A ban for fishing activity with mobile bottom contacting gear in areas mapped as reefs (H1170).

Protection of reefs (habitat code H1170)

The outlined zones with mapped reefs (H1170) and the surrounding buffer zones will be closed for the following mobile bottom contacting gear types~~,~~ ~~(~~see table 1 below:~~for gear codes):~~

~~Beam trawls~~

~~Mobile gears (Bottom trawl / Otter trawl)~~

~~Seine nets (Danish and Scottish seines)~~

~~Dredges~~

Table 1: Gear codes for the banned gear types.

Gear types that are banned in the closed zones	**Habitat code**	**Gear code Annex XI in EU Regulation No. 404/2011**	**International standard Classification of Fishing Gears (ISSCFG)**
Beam trawl	1170	TBB	TBB
Bottom trawl / otter trawl	1170	OTB, OTT, PTB, TBN, TBS, TB	OTB, OTT, OT, PTB, TB
Seine nets	1170	SDN, SSC, SX, SV	SB, SV, SDN, SSC, SPR, SX
Dredges	1170	DRB	DRB, DRH

The outline of the areas, in which these fishing activities are proposed to be banned, are given in section 5.1.1-5.1.3 and 6.2. Annex I gives the coordinates for the proposed buffer zones for the three Natura 2000 sites concerned.

2. Legal framework

This chapter describes the legal framework of the present proposal; the Common Fisheries Policy, the "TAC's and Fishing opportunities for 2016" (Council Regulation 2072/2015, Annex C and the implementation of Natura 2000 in Danish waters by the Danish government.

2.1 Common Fisheries Policy

According to the Common Fisheries Policy (Regulation No 1380/2013 (The Basic Regulation)) Article 11, Member States are empowered to adopt conservation measures not affecting fishing vessels of other Member States that are applicable to waters under their sovereignty or jurisdiction and that are necessary to comply with their obligations under Article 6 of Directive 92/43/EEC, Article 4 of Directive 2009/147/EC and Article 13(4) of Directive 2008/56/EC.

Where a Member State ("initiating Member State") considers that measures need to be adopted for the purpose of complying with the obligations referred to above, and other Member States have a direct management interest in the fishery to be affected by such measures, the European Commission shall be empowered to adopt such measures, upon request, by means of delegated acts. For this purpose cooperation between Member States having a direct management interest[6] is foreseen with a view to formulating a joint recommendation in agreement on draft fisheries management measures to be forwarded to the Commission.

The initiating Member State shall provide the Commission and the other Member States having a direct management interest with relevant information on the measures required, including their rationale, scientific evidence in support and details on their practical implementation and enforcement. Member States shall consult the relevant Advisory Councils.

The initiating Member State and the other Member States having a direct management interest may submit a joint recommendation within six months from the provision of sufficient information. The Commission shall adopt the measures, taking into account any available scientific advice, within three months from receipt of a complete request (Reg. 1380/2013, Articles 11 and 18).

Since other Member States have fishing opportunities in the Danish part of the western Baltic Sea, Denmark, as the initiating Member State, has taken steps to jointly propose a set of management measures, which will apply to all fishing vessels carrying out fishing activities in the concerned sites. For the two sites located within the 12 nautical mile zone, only Germany and Sweden have fishing rights, see section 2.2. For the site located in the Danish part of the EEZ of the Baltic Sea all BALTFISH Member States have fishing opportunities according to the "TAC's and Fishing opportunities for 2016", see Annex C.

The proposed fisheries management measures for protection of reef structures from fishery with certain gear types is based on the Commission's guidance document "*Fisheries measures for marine Natura 2000 sites – A consistent approach to request for fisheries management measures under the Common Fisheries Policy (2008)"*[7]. This document provides guidance on how Member States should prepare a proposal for fisheries management measures within the CFP framework, for delivering Natura 2000 conservation objectives.

[6] Basic Regulation 1380/2013, art. 4, § 1, no. 22; *"Member State having a direct management interest means a Member State which has an interest consisting of either fishing opportunities or a fishery taking place in the exclusive economic zone of the Member State concerned".*

[7] Link Guidance document: http://ec.europa.eu/environment/nature/natura2000/marine/docs/fish_measures.pdf

The guidance document provides the basis for the present proposal. The 11 information items given in the guidance document, provides the structure of the present proposal. Annex D gives an overview of how the present proposal deals with the 11 information items.

The following chapters describe how Denmark, as the initiating Member State, has taken the Commission's criteria for decision making into account – as well as the requirements for regional coordination in line with the new Basic Regulation.

2.2 Access to the Danish Natura sites

Access to the concerned Natura 2000 sites depends on the location of the site.

Access to the concerned sites located in the Danish Exclusive Zone of the western Baltic Sea is outlined in Council Regulation (EU) No. 2072/2015[8], which states that a number of Member States have access (fishing opportunities) in the Danish Exclusive Zone in the ICES areas IIIc 22 and IIId 24 (Belt Sea and western Baltic), see Annex C. However, not all the listed Member States carry out fishing activity in the areas concerned (subdivision 22-24). Only Sweden, Germany, Poland and Estonia have so far forwarded fishery data.

According to EP/Council Regulation (EU) No 1380/2013 Annex I, Germany and Sweden have fishing rights within 12 nautical miles in the Danish part of the western Baltic Sea.

Denmark has therefore requested for fishery data for fishing activities carried out in the Belt Sea and the Danish part of the Western Baltic area as well as within the Natura 2000 sites for the period 2011-2015 – as required in the Commissions guidance document from 2008 (information item 5 and 6).

Fishery data has been requested for from all Member States around the Baltic Sea for the period 2011-2015

A detailed description of the fishing activities in and around the three Natura 2000 sites concerned is given in section 6.1 and 6.2 and Annex K-L.

2.3 Implementation of Natura 2000 in Denmark

The Act on Environmental Goals[9] contains the legal basis for the designation of Natura 2000 sites according to the Habitats Directive (92/43/EEC) and the Birds Directive (2009/147) in Denmark. The overall objective of the Habitats Directive of maintaining and restoring favorable conservation status is nationally implemented in the Administrative Order No. 408/2007 together with the legal designation of the sites. Until management plans have been adopted and site specific conservation objectives formulated, the overall objective of favorable conservation status is to be followed.

According to the Environmental objective (§ 36 (6)), the Ministry of Environment and Food of Denmark is the responsible authority for the designation of Natura 2000 sites and for ensuring a representative network of protected sites for the protection of unique, threatened and characteristic marine habitats and species in Danish waters. Thus, the bilateral communication between Denmark and the European Commission, is handled by the Ministry of Environment and Food. The Ministry of Environment and Food is also the responsible authority for the national monitoring program (NOVANA) and for mapping marine

[8] Link to Council Regulation: http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1467024866502&uri=CELEX:32015R2072
[9] Link Act on Environmental Goals: https://www.retsinformation.dk/Forms/R0710.aspx?id=127102

habitats. The national monitoring program in relation to the present proposal is described in more detail in section 6.4.2.

In Denmark, the main provisions of the Habitats Directive article 6 for protection and managing the Natura 2000 sites are sector implemented, i.e. the competent authority is responsible for implementing the necessary measures identified through the Natura 2000 management plans. When it comes to the regulation of fisheries, the Ministry of Environment and Food is the responsible authority for the supplementary fishery regulation. In June 2008, the Fisheries Act was amended to include the Habitats Directives provisions[10]. Thus, in Denmark, the Ministry of Environment and Food is also the responsible authority for ensuring adequate protection of marine habitats and species in relation to fisheries.

This proposal seeks to fulfill the provision of article 6 (1) and 6 (2) of the Habitats Directive, through protection of reef structures from physical impact due to fishing activity.

2.3.1 Designation of Natura 2000 sites in Denmark

Denmark has in the period between 1998 and 2011 designated 97 Natura 2000 sites for the protection of marine habitats and species. The designation has been done in accordance with the Administrative Order No. 408, 1 May 2007[11] and subsequent amendments thereof, which designates and sets up the overall conservation objectives as basis for the administration of Natura 2000 sites.

Annex B gives an overview of the designation of the concerned Natura 2000 sites from appointment as PSCI site until designation as SAC's.

In December 2011, nature management plans were adopted for the sites designated before 2010[12]. With the adoption of the plans, the sites were also designated as Special Areas of Conservation (SAC's). A second generation of nature management plans for all terrestrial and marine sites were adopted on 20th April 2016.

For sites designated before 2010, necessary fishery management measures must be formulated and implemented before 2016, whereas the timeframe is 2021 for sites designated later. The present proposal for fisheries management measures only contains fishery management measures for sites designated before 2010.

The European Commission has officially announced that Denmark has designated sufficient area to ensure a representative network of marine habitats and species, however, there is a scientific reserve regarding harbour porpoise in the western Baltic Sea. Once the results from the SAMBAH project have been evaluated and assessed, a formal decision will be taken as to whether additional areas need to be designated for harbour porpoise in the Danish part of the Baltic Sea. The Danish marine Natura 2000 network covers approximately 18 % of Denmark's marine waters. A map showing the 97 marine Natura 2000 sites is given in Annex A.

The present proposal deals with the following three Natura 2000 sites: 'Adler Grund og Rønne Banke', 'Centrale Storebælt og Vresen', 'Flensborg Fjord, Bredgrund og farvandet omkring Als'.

The table below gives information of the marine habitats for which the three Natura 2000 sites have been designated, as well as the legal framework for designation.

[10] Link Fisheries Act: https://www.retsinformation.dk/Forms/r0710.aspx?id=121218
[11] Link Administrative order no. 408, 1 May 2007: https://www.retsinformation.dk/Forms/R0710.aspx?id=13043
[12] Link Administrative order no. 1114, 25 November 2011: https://www.retsinformation.dk/Forms/R0710.aspx?id=139270

Table 2. Description of the three Natura 2000 sites (SACs) that the present proposal deals with

Site name	Marine habitats and species	Year of designation	National Administrative Order
Adler Grund og Rønne Banke	Reefs 1170 Sandbanks 1110	2009	Administrative order no. 408 of 1 May 2007 and subsequent amendments: Sets out the framework for designation, formulation of overall objectives and administration of Natura 2000 sites in Danish waters
Centrale Storebælt og Vresen	Reefs 1170 Harbor porpoises 1351 Some bird species*	1995 Expanded in 2010 and 2011	
Flensborg Fjord, Bredegrund og farvandet omkring Als	Reefs 1170 Sandbanks 1110 Harbor porpoises 1351 Some bird species*	1995 Expanded in 2010	

* Parts of the site are designated as SPA for birds, designated species can be found in annex A.

2.3.2 Mapping of marine Natura 2000 sites

Mapping of marine habitats forms the basis for protection of marine habitats in relation to fishing activities. In 2006, the Danish Nature Agency began the process of mapping marine habitat types within the Danish Natura 2000 network, starting with locating bubbling reefs (H1180) in Kattegat. In 2011-2012, the Danish Nature Agency published maps of reefs and sandbanks for 18 Natura 2000 sites in Kattegat and the Baltic Sea near the island of Bornholm[13]. One of the three Natura 2000 sites (Adler Grund og Rønne Banke) in the present proposal are based upon this first mapping exercise. The remaining two sites were mapped in 2012 and 2014 in a similar exercise.

The method of mapping marine Natura 2000 sites occur in three steps. In 2011, each of the 18 Natura 2000 site was examined using sidescan sonars producing a complete picture of the rugosity of the substrate of the sea floor. On the basis of this data, an initial map was produced – the so-called 'first generation habitat map. The collected data was then thoroughly studied and any abnormality or structures in the sea bottom not easily classified as the various habitat types (reef, sandbanks etc.) was then examined further, using either a scuba diver or remote operated vehicle (ROV) equipped with video cameras. Through this process bubbling reefs were verified. In addition, a number of areas classified as reefs, sandbanks, etc. were visited to ensure accurate classifications and to study the biological content of the areas. On the basis of the complete dataset, habitat maps were then created showing where within the Natura 2000 sites, reef structures (H1170 and H1180) and sandbanks (H1110) are located.

Mapping of marine habitats in Danish Natura 2000 sites builds on the Danish definition of the habitat types designated under the Habitats Directive. According to the Danish definition of stone reefs, an area is classified as reef, if the coverage of hard substrate is above 25 pct. Areas with a cover of hard substrate of 10-25 pct. are also classified as reef, if the areas are directly connected to areas with a coverage of hard substrate of 25 pct. or more. For the site "Centrale Storebælt og Vresen" mapping of reef structures have been done by two different methods, where only the one in accordance with the Danish definition of reef structures is used as the basis for this proposal of fisheries management measures, for the protection of reef structures.

[13] Link: Report - Mapping of Natura 2000 sites in 2011 and 2012: http://www2.naturstyrelsen.dk/habitatkortlaegning/, http://naturstyrelsen.dk/publikationer/2013/dec/marin-habitatnaturtype-kortlaegning/, http://naturstyrelsen.dk/media/136155/habitatkortl%C3%A6gning-2014_geus_dce.pdf

3. Process

This chapter describes the process from when the Danish initiative to protect reef structures (H1170 and H 1180) from fishing activities in marine Natura 2000 sites was launched in spring 2011 by the former Ministry of Food, Agriculture and Fisheries/Danish AgriFish Agency and until submission of fisheries management measures in the form of *'A Joint Recommendation' by Denmark, Sweden, Germany, Estonia, Poland, Finland, Latvia, Lithuania to the European Commission in [XX 2016].*

The following two sections describe the national and international coordination processes, which have taken place in the course of the last six years (2011-2016) in relation to the formulation of fisheries management measures for protection of reef structures in Danish Natura 2000 sites.

3.1 National coordination and consultation

National coordination and consultation with stakeholders in relation to Natura 2000 and fisheries take place in the so-called *'Natura 2000 Dialogue Forum'* as well as in the ministry's committees. In addition to formal consultations, informal consultations have also been held with stakeholders with the aim of discussing protection of reefs in relation to fisheries at a more technical level. Annex F gives an overview of the formal and informal consultations held since the initiative of protection of reefs from fisheries was launched in spring 2011.

3.1.1 Natura 2000 Dialogue Forum

The Natura 2000 Dialogue Forum was launched in May 2010 by the former Minister for Food, Agriculture and Fisheries in order to actively involve relevant stakeholders with an interest in fishery and Natura 2000 in the ministry's work with the implementation of the Natura 2000 directives. The Natura 2000 Dialogue Forum is chaired by the Danish AgriFish Agency and consists of representatives from NGO's, fishermen's organizations, research organizations and national authorities[14]. The Natura 2000 Dialogue Forum meets 2-3 times a year and is the forum where the Danish AgriFish Agency presents upcoming proposals for fisheries management measures and in general informs stakeholders of current state of play through open discussions and dialogue.

The rationale and principles on which the present proposals builds were initially presented to the Natura 2000 Dialogue Forum in November 2012, and have been discussed in a range of meetings since then. Latest on 23 May 2016.

Consultations in relation to the present proposal

In November 2012, the Danish Ministry of Environment/Danish Nature Agency published detailed maps of habitat types for one of the three sites concerned, as described in section 2.3.2.

In spring 2015, the Danish Ministry of Environment/Danish Nature Agency published detailed maps of habitat types for a range of sites, including the remaining two sites of the present proposal. Thus, all maps have been updated in order to take the new information into account. Updated maps have been presented to the *Natura 2000 Dialogue Forum* on November 16th 2012, May 8th 2015 and January 28th 2016.

[14] The following organizations participate in meetings in the Natura 2000 Dialogue Forum: The Nature Agency, WWF, Greenpeace, Oceana, Bird Life Denmark, The Danish Society for Nature Conservation, Danish Fishermen´s Association PO and other local fishermen associations. Plus other NGOs with interests in the discussed topics are invited, e.g. The Danish Hunters Association and ASCOBANS. The Terms of References for the Natura 2000 Dialogue Forum can be found here:
http://naturerhverv.dk/fileadmin/user_upload/NaturErhverv/Filer/Fiskeri/Natura_2000_hav/Natura_2000_dialogforum/Revideret_kommissorium_for_N2000_Dialogforum_020513.pdf

In relation to the present proposal, the *Natura 2000 Dialogue Forum* has been consulted in a parallel session with concerned Member States, as well as the Advisory Council for the Baltic Sea, respectively. Besides the pre-consultation meeting held on 9 May 2016, the Danish AgriFish Agency presented the proposed fisheries management measures to the *Natura 2000 Dialogue Forum* on 23 May 2016, where also a summary of the pre-consultation meeting with Member States was given. The outcome of this consultation is given in section 3.2.3.

[The Natura 2000 Dialogue Forum was briefed on state of play regarding the Danish proposals on XX October 2016 in relation to finalization of the two proposals with concerned Member States as well as the drafting of the joint recommendation].

~~*Outcome of consultations held*~~

3.1.2 Meetings with stakeholders

Bilateral meetings have been held with the Danish Fishermen's Association PO during spring and autumn of 2015. The purpose of these meetings were to discuss the proposed ban for trawling with mobile bottom contacting gear in the 7 Natura 2000 sites located between the baseline and 12 nautical miles in the Kattegat (four sites) and western Baltic (three sites) as well as in the Exclusive Economic Zone. Furthermore, the consultations also aimed at obtaining a better understanding of the fishing pattern from smaller vessels in the 7 Natura 2000 sites concerned. The outcome of these meetings center around an in depth understanding of the fishing pattern in the discussed Natura 2000 sites – also for the smaller vessels not obliged to carry VMS[15]. These discussions support the analyses of fishing activity based on VMS, which the Danish AgriFish Agency in collaboration with DTU Aqua have carried out, assuring that the proposed fisheries measures will have no or low impact on current fishing activities for vessels above and below 12 meters.

3.1.3 Involvement of Parliament and Committees within the Ministry of Environment and Food

The Danish Government has laid down national procedures for coordination of initiatives in relation to the implementation of EU's Natura 2000 directives and the reformed fisheries policy.

For initiatives, where Denmark act as the initiating Member State, The Danish Parliament must be informed of the intended draft proposals for fisheries management measures prior to regional consultation. All initiatives both launched by Denmark and by other Member States, where Denmark has direct management interest, will be coordinated nationally with stakeholders through the Ministry's national committees and *Natura 2000 Dialogue Forum*. The Danish Parliament is informed of these initiatives before joint recommendations are finalized for submission to the European Commission. In relation to present proposal, Parliament was informed in March 2016.

3.1.4 Peer review of the proposal

The present proposal has been peer reviewed by The Danish Technical University, Institute for Aquatic Resources, DTU Aqua and the University of Aarhus, Danish Centre for Environment and Energy. A peer review of the proposal ensures that, the proposed fisheries management measures, along side the rationale and principles on which the proposal builds, are scientifically sound. The peer review has also

[15] VMS (Vessel monitoring systems) is a satellite based monitoring system, which is used in commercial fisheries – positions, times, course and speed of the fishing vessels are monitored and stored.

increased the scientific evidence in terms of references and ensured that relevant scientific studies have been included.

The outcome of the peer review can, besides minor editorial changes, be summarized to:

i) scientific assessment of the documentation of conservation status in the concerned Natura 2000 sites
ii) scientific assessment of the rationale for a ban for fishing activity with mobile bottom contacting gear in areas mapped as reefs code H1170 and H1180 and other type of fishery activity in areas mapped of bubbling reefs code H1180 in relation to the documented conservation status.

3.2 International coordination – regionalization

The sections below describe the process that the Danish AgriFish Agency has pursued with respect to the present proposal in terms of international coordination and consultation with other Member States, the European Commission and relevant Advisory Councils, see Annex F-G.

3.2.1. Consultation with Member States and the European Commission ~~[*this section will be finalized at a later stage*]~~

The present proposal has been coordinated regionally in accordance with Article 11 and 18 of the reformed fisheries policy (Basic Regulation) through the established ad hoc working group in accordance with the Terms of Reference for the BALTFISH technical expert group.

Terms of reference for the BALTFISH technical expert group was agreed upon in 2014 by the Fisheries Directors. In accordance with the ToR's, Denmark, as the initiating Member State, has taken the lead in the ad hoc working group with Sweden, Germany, and Poland. *These Member States have finalized the proposal for fisheries management measures for protection of reef structures in collaboration.*

International coordination and consultations of the present proposal were launched back in March 2012, when Denmark in accordance with article 9 in Regulation no. 2371/2002 invited German and Swedish fishery- and environmental authorities, the Advisory Council for the North Sea, ICES and the Commission to a pre-consultation meeting in Copenhagen. A booklet containing all the relevant information was sent out in February 2012 containing information about the proposed fishery regulation.

The recent mapping of marine habitats in the Kattegat area in 2011, 2012 and 2015, has enabled the Danish AgriFish Agency to include protection of more reef structures in terms of area and number of sites in the present proposal.

A draft of the present proposal was sent in pre-consultation to the relevant authorities in Sweden, Germany, Poland, Finland, Estonia, Latvia and Lithuania alongside ICES, the Baltic Sea Advisory Council and the European Commission (DG MARE and DG ENVI) on 7 April 2016 prior to the scheduled pre-consultation meeting on 9 May 2016 – a process in line with the provisions of regionalization in the reformed fisheries policy.

The proposed management measures were in a parallel process sent to the members of the Danish *Natura 2000 Dialogue Forum*. A summary of the pre-consultation meeting on 9 May 2016 is given in Annex G. At the pre-consultation meeting in May ~~meeting~~, an ad hoc working group, to be chaired by the Danish AgriFish Agency, was established with Sweden, Germany and Poland. Meetings were held in June~~May, and~~ August and September [October] 2016. The outcome of these meetings is given in Annex G. ~~Meetings in the ad hoc working group were held on:~~

~~22 June 2016~~

~~25 August 2016~~

Consultations with Finland, Estonia, Latvia and Lithuania has been done through emails.

Denmark, Sweden, Germany and Poland have consulted their national fishermen associations/organizations. The Advisory Councils and NGOs have been consulted by Denmark as the initiating Member State, see section 3.2.3 and Annex F-H.

On 5 July 2016 a bilateral meeting was held in Brussels with representatives from the European Commission. DG Environment had requested their consultants to evaluate the Danish proposals. The evaluation and outcome of this consultation is given in Annex G.

3.2.2 Informal consultations with other Member States ~~[*to be finalized after consultation*]~~

During the formulation of the present proposal, a range of informal meetings have been held with Sweden. The focus of the informal meetings with the Swedish authorities have been to discuss the Danish approach of buffer zones and to explore the possibility of a joint proposal for the Natura 2000 sites in the Kattegat area. The informal consultations have taken place on:

- 1 June 2011: meeting in Copenhagen, Denmark
- 17 January 2013: meeting in Göteborg, Sweden
- 10 October 2013: meeting in Göteborg, Sweden

In addition to the informal meetings with Sweden, on 18 November 2015 an informal meeting was held in Copenhagen with representatives from Poland.

The informal discussions between Sweden and Denmark have resulted in Denmark solitarily proposing fisheries management measures for Natura 2000 sites located between the baseline and 12 nautical miles as well as for sites located in the Exclusive Economic Zone of the western Baltic Sea. As already mentioned, this proposal and that of sites located in the Kattegat, are supplementary to the measures already forwarded to the EU Commission jointly by Denmark, Sweden and Germany early 2015. The same methods and rationale have been applied.

3.2.3 Consultations with Advisory Councils ~~[*to be finalized after consultation*]~~

The Advisory Councils for the Baltic Sea and North Sea, respectively, have also been consulted. The Advisory Councils received the proposals parallel to Sweden, Germany, Estonia, Poland, Latvia, Finland and Lithuania, the Commission and the *Danish Natura 2000 Dialogue Forum*.

A summary of the consultation with the Advisory Councils and the *Natura 2000 Dialogue Forum* is given in Annex H.

4. Principles and rationale

Member States are responsible for ensuring favorable conservation status of designated marine habitats and species in their respective Natura 2000 network and to take appropriate steps to avoid the deterioration of natural habitats and the habitats of species as well as the disturbance of the species for which the Natura 2000 site has been designated. In Denmark, this responsibility falls under the Ministry of Food, Agriculture and Fishery in relation to fisheries. At the Ministry of Environment and Food of Denmark, the Danish AgriFish Agency is responsible for formulation of fishery regulation as well as fishery control and enforcement of implemented management measures.

In spring 2011, the Danish AgriFish Agency launched the initiative to ensure adequate protection of reef structures designated under the Habitats Directive. Of the 97 marine Natura 2000 sites located in Danish waters, 65 sites have been designated for reefs (H1170 and H1180). A total of 30 of the 65 sites are located within the baseline and/or in waters under Danish sovereignty.

Based on scientific advice from DTU Aqua (the Danish Technical University, Institute for Aquatic Resources, Denmark has decided to protect reef structures (H1170 and H1180) from physical disturbances due to fishing activities with mobile bottom contacting gears (see section 5.2 and Annex E). DTU Aqua has advised, that a buffer zone equivalent to 6 times the average water depth (meters) will ensure adequate protection of these reef structures from direct impact from fishing activities, see Annex E. The same method has been applied in the National Administrative Order of 28 August 2013[16], which applies to protection of reef structures in four Danish coastal Natura 2000 sites. In June 2013, ICES published a general advice on evaluation of the appropriateness of buffer zones, see Annex E. The ICES advice is in line with scientific advice from DTU Aqua.

The rationale behind the buffer zone method is that the reef structures in their full extent need protection from mobile bottom contacting fishing gears - from current fishing activities as well as potential future fishing activities. Modern fishing vessels are equipped with advanced technology that allow then to fish with high precision. In addition, other technologies allow integration of buffer zones in the GPS systems of fishing vessels. As a result, buffer zones eliminate any potential threat from trawls to the reef structure during fishing – even when vessels turn. The overall aim of the present proposal is protection of reef structures from direct physical disturbances from fisheries with mobile bottom contacting gears, which according to the Danish Natura 2000 management plans is adversely affecting the conservation status of these habitat types. Several scientific studies worldwide state that fishery with mobile bottom contacting gears have a negative impact on reef structures (Dahl 2005; Kaiser et al. 2002; ICES 2009)[17]. The buffer zone is also expected to limit the risk of resuspension of sediment due to fishing with mobile bottom contacting gears. Taking habitat type, depth and location of reef structures into account, resuspension of sediment is assessed to be relatively low.

Several studies have focused on habitat sensitivity in relation to fishery and different gear types. Majority of studies have found low sensitivity between gillnet fishery and stone reef structures (BALTFIMPA project, Shester and Micheki (2011), however, majority of studies focus on impact from mobile bottom contacting gears, which are dragged along the sea floor.

Over time, the proposed fisheries management measures are believed to significantly contribute to the improvement of the conservation status of these habitat types (e.g. Dahl 2005; Fenberg et al. 2012; Collie

[16] Link Administrative order no. 1048 of 28 August 2013: https://www.retsinformation.dk/Forms/R0710.aspx?id=158209

[17] Dahl, K. (2005): Effekter af fiskeri på stenrevs algevegetation. Danmarks Miljøundersøgelser. 16 s. – Faglig rapport fra DMU nr. 526; Kaiser, M. J., Collie, J. S., Hall, S. J., Jennings, S. and Poiner, I. R. (2002), Modification of marine habitats by trawling activities: prognosis and solutions. Fish and Fisheries, 3: 114–136; ICES. 2009. Report of the EMPAS project (Environmentally Sound Fisheries Management in Protected Areas), 2006-2008, an ICES-BfN project. 123 pp.

et al. 2000)[18] and, ultimately, to the achievement of favorable conservation status. Full protection of reef structures from fisheries is indicated as a priority in all the Danish Natura 2000 management plans for sites designated for reefs.

When formulating the present proposal, the following principles coming from the Commission's guidelines from 2008, have~~have~~ been the focal points:

1. *Sound scientific basis*
   Any proposal for fisheries management measures must be based on scientific evidence and advice and take all relevant information into account. DTU Aqua has provided scientific advice in relation to the principles and methods pursued in the present proposal, which is supported by ICES in terms of buffer zones.
   Spatial distribution of the habitat types is central when designing fisheries management measures. The Danish Nature Agency is the responsible authority in Denmark for mapping the marine Natura 2000 sites. In April 2015, the Danish Nature Agency published the last detailed maps of Natura 2000 sites in inner Danish waters – 39 sites in total (37 designated for reefs). The present proposal builds upon these detailed maps.

2. *Stakeholder involvement*
   An important element of the process of formulating fisheries management measures is stakeholder involvement – nationally as well as internationally.
   In Denmark, national coordination with stakeholders takes place in the '*Natura 2000 Dialogue Forum*', which was established in spring 2010 to ensure coordination with all stakeholders from green NGOs to fishermen's associations/organizations, research bodies, authorities etc. The proposed fisheries management measures have been discussed in the forum at all meetings since spring 2011.
   Internationally, any proposal for fisheries management measures, which might affect other Member States must at an early stage be presented to ensure regional coordination. The present proposal and buffer zone approach was initially presented to German and Swedish authorities in March 2012 at a meeting in Copenhagen, where also the North Sea Advisory Council, ICES and the European Commission participated. The present proposal has been discussed with Sweden, Germany and Poland in the established ad hoc working group comprising of representatives from fisheries and environmental departments.
   Stakeholders have been involved in the current process since 2011 and actively taken part in the previous regional coordination process with Sweden and Germany concerning fisheries management measures in 10 Natura 2000 sites (delegated act came into force 1 January 2016).

3. *Regional coordination*
   According to the Basic Regulation Articles 11 and 18, Member States may submit joint recommendations on conservation measures that are necessary for the purpose of complying with their obligations under the Common Fisheries Policy (Reg. No 1380/2013 (The Basic Regulation)). The present proposal is jointly presented to the European Commission after regional coordination with Member States having a direct management interest within the framework of the Terms of Reference for the BALTFISH technical expert group/ad hoc working group. A process, which was

[18] Dahl, K. (2005): Effekter af fiskeri på stenrevs algevegetation. Danmarks Miljøundersøgelser. 16 s. – Faglig rapport fra DMU nr. 526; Fenberg P.B.*, Caselle J., Claudet J., Clemence M., Gaines S., García-Charton J.A., Gonçalves E., Grorud-Colvert K., Guidetti P., Jenkins S., Jones P.J.S., Lester S., McAllen R., Moland E., Planes S. and Sørensen T.K. (2012) The science of European marine reserves: status, efficacy and needs. Marine Policy 36(5), 1012-1021; Collie, J. S., Hall, S. J., Kaiser, M. J. and Poiner, I. R. (2000), A quantitative analysis of fishing impacts on shelf-sea benthos. Journal of Animal Ecology, 69: 785–798.

launched in March 2012 with a pre-consultation meeting in Copenhagen followed by an additional pre-consultation meeting in Copenhagen in May 2016 and meetings in the established ad hoc working group with Sweden, Germany and Poland.

4. *Transparency*
   Transparency of data and the methodology which is used is important, and can only be achieved through stakeholder involvement, regional coordination and use of scientific advice. The data used to describe fishing patterns and effort is based on log book and VMS data from the involved countries. In addition to VMS and log book data, information of fishing patterns for smaller Danish vessels (<12 meters) has also been used. In order to collect information of fishing patterns for smaller Danish vessels, consultations have been held with the Danish Fishermen Association during 2015/ 2016.

5. *Proportionality*
   The proposed management measures must balance sustainable exploitation of resources and the need to conserve important habitats and species. This means that the proposed measures must comply with the proportionality principle so they do not go further than necessary to ensure the needed protection of the mapped reefs within the framework of the Habitats Directive. Furthermore, no other and less burdening measures must be able to provide the same level of necessary protection seen from a scientific and practical point of view. Consequently this means that fishery is not prohibited in these areas, unless it is carried out with gears that potentially can damage the mapped reefs. At the same time, the proposed management measures should be possible to control and enforce. The present proposal concerns protection of reef structures. For sites where the reef structures cover the majority of the site – the entire site is closed for fishing activities, whereas for other sites, the area closed for fishing contains the reef itself and the surrounding 240 meter buffer zone – given as 6 times water depth set at an average depth of 40 meters for the area.

6. *Non discrimination*
   The proposal must ensure that measures are applied in a non-discriminatory manner. A coordinated approach between Member States having direct management interests is key to ensuring non-discrimination of fleets affected by the proposed fisheries management measures. This coordination must follow the steps laid down in the Basic Regulation of the Common Fisheries Policy, thus ensuring a level playing field for the fishing sector potentially affected. The present proposal contains fisheries management measures for three sites located in the Danish part of the Western Baltic Sea, where Sweden, Germany and Poland among others have fishing rights/opportunities. Thus, the proposed fisheries management measures must be coordinated in accordance with the Common Fisheries Policy (articles 11 and 18).

5. Scope of the present proposal

In the first plan period (2010-2015), special focus should be given to the protection of reef structures from any form of physical disturbances. The Danish AgriFish Agency launched the initiative to protect reef structures from impact from fishing activity back in spring 2011 alongside regulation of other activities e.g. sand and gravel extraction. In the second plan period (2016-2021), the on-going work with protection of reef structures is to be continued.

The present proposal aims at ensuring adequate protection of reef structures in three Natura 2000 sites located in the Danish part of the western Baltic Sea: "Adler Grund og Rønne Banke", "Centrale Storebælt og Vresen" and "Flensborg Fjord, Bredgrund og farvandet omkring Als". The present proposal is part of a larger plan to implement the Habitats Directive in relation to the protection of reef structures in the 65 Natura 2000 sites designated for reefs in Danish waters. Denmark has designated 97 marine Natura 2000 sites, of which 65 have been ~~designa~~ted for reefs H1170 and/or H1180.

The present proposal is identical to a similar proposal for the protection of reef structures in Natura 2000 sites located in the Kattegat. These two proposals are further identical to two other proposals concerning fisheries management measures (3 sites in the Kattegat and 7 sites in the western Baltic Sea), which have already been forwarded to the EU Commission as a joint recommendation by Denmark, Sweden and Germany and adopted as an delegated act in summer 2015. The Delegated Act came into force 1 January 2016.

The principles and methods used in the present proposal and that of the Kattegat, are furthermore identical to those used in the first national administrative order for protection of reefs in coastal Natura 2000 sites, which came into force on 1 September 2013, where the first fisheries management measures for protection of reefs were launched. The national administrative order prohibits the usage of mobile bottom contacting gear in four coastal Natura 2000 sites. These measures further supplement the delegated act, (EU) 2015/ 1778.

The following two sections describe the Natura 2000 sites in question and the proposed fisheries management measures to be adopted in order to secure adequate protection of reef structures from fishing activities in accordance with the Habitats Directive, article 6 (1) and 6 (2). The expected outcome and benefit in relation to conservation status is given in section 6.4.3.

5.1 Description of the Natura 2000 sites concerned

The present proposal concerns three Natura 2000 sites located in the Baltic Sea:

- Adler Grund og Rønne Banke (EU site code: DK00VA261)
- Centrale Storebælt og Vresen (EU site code: DK008X190)
- Flensborg Fjord, Bredgrund og farvandet omkring Als (EU site code: DK00VA254)

The three Natura 2000 sites and the habitat types found in the areas are described in 5.1.1-5.1.3.

The sites are designated for not only the protection of reef structures (H1170) – two of them are also designated for the protection of sandbanks (H1110). Centrale Storebælt and Flensborg Fjord are also designated for the protection of harbor porpoises (H1351) and a range of sea bird species.

The conservation status for the reef structures (H1170) is given as unfavorable for all three Natura 2000 sites.. The annual assessment reports on environmental status do not contain information in relation to physical disturbances of reefs, however, it is generally accepted and documented, that fishing activities

with mobile bottom contacting gear can have an irreversible impact on reef structure and function (Dahl 2005; Kaiser et al. 2002; ICES 2009)[19].

The aim of the present proposal is to achieve the overall conservation objective of favorable conservation status, since site specific conservation objectives have not yet been formulated for Danish marine habitats (see section 2.3). In December 2012, the former Danish Ministry of Environment made the Natura 2000 management plans public. The management plans contain a description of the habitats and species for which the site has been designated, the current conservation status of these habitats and species, possible threats and actions to be taken. In all management plans for marine Natura 2000 sites designated for reefs – actions should be taken in relation to fishing activities with mobile bottom contacting gear.

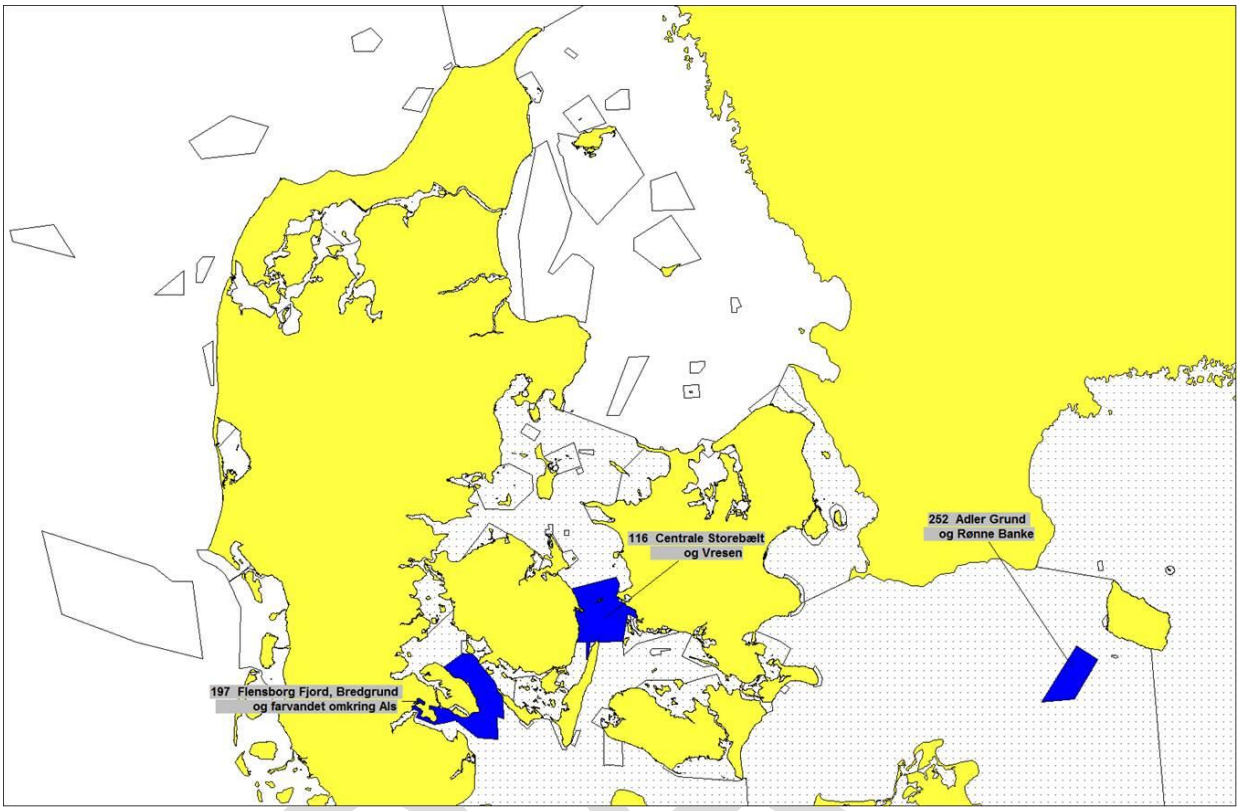
Other activities such as extraction of sand and gravel, which also negatively affect the physical structure and function of reef structures in general, is also being regulated in Natura 2000 sites. Furthermore, on-going initiatives seek to reduce the flow of nutrients from terrestrial sources. Thus, regulation of fishery is one of several initiatives which together is expected over time to improve the conservation status of reef structures in Danish waters.

The present proposal solely concerns protection of reef structures. Assessment of the need for fisheries management measures for the protection of harbour porpoise and sandbanks is yet to be made. On-going work on harbour porpoise by-catch and estimation of bycatch rate and amount in Danish waters, as well as identification of hotspot areas are important information needed for the assessment, as is more information on impact of fishing gears on sandbanks and their functions. Thus, Denmark pursues an adaptive management strategy whereby necessary fisheries management measures are formulated as the required knowledge and assessments are made available. The marine habitats and species which need urgent attention are protected first, e.g. reef structures.

State of play of the implementation of Natura 2000 in relation to fishery in Danish waters are given in annex A.

[19] Dahl, K. (2005): Effekter af fiskeri på stenrevs algevegetation. Danmarks Miljøundersøgelser. 16 s. – Faglig rapport fra DMU nr. 526; Kaiser, M. J., Collie, J. S., Hall, S. J., Jennings, S. and Poiner, I. R. (2002), Modification of marine habitats by trawling activities: prognoses and solutions. Fish and Fisheries, 3: 114–136; ICES. 2009. Report of the EMPAS project (Environmentally Sound Fisheries Management in Protected Areas), 2006-2008, an ICES-BfN project. 123 pp.

Figure 1. Map of marine Danish Natura 2000 sites (white areas). Blue areas indicate the location of the three Natura 2000 sites, which the present proposal covers. Shaded area indicates the boundaries of the western Baltic Sea



The present proposal covers three Natura 2000 sites located in the Danish part of the western Baltic Sea, as shown in figure 1. The Baltic Sea flows into the Kattegat through the Sound, the Little Belt and the Great Belt and from there to the North Sea. The western part of the Baltic Sea comprises of ICES subdivisions 22-24, from the southern boundary of the Kattegat to the island of Bornholm.

Two of the Natura 2000 sites are located in the Belt Sea, which consists of the straits of the Great Belt and the Little Belt, as shown in figure 1. The Great Belt is defined as the strait between Zealand and the island of Fyn, which connects the Kattegat to the Baltic Sea. The third Natura 2000 site is located just west of Bornholm.

The reef structures in the western Baltic Sea comprises of stone reef and biogenic reef structures (H1170). In the western Baltic Sea, reef structures made of blue mussels are rather common. Fishery for blue mussels takes place in the Little Belt and northern part of the Belt Sea, however not in any of the Natura 2000 sites the present proposal covers.

The analysis of fishery activity – both in relation to target species and VMS effort has in the present proposal only been conducted for the Baltic Sea (subdivisions 22-24), which is in line with the ICES fish stock assessments and variation seen in the target species and gears used.

The western Baltic Sea is an important fishing area for Denmark, Sweden and Germany. Target species range from cod, eel, herring, plaice to sprat. Sand-eel has in the last years become increasingly important in the area. In general fishing activity in the western Baltic Sea (given as catch value) has decreased by approximately 40 pct. Cod is the main target species, however. The reduction in landings registered for the area is attributed to a reduction in fishery for cod. The main reduction in cod landings was seen in 2009, where after landings have been somehow stable. Fishery activity in the western Baltic Sea is largely conducted by smaller vessel below 15 meters. In the eastern Baltic Sea (subdivision 25), several countries

are involved in the fisheries as this area is the main area for cod fishery. In this area, fishery in the period 2007 to 2012 has been quite stable however, and slightly lower in 2013. Cod is the main target species followed by herring and sprat.

Several initiatives have been taken for the protection of cod. In 2009, Denmark and Sweden agreed on a cod fishing ban in the northern part of the Sound (subdivision 23) in the months of February and March. Fishery in the eastern Baltic Sea (subdivisions 25-32) are also regulated by a seasonal closure from 1 July to 31 August to protect cod, as is fishery for cod in subdivision 24 where there is a seasonal closure in April. The seasonal closures alongside the introduction of BACOMA 120 mm trawl gear, which was introduced in 2009 to make sure undersized cod was not caught form the basis of a focused protection of cod in the Baltic Sea.

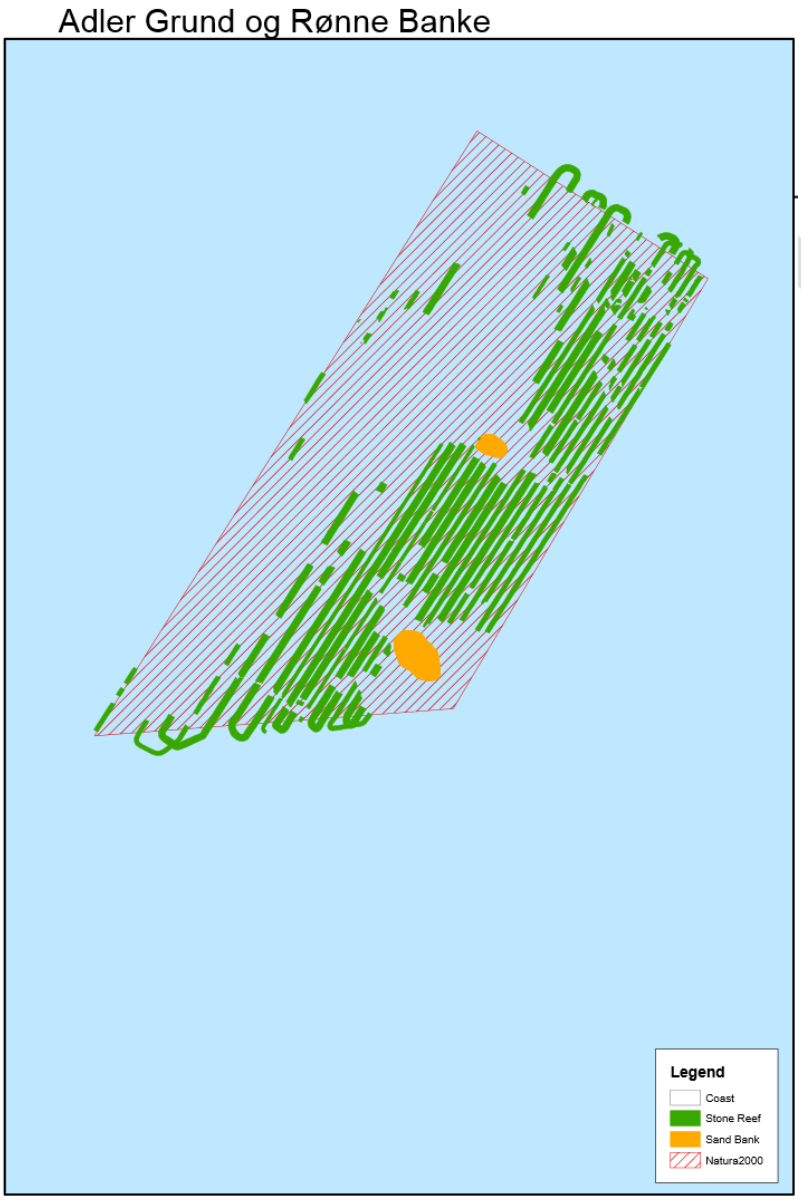
VMS effort in the Danish part of the Baltic Sea is given in Annex L. The highest effort is seen for Danish vessels in both SD 22-24 and SD 25. The highest effort in relation to Danish vessels is seen for mobile contacting gears. Swedish and German vessels carrying VMS primarily conduct fishing activity in SD 25 and on the western side of the island of Bornholm in SD 24 – eastern part with mobile bottom contacting gears. There is some fishing activity from German vessels along the border between Denmark and Germany in the Belt Sea, primarily with mobile bottom contacting gears.

The three Natura 2000 sites, which the present proposal covers, are part of the Danish Natura 2000 network for the protection of reefs. A total of 34 Natura 2000 sites have been designated for reefs in the Belt Sea and the western Baltic Sea area. With this proposal all sites designated for reefs in the Danish part of the Belt Sea will be fully protected from physical impact from fishery with bottom contacting gears.

5.1.1 Natura 2000 site: Adler Grund og Rønne Banke

The Natura 2000 site "Adler Grund og Rønne Banke[20]" is located southwest of Bornholm, and borders German waters, see figure 1. The Natura 2000 site covers an area of 321 km^2 and is designated for the protection of sandbanks (H1110) and reefs (H1170), see figure 2. In total, stone reef structures cover approximately 73 km^2 of the area, corresponding to 23 % of the Natura 2000 site. The site is characterized as being one large reef structure. The reef is representative for stone reefs in the open parts in the Baltic Sea. The first management plan for the site was adopted in April 2016. In the baseline analysis the need for fisheries regulation has been evaluated due to the risk of damage from bottom contacting gears.

Figure 2. Map of Natura 2000 site "Adler Grund og Rønne Banke" showing the location and spatial distribution of reef structures and sandbanks



[20] Habitat No. H261, Natura 2000 site No. 252, EU site code: DK00VA261

5.1.2 Natura 2000 site: Centrale Storebælt og Vresen

The Natura 2000 site "Centrale Storebælt and Vresen[21]" consists of two former Natura 2000 areas; no. 165, "Sprogø and Halsskov Rev" and no. 116, "Vresen".

The marine area is dominated by smaller reefs and in the shallow water large deposits of stone and mussel beds are found. Conditions of the water masses are very dynamic as a result of the meeting between the salt water from the Kattegat and less saline water from the Baltic Sea.

Sprogø, Vresen and the many adjoining reefs represent a continuation of the north-south hill street that runs through Langeland and pass in an arc from Lohals to Korsor. Sprogø is a moraine knoll after construction of the bridge has changed a lot. Vresen was originally a hill island, but by erosion and sediment into a low island consisting of beach ridges and sand. Lejsø area is caused by material migration, which has formed a lagoon and salt marsh, which is fringed beach ridges. In the sea area is designated habitat reefs, while rural areas are not part of the designation document.

The site is located in the middle of the Great Belt, see figure 1. The site covers an area of 807 km^2 and is designated for the protection of reefs (H1170), harbor porpoises (1351) and two bird species (common eider and sandwich tern). In total, stone reef structures cover approximately 121 km^2 of the area, corresponding to 15 % of the Natura 2000 site, see figure 3.

According to the Natura 2000 management plan for the area[22], fishing activity with mobile bottom contacting gear is described as a threat to the stone reefs. Fishing in general in the area is considered a threat towards both harbor porpoises (entanglement in gear) and birds (disturbance and removal of gravel).

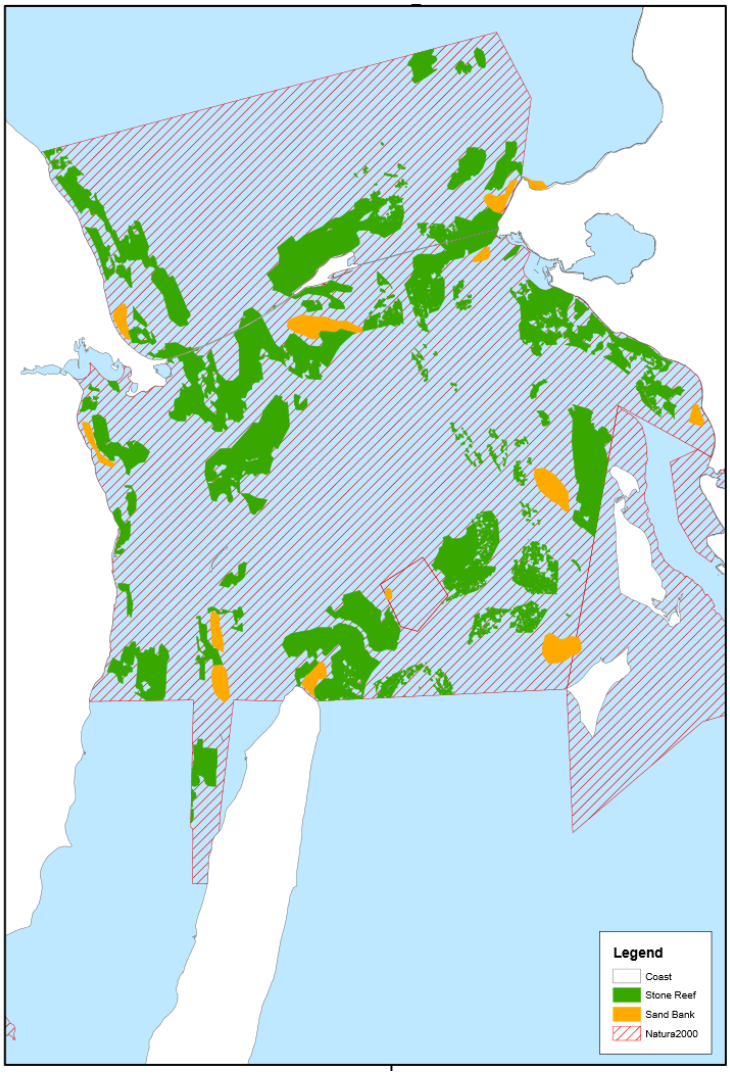


Figure 3. Map of Natura 2000 site "Centrale Storebælt og Vresen" showing the location and spatial distribution of reef structures and sandbanks

[21] Habitat No. H204, Natura 2000 site No. 204, EU site code: DK00VA303
[22] Link to Natura 2000 management plan for Centrale Storebælt og Vresen: http://naturstyrelsen.dk/naturbeskyttelse/natura-2000/natura-2000-planer/natura-2000-planer-2009-15/plan-1-125/116-vresen/

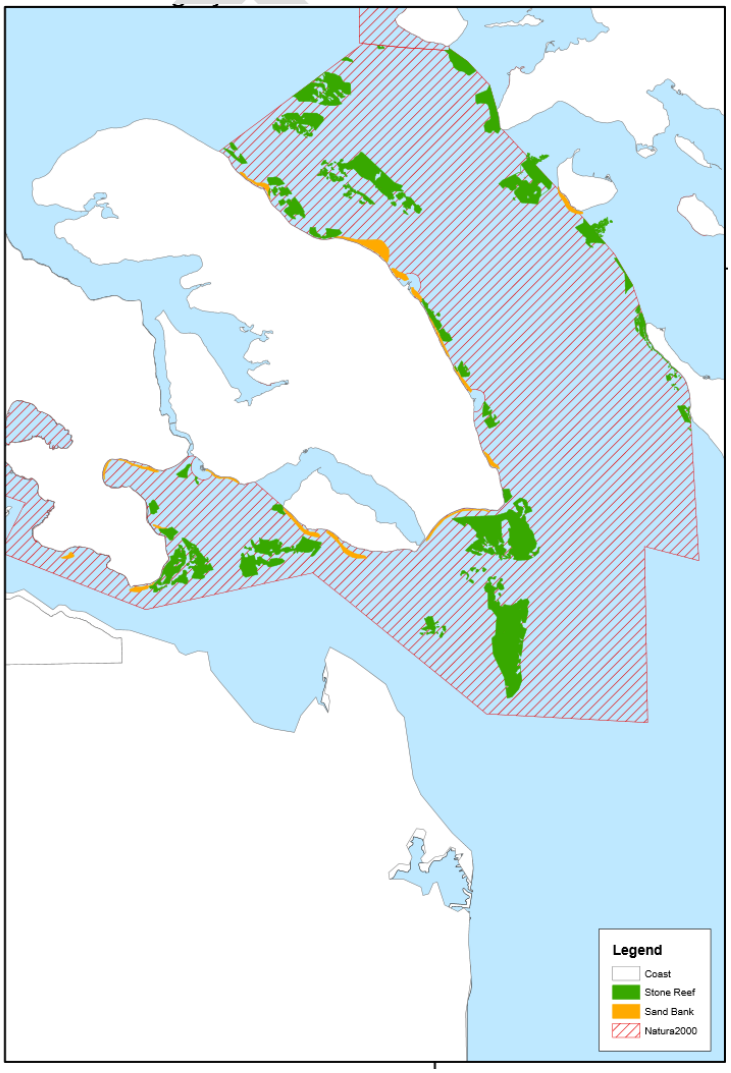
5.1.3 Natura 2000 site: Flensborg Fjord, Bredgrund og farvandet omkring Als

The Natura 2000 site "Flensborg Fjord, Bredgrund og farvandet omkring Als[23]" is located in the Southern part of the Little Belt and the most western part of the Baltic Sea, see figure 1. The site covers an area of 646 km^2 and is designated for the protection of reefs (H1170), sandbanks (H1110), harbor porpoises (1351) and a range of bird species. The site is a well known resting area for swimming and diving ducks in the winter season and midsummer. The outer part of the fjord located in German waters, is also designated as a SPA.

In total, stone reef structures cover approximately 53 km^2 of the area, corresponding to 8 % of the total Natura 2000 site, see figure 4.

According to the Natura 2000 management plan for the area[24], fishing activity with mobile bottom contacting gear is described as a threat to stone reefs and the marine habitat types in the area. Fishing activity with static gears is furthermore described as a threat to the harbor porpoises in the area.

Figure 4. Map of Natura 2000 site "Flensborg Fjord, Bredgrund og farvandet omkring Als" showing the location and spatial distribution of reef structures and sandbanks



[23] Habitat No. H173, Natura 2000 site No. 197, EU site code: DK00VA254

[24] Link to Natura 2000 management plan for Flensborg Fjord, Bredgrund og farvandet omkring Als: http://naturstyrelsen.dk/naturbeskyttelse/natura-2000/natura-2000-planer/natura-2000-planer-2009-15/plan-126-246/197-flensborg-fjord-og-bredgrund/

5.2 Description of proposed fisheries management measures

5.2.1 Purpose of the present proposal

The purpose of the present proposal is to ensure full protection of reef structures (habitat code H1170) from physical disturbance due to fishing activities and thereby contribute to the achievement of favorable conservation status for reef structures.

The protection of reef structures will be ensured through a buffer zone approach, where a 240 meter buffer zone is placed around the mapped reef structures. The Danish AgriFish Agency has received scientific advice from DTU Aqua, on the appropriate method to be used. The size of the buffer zone is calculated as 6 times the water depth in meters. Water depth around the reef structures in the three Natura 2000 sites, that the present proposal deals with, ranges between 30-40 meters. For the present proposal, a water depth of 40 meter is used – giving a buffer zone of 240 meters, see Annex E.

Once the reefs are mapped and their size and spatial distribution is known, the Danish AgriFish Agency, on the basis of scientific advice, formulates the necessary fisheries management measures. The final determination of boundaries within which fishing activities are proposed to be prohibited, follows the principles and rationale described in section 4. The outline of the area to be closed for fishing activities is therefore decided upon separately for each Natura 2000 site taking into account the site specific mapping of marine habitats, fisheries control and enforcement as well as proportionality in relation to impact on fishing patterns. Thus, the outline of the proposed areas to be closed for fishing activities is done per site in order to on one side ensure adequate protection of the mapped reef structures as well as to ensure proportionality in the proposed management measures in relation to fisheries control and enforcement.

The outline of reef structures and associated buffer zones are given above in section 5.1.1-5.1.3 for the three Natura 2000 sites. For the Natura 2000 sites, the reef complexes in two of the areas (Flensborg Fjord and Centrale Storebælt) are rather fragmented, at Adler Grund og Rønne Banke, the reef complexes are cohesive and cover a large part of the site. Thus, the area in which fishing activity is proposed to be regulated solely covers reef structures and the buffer zone area. Table 3 gives an overview of the size of the three Natura 2000 sites, the reef structures and the area proposed closed for fishing activities with mobile bottom contacting gear.

Table 3. Total area of reef structures and buffer zones

Natura 2000 site	Total area (km²)	Area of reef structures (km²)	Area of reefs and buffer zones	
			km²	% of N2000 area
Adler Grund og Rønne Banke	312.24	73.29	173.50	56%
Centrale Storebælt og Vresen	807.26	120.71	269.94	33%
Flensborg Fjord	645.65	53.24	122.54	19%

The proposed fisheries management measures will close approximately 56 % of Adler Grund og Rønne Banke, 33 % of Centrale Storebælt og Vresen and 19 % of Flensborg Fjord.

5.2.2 Assessment of adequacy, proportionality and the precautionary principle

In the present proposal, assessment of adequacy and proportionality as well as the precautionary principle has been given much focus. DTU Aqua has given scientific advice in terms of adequacy in relation to protection of reef structures from impact from unintended fishing activities. Proportionality has been

discussed in relation to reef structures, that cross the outline of the Natura 2000 site and/or are located adjacent to Natura 2000 sites as well as in relation to control and enforcement.

In the same context the precautionary principle has been assessed. The Waddenzee judgment C127-02 has explicitly stated the precautionary principle as part of the required assessments of the Habitats directive's requirements. This assessment is specifically stated in the paragraph 59 in the Waddenzee judgment, saying that activities only are allowed, if it is made certain that it will not adversely affect the integrity of that site. This leads to the conclusion that since Natura 2000 sites in Danish waters are designated prior to the mapping of the reefs, fisheries management measures might be laid down transboundary to the designated areas if it is asserted that it is needed to protect the integrity of the site.

All reef structures located within a Natura 2000 site will be protected from physical disturbance from fishing activity. Consequently reef structures located outside a Natura 2000 site, which are in direct contact with reef structures located inside the site, will also be protected from physical disturbance, since certain fisheries at these reef structures may have a negative impact on the reef structures located inside the site. Reef structures located outside a Natura 2000 site, which are not in direct contact with reef structures inside the designated Natura 2000 site, are not included in the provisions of the Habitats Directive, and will therefore in the present proposal not be protected from fishing activity[25].

For the site "Centrale Storebælt og Vresen' the mapping of reef structures and other habitats were done in two different mapping sessions. Different techniques were used and the spatial resolution varies. Thus, there is a conflict between fishery activity by Danish fishermen with mobile bottom contacting gears in part of the area, mapped by the 'low' resolution. The proposal therefore solely makes use of the high resolution mapping in the areas where conflict exits.

In relation to protection of stone reef structures (habitat code H 1170), scientific evidence support a total fishery ban with mobile bottom contacting gears, whereas fishery with static gears is not assessed as having a significant negative impact. Thus, these activities will be able to continue in areas mapped as reefs [references to be included].

The rationale behind these principles is to enable the achievement of favourable conservation status for designated habitats by implementing the necessary restrictions on human activities - in this case by formulating fisheries management measures, which supplement regulation of other activities such as gravel and sand extraction among other activities.

In relation to the present proposal, reef structures located outside the Natura 2000 sites are, therefore, included in the protection measures, if they are in direct contact to reef structures located inside the site.

Proportionality is also assessed in relation to control and enforcement of the proposed fisheries management measures. The proposed measures must be controllable.

[25] Further reference to this principle in Danish case law: Decision by the Supreme Court (Højesterets kendelse 356/2011): http://www.domstol.dk/hojesteret/nyheder/Afgorelser/Documents/356-2011.pdf

6. Restriction of fisheries within the Danish Natura 2000 sites

The present proposal intends to prohibit fishing activities with mobile bottom contacting gear in areas mapped as reefs (H1170) in the three marine Natura 2000 sites: Adler Grund og Rønne Banke, Centrale Storebælt og Vresen and Flensborg Fjord, see section 1.3.

In accordance with the Commission guidelines of 2008 in relation to the formulation of fisheries management measures in Natura 2000, the Danish AgriFish Agency has requested for fishery data from all Member States with fishing opportunities in the Danish part of the western Baltic Sea. Germany and Sweden have indicated to have direct management interest in the concerned areas and have forwarded fisheries data. Around the site, "Adler Grund og Rønne Banke", Estonia, Poland, Lithuania. Latvia and Finland also have fishing opportunities. However, only Estonia and Poland have forwarded relevant fisheries data for their fisheries in/around the site.

From Sweden, the Danish AgriFish Agency has received fishery data for the period 2011-2015. Germany has contributed with fishery data for the period of 2011-2015, Estonia with fisheries data from 2010-2012 and Poland with fisheries data for the period 2012-2015. DTU Aqua has carried out the analysis regarding landings, catch value and effort in order to assess the impact, which the proposed measures will have on current fishing activities. The analyses of fishing activities have been carried out on the basis of VMS and log book data for vessels above 12 meters, since smaller vessels are not obliged to carry VMS. The fishing pattern for smaller vessels below 12 meters have only been assessed for Danish and Swedish vessels. Annex J describes in more detail how the fishery data have been analyzed, and the methods used. The following sections (6.1-6.3) describe in more detail information regarding fleet activity, type of fisheries, target species and annual trends for the period 2011-2015 (average values). Seasonal trends have not been analyzed due to the relatively low fishing activities in the three sites. Annual landing and catch values are given in Annex K, whereas effort data is given in Annex L.

6.1 Fleet activity and type of fisheries

German and Swedish registered fishing vessels have access to the Danish part of the Baltic Sea within 12 nautical miles, see section 2.2. No other Member States have direct management interest/rights within 12 nautical miles from the Danish coastline. The Danish part of the Baltic Sea has historically been an important fishing area for Danish, Swedish and German fishermen. Concerning the site in the EEZ – all Baltic Sea countries have fishing opportunities in and around the area.

Fishing activities conducted in and around the three sites include fishing with bottom trawls, pelagic trawls, net gear, traps and lines. Only fishery data from fishing activity with mobile bottom contacting gears are listed in the following sections, since only this activity is proposed to be banned.

Swedish fishing activities with mobile bottom contacting gears are limited in and around the site 'Adler Grund og Rønne Banke'. There are no registrations of Swedish vessels above 12 meters conducting fishery with mobile bottom contacting gears in the other two sites.

German fishing activities are registered in all three sites, especially in the site "Flensborg Fjord".

Estonian and Polish fishing activity with mobile bottom contacting gears are only conducted in and around the site "Adler Grund og Rønne Banke". The exact location of Estonia activity can however not be displayed, since the Estonian data is given per ICES square (38G4 and 39G4). The Polish data was forwarded as landings from area "D7", which covers part of the site "Adler Grund og Rønne Banke". The Polish landings can therefore not with certainty be attributed to fishing activity directly within the site of "Adler Grund og Rønne Banke".

Danish and Swedish fishing activities within the three Natura 2000 sites constitutes less than 1‰ of the total VMS effort in the western Baltic Sea – both in relation to fishing with mobile bottom contacting gears and other gear types combined, see table 3 in Annex L.

The number of vessels conducting fishing activity in the three Natura 2000 sites are fairly low, see table 4 below, however, there is a trend of more Danish trawlers being present in the three areas concerned compared to the number of Swedish, German and Polish vessels. No Swedish vessels above 12 meters use the site "Centrale Storebælt og Vresen" nor "Flensborg Fjord" for fishing. Polish vessels are present in and around the site "Adler Grund og Rønne Banke" (1-5 in numbers).

According to VMS effort (see Annex L), the three Natura 2000 sites are not important fishing grounds for Danish, German, Swedish, Estonian or Polish fishermen. Of these countries, Denmark seems to have the highest effort values when looking at the Danish part of the western Baltic Sea area in general. Yet in and around the Natura 2000 sites, the effort is fairly low. Swedish vessels have a relatively high VMS effort in the Swedish part of the Baltic Sea, compared to the Danish part, where the highest intensity is found in the area closest to the Danish-Swedish nautical border (Adler Grund og Rønne Banke). German vessels seems to have a relative stable abundance (based on landings in the Danish part of the Baltic.

Table 4. Number of vessels fishing in Natura 2000 sites with mobile bottom contacting gears and other gear types, respectively

Natura 2000 site	Danish vessels					German vessels					Swedish vessels					Polish vessels				
	Mobile bottom contacting gears (other gears)					Mobile bottom contacting gears (other gears)					Mobile bottom contacting gears (other gears)					Mobile bottom contacting gears (other gears)				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Adler Grund og Rønne Banke	2 (1)	9 (2)	7 (0)	8 (0)	5 (0)	2 (0)	16(0)	2 (0)	1 (0)	0 (0)	1 (0)	0 (3)	2 (2)	0 (2)	0 (0)	0(1)	4(1)	1(0)	2(0)	0 (1)
Centrale Storebælt og Vresen	8 (2)	16(6)	16 (8)	12(3)	17 (7)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	No direct management interests				
Flensborg Fjord	6 (6)	26(8)	23(5)	21(0)	15 (1)	7 (0)	8 (0)	16 (0)	14 (0)	14 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)					

*) "No records" indicates that no information regarding the number of vessels conducting fishery in the sites are available.

Since smaller fishing vessels (below 12 meters) do not carry VMS onboard, it has not been possible to include the activity from these vessels in the analysis carried out in and around the three Natura 2000 sites with regards to effort, fishing pattern, target species etc. However, based on dialogue with the Danish Fishermen Association PO, the fishing effort from these smaller vessels seems to be relatively similar to commercial fishing vessels above 12 meters. Experiences from fisheries control at sea as well as from the FMC (the Danish Fishery Monitoring Centre) confirms this assumption.

6.2 Target species and annual trends

Analyses of target species and annual trends for fishing activity within the three Natura 2000 sites have been made possible through a coupling of VMS-data and log book data, see Annex J-K (only for vessels above 12 meters since VMS data is not available for smaller vessels due to lack of legal obligations). Focus has been given to the period 2011-2015.

The following section describes in more detail fishing activity per site separately for Denmark, Sweden, Germany, Poland and Estonia for the main target species; (2011-2015) for Danish, Swedish, German and

Polish fishery data and a three year period (2010-2012) for Estonian fishery data. Annex K lists fishery data at species level per year per country.

Natura 2000 site "Adler Grund og Rønne Banke"

A number of Member States, besides Denmark, conduct fishing activities in and around the Natura 2000 site 'Adler Grund og Rønne Banke', see table 5 and following figures. According to the forwarded fishery data Germany, Sweden, Estonia and Poland also use the area for fishing with mobile bottom contacting gears, alongside Denmark. The main target species in the area are Atlantic cod d a mixed range of flatfish.

According to log book and VMS data, Danish fishermen conduct fishing activity with both pelagic- and bottom trawls in the site. The average annual Danish landings from the bottom trawling fishery amounts to approximately 9.500 kg at an estimated mean catch value of € 12.900 (for the years 2011-2015). If looking at Danish annual values, the majority of registered landings took place in 2012 (35.500 kg at a catch value of € 47.500), see Annex K, table 2 and 8.

German fishermen conduct a small scale fishery with mobile bottom contacting trawls, mainly for Atlantic cod. The registered landings from the German vessels (mobile bottom contacting gears) amounts to approximately 8.500 kg at an estimated catch value of € 11.700 (based on the period 2010-2015), see Annex K, table 4 and 11.

Swedish fishermen also conduct a small scale fishery with mobile bottom contacting trawls for Atlantic cod, besides fishery with nets and lines (also for Atlantic cod). The registered landings from the Swedish bottom trawl fishery in the area amounts to approximately 2.300 kg at an estimated average catch value of € 3.000 (based on the period 2011-2015), see Annex K, table 3 and 10.

The Estonian fisheries data have been forwarded at ICES square level which may not give the exact values of the Estonian fishery with mobile bottom contacting gears in and around the site "Adler Grund og Rønne Banke". The Danish AgriFish Agency wish to include all forwarded fishery data, as fishing activities with mobile bottom contacting gears do take place within the boundaries of the Natura 2000 site. This results in registered landings from Estonian fishermen to approximately 2.500 kg at an estimated mean catch value of € 3.000 (based on the period 2010-2012).

The Polish fishery data has been forwarded for an area termed "area D7", which covers part of the Natura 2000 site, see Annex K. The Polish landings can therefore not with certainty be matched to the site, as well as there can be landings from the site which are not included in the dataset. The registered landings indicate that Polish fishermen primarily conduct fishery with mobile bottom contacting gears in D7, where the main target species are Atlantic cod and European flounder. These landings amounts to an approximately annual landing of 5.800 kg at an estimated average catch value of € 7.600 (based on the period 2011-2015). In 2015, there was no Polish activity in the area 'D7', see Annex K, table 6 and 13.

Table 5. Average landings per country and value of landings per gear type and target species for Adler Grund og Rønne Banke. The values are estimated from log book and VMS data

		MS / landings (in kg)					Estimated value of catch (in €)				
Type of gear	Target species	DK	DE	SE	EST	PL	DK	DE	SE	EST	PL
Mobile bottom trawl	Atlantic cod	6,981	8,326	2,299	***	4,261	11,362	**	2,927	***	7,280
	European flounder	66	102	0	***	1,055	22	**	0	***	291
	Others*	247	54	0	2,417	502	144	**	0	2,861	19
Total		7,295	8,482	2,299	2,417	5,818	11,528	11,668	2,927	2,861	7,589

*) Others; catches below 200 kg are summarized in this category.
**) Value of landings received as a total and not at specie level
***) Estonian data are received at Ices square level and not per Natura 2000 site. The data are further received as totals and not specie level.

Figure 5a. Maps of Adler Grund og Rønne Banke showing reef structures, proposed buffer zones and VMS positions for Danish vessels above 12 meters – left map showing fishing activities with bottom contacting gears and right map showing fishing activities with other gear types.

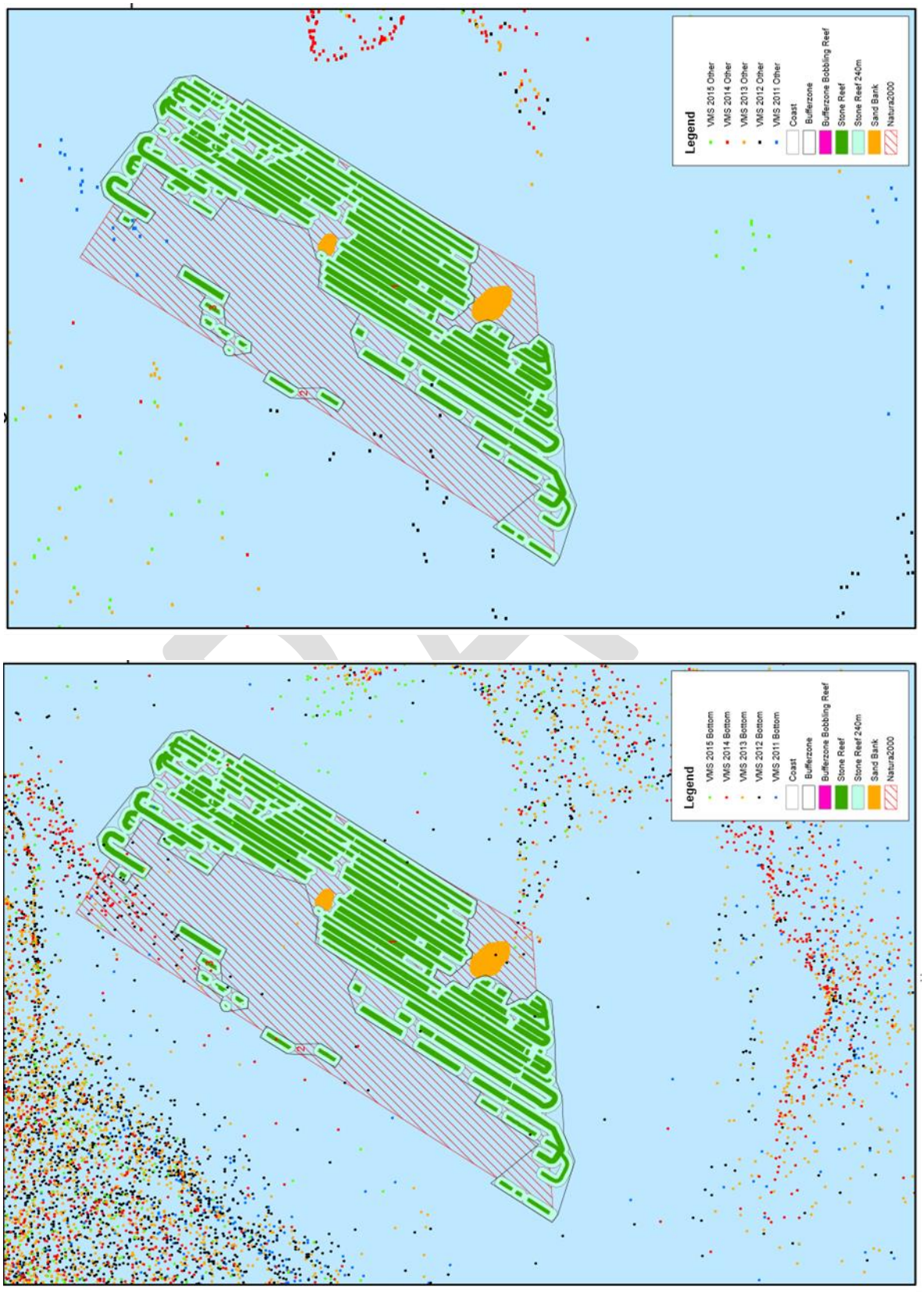
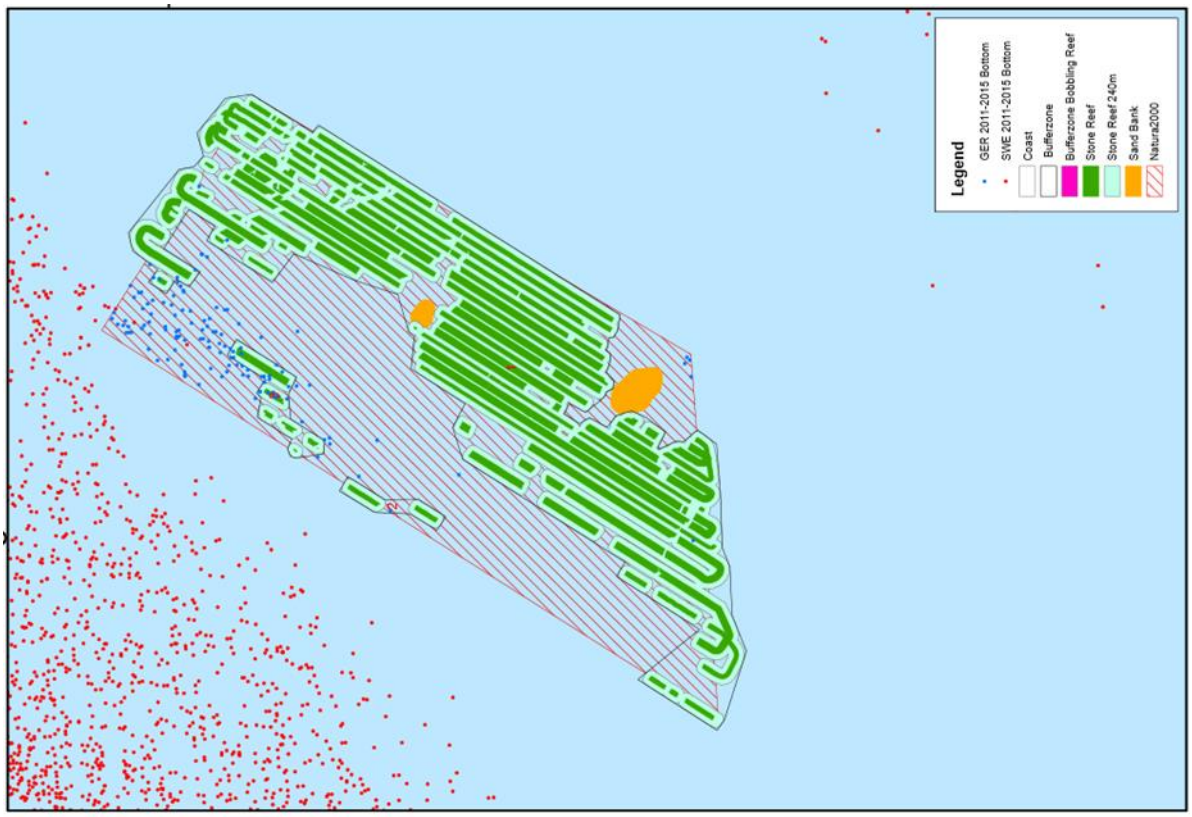
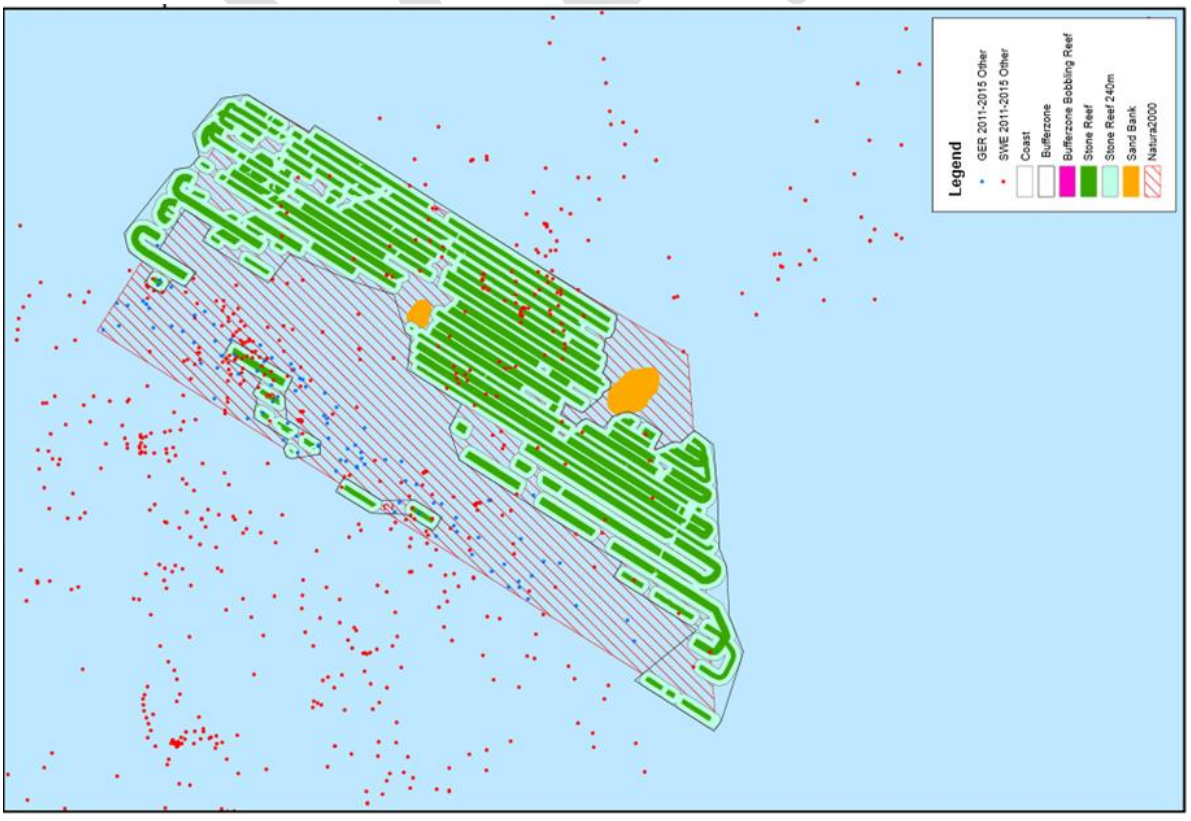


Figure 5b. Maps of Adler Grund og Rønne Banke showing reef structures, proposed buffer zones and VMS positions for Swedish, German and Estonian vessels above 12 meters – first map showing fishing activities with bottom contacting gears and second map showing fishing activities with other gear types.





Natura 2000 site "Centrale Storebælt og Vresen"

Danish and German fishermen conduct fishing activities in and around the Natura 2000 site "Centrale Storebælt og Vresen", see table 6 and figures 6a and 6b. The red polygon shown in figure 6a, is the area in which a potential conflict between reef structures and fishery with mobile bottom contacting gears exists. Since the resolution of the mapping is fairly low, the site therefore cannot in accordance with the Danish definition of reef structures, be closed for fishery.

According to log books and VMS data, Danish fishermen conduct an extensive fishery in the area with both net gears, pelagic- and bottom contacting trawls. The target species in the fishery with mobile bottom contacting gears are primarily Atlantic cod, sprat and different flatfishes.

The Danish average landings amount to approximately 354.000 kg at an estimated mean catch value of € 390.700 (based on the period 2011-2015). The majority of the Danish landings took place in 2015 (766.3385 kg at an estimated catch value of € 604.266), see Annex K, table 2 and 8.

According to log books and VMS data from German fishermen, they conduct a small scale fishery for European flounder and plaice as well as cod with mobile bottom contacting gears. There are only registered landings from this fishery in 2011, which for this year amounts to approximately 4.000 kg at an estimated catch value of € 10.000. In the period 2012-2015 there are no registered landing from German vessels from this site, see Annex K, table 4 and 11.

There are no records of Swedish fishermen conducting fishery in this area when looking at the period of 2011-2015, see table 6 and figures 6a and 6b.

Fishery data for smaller vessels are not available for the area for Danish and German vessels. Fishing activity with smaller vessels (below 12 meters) are for Denmark and Germany estimated to be similar to those of larger vessels. This assumption is supported by information of fishing patterns for smaller vessels provided by the Danish Fishermen Association. However, some smaller vessels may likely be affected by the proposed measures, since they do use the areas where the reefs are comprised of smaller stones (in the buffer zones), when fishing with mobile bottom contacting gears.

Table 6. Average landings per country and value of landings per gear type and target species for Centrale Storebælt og Vresen. The values are estimated from log book and VMS data

		Country / Landings (in kg)			Estimated value of catch (in €)		
Type of gear	Target species	DK	DE	SE	DK	DE	SE
Mobile bottom trawl	Atlantic cod	87,781	131	0	173,983	**	0
	Brill	582	19	0	3,661	**	0
	Common dab	6,167	56	0	4,711	**	0
	Common sole	2,219	106	0	27,470	**	0
	European flounder	18,387	263	0	10,045	**	0
	European plaice	31,924	218	0	32,925	**	0
	Lumpfish	582	1	0	1,477	**	0
	Sprat	37,257	0	0	9,932	**	0
	Turbot	496	11	0	3,968	**	0
	Others*	2,805	5	0	1,896	**	0
Total		188.201	808	0	270,067	2,010	0

*) Others; catches below 200 kg are summarized in this category.
**)Value of landings received as a total and not per specie.

Figure 6a. Maps of Centrale Storebælt og Vresen showing reef structures, proposed buffer zones and VMS positions for Danish vessels above 12 meters – left map showing fishing activities with bottom contacting gears and right map showing fishing activities with other gear types.

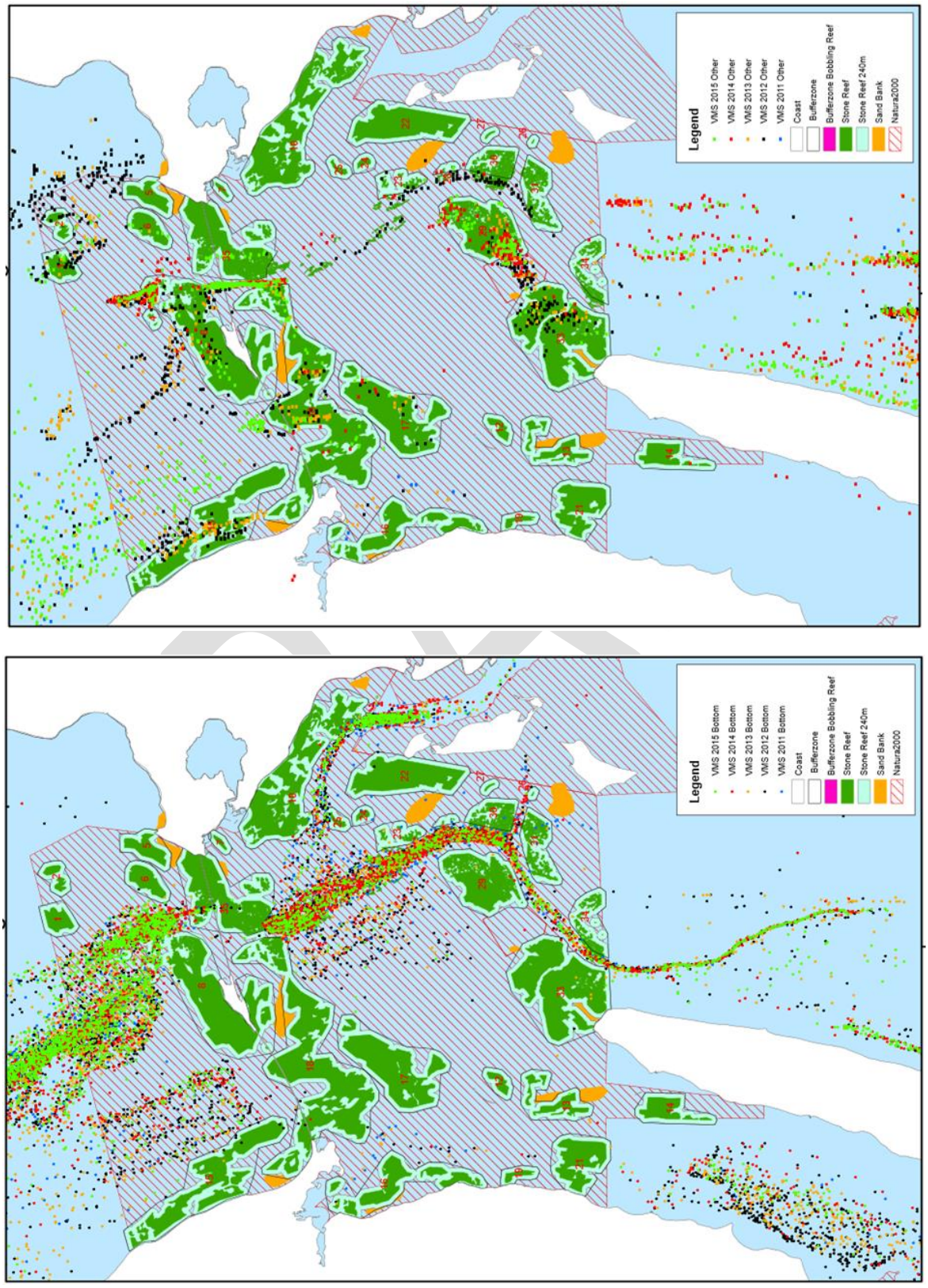
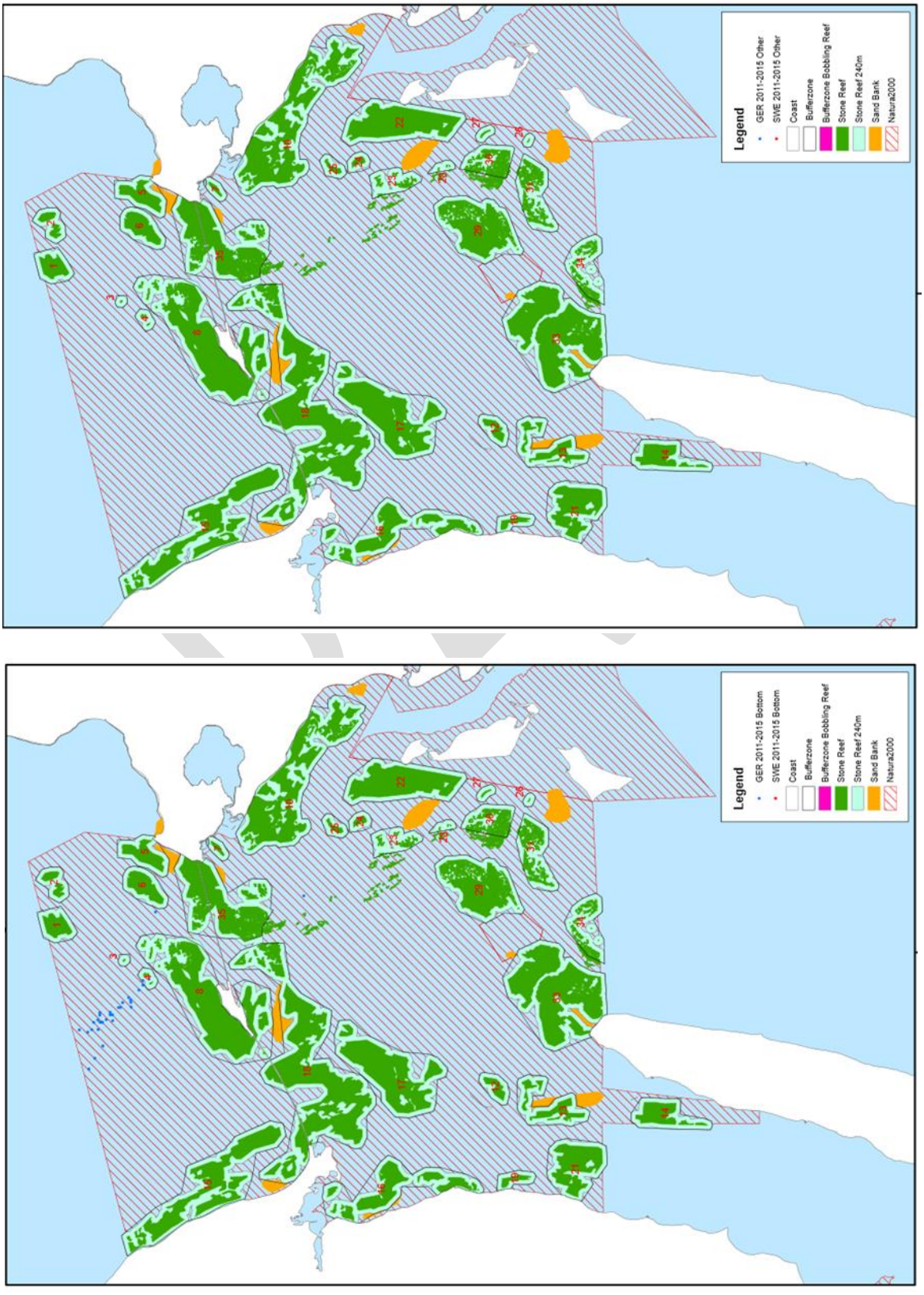


Figure 6b. Maps of Centrale Storebælt og Vresen showing reef structures, proposed buffer zones and VMS positions for Swedish and German vessels above 12 meters – left map showing fishing activities with bottom contacting gears and right map showing fishing activities with other gear types.



Natura 2000 site "Flensborg Fjord, Bredgrund og farvandet omkring Als"

Danish and German fishermen conduct fishing activities in and around the Natura 2000 site 'Flensborg Fjord', see table 7 and figures 7a and 7b.

According to log book and VMS data, Danish fishermen conduct fishery in the area with both pelagic and mobile bottom contacting gears. The target species are primarily cod and different flatfishes. The Danish average annual landings amounts to approximately 699.300 kg at an estimated average catch value of around € 431.600 (based on the years 2011-2015). The majority of Danish landings took place in 2011 (1,370,000 kg at an estimated average catch value of € 370.000), see Annex K, table 2 and 8. In later years, landings reduced and catch values went up

According to log book and VMS data from German fishermen, these conduct fishery with mobile bottom contacting gears in the area. The registered German landings from this fishery amounts to approximately 78.100 kg at an estimated average catch value of € 47.000 (based on the period 2011-2015).

Swedish fishermen have no registered landings from the area form the period 2011-2015, see table 7 and figures 7a and 7b.

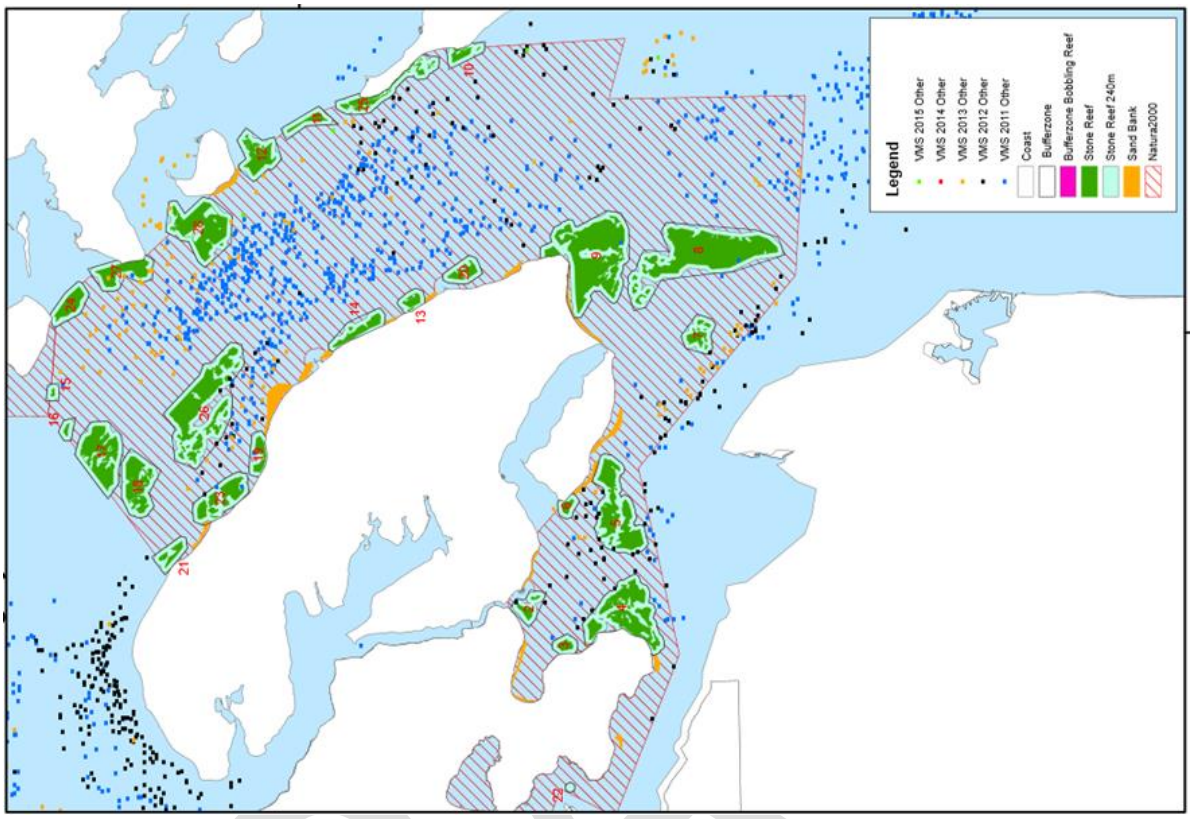
Fishery data for smaller vessels are not available for the area for Danish nor German vessels. Fishing activity with smaller vessels (below 12 meters) are for Denmark and Germany estimated to be similar to those of larger vessels. This assumption is supported by information of fishing patterns for smaller vessels provided by the Danish Fishermen Association PO. However, some smaller vessels may likely be affected by the proposed measures, since they do use the areas where the reefs are comprised of smaller stones (in the buffer zones), when fishing with mobile bottom contacting gears.

Table 7. Average landings per country and value of landings per gear type and target species for Flensborg Fjord. The values are estimated from log book and VMS data

		Country / Landings (in kg)			Estimated value of catch (in €)		
Type of gear	Target species	DK	DE	SE	DK	DE	SE
Mobile bottom trawl	Atlantic cod	117,622	6,927	0	203,435	**	0
	Common dab	19,763	7,131	0	12,204	**	0
	European flounder	31,600	6,145	0	14,441	**	0
	European plaice	92,132	8,568	0	82,372	**	0
	Sprat	272	16,034	0	70	**	0
	Turbot	245	57	0	1,589	**	0
	Whiting	400	15,424	0	195	**	0
	Others*	429	17,846	0	2,119	**	0
Total		262.462	78,133	0	316,424	46,977	0

*) Others; catches below 200 kg are summarized in this category.
**)Value of landings received as a total and not per specie.

Figure 7a. Maps of Flensborg Fjord showing reef structures, proposed buffer zones and VMS positions for Danish vessels above 12 meters – left map showing fishing activities with bottom contacting gears and right map showing fishing activities with other gear types.



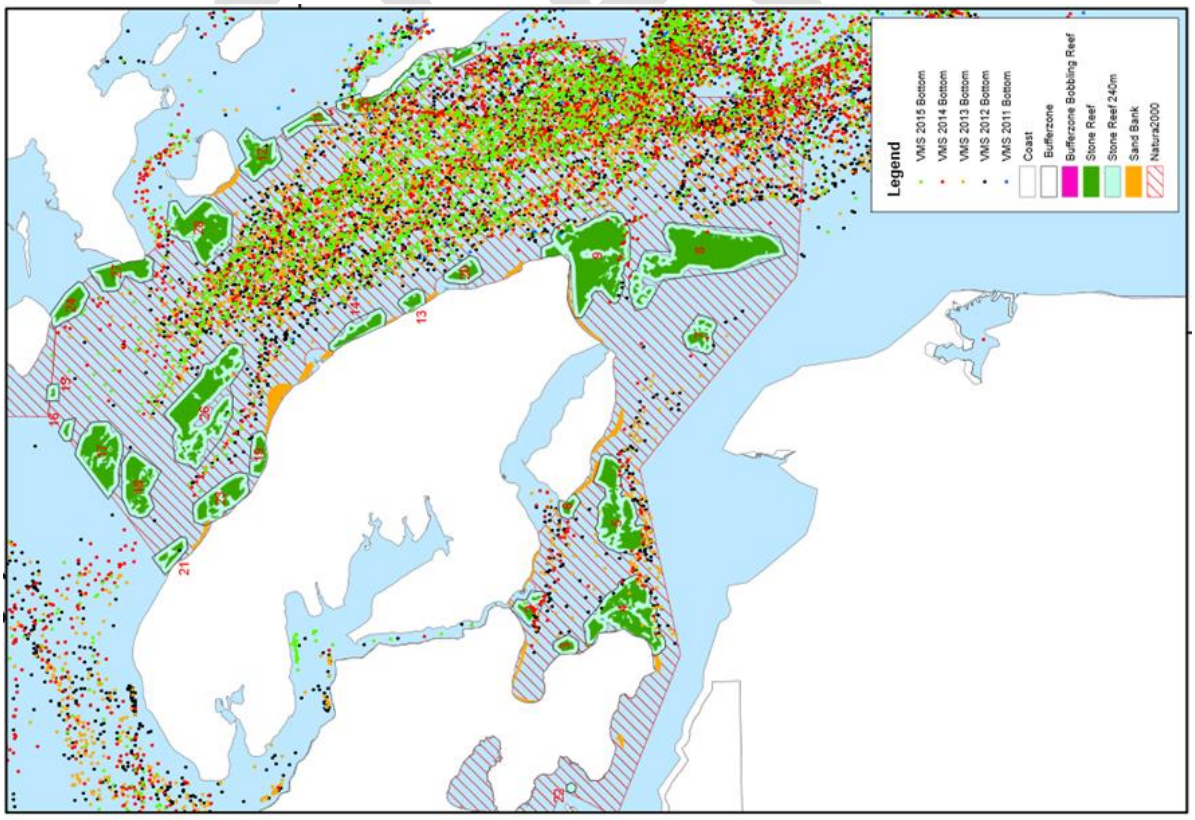
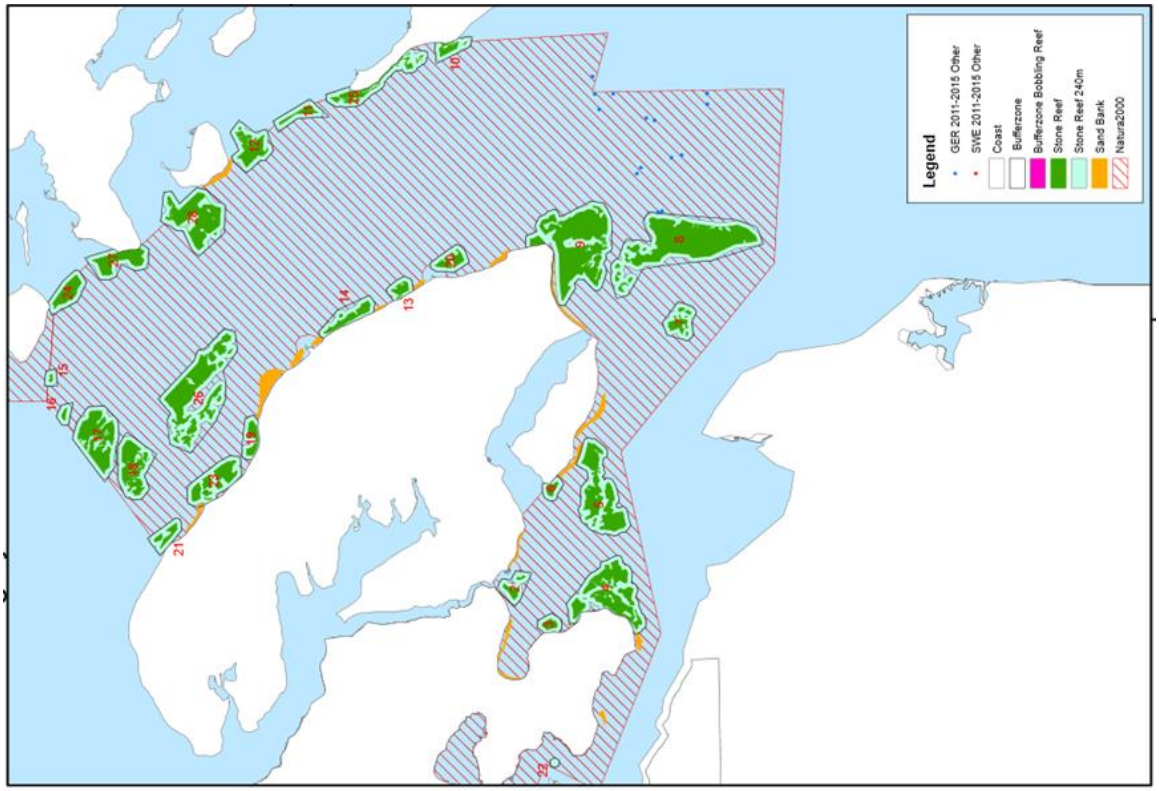
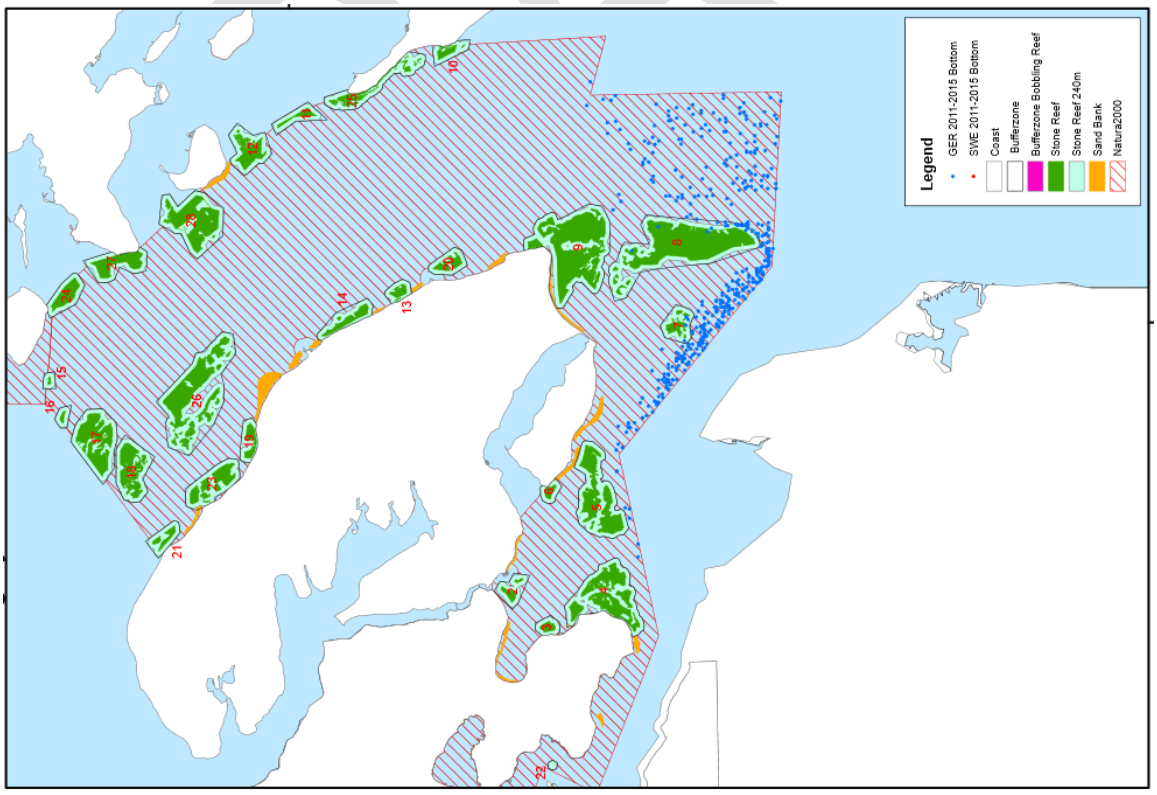


Figure 7b. Maps of Flensborg Fjord showing reef structures, proposed buffer zones and VMS positions for Swedish and German vessels above 12 meters – left map showing fishing activities with bottom contacting gears and right map showing fishing activities with other gear types.





6.3 Displacement

Analysis of fishing patterns based on VMS positions and log book data indicate, that the proposed fisheries management measures are not likely to have a great impact in relation to the current fishing activities in the western Baltic for Danish, Swedish, German, Estonian and Polish vessels. For Danish and German vessels, the western Baltic area is an important fishing ground, however, the areas addressed in the present proposal are characterized by reef structures and are, therefore, not preferred fishing grounds primarily due to the risk of damage to the fishing gear used from contact with the reef structures.

Danish fishermen carry out fishing activities with mobile bottom contacting gear in all the three Natura 2000 sites in question, however, the activities are not taking place in areas mapped as reefs, and will therefore only be displaced in a minor degree due to the proposed fisheries management measures. There are, however, indications that smaller vessels are conducting fishing activity with mobile bottom contacting gears in the area of Flensborg Fjord, solely in areas characterized by less dense stone occurrences. These fishermen will be displaced from the area if this activity is taking place in the outlined buffer zones unless they change gear type and fish with pelagic trawls instead of mobile bottom contacting trawls.

Swedish vessels have some fishing activities according to VMS and log book data in only one of the sites. However the degree of mobile bottom contacting fishery there is still very limited.

Germany have fishing activities in all three sites. Like for the Danish vessels it is assumed that the displacement will be the same as that for the Danish vessels in the areas.

The overall conclusion in relation to displacement is therefore, that the proposed fisheries management measures for protection of reef structures will not have any significant impact on the fishing activities in the Western Baltic area in general for the Member States with fishing rights within 12 nautical miles, e.g. Swedish, German and Danish vessels. Likewise, Member States with fishing rights in the Danish EEZ around the site Adler Grund og Rønne Banke will not be displaced from current fishing grounds by the proposed fisheries management measures.

The majority of the areas within the three Natura 2000 sites will still be open for fishing activities with nets, traps/pots and pelagic trawls. VMS effort data confirms that the three Natura 2000 sites are not so important fishing areas for either Danish, Swedish, German, Estonian nor Polish fishermen. However, it cannot be excluded that the proposed fisheries management measures might have an effect on some fishermen, carrying out fishing activities in the outlined buffer zones. This activity is estimated to be of a quantity, which can be fished elsewhere. However, this potential impact is, according to the available fishery data, minimal.

Assessment of displacement is important not only in terms of potential effects to ongoing fishing activities but also in relation to the marine environment. Displacement of fishing activities to less productive areas can potentially cause great damage to the marine environment, thus resulting in an overall negative impact. The proposed fisheries measures in the present proposal will in general not result in displacement of fishing activities, since the areas proposed closed to fishing activity are not the most important fishing grounds for Danish, Swedish, German, Estonian nor Polish fishermen.

6.4 Control, enforcement and monitoring

The following two sections describe how the proposed management measures will be controlled, enforced and monitored. Changes in conservation status as well as monitoring of effects of implemented management measures are assessed in the Danish Monitoring Program (NOVANA).

6.4.1 Control and enforcement

Control and enforcement of fishery management measures in marine Natura 2000 sites in Denmark is coordinated by the Fishery Monitoring Center (FMC) under the Danish Agrifish Agency located in Kolding, Jutland. The Danish FMC has developed specific guidelines for fisheries control and enforcement, which were launched parallel to the implementation of the first national order for the protection of reef structures in four coastal Natura 2000 sites located in the western Baltic Sea.

All marine Natura 2000 sites are visible in the Danish V-track system[26]. The Danish FMC has developed a model whereby the center is alerted if and when a vessel enters the outlined area (control area) placed around the Natura 2000 sites for which fisheries management measures have been implemented. The control area has a minimum size of 4 nautical miles whereby any activity in the area will be detected. Every day FMC receives a list of the vessels which have been detected in the control areas the previous day. In case a vessel has been detected within a Natura 2000 site, an analysis of the vessels fishing pattern is carried out and the vessel is contacted with the purpose of informing the vessel owner of current fisheries management measures. The model allows for real time control as well as administrative control.

Since September 2013 when the first national administrative order was implemented for protection of reef structures in 4 coastal Natura 2000 sites, the FMC has detected both gillnet vessels and trawlers in the areas closed for fishing activities with mobile bottom contacting gear. An open dialogue with the fishermen so far seems to have had an effect.

Control and enforcement of fisheries management measures in marine Natura 2000 sites in Danish waters are centered around the VMS system, the risk based system used in regular fisheries control and enforcement as well as open dialogue with fishermen and their organizations. The Danish AgriFish Agency is fully aware of the challenges of control and enforcement of fisheries management measures for relatively small Natura 2000 sites, which can be passed in the time between two VMS pings. ~~Control and enforcement needs to be seen in connection with the implementation of the reform of the Common Fisheries Policy.~~

Analysis of the fishing patterns in and around the three Natura 2000 sites which the present proposal covers, show that fishing activity with mobile bottom contacting gear in the two areas is quite extensive (Flensborg Fjord and Centrale Storebælt). However, the fishing activity do not take place in areas mapped as reefs code H1170, but some fishing activity is seen in the buffer zones placed around the reefs. The analyses is based on VMS positions for Danish, Swedish and German vessels as well as information from smaller Danish vessels – see section 6.1 and 6.2 for more information on fishing pattern, target species etc. With the current fishing activity in mind, control and enforcement does not seem to be a major issue under a new regime with prohibition of certain fishing activities in the three Natura 2000 sites].

Denmark will reassess whether there is a need for additional technical equipment in relation to control and enforcement of the proposed fisheries management measures. An evaluation of the Danish control and enforcement model will take place in summer 2018 when the measures adopted for 10 Natura 2000 sites (Delegated Act (EU) 2015/1778) has been in place for 18 months. Thus, the Danish AgriFish Agency will, if the need arises, require usage of technical equipment (GPS and sensors as a minimum), in line with the current CCTV and technical specifications for some types of fishing activities in Danish waters both within and outside 12 nautical miles. If the need arises for technical equipment in relation to fisheries control and enforcement – Denmark will coordinate such a requirement in accordance with Article 11 and 18 of the Basic Regulation and with the Member States having a direct management interest in the area, e.g. Germany, Sweden, Poland, Estonia, Latvia, Finland and Lithuania.

[26] The V-track system displays VMS positions for vessels. For all vessels above 12 meters VMS is mandatory.

6.4.2 The national monitoring program – NOVANA

In Denmark, reef structures in Natura 2000 sites are monitored through NOVANA, the Danish national monitoring program. Within this program, reefs in open waters are monitored by the Danish Centre for Environment and Energy (DCE) University of Aarhus. DCE monitors reefs in 34 Natura 2000 sites following specific national guidelines. Of the 34 areas, boulder reefs in 12 areas are monitored yearly, whereas boulder reefs and "bubbling reefs" in the remaining 22 areas are monitored every six years. In addition to this program, the Danish Agency for water and nature management monitors macro algae coverage and fauna on transects on rocky substrates in the coastal sites[27]. Thus, the main aim is an assessment of biodiversity on and around the reef structures.

Thus, the effect of the proposed management measures will be monitored through the Danish national monitoring program NOVANA. Data from the marine monitoring stations located within and/or close to the Natura 2000 sites concerned provides the basis for the description of the current conservation status both in relation to basic analyses plans and management plans with macro algae being the main indicator.

Of the three Natura 2000 sites that the present proposal deals with; Adler Grund is monitored at four different depths every six years (last monitored in 2016) and Flensborg Fjord; is monitored at three different depths every six years (last monitored in 2013) as well as four areas coastally. Within the site of Centrale Storebælt, there is a separate small Natura 2000 site called "Broen", the reef structures in this minor site is monitored at four different depths every year, additionally one coastal macro algae station is located within the site.

6.4.3 Expected outcome of the proposed fisheries management measures

The proposed fisheries management measures are expected to contribute to the obligation of ensuring a favorable conservation status for reef structures in Danish waters, e.g. reef structures with habitat codes H 1170.

Several studies have shown that fishing with mobile bottom contacting gears has a negative effect on the physical distribution of reef structures as well as their function in the ecosystem. When a trawl passes, stones and vegetation are damaged. Thus, despite low fishing intensity in recent years, there is a need to ensure that the activity cannot be reinstated in the future.

Until 2010, fishing for stones was allowed in Danish waters, also in areas now designated as habitat areas. Until 2008, extraction of building material was also taking place in areas now designated as Natura 2000 sites.

Thus, reef structures in Danish waters have been impacted from a range of activities over time and is now classified as being in an unfavorable conservation status, see Annex A. A total ban for fishing with mobile bottom contacting gears in areas mapped as reefs and in the surrounding buffer zone is expecting to contribute to an improved conservation status over time.

Any change in conservation status and growth of characteristic species is monitored through the national monitoring program as described in section 6.4.2.

[27] Dahl, K. and Carstensen, J. (2008): Tools to assess conservation status on open water reefs in Natura 2000 areas. Nat Env R Inst, University of Aarhus, 25 pp. NERI Technical Report No. 663: http:// www.dmu.dk/Pub/FR663.pdf

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7. Link Guidance document: http://ec.europa.eu/environment/nature/natura2000/marine/docs/fish_measures.pdf
8. Link to Council Regulation http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1467024866502&uri=CELEX:32015R2072
9. Link Act on Environmental Goals: https://www.retsinformation.dk/Forms/R0710.aspx?id=127102
10. Link Fisheries Act: https://www.retsinformation.dk/Forms/r0710.aspx?id=121218
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21. Habitat No. H204, Natura 2000 site No. 204, EU site code: DK00VA303

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23. Habitat No. H173, Natura 2000 site No. 197, EU site code: DK00VA254
24. Link to Natura 2000 management plan for Flensborg Fjord, Bredgrund og farvandet omkring Als: http://naturstyrelsen.dk/naturbeskyttelse/natura-2000/natura-2000-planer/natura-2000-planer-2009-15/plan-126-246/197-flensborg-fjord-og-bredgrund/
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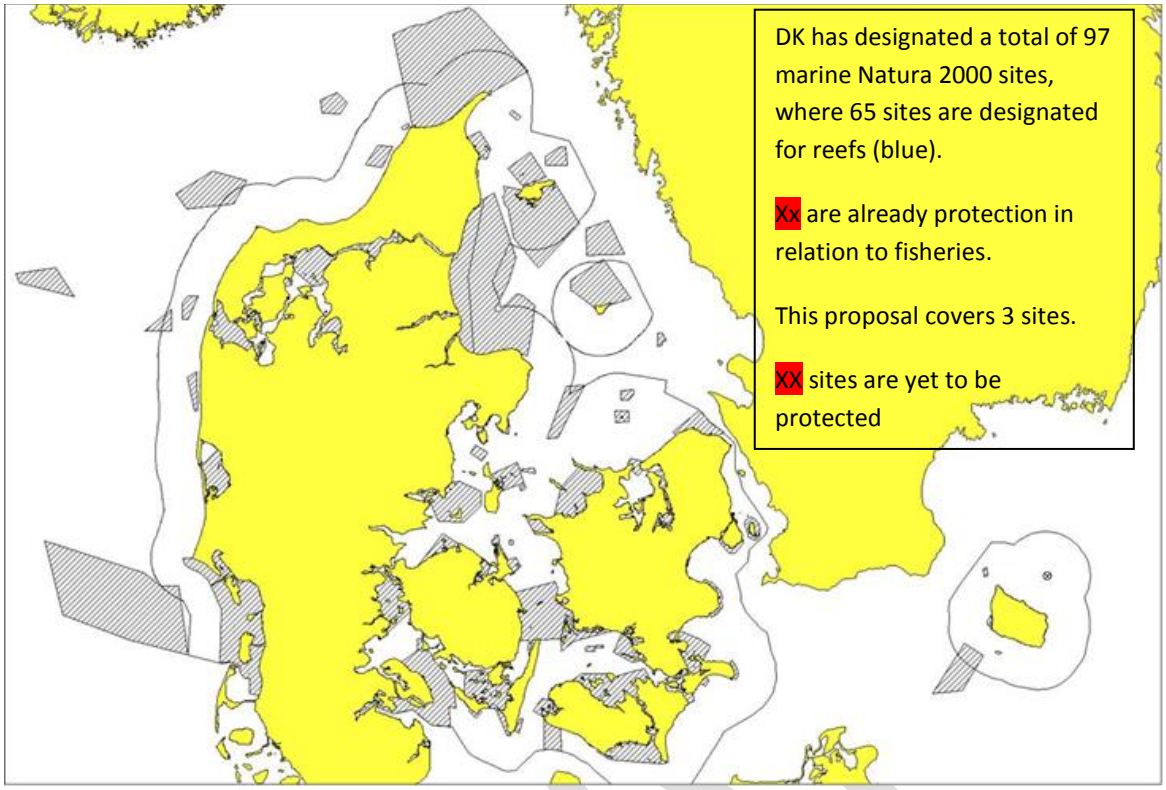
Annex A – Map of Danish marine Natura 2000 network



Designation codes are used (marine only) – definitions and further information regarding the designation types appears in the EU Commission´s "Interpretation Manual of European Union Habitats"[28] and "Code list for species" on the Reference Portal for Natura 2000[29].

1095 Sea lamprey
1099 River lamprey
1103 Twait shad
1110 Sandbank which are slightly covered by sea water all the time
1140 Mudflats and sandflats not covered by sea water at low tide
1150 Coastal lagoons
1160 Large shallow inlets and bays
1170 Reefs
1180 Submarine structures made by leaking gases
1351 Harbour porpoise
1364 Grey seal
1365 Harbour seal

A range of birds species

[28] http://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/Int_Manual_EU28.pdf
[29] http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

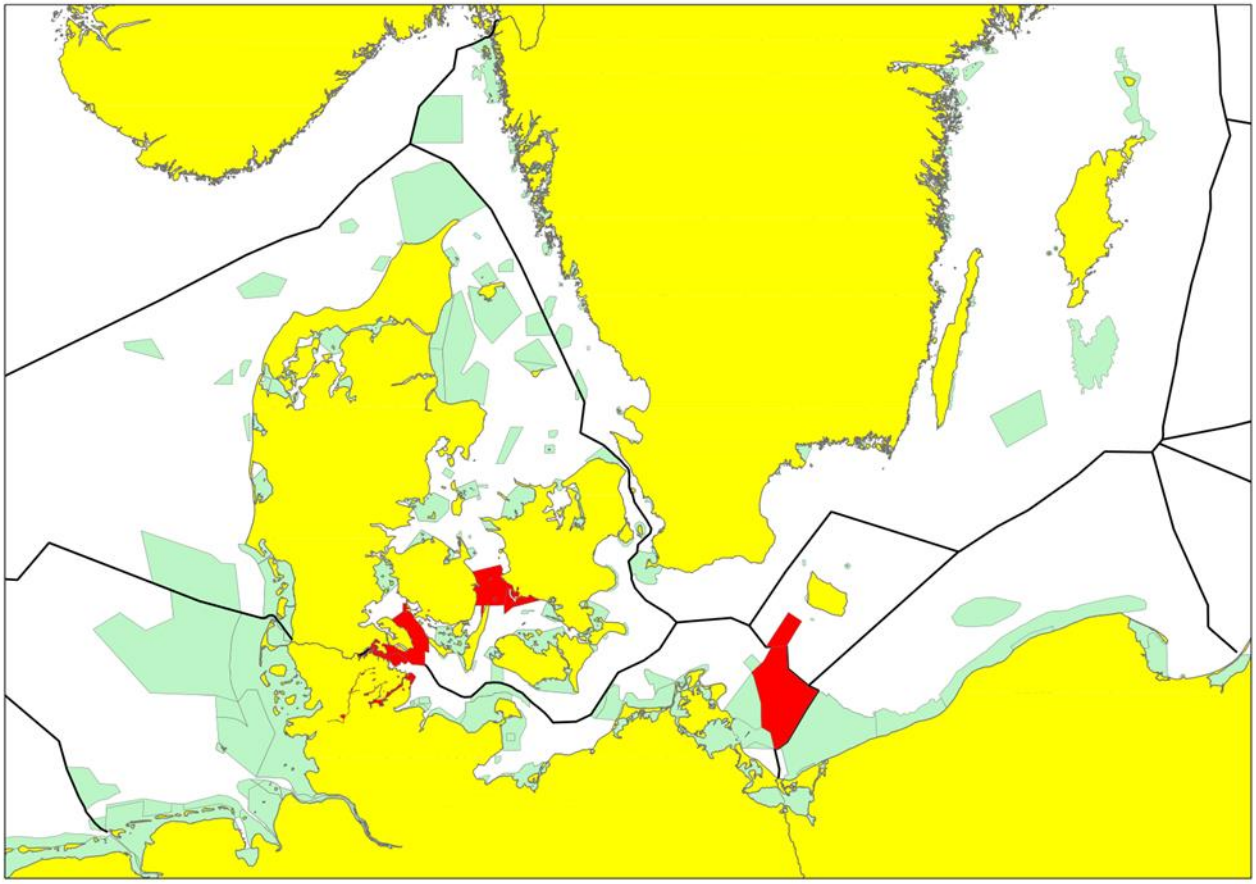
Table of designated habitat types and species for the 97 Danish Natura 2000 sites is given in the following pages.

EU site code	N2000 site name (in Danish)	Size (ha)	Designated for: (only marine habitats and species mentioned)
DK00FX112	Skagens Gren og Skagerrak	270.295	1351, 1150
DK00FX113	Hirsholmene, havet vest herfor og Ellinge Å's udløb	9.533	1095,1364,1365,1110,1150,1170,1180, birds
DK00FX010	Strandenge på Læsø og havet syd herfor	102.714	1364,1365,1110,1140,1150,1170,1180, birds
DK00FX118	Holtemmen, Højsande og Nordmarken	713	1150
DK00FX122	Ålborg Bugt, Randers Fjord og Mariager Fjord	72.197	1095,1099,1103,1365,1355,1110,1130,1140,1150, 1160, birds
DK00FX123	Nibe Bredning, Halkær Ådal og Sønderup Ådal	20.341	1095,1099,1355,1365,1110,1150,1160,1170,1140, Birds
DK00EY124	Løgstør Bredning, Vejlerne og Bulbjerg	44.768	1095,1355,1365,1110,1140,1150,1160,1170, birds
DK00FX257	Havet omkring Nordre Rønner	18.535	1364,1365,1110,1140,1170,1180, birds
DK00FX128	Kielstrup Sø	40	1110, 1150
DK00EY133	Agger Tange, Nissum Bredning, Skibsted Fjord og Agerø	33.165	1103,1355,1365,1110,1140,1150,1160,1170, birds
DK00EX026	Dråby Vig	1.678	1103,1355,1365,1140,1150,1160,1170, birds
DK00EY134	Lovns Bredning, Hjarbæk Fjord og Skals, Simested mv.	23.520	1103,1355,1365,1140,1150,1160,1170, birds
DK00EX135	Kås Hoved	396	1355, 1150
DK00EY136	Sønder Lem Vig og Geddal Strandenge	1.115	1355, 1150
DK00EX258	Mågerodde og Karby Odde	497	1355,1150,1160, birds
DK00DX146	Anholt og havet nord for	47.878	1364,1365,1110,1150, birds
DK00DX151	Begtrup Vig og kystområder ved Helgenæs	1.771	1110,1150,1160,1170
DK00DX155	Stavns Fjord, Samsø Østerflak og Nordby Hede	15.663	1364,1365,1110,1150,1160,1170, birds
DK00DY156	Horsens Fjord, havet øst for og Endelave	45.823	1355,1364,1365,1110,1140,1150,1160,1170, birds
DK00CY040	Venø, Venø Sund	2.926	1103,1365,1150,1160,1170, birds
DK00CX160	Nissum Fjord	6.430	1095,1099,1103,1106,1355,1150, birds
DK00CX161	Stadil Fjord og Vest Stadil Fjord	6.903	1095,1355,1150, birds
DK00CY163	Ringkøbing Fjord og Nymindestrømmen	21.810	1095,1099,1102,1103,1106,1355,1130,1150, birds
DK00AY176	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde	151.158	1095,1099,1103,1106,1113,1351,1355,1364,1365, 1110,1130,1140,1150,1160,1170,birds
DK008X182	Fyns Hoved, Lillegrund og Lillestrand	1.960	1351,1110,1140,1150,1160,1170
DK008X184	Æbelø, havet syd for og Nærå	13.161	1351,1365,1110,1140,1150,1160,1170, birds
DK008X185	Havet mellem Romsø og Hindsholm samt Romsø	4.328	1351,1110,1150,1160,1170
DK008X075	Odense Fjord	4.136	1110,1140,1150,1160,1170, birds
DK008X047	Lillebælt	35.043	1351,1110,1140,1150,1160,1170, birds
DK008X189	Østerø Sø	57	1150
DK008X190	Centrale Storebælt og Vresen	8.572	1351, 1170, birds
DK008X197	Bøjden Nor	114	1150
DK008X198	Maden på Helnæs og havet vest for	1.696	1351,1110,1160,1170
DK008X199	Vestlige del af Avernakø	124	1150
DK00VA200	Stenrev sydøst for Langeland	1.484	1110, 1170
DK008X201	Sydfynske Øhav	37.000	1110,1140,1150,1160,1170, birds
DK003X202	Hesselø med omliggende stenrev	4.193	1364,1365,1110,1150,1170
DK003X209	Roskilde Fjord	14.810	1110,1140,1150,1160, birds

DK002X110	Saltholm og omliggende hav	5.405	1364,1365,1110,1150,1160,1170, birds
DK002X111	Vestamager og havet syd for	6.179	1110,1150,1160, birds
DK004X217	Ølsemagle Strand og Staunings Ø	348	1140,1150,1160
DK005Y220	Havet og kysten mellem Hundested og Rørvig	3.900	1110,1150,1160, birds
DK005X221	Sejerø Bugt og Saltbæk Vig	40.000	1355,1110,1140,1150,1160,1170,birds
DK005X222	Udby Vig	384	1140, 1160
DK005X223	Åmose, Tissø, Halleby Å og Flasken	2.000	1130, 1150, birds
DK005Y229	Skælskør Fjord og havet og kysten mellem Agersø og Glænø	14.000	1110,1140,1150,1160,1170, birds
DK005X097	Hov Vig	45	birds
DK005X276	Røsnæs, Røsnæs Rev og Kalundborg Fjord	5.540	1351,1365,1160,1170
DK006X233	Havet og kysten mellem Præstø Fjord og Grønsund	28.600	1110,1140,1150,1160,1170, birds
DK006X234	Havet og kysten mellem Karrebæk Fjord og Knudshoved Odde	16.458	1365,1110,1140,1150,1160,1170, birds
DK00VA235	Kirkegrund	1.761	1110, 1170
DK006X090	Klinteskoven og Klinteskov kalkgrund	2.000	birds
DK006X238	Smålandsfarvandet nord for Lolland, Guldborg Sund mv.	79.069	1364,1365,1110,1140,1150,1160,1170, birds
DK006X242	Nakskov Fjord og inderfjord	7.574	1110,1140,1150,1160,1170, birds
DK006X260	Stege Nor	572	1150
DK006X279	Busemarke Mose og Råby Sø	242	1150
DK007X079	Ertholmene	1.256	1364, 1170, birds
DK00VA247	Kims Top og den Kinesiske Mur	26.092	1170, 1180
DK00VA248	Herthas Flak	1.380	1110,1170,1180
DK00VA249	Læsø Trindel og Tønneberg Banke	8.123	1110,1170,1180
DK00VA250	Store Middelgrund	2.094	1351,1110,1170,1180
DK00VA170	Mejl Flak	3.907	1110, 1170
DK00VA171	Gilleleje Flak og Tragten	15.034	1351,1110,1170
DK00VA253	Ryggen	437	1110, 1170
DK00VA254	Flensborg Fjord, Bredgrund og farvandet omkring Als	64.922	1351,1110,1170, birds
DK00VA255	Hatterbarn	633	1170
DK00VA256	Broen	588	1110, 1170
DK00VA301	Lønstrup Rødgrund	9.283	1170
DK00VA302	Knudegrund	748	1170
DK00VA303	Schultz og Hastens Grund samt Briseis Flak	20.710	1110, 1170
DK00VA304	Munkegrund	1.329	1110, 1170
DK00VA305	Stevns Rev	4.640	1110, 1170
DK00VA299	Lysegrund	3.158	1110, 1170
DK00VA307	Bøchers Grund	1.098	1170
DK00VA308	Davids Banke	838	1170
DK00VA309	Hvideodde Rev	789	1170
DK00VA310	Bakkebrædt og Bakkegrund	299	1110, 1170
DK00VA340	Sandbanker ud for Thyborøn	6.325	1110
DK00VA341	Sandbanker ud for Thorsminde	6.354	1110
DK00EX284	Risum Enge og Selde Vig	322	1110,1140,1150,1160
DK00DX319	Kastbjerg Ådal	38	1355,1110,1150,1160
DK00DX300	Mols Bjerge med kystvande	2.915	1110,1160,1170
DK00DX321	Kaløskovene og Kaløvig	280	1110,1140,1160,1170

DK00DX322	Kobberhage kystarealer	792	1110, 1170
DK003X297	Jægerspris Skydeterræn	569	1140, 1160
DK004Y335	Ryegård Dyrehave, Bramsnæs mv.	197	1160
DK008X329	Thurø Rev	163	1110,1150,1160,1170
DK00VA330	Ebbeløkke Rev	140	1170
DK003X333	Kyndby Kyst	360	1110,1140,1150,1160,1170
DK00FX122	Ålborg Bugt, østlige del	177.360	birds
DK00VA347	Sydlige Nordsø	246.296	1351,1364,1365,1110
DK00VA348	Thyborøn Stenvolde	7.804	1170
DK00VA257	Jyske Rev, Lillefiskerbanke	24.083	1170
DK00VA258	Store Rev	10.892	1351,1170,1180
DK00VA259	Gule Rev	47.059	1351, 1170
DK00VA260	Fermern Bælt	11.456	1351
DK00VA261	Adler Grund og Rønne Banke	31.910	1110, 1170

Map Natura 2000 network (Danish Natura 2000 sites concerned are given in separate color)



State of Play – implementation of Natura 2000 in Denmark in relation to fishery

In the first plan period (2010-2015), Denmark has focus on protection of reef structures from irreversible damages due to impact from fishing activity.

The sites concerned in the present proposal, have also been designated for other marine habitats and species, e.g. sandbanks, harbor porpoises, seabirds etc. Formulation of necessary fisheries management measures in relation to the remaining habitats and species will be dealt with at a later stage. Several projects have been launched to increase the knowledge base regarding by-catch of harbor porpoises and seabirds.

Marine habitats and species to be given special focus will also be addressed in the management plans for the second plan period, which came into force in 2016.

In relation to protection of reef structures in the Danish part of the western Baltic Sea, state of play is that once the three sites the present proposal covers, have been fully protected, all Danish sites designated for reefs are protected.

At a national level – protection of reef structures is progressing. Of the 65 sites designated for reef, by end 2016 Denmark expects to have fully protected reef structures in 57 sites.

Natura 2000 site:	**Designated for:**	**Present conservation status/ trend:**
Adler Grund og Rønne Banke	1110 Sandbanks 1170 Reefs	Unfavourable conservation status Unfavourable conservation status
Centrale Storebælt og Vresen	1170 Reefs 1351 Harbor porpoises Common eider Sandwich tern Little tern	Unfavourable conservation status Unfavourable conservation status Decreasing Increasing Stable
Flensborg Fjord	1110 Sandbanks 1170 Reefs 1351 Harbor porpoises *Birds:* Common eider (winthering) Common goldeneye (winthering)	Unfavourable conservation status Unfavourable conservation status Unfavourable conservation status *Trend:* Decreasing Stable

State of play – Sweden

In Sweden, there is an ongoing process concerning fisheries conservation measures in marine protected areas. A questionnaire was sent out to the County Administrative Boards responsible for the implementation and management of the protected areas in 2014. The results from the questionnaire show that fisheries conservation measures need to be adopted in around 30 marine protected areas in Sweden for the purpose of complying with obligations under environmental legislation. Of these, there are about ten areas located outside 12 nautical miles and therefore will be treated within articles 11 and 18 of the Common Fisheries Policy.

Additionally, a number of marine protected areas are soon to be implemented in order to reach the Swedish environmental milestone target of 10% protection in an ecologically representative, connected and functional network of marine protected areas.

For HELCOM biotopes and biotope complexes se HELCOM MPA database

According to the latest Article 17 reporting, which is done at biogeographical level (MATL), the status of the Natura 2000 habitats and species were in 2013:

- Sandbanks – unfavorable with a negative trend
- Reefs – unfavorable with stable or unknown trend
- Submarine structures made by leaking gasses - unfavorable with stable or unknown trend
- Harbor porpoise - unfavorable with stable or unknown trend

State of play – Germany

In the Baltic Sea, Germany has also designated a range of Natura 2000 sites. Fisheries management measures for the German Natura 2000 sites "Adlergrund" (Protection of habitat types H1110, sandbanks, and H1170, reefs) and "Westliche Rönnebank" (Protection of habitat type H1170, reefs) are in drafting and subject to internal consultations.

State of play – Poland

Poland has designated 17 marine Natura 2000 areas. Almost half of them (8) are protected under the Birds Directive and 8 under the Habitats directive. Additionally, one area (Ławica Słupska PLC990001) is protected under both the Habitats and Birds directives. Most of the sites are located in the Polish territorial waters, except for Ostoja na Zatoce Pomorskiej and Zatoka Pomorska (PLH990002 and PLB990003) which are partly located in the Polish EEZ and Ławica Słupska which is located in the Polish EEZ.

Polish marine Natura 2000 network under the Habitats directive have been designated to protect such habitats as H1110 Sandbanks which are slightly covered by sea water, H1130 Estuaries, H1150 Coastal lagoons, H1160 Large shallow inlets and bays, and H1170 Reefs, and also to protect species of fish (Sea and River lamprey, Twait shad) and marine mammals (Grey seal and Harbor porpoise). Poland does not have plans to enhance the Polish network of marine Natura 2000 areas in the nearest future, however, Sea lamprey will be added in one area, as a purpose for protection (Ujscie Odry & Zalew Szczeciński PLH320018).
None of the Polish Natura 2000 sites are located in a proximity to the Danish Natura 2000 sites.
Protection plans for Polish marine Natura 2000 sites are under preparation. Most advanced is preparation of protection plans for sites located in the Eastern part of the Polish Baltic coast (sites around the Gulf of Gdansk and the Vistula Lagoon) as well as for the Western part (sites in the Pomeranian Bay).

Annex B – Overview of designation of Natura 2000 sites

Natura 2000 site name	EU-code site number	Designated as PSCI (year)	Revised PSCI (year)	SCI appointed (year)	SAC appointed (year)	Total area (km^2)	Reef area mapped (km^2)
Adler Grund og Rønne Banke	DK00VA261	2009	2010	2016		319.10	138
Centrale Storebælt og Vresen	DK008X190	1995	1998	2005	2011	807.20	119.90
Flensborg Fjord	DK00VA254	1995	2003	2005	2011	649.22	51.70

All the above mentioned Natura 2000 sites are also designated as HELCOM marine protected areas.

Annex C – TAC's and Fishing opportunities for 2016

The Natura 2000 site "Adler Grund and Rønne Banke" is located in the Danish EEZ of the western Baltic Sea, ICES subdivisions 22-24.

In this area, the Member States given in the table below have fishing opportunities, according to Council Regulation (EC) No. 2072/2015, fixing for 2016 the fishing opportunities for certain fish stocks and groups of fish stocks applicable in the Baltic Sea, TACs applicable to union vessels in areas where TACs exist by species and by area are listed.

The table below gives an overview of the total allowable catches (2014) in the western part of the Baltic Sea (subdivisions 22-24), see footnote for further explanation.

	TAC (2016)				
MS	HER*	COD*	PLE**	SAL**	SPR**
Denmark	3.683	5.552	2.890	19.879	19.958
Germany	14.496	2.715	321	2.212	12.644
Finland	2	109		24.787	10.447
Poland	3.419	1.486	605	6.030	59.399
Sweden	4.674	1.978	218	26.870	38.582
Estonia		123		2.020	23.175
Latvia		459		12.644	27.990
Lithuania		298		1.486	10.125

*) subdivision 22-24
**) subdivision 22-32

HER: herring, *Clupea harengus*
COD: cod, *Gadus morhua*
PLE: plaice, *Pleuronectes platessa*
SAL: salmon, *Salmo salar*
SPR: spr, *Sprattus sprattus*

Annex D – Overview of the 11 information items in the Commission guidelines from 2008

The table below gives an overview of how the present proposal has covered the 11 information items of the Commission's guidelines from 2008[30] concerning development of proposals for fisheries management measures in marine Natura 2000 within the scope of the CFP.

	Section
1. Comprehensive description of the natural features including distribution within the site	2.3.2, 5.1
2. Scientific rationale for the site´s selection in accordance with the information provided in the Natura 2000 data form. Intrinsic value of its features. Specific conservation objectives.	2.3
3. Basis for the spatial extent of the site boundary clearly justified in terms of conservation objectives.	2.3
4. Threats to habitats and species from different types of fishing gear. List of other human activities in the area that could damage the habitats.	2.3, 4.1
5. Fleet activity in the area and in the region, distribution of fleets (by nation, gear and species), and information on target and by-catch species, all over the last 3 years.	6.1
6. Annual trends in fisheries over the last 3 years.	6.2
7. Proposed fisheries management measures to maintain the habitats features in favourable condition. Are they proportionate and enforceable? Other conservation measures that apply to the area.	1.3, 3.1, 4, 5.2
8. Control measures envisaged by the Member State, possible ecological and control buffer zones to ensure site protection and/or effective control and monitoring measures.	6.4
9. Measures to monitor and assess the maintenance and/or recovery of the features within the site.	6.4
10. Coordination with neighbouring Member States as appropriate.	3.2
11. Evaluation of possible displacement of fishing effort and impact on new areas.	6.3

[30] Fisheries measures for marine Natura 2000 sites – a consistent approach to requests for fisheries management measures under the Common Fisheries Policy: http://ec.europa.eu/environment/nature/natura2000/marine/docs/fish_measures.pdf

Annex E – Scientific advice regarding protection of reef structures through buffer zones

Protection of stone reefs (habitat code H1170) and bubbling reefs (habitat code H1180)

For protection of stone reefs and bubbling reefs (habitat code H1170 and H1180) different protection measures can be implemented. DTU Aqua has in relation to the present proposal provided scientific advice to the Danish AgriFish Agency with regard to protection of reef structures.

DTU Aqua has analyzed fishing activity in and around the concerned Natura 2000 sites using VMS data from Danish fishing vessels (vessels => 12m in length in 2012, vessels>=15 m in length in 2008-2011) for the period 2008-2012. Based on these analyses, DTU Aqua has advised upon the need for the protection of habitat code H1170 and H1180 against any unintended impact from mobile bottom contacting fishing gear, and that a safety zone (buffer zone) should be implemented around the mapped reef structures.

The safety zone is calculated by taking water depth, warp length and the length of the fishing gear into account. The standard warp length used by trawlers in the concerned Natura 2000 sites is three times the water depth, when water depth is less than 200 meter.

Water depth around the marine habitats (H1170 and H 1180) varies from 30 – 40 meters depth in the Kattegat area where the concerned Natura 2000 sites are located. DTU Aqua has advised the Danish AgriFish Agency to use the proportion 4:1 + length of the gear + 1 times the water depth for safety. This method has resulted in a buffer zone of 240 meters around the mapped reef structures – code H1170.

DTU Aqua has furthermore advised that for bubbling reefs (habitat code H1180) usage of any other gear type ought to be prohibited if full protection of this reef type is wanted.

The method of safety zones (buffer zones) is in line with the advice by ICES to a NEAFC request of the appropriateness of buffer zones (ICES Advice 2013, Book, 1.5.5.2. Special request, Advice June 2013). ICES Advice June 2013 is attached below.

1.5.5.2 **Special request, Advice June 2013**

ECOREGION **General advice**
SUBJECT **Evaluation of the appropriateness of buffer zones**

Advice summary

Both the VME location accuracy and a buffer zone are considered when delineating the closure boundary around VMEs. ICES is confident that the buffer zone considerations used to define the boundaries around the area closures are appropriate and therefore adequate for the protection of VMEs. A schematic diagram of the approach to generate buffer zones is presented. The buffer zones will always be included in ICES advice and will be illustrated where appropriate to the scale of the closure.

Request

ICES is requested to evaluate whether buffer zones applied in the current bottom fishing closures are appropriate. Additionally, ICES is requested to include, specify and illustrate buffer zones in its future advice on closures in the Regulatory Area as appropriate.

Advice

Two different considerations are used to delineate buffer zones around VMEs; one is linked to the VME location accuracy, the other to setting a buffer zone around the VME location (Figure 1.5.5.2.1).

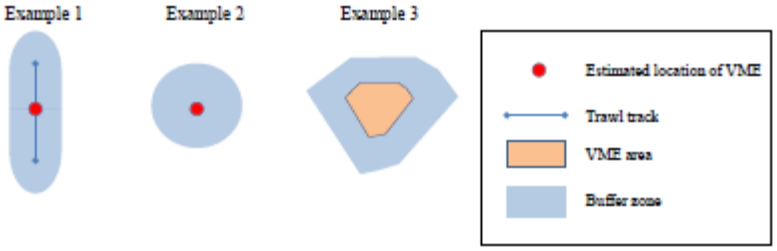


Figure 1.5.5.2.1 Three conceptual examples of the two considerations for delineating buffer zones around VMEs, applied to three theoretical examples of VME closures. Example 1: isolated VME detection with low geospatial certainty (e.g. trawl track); Example 2: isolated VME detection with high geospatial certainty (e.g. ROV observation); and Example 3: area identified as hosting a VME.

Consideration 1. VME location accuracy

The data used by ICES to assess the likelihood of VME presence consists of mainly point records of species (Figure 1.5.5.2.1). While recognising this is the best available data, there are varying levels of spatial uncertainty associated with the records, ranging from trawl bycatch with low spatial accuracy (Example 1) to dynamically positioned ROV observations with high spatial accuracy (Example 2) and areas identified as hosting VMEs (Example 3). This uncertainty in VME location is dealt with by outlining the minimum boundary that encompasses the records. In the case of records derived from trawling, the deviation perpendicular to the track is considered negligible relative to the length of the track and is not taken into account in the VME location.

While spatial accuracy of the position of VMEs has improved over time, there are still a high number of records where the location accuracy is unknown. In such cases a simple buffer is applied (see Consideration 2).

Consideration 2. Buffer zone around VME location

ICES considers a buffer zone to be a spatial margin of assurance around the VME to avoid adverse impact (Figure 1.5.5.2.1). The spatial extension of the buffer zone may vary and is based on the following:

- The potential for fishing gear to stray into the VME is related to the uncertainty of the location of the fishing gear relative to the known location of the vessel. This will be a function of water depth and the trawl warp length deployed. In deep-water trawling, the typical warp length deployed decreases with water depth, from around 3:1 at 200 m to 2:1 at 500 m and more. For VMEs that occur on flat or undulating seabed a buffer zone of approximately two (>500 m depth) or three times (< 500 m depth) the local depth is advised.

- In the case of VMEs on very steep slopes, the risk of straying of bottom trawls is mitigated by the fishers' own incentive to avoid the steep slopes and cliff edges, in which case the buffer zone may be reduced.
- In some cases the presence of geomorphological features are used to define boundaries for closures on the basis that they are considered to be VME elements, in which case the VME reflects the topographic relief of the VME element without a buffer zone.

As both the VME location accuracy and a buffer zone are considered when advising on a closure boundary around VMEs, ICES is confident that the buffer zone considerations used to extend closures beyond the immediate estimated position of a VME are appropriate and therefore adequate for the protection of VMEs.

The buffer zone approach described here does not take into account any issues specifically related to enforcement.

Source

ICES 2013. Report of the ICES/NAFO Joint Working Group on Deep-water Ecology (WGDEC). ICES CM 2013/ACOM: 28.

Annex F - Overview of formal ~~and informal~~ consultations

Since the initiative for protection reef structures in Natura 2000 sites was launched in spring 2011, formal and informal consultations have been held with various stakeholders. The table below lists the meetings held in relation to the present proposal.

Date	**Meeting**	**Participants**
9 May 2016	Pre-consultation meeting	DK (chair), DE, SE, PL
23 May 2016	Consultation with Natura 2000 Dialogue Forum and Advisory Councils	National stakeholders (fishery and green NGO's), BSAC and NSAC
22 June 0216	1. Meeting ad hoc working group	DK (chair), DE, SE, PL
5 July 2016	Consultation with DG MARE and DG ENVI	Marta Janakakisz, Fotios Papulinas, Marita Arvela
25 August 2016	2. Meeting ad hoc working group	DK (chair), DE, SE, PL
14 September 2016	3. Meeting ad hoc working group	DK (chair), DE, SE, PL, BE
Xx October	4. Meeting ad hoc working group	

Annex G - Summary of outcome of the regional coordination process with Member States and the European Commission

Outcome of meetings in the established ad hoc working group

Meetings were held on the following dates:

- 22 June 2016
- 25 August 2016
- 14 September 2016
- 27 October 2016

Minutes of these meetings are given below [will be inserted once the JR has been developed]

Outcome of consultations with the European Commission

Minutes of these meetings are given below [will be inserted once the JR has been developed]

Annex H - Summary of outcome of consultation with the *Natura 2000 Dialogue Forum* and Advisory Councils for the North Sea and Baltic Sea, respectively

Minutes from meeting with national stakeholders (*Natura 2000 Dialogue Forum*) and Advisory Councils for the Baltic and North Sea - 23 May 2016

The Danish AgriFish Agency had invited stakeholders to a consultation of the two Danish proposals for fisheries management measures in 7 Natura 2000 sites currently being discussed with Member States with direct management interests. The two proposals were forwarded prior to the meeting (8 April 2016) for commenting. Deadline for forwarding comments was 31 May 2016.

List of attendees is given in annex 1. Prior to the consultation meeting, OCEANA had forwarded written comments -given in annex 2. The Danish Fishermen Association PO, has given their comments in the process of designing the buffer zones and coordinates.

The Danish AgriFish presented the proposed fisheries management measures for the 4 N2000 sites in the Kattegat; "Store Middelgrund", "Schultz, Hastens Grund samt Briseis Flak", "Strandenge på Læsø og havet syd herfor" and "Havet omkring Nordre Rønner" – and for the 3 N2000 sites in the Danish part of the western Baltic Sea; "Centrale Storebælt og Vresen", "Flensborg Fjord, Bredgrund og farvandet omkring Als" and "Adler Grund og Rønne Banke".

The proposed management measures were presented and the rationale explained; a ban for mobile bottom contacting gears in areas mapped as reef structures (H1170) and in 240 meters surrounding buffer zone – and a total ban for all commercial fisheries near bubbling reefs (H1180). Analysis of fishing activity based on the forwarded fishery data from Member States shows that fisheries – Danish vessels or other Member States' vessels, does not take place in the areas mapped as reef structures, which will be restricted for fisheries. The extent of displacement is therefore minimal.

The Danish Nature Agency supplemented with a presentation of the designation of the sites, the formulation of management plans and actions to be taken in the sites, the mapping exercise and finally the national monitoring programme (NOVANA).

A summary of the comments received in relation to the two proposals is given below.

The BSAC representative reported that none of the 25 BSAC members had specific comments to the Danish proposals, but all welcomed the Danish initiative.

The NSAC representative took notice of the fact that if fisheries does not occur in the sites, then how will Denmark secure environmental favourable conditions in the areas by imposing fishing restrictions. The scientific rationale for this is not clear. Neither is the legal framework for this.

Further the proposed prohibited gear types should be categorized in light and heavy gear types – e.g. Scottish seines should be considered as a light gear type and not necessarily be prohibited.

The Danish Fisheries Association PO: agreed to the obligation of protection of reef structures and the method used with site specific regulation, although there should be given special attention to fisheries from smaller vessels, e.g. Flensborg Fjord. Further fisheries data should be given for a longer period of time instead of only 4 years, which is not sufficient. The Danish AgriFish Agency should take notice of any potentially future fisheries opportunities, e.g. fishery for sandeel in new areas.

DFPO pointed out, that although there´s a lack of species/macro algae, it is not necessarily a problem caused by fishery. The high content of nutrients in the water column could also be the reason.

The NGO´s (OCEANA and WWF): OCEANA had prior the meeting forwarded comments to the two proposals (annex 2). Both OCEANA and WWF welcomes the Danish initiative and stress the importance of adequate protection of areas the reef structures. However, the Danish approach is unambitious and instead of a site specific management which only leads to fragmented protection from fisheries. More coherent protection zones and a holistic and ecosystem based approach would provide more protection (and restoring) of the habitat and species located near it.

Further when sandbanks have been mapped in the sites, this habitat type should also be protected from fisheries and not wait on processes in other countries (e.g. Dogger Bank), Annex A lists OCEANAs comments.

After the meeting, the Danish Agrifish Agency has received comments from WWF. The forwarded comments support the written comments given by OCEANA and the comments presented at the meeting. WWF requests for the zone protecting bubbling reefs in the site 'Nordre Rønner' to be combined and for a more holitic approach to MPA management to be followed.

Comments from the Danish AgriFish Agency and the Danish Nature Agency: The two agencies welcomed the comments. The NSAC has several comments, which were not solely directed to the Danish proposals. Thus, it was agreed that a separate answer would be given to the more principal questions raised. Regarding rationale and scientific evidence, scientific evidence is clear in relation to reef structures and gear types. Same is not given for sandbanks. The Danish proposals should also been seen in relation to future fishing activities, whereby the proposed measures will guarantee protection. Other threats are also being addressed by other agencies, e.g. extraction of gravel and sand, construction work etc.

The proposed measures should been seen together with other initiatives as Denmark's contribution to achieving good environmental status in our waters. The Danish approach focuses on reef protection, since this habitat type is the most vulnerable habitat type in relation to fishery. Once more studies have been done on sandbanks, it will be assessed whether there is a need for further protection. Impact from fishery on sandbank is less clear, and before fisheries management measures can be proposed, more information is needed.

The agencies took notice of the request from the green NGO's to combine some of the buffer zones in the site "Strandenge på Læsø og havet syd herfor".

Further process in relation to comments received regarding the Danish proposals for fisheries management measures for protection of reef structures designated under the habitats directives

The Danish AgriFish Agency and the Danish Nature Agency has discussed the comments received and finds no need for substantial editorial changes. The proposed fisheries management measures aim at ensuring adequate protection of reef structures designated under the Habitats Directive. This initiative will contribute to a better environmental status in the Danish waters. The designated reef structures will be protected in their full extent, also if the reef structures go beyond the boundaries of the Natura 2000 site. The rationale behind this is given in section 4. There is no rationale for protecting the entire site/full closure, if reef structures are not present. Proposed measures must comply with the proportionality principle so that they do not go any further than necessary to ensure the needed protection of the mapped reef within the framework of the habitats directive. The aim of Article 6 (2,3) is to find the balance between protection of marine habitats and species and management of fishing activities. Also assessing the precautionary principles.

The Danish AgriFish Agency has been focusing on protection of reef structures since 2011, due to a urgent need for actions to be taken. With 65 Natura 2000 sites designated for reef structures, this a large task to finalize. Sandbanks will be protected when there is scientific advice on the protection needs of the habitat

type. There is an ambition of launching the work of formulating necessary fisheries management measures in 2017. The outcome of the EU funded 'Benthis project' is expected to be an important input in this work.

Annex 1

List of participants:

BSAC:	Sally Clink
NSAC:	Peter Breckling
OCEANA:	Hanna Paulomaki
WWF Denmark:	Mette Blæsbjerg
Danish Fishermen Association PO: Bælternes Fiskeriforening:	Henrik Lund Allan Buch
DTU Aqua:	Thomas Kirk Sørensen
The Danish Nature Agency:	Marie-Louise Krawack
Fishery Control Unit, AgriFish Agency:	Jacob Handrup
Center for Fishery, AgriFish Agency:	Bjørn Wirlander, Anja Gadgård Boye, Elsbeth Teichert & Pernille B. Jensen

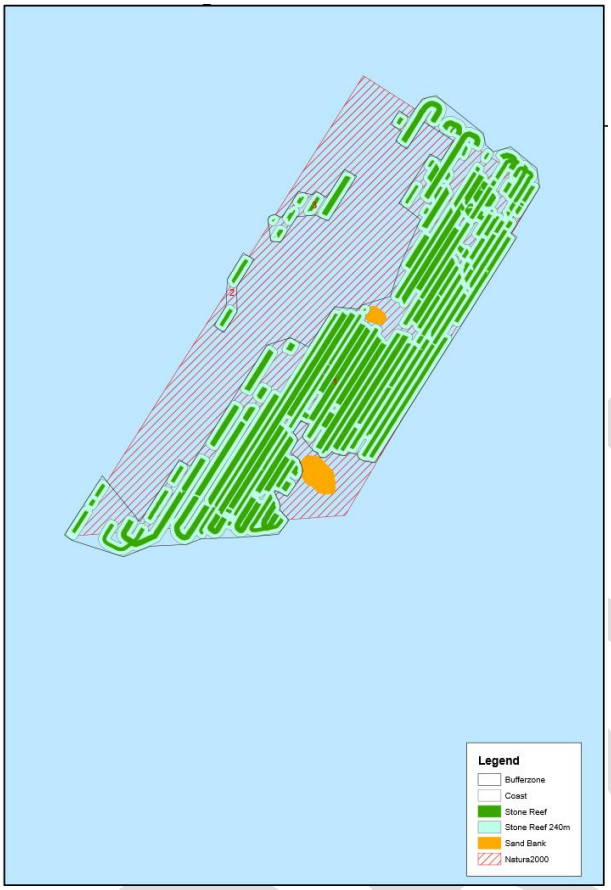
The following organizations/ representatives could not participate

NSAC:	Henrike Semmeler
Danish Nature Conservation Association:	Bo Håkonsson

Annex I – Buffer zones and coordinates

"Adler Grund og Rønne Banke"

Habitat No. H261, Natura 2000 site No. 252 (EU Code: DK00VA261)



Map showing positions of buffer zones around stone reefs (H1170)

<u>Coordinates of the buffer zone which form the protection of **stone reefs**</u>:

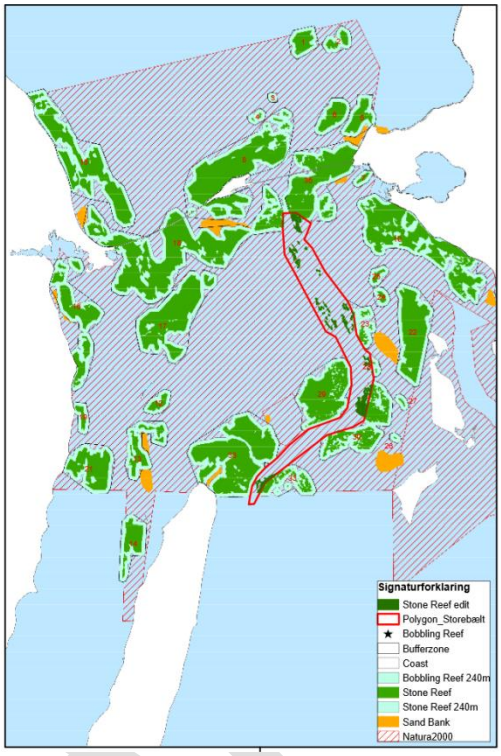
Reef no.	Latitude	Longitude
1	54 50.2' N	14 22.77' E
1	54 49.91' N	14 22.5' E
1	54 49.461' N	14 21.831' E
1	54 49.673' N	14 21.203' E
1	54 49.637' N	14 21.172' E
1	54 49.229' N	14 21.434' E
1	54 49.075' N	14 21.385' E
1	54 48.736' N	14 21.821' E
1	54 48.324' N	14 21.197' E
1	54 48.321' N	14 19.268' E
1	54 48.368' N	14 17.09' E
1	54 48.233' N	14 16.306' E
1	54 48.262' N	14 14.382' E
1	54 47.997' N	14 12.93' E
1	54 48.802' N	14 9.888' E
1	54 58.281' N	14 36.49' E
1	54 56.959' N	14 34.793' E
1	54 56.816' N	14 35.056' E
1	54 50.283' N	14 26.605' E
1	54 50.368' N	14 25.991' E
1	54 50.479' N	14 25.724' E
1	54 50.586' N	14 25.711' E
1	54 50.655' N	14 25.222' E
1	54 50.573' N	14 25.081' E
1	54 50.599' N	14 24.788' E
1	54 50.704' N	14 24.373' E
1	54 50.553' N	14 24.025' E
1	54 50.576' N	14 23.71' E
1	54 50.735' N	14 23.591' E
1	54 50.778' N	14 23.43' E
1	54 50.898' N	14 23.263' E
1	54 51.248' N	14 22.848' E
1	54 51.607' N	14 23.248' E
1	54 51.733' N	14 22.857' E
1	54 51.174' N	14 22.625' E
1	54 50.784' N	14 22.19' E
1	54 50.561' N	14 22.625' E
1	54 51.407' N	14 22.412' E
1	54 54.127' N	14 21.359' E
1	54 48.802' N	14 9.888' E
1	54 50.52' N	14 12.125' E
1	54 49.028' N	14 13.925' E
1	54 50.832' N	14 16.266' E
1	54 50.608' N	14 16.808' E
1	54 59.354' N	14 31.369' E
1	54 54.3' N	14 22.661' E
1	54 53.976' N	14 23.554' E
1	54 55.143' N	14 25.105' E
1	54 55.013' N	14 26.378' E
1	54 55.131' N	14 26.576' E
1	54 55.316' N	14 28.098' E
1	54 48.623' N	14 10.252' E
1	54 56.264' N	14 28.778' E
1	54 57.603' N	14 30.03' E
1	54 58.146' N	14 28.954' E
1	54 59.569' N	14 30.82' E
1	54 59.918' N	14 32.115' E
1	55 0.553' N	14 30.644' E
1	54 59.771' N	14 29.605' E
1	55 0.053' N	14 29.042' E
1	55 0.334' N	14 29.386' E

1	55 0.578' N	14 28.837' E
1	55 0.968' N	14 29.355' E
1	55 0.734' N	14 29.839' E
1	55 1.266' N	14 30.639' E
1	55 1.34' N	14 31.374' E
1	55 0.065' N	14 33.739' E
1	54 59.72' N	14 33.79' E
1	54 59.485' N	14 34.193' E
1	54 59.594' N	14 35.129' E
1	54 58.875' N	14 36.417' E
2	54 56.989' N	14 20.483' E
2	54 56.775' N	14 21.031' E
2	54 55.97' N	14 20.005' E
2	54 55.208' N	14 19.918' E
2	54 54.614' N	14 19.139' E
2	54 54.842' N	14 18.629' E
2	54 55.423' N	14 19.358' E
2	54 56.232' N	14 19.534' E
2	54 56.989' N	14 20.483' E
3	54 59.065' N	14 26.817' E
3	54 57.764' N	14 25.132' E
3	54 57.984' N	14 24.458' E
3	54 57.971' N	14 23.479' E
3	54 57.233' N	14 22.515' E
3	54 57.285' N	14 22.001' E
3	54 57.922' N	14 21.922' E
3	54 58.045' N	14 21.993' E
3	54 58.098' N	14 22.314' E
3	54 57.983' N	14 22.684' E
3	54 58.736' N	14 23.659' E
3	54 58.606' N	14 24.422' E
3	54 58.706' N	14 24.611' E
3	54 58.485' N	14 25.145' E
3	54 59.305' N	14 26.211' E
3	54 59.065' N	14 26.817' E

"Centrale Storebælt og Vresen"

Habitat No. H100, Natura 2000 site No. 116 (EU Code: DK008X190)

Map on right showing positions of buffer zones around stone reefs (H1170). Red stripe indicate corridor in which fisheries activities will be allowed, see further in section 5.1.2.



Coordinates of the buffer zone which form the protection of **the stone reefs**:

Reef no.	Latitude	Longitude
1	55 25.438' N	11 1.989' E
1	55 25.601' N	11 3.28' E
1	55 24.903' N	11 3.559' E
1	55 24.649' N	11 2.88' E
1	55 24.439' N	11 2.217' E
1	55 25.119' N	11 1.706' E
1	55 25.438' N	11 1.989' E
1	55 24.619' N	11 1.854' E
2	55 25.419' N	11 5.434' E
2	55 25.184' N	11 5.534' E
2	55 24.902' N	11 5.54' E
2	55 24.783' N	11 5.26' E
2	55 24.819' N	11 5.086' E
2	55 24.67' N	11 4.593' E
2	55 24.659' N	11 4.042' E
2	55 24.939' N	11 3.703' E
2	55 25.256' N	11 4.045' E
2	55 25.252' N	11 4.428' E
2	55 25.625' N	11 4.901' E
2	55 25.625' N	11 4.901' E
3	55 23.089' N	11 0.437' E
3	55 23.314' N	11 0.64' E
3	55 23.276' N	11 1.024' E
3	55 22.98' N	11 1.046' E
3	55 22.965' N	11 0.658' E
3	55 23.257' N	11 0.451' E
3	55 23.314' N	11 0.64' E
4	55 22.624' N	11 0.355' E
4	55 22.359' N	11 0.259' E
4	55 22.176' N	10 59.661' E
4	55 22.279' N	10 59.321' E
4	55 22.479' N	10 59.184' E
4	55 22.78' N	10 59.978' E
4	55 22.479' N	10 59.184' E
5	55 22.187' N	11 6.828' E
5	55 23.241' N	11 5.892' E
5	55 23.232' N	11 6.815' E
5	55 22.211' N	11 6.834' E
5	55 22.792' N	11 6.766' E
5	55 22.499' N	11 7.033' E
5	55 22.154' N	11 6.932' E
5	55 22.139' N	11 6.882' E
5	55 22.162' N	11 6.84' E
5	55 22.232' N	11 6.814' E
5	55 22.227' N	11 6.789' E
5	55 22.195' N	11 6.762' E
5	55 22.107' N	11 6.651' E
5	55 22.049' N	11 6.583' E
5	55 21.901' N	11 6.091' E
5	55 21.759' N	11 5.742' E
5	55 21.822' N	11 4.958' E
5	55 21.98' N	11 4.822' E
5	55 22.383' N	11 5.326' E
5	55 22.671' N	11 5.463' E
5	55 22.87' N	11 5.831' E
5	55 23.241' N	11 5.892' E
6	55 23.116' N	11 4.313' E
6	55 23.116' N	11 5.023' E
6	55 22.97' N	11 5.376' E
6	55 22.783' N	11 5.465' E
6	55 22.4' N	11 5.251' E
6	55 22.211' N	11 4.987' E
6	55 22.085' N	11 4.631' E
6	55 21.815' N	11 3.811' E
6	55 21.865' N	11 3.393' E
6	55 21.955' N	11 3.286' E
6	55 22.125' N	11 3.286' E
6	55 22.426' N	11 3.522' E

6	55 22.771' N	11 3.846' E
6	55 23.116' N	11 4.313' E
6	55 22.56' N	11 5.372' E
7	55 20.632' N	11 6.389' E
7	55 20.646' N	11 6.342' E
7	55 20.638' N	11 6.342' E
7	55 20.616' N	11 6.469' E
7	55 20.514' N	11 6.85' E
7	55 20.61' N	11 6.83' E
7	55 20.627' N	11 6.794' E
7	55 20.613' N	11 6.506' E
7	55 20.682' N	11 6.403' E
7	55 20.525' N	11 6.027' E
7	55 20.225' N	11 5.564' E
7	55 20.103' N	11 5.659' E
7	55 20.028' N	11 5.906' E
7	55 20.223' N	11 6.516' E
7	55 20.682' N	11 6.403' E
7	55 20.68' N	11 6.641' E
7	55 20.651' N	11 6.771' E
7	55 20.633' N	11 6.767' E
7	55 20.62' N	11 6.51' E
7	55 20.336' N	11 5.695' E
7	55 20.635' N	11 6.49' E
7	55 20.639' N	11 6.446' E
7	55 20.63' N	11 6.436' E
7	55 20.647' N	11 6.362' E
8	55 21.056' N	10 56.562' E
8	55 21.92' N	10 59.68' E
8	55 22.028' N	10 59.909' E
8	55 22.219' N	11 0.087' E
8	55 20.379' N	10 58.507' E
8	55 20.421' N	10 58.837' E
8	55 20.49' N	10 59.106' E
8	55 20.537' N	10 59.268' E
8	55 20.506' N	10 59.374' E
8	55 20.444' N	10 59.385' E
8	55 20.72' N	11 0.843' E
8	55 20.951' N	11 1.385' E
8	55 21.374' N	11 1.777' E
8	55 22.182' N	11 2.048' E
8	55 22.637' N	11 1.948' E
8	55 22.807' N	11 1.442' E
8	55 22.535' N	11 0.65' E
8	55 22.219' N	11 0.087' E
8	55 19.712' N	10 59.605' E
8	55 20.707' N	10 55.772' E
8	55 20.044' N	10 55.351' E
8	55 19.074' N	10 55.587' E
8	55 19.01' N	10 55.724' E
8	55 18.926' N	10 57.284' E
8	55 18.978' N	10 59.081' E
8	55 20.044' N	10 59.317' E
8	55 19.963' N	10 59.031' E
8	55 19.878' N	10 58.604' E
8	55 19.765' N	10 58.204' E
8	55 19.669' N	10 57.572' E
8	55 19.673' N	10 57.297' E
8	55 19.475' N	10 56.801' E
8	55 19.53' N	10 56.681' E
8	55 19.683' N	10 57.012' E
8	55 19.784' N	10 57.181' E
8	55 19.882' N	10 57.508' E
8	55 20.129' N	10 57.805' E
8	55 20.382' N	10 58.341' E
10	55 19.539' N	11 7.846' E
10	55 19.464' N	11 8.143' E
10	55 19.348' N	11 8.54' E
10	55 19.237' N	11 8.9' E
10	55 19.249' N	11 8.982' E
10	55 19.134' N	11 9.283' E
10	55 19.063' N	11 9.396' E
10	55 18.886' N	11 9.591' E
10	55 18.843' N	11 9.67' E
10	55 18.724' N	11 9.841' E
10	55 17.958' N	11 8.211' E
10	55 17.881' N	11 8.862' E
10	55 17.714' N	11 9.281' E
10	55 17.648' N	11 9.861' E
10	55 17.477' N	11 10.315' E
10	55 17.239' N	11 10.827' E
10	55 17.114' N	11 11.133' E
10	55 16.854' N	11 11.197' E
10	55 16.766' N	11 11.324' E
10	55 16.53' N	11 11.452' E
10	55 16.095' N	11 12.308' E
10	55 16.08' N	11 12.453' E
10	55 16.169' N	11 12.654' E
10	55 16.161' N	11 12.723' E
10	55 16.033' N	11 12.904' E
10	55 16.007' N	11 13.144' E
10	55 16.543' N	11 13.644' E
10	55 16.902' N	11 13.73' E
10	55 17.096' N	11 13.51' E
10	55 17.076' N	11 13.064' E
10	55 17.545' N	11 13.235' E
10	55 17.587' N	11 13.017' E
10	55 17.673' N	11 12.6' E
10	55 17.845' N	11 12.322' E
10	55 17.929' N	11 12.155' E
10	55 18.036' N	11 11.762' E
10	55 18.08' N	11 11.607' E
10	55 18.129' N	11 11.477' E
10	55 18.265' N	11 11.005' E
10	55 18.326' N	11 10.851' E
10	55 18.315' N	11 10.591' E
10	55 18.361' N	11 10.416' E
10	55 18.527' N	11 10.156' E
10	55 18.616' N	11 10.002' E
10	55 17.988' N	11 11.987' E
10	55 19.539' N	11 7.846' E
10	55 19.847' N	11 6.941' E

10	55 19.653' N	11 5.987' E
10	55 19.486' N	11 5.827' E
10	55 19.338' N	11 5.889' E
10	55 19.032' N	11 6.271' E
10	55 18.7' N	11 6.298' E
10	55 18.633' N	11 6.171' E
10	55 18.155' N	11 6.263' E
10	55 18.056' N	11 6.409' E
10	55 17.965' N	11 6.661' E
10	55 17.843' N	11 6.743' E
10	55 17.755' N	11 6.86' E
10	55 17.682' N	11 7.066' E
10	55 17.682' N	11 7.356' E
10	55 17.736' N	11 7.553' E
10	55 17.835' N	11 7.591' E
10	55 17.937' N	11 7.587' E
12	55 13.037' N	10 54.564' E
12	55 13.099' N	10 54.201' E
12	55 12.975' N	10 53.846' E
12	55 12.738' N	10 53.308' E
12	55 12.528' N	10 54.474' E
12	55 12.431' N	10 52.92' E
12	55 12.291' N	10 52.964' E
12	55 12.204' N	10 53.563' E
12	55 13.099' N	10 54.201' E
12	55 12.27' N	10 54.034' E
12	55 12.934' N	10 54.608' E
13	55 12.001' N	10 52.671' E
13	55 11.988' N	10 54.097' E
13	55 11.946' N	10 54.239' E
13	55 11.675' N	10 54.439' E
13	55 11.172' N	10 54.336' E
13	55 11.088' N	10 54.182' E
13	55 11.241' N	10 53.372' E
13	55 11.541' N	10 53.384' E
13	55 11.584' N	10 52.825' E
13	55 11.107' N	10 52.819' E
13	55 10.944' N	10 53.173' E
13	55 10.431' N	10 53.477' E
13	55 10.324' N	10 53.338' E
13	55 10.304' N	10 52.808' E
13	55 10.069' N	10 52.688' E
13	55 9.994' N	10 52.053' E
13	55 10.484' N	10 51.781' E
13	55 10.689' N	10 51.872' E
13	55 11.711' N	10 51.901' E
13	55 12.001' N	10 52.671' E
13	55 9.919' N	10 52.511' E
14	55 8.442' N	10 53.135' E
14	55 7.312' N	10 53.026' E
14	55 7.339' N	10 52.24' E
14	55 6.665' N	10 52.011' E
14	55 6.458' N	10 51.873' E
14	55 6.425' N	10 51.644' E
14	55 6.49' N	10 51.431' E
14	55 7.913' N	10 51.552' E
14	55 8.542' N	10 51.629' E
14	55 8.762' N	10 51.987' E
14	55 8.754' N	10 52.343' E
14	55 8.442' N	10 53.135' E
15	55 23.281' N	10 45.868' E
15	55 23.438' N	10 46.899' E
15	55 22.436' N	10 48.264' E
15	55 21.686' N	10 48.96' E
15	55 21.508' N	10 50.307' E
15	55 20.441' N	10 51.066' E
15	55 20.104' N	10 51.73' E
15	55 19.095' N	10 52.473' E
15	55 18.718' N	10 52.328' E
15	55 18.642' N	10 51.7' E
15	55 18.91' N	10 51.124' E
15	55 19.513' N	10 50.867' E
15	55 19.65' N	10 49.615' E
15	55 19.861' N	10 48.606' E
15	55 20.471' N	10 48.321' E
15	55 21.046' N	10 47.795' E
15	55 21.568' N	10 47.536' E
15	55 22.25' N	10 46.695' E
15	55 22.534' N	10 46.353' E
15	55 22.816' N	10 46.344' E
15	55 22.948' N	10 46.253' E
15	55 23.281' N	10 45.868' E
16	55 17.047' N	10 49.155' E
16	55 16.79' N	10 48.307' E
16	55 15.961' N	10 50.277' E
16	55 15.729' N	10 50.6' E
16	55 15.396' N	10 50.281' E
16	55 15.076' N	10 49.59' E
16	55 14.69' N	10 49.923' E
16	55 14.26' N	10 49.912' E
16	55 13.484' N	10 49.512' E
16	55 13.171' N	10 49.238' E
16	55 13.008' N	10 48.759' E
16	55 13.052' N	10 48.589' E
16	55 13.187' N	10 48.565' E
16	55 13.412' N	10 48.691' E
16	55 13.514' N	10 48.719' E
16	55 13.598' N	10 48.78' E
16	55 13.696' N	10 48.876' E
16	55 13.756' N	10 48.89' E
16	55 13.844' N	10 48.866' E
16	55 13.876' N	10 48.941' E
16	55 14.054' N	10 48.763' E
16	55 14.243' N	10 48.657' E
16	55 14.308' N	10 48.555' E
16	55 14.365' N	10 48.506' E
16	55 14.61' N	10 48.945' E
16	55 15.371' N	10 49.001' E
16	55 15.408' N	10 48.532' E
16	55 15.772' N	10 47.882' E
16	55 16.2' N	10 47.656' E
16	55 16.614' N	10 47.216' E

16	55 16.75' N	10 47.263' E
16	55 17.035' N	10 47.428' E
16	55 17.137' N	10 47.465' E
16	55 17.217' N	10 47.533' E
16	55 17.277' N	10 47.53' E
16	55 17.317' N	10 47.474' E
16	55 17.563' N	10 47.673' E
16	55 17.654' N	10 48.554' E
16	55 17.615' N	10 49.147' E
16	55 17.27' N	10 49.375' E
16	55 17.047' N	10 49.155' E
17	55 15.901' N	10 53.294' E
17	55 15.897' N	10 53.739' E
17	55 16.516' N	10 54.748' E
17	55 17.165' N	10 55.712' E
17	55 17.195' N	10 56.657' E
17	55 17.043' N	10 57.42' E
17	55 16.717' N	10 57.427' E
17	55 16.223' N	10 56.627' E
17	55 15.216' N	10 55.738' E
17	55 14.488' N	10 55.598' E
17	55 14.255' N	10 55.435' E
17	55 13.955' N	10 54.872' E
17	55 14.014' N	10 54.435' E
17	55 14.277' N	10 54.294' E
17	55 14.315' N	10 53.183' E
17	55 14.404' N	10 52.716' E
17	55 15.081' N	10 52.435' E
17	55 15.504' N	10 52.472' E
17	55 15.901' N	10 53.294' E
18	55 19.153' N	11 1.41' E
18	55 19.153' N	11 1.405' E
18	55 18.706' N	11 1.361' E
18	55 18.556' N	11 1.38' E
18	55 18.54' N	11 1.382' E
18	55 18.407' N	10 59.519' E
18	55 18.083' N	10 58.811' E
18	55 17.231' N	10 57.913' E
18	55 17.31' N	10 56.894' E
18	55 17.792' N	10 55.498' E
18	55 17.345' N	10 55.539' E
18	55 17.204' N	10 55.094' E
18	55 16.45' N	10 54.649' E
18	55 16.272' N	10 54.307' E
18	55 16.034' N	10 53.54' E
18	55 16.043' N	10 53.107' E
18	55 16.312' N	10 52.573' E
18	55 16.321' N	10 51.505' E
18	55 16.48' N	10 50.971' E
18	55 16.719' N	10 50.963' E
18	55 17.598' N	10 51.706' E
18	55 17.712' N	10 51.637' E
18	55 17.756' N	10 51.339' E
18	55 18.016' N	10 51.184' E
18	55 17.996' N	10 50.625' E
18	55 18.057' N	10 50.283' E
18	55 18.209' N	10 49.881' E
18	55 18.337' N	10 49.638' E
18	55 18.446' N	10 49.432' E
18	55 18.71' N	10 49.284' E
18	55 19.429' N	10 49.555' E
18	55 19.456' N	10 49.88' E
18	55 18.953' N	10 50.561' E
18	55 18.626' N	10 50.886' E
18	55 18.339' N	10 53.146' E
18	55 18.587' N	10 53.85' E
18	55 19.2' N	10 54.345' E
18	55 19.368' N	10 54.926' E
18	55 19.129' N	10 55.437' E
18	55 18.633' N	10 55.848' E
18	55 18.749' N	10 58.729' E
18	55 18.67' N	10 59.198' E
18	55 19.262' N	11 0.072' E
18	55 20.109' N	11 0.134' E
18	55 20.163' N	11 0.469' E
18	55 19.793' N	11 1.058' E
18	55 19.185' N	11 1.404' E
18	55 19.153' N	11 1.41' E
19	55 12.521' N	10 48.713' E
19	55 12.66' N	10 48.627' E
19	55 12.612' N	10 49.461' E
19	55 12.028' N	10 49.661' E
19	55 11.588' N	10 49.552' E
19	55 11.513' N	10 49.361' E
19	55 11.598' N	10 49.005' E
19	55 11.744' N	10 48.931' E
19	55 12.172' N	10 48.956' E
19	55 12.25' N	10 48.747' E
19	55 12.322' N	10 48.752' E
19	55 12.398' N	10 48.755' E
19	55 12.464' N	10 48.707' E
19	55 12.509' N	10 48.678' E
19	55 12.521' N	10 48.713' E
21	55 11.213' N	10 49.51' E
21	55 11.138' N	10 50.719' E
21	55 10.916' N	10 51.079' E
21	55 10.626' N	10 51.187' E
21	55 9.675' N	10 50.936' E
21	55 9.479' N	10 50.754' E
21	55 9.476' N	10 49.829' E
21	55 10.234' N	10 48.014' E
21	55 10.256' N	10 48.051' E
21	55 11.213' N	10 49.51' E
21	55 11.177' N	10 49.151' E
21	55 10.847' N	10 48.427' E
21	55 10.816' N	10 48.379' E
21	55 10.719' N	10 48.362' E
21	55 10.669' N	10 48.285' E
21	55 10.475' N	10 48.162' E
21	55 10.339' N	10 48.111' E
22	55 14.799' N	11 10.2' E
22	55 15.844' N	11 10.527' E

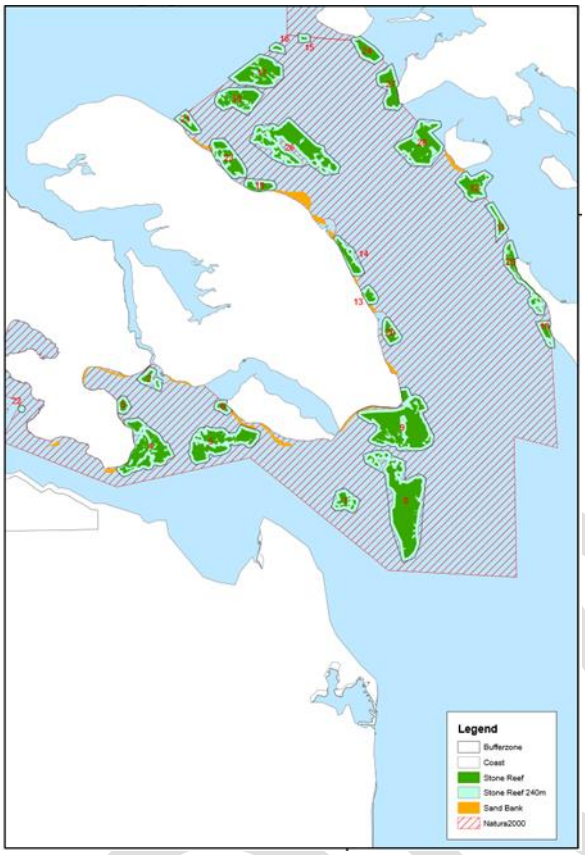
22	55 15.044' N	11 10.252' E
22	55 16.2' N	11 8.367' E
22	55 16.768' N	11 8.485' E
22	55 15.204' N	11 10.346' E
22	55 14.917' N	11 10.106' E
22	55 14.446' N	11 8.476' E
22	55 16.484' N	11 8.142' E
22	55 15.684' N	11 8.295' E
22	55 13.227' N	11 9.632' E
22	55 13.149' N	11 9.334' E
22	55 13.702' N	11 8.196' E
22	55 16.768' N	11 8.485' E
22	55 16.551' N	11 9.587' E
23	55 14.471' N	11 6.497' E
23	55 15.696' N	11 6.903' E
23	55 15.987' N	11 6.678' E
23	55 15.927' N	11 6.109' E
23	55 15.683' N	11 5.663' E
23	55 14.974' N	11 5.842' E
23	55 14.502' N	11 6.306' E
23	55 14.49' N	11 6.317' E
23	55 14.49' N	11 6.317' E
23	55 15.907' N	11 5.482' E
23	55 15.162' N	11 7.045' E
23	55 15.36' N	11 6.988' E
23	55 15.052' N	11 6.967' E
23	55 15.008' N	11 6.705' E
23	55 14.73' N	11 6.849' E
24	55 16.004' N	11 7.717' E
24	55 15.922' N	11 7.401' E
24	55 15.963' N	11 7.048' E
24	55 16.19' N	11 6.895' E
24	55 16.578' N	11 6.822' E
24	55 16.601' N	11 7.41' E
24	55 16.578' N	11 6.822' E
24	55 16.422' N	11 7.753' E
24	55 16.19' N	11 7.898' E
25	55 17.387' N	11 7.5' E
25	55 17.225' N	11 6.722' E
25	55 16.608' N	11 6.803' E
25	55 17.108' N	11 7.79' E
25	55 17.225' N	11 6.722' E
25	55 17.232' N	11 7.807' E
25	55 16.67' N	11 7.181' E
25	55 16.779' N	11 6.532' E
26	55 11.208' N	11 8.312' E
26	55 11.336' N	11 8.546' E
26	55 11.466' N	11 8.478' E
26	55 11.584' N	11 8.192' E
26	55 11.594' N	11 8.074' E
26	55 11.545' N	11 7.839' E
26	55 11.336' N	11 7.839' E
26	55 11.545' N	11 7.839' E
27	55 12.832' N	11 8.739' E
27	55 12.918' N	11 8.519' E
27	55 12.522' N	11 9.001' E
27	55 12.818' N	11 8.16' E
27	55 12.907' N	11 8.258' E
27	55 12.918' N	11 8.519' E
27	55 12.45' N	11 8.991' E
27	55 12.371' N	11 8.858' E
27	55 12.351' N	11 8.707' E
27	55 12.388' N	11 8.532' E
27	55 12.523' N	11 8.438' E
27	55 12.707' N	11 8.117' E
27	55 12.74' N	11 8.871' E
28	55 13.515' N	11 6.869' E
28	55 13.519' N	11 6.868' E
28	55 14.309' N	11 6.652' E
28	55 14.311' N	11 6.651' E
28	55 14.276' N	11 6.793' E
28	55 14.06' N	11 7.176' E
28	55 13.781' N	11 7.32' E
28	55 13.623' N	11 7.281' E
28	55 13.52' N	11 7.074' E
28	55 13.515' N	11 6.869' E
29	55 11.712' N	11 2.469' E
29	55 11.707' N	11 2.916' E
29	55 12.211' N	11 2.56' E
29	55 12.756' N	11 2.064' E
29	55 13.506' N	11 2.685' E
29	55 14.132' N	11 4.408' E
29	55 14.132' N	11 4.408' E
29	55 14.174' N	11 5.053' E
29	55 14.119' N	11 5.172' E
29	55 13.845' N	11 5.486' E
29	55 13.238' N	11 5.52' E
29	55 12.863' N	11 5.161' E
29	55 12.681' N	11 5.349' E
29	55 12.439' N	11 5.275' E
29	55 12.283' N	11 4.904' E
29	55 12.123' N	11 4.836' E
29	55 12.079' N	11 4.703' E
29	55 11.665' N	11 2.827' E
29	55 11.634' N	11 2.708' E
30	55 10.661' N	11 3.627' E
30	55 11.822' N	11 6.151' E
30	55 11.741' N	11 5.371' E
30	55 11.501' N	11 4.037' E
30	55 11.374' N	11 3.746' E
30	55 10.86' N	11 3.558' E
30	55 12.075' N	11 6.32' E
30	55 10.628' N	11 3.878' E
30	55 11.079' N	11 5.423' E
30	55 10.893' N	11 5.851' E
30	55 10.889' N	11 6.753' E
30	55 11.513' N	11 7.505' E
30	55 11.574' N	11 7.507' E
30	55 11.574' N	11 7.507' E
30	55 11.81' N	11 7.802' E
30	55 12.075' N	11 6.32' E
30	55 13.387' N	11 6.859' E

30	55 13.397' N	11 6.863' E
30	55 13.366' N	11 7.055' E
30	55 13.219' N	11 7.528' E
30	55 12.743' N	11 8.047' E
30	55 11.882' N	11 7.928' E
33	55 10.52' N	11 0.624' E
33	55 9.891' N	10 56.303' E
33	55 9.835' N	10 56.615' E
33	55 9.651' N	10 56.891' E
33	55 9.493' N	10 57.265' E
33	55 9.355' N	10 57.346' E
33	55 9.383' N	10 59.387' E
33	55 9.419' N	10 59.402' E
33	55 9.509' N	10 59.432' E
33	55 9.761' N	10 59.518' E
33	55 10.084' N	10 59.832' E
33	55 10.301' N	11 0.194' E
33	55 10.35' N	11 0.271' E
33	55 10.566' N	11 0.25' E
33	55 10.675' N	11 0.948' E
33	55 10.885' N	10 55.558' E
33	55 11.174' N	10 55.765' E
33	55 9.807' N	10 56.235' E
33	55 12.186' N	10 58.317' E
33	55 12.329' N	10 59.308' E
33	55 11.837' N	11 0.701' E
33	55 11.229' N	11 1.175' E
33	55 10.675' N	11 0.948' E
33	55 11.904' N	10 57.704' E
34	55 9.411' N	11 3.202' E
34	55 9.411' N	11 2.46' E
34	55 9.676' N	11 2.082' E
34	55 9.383' N	11 1.07' E
34	55 9.39' N	10 59.871' E
34	55 9.991' N	11 3.159' E
34	55 9.866' N	11 0.298' E
34	55 10.451' N	11 1.635' E
34	55 10.501' N	11 2.061' E
34	55 10.276' N	11 2.795' E
34	55 9.39' N	10 59.871' E
34	55 9.587' N	11 3.423' E
34	55 9.515' N	10 59.983' E
35	55 20.698' N	11 5.781' E
35	55 20.501' N	11 5.489' E
35	55 19.429' N	11 4.654' E
35	55 18.993' N	11 4.615' E
35	55 18.847' N	11 4.228' E
35	55 18.904' N	11 3.106' E
35	55 18.823' N	11 3.041' E
35	55 20.109' N	11 3.973' E
35	55 18.823' N	11 3.041' E
35	55 18.872' N	11 2.921' E
35	55 19.173' N	11 2.188' E
35	55 19.162' N	11 1.756' E
35	55 19.195' N	11 1.75' E
35	55 19.674' N	11 1.496' E
35	55 19.793' N	11 1.681' E
35	55 20.048' N	11 1.664' E
35	55 20.365' N	11 1.713' E
35	55 20.817' N	11 1.873' E
35	55 21.281' N	11 2.069' E
35	55 21.423' N	11 3.756' E
35	55 21.639' N	11 5.288' E
35	55 21.429' N	11 6.001' E
35	55 21.349' N	11 5.918' E
35	55 21.119' N	11 5.624' E
35	55 21.084' N	11 5.633' E
35	55 21.04' N	11 5.628' E
35	55 20.991' N	11 5.667' E
35	55 20.964' N	11 5.667' E
35	55 20.903' N	11 5.631' E
35	55 20.814' N	11 5.537' E
35	55 20.796' N	11 5.613' E
35	55 20.758' N	11 5.667' E
35	55 20.736' N	11 5.715' E
35	55 20.705' N	11 5.766' E

"Flensborg Fjord, Bredgrund og farvandet omkring Als"

Habitat No. H173 and Bird protection area No. F64, Natura 2000 site No. 197 (EU Code: DK00VA254)

Map showing positions of buffer zones around stone reefs (H1170)



Coordinates of the buffer zone which form the protection of the **stone reefs**:

Reef no.	Latitude	Longitude
2	54 53.509' N	9 46.189' E
2	54 53.686' N	9 45.822' E
2	54 54.227' N	9 46.743' E
2	54 54.056' N	9 47.246' E
2	54 53.788' N	9 47.19' E
2	54 53.647' N	9 47.665' E
2	54 53.175' N	9 47.547' E
2	54 53.239' N	9 47.288' E
2	54 53.509' N	9 46.189' E
3	54 53.037' N	9 44.738' E
3	54 53.034' N	9 45.098' E
3	54 52.581' N	9 45.493' E
3	54 52.313' N	9 45.144' E
3	54 52.304' N	9 44.662' E
3	54 52.405' N	9 44.49' E
3	54 52.551' N	9 44.514' E
3	54 52.701' N	9 44.481' E
3	54 52.814' N	9 44.46' E
3	54 53.037' N	9 44.738' E
4	54 52.09' N	9 44.886' E
4	54 52.164' N	9 45.97' E
4	54 51.927' N	9 46.449' E
4	54 51.774' N	9 46.719' E
4	54 51.576' N	9 47.24' E
4	54 51.49' N	9 47.397' E
4	54 51.374' N	9 47.565' E
4	54 51.319' N	9 47.574' E
4	54 51.201' N	9 47.734' E
4	54 51.167' N	9 47.772' E
4	54 51.161' N	9 47.917' E
4	54 51.148' N	9 47.979' E
4	54 51.117' N	9 48.044' E
4	54 51.086' N	9 48.079' E
4	54 50.948' N	9 48.13' E
4	54 50.939' N	9 48.149' E
4	54 50.918' N	9 48.175' E
4	54 50.899' N	9 48.193' E
4	54 50.665' N	9 48.391' E
4	54 50.612' N	9 48.374' E
4	54 50.572' N	9 48.345' E
4	54 50.541' N	9 48.294' E
4	54 50.525' N	9 48.24' E
4	54 50.5' N	9 48.096' E
4	54 50.498' N	9 48.028' E
4	54 50.436' N	9 47.909' E
4	54 50.351' N	9 47.861' E
4	54 50.318' N	9 47.83' E
4	54 50.254' N	9 47.679' E
4	54 50.242' N	9 47.609' E
4	54 50.24' N	9 47.551' E
4	54 50.22' N	9 47.443' E
4	54 50.217' N	9 47.377' E
4	54 50.24' N	9 47.234' E
4	54 50.252' N	9 46.969' E
4	54 50.147' N	9 46.907' E
4	54 50.04' N	9 45.967' E
4	54 50.07' N	9 46.089' E
4	54 50.099' N	9 46.164' E
4	54 50.13' N	9 46.21' E
4	54 50.107' N	9 46.381' E
4	54 50.073' N	9 46.522' E
4	54 50.067' N	9 46.599' E
4	54 50.091' N	9 46.783' E
4	54 50.106' N	9 46.841' E
4	54 50.809' N	9 45.451' E

4	54 52.09' N	9 44.886' E
4	54 51.914' N	9 44.953' E
4	54 51.734' N	9 45.508' E
4	54 51.178' N	9 45.611' E
4	54 51.02' N	9 45.725' E
4	54 50.937' N	9 45.662' E
4	54 50.384' N	9 45.183' E
4	54 50.22' N	9 44.71' E
4	54 50.184' N	9 44.392' E
4	54 50.116' N	9 44.377' E
4	54 50.005' N	9 44.45' E
4	54 49.964' N	9 44.515' E
4	54 49.94' N	9 44.607' E
4	54 49.878' N	9 44.654' E
4	54 49.846' N	9 44.705' E
4	54 49.83' N	9 44.805' E
4	54 49.822' N	9 44.904' E
4	54 49.825' N	9 45.043' E
4	54 49.852' N	9 45.167' E
4	54 49.865' N	9 45.205' E
4	54 49.871' N	9 45.252' E
4	54 49.892' N	9 45.332' E
4	54 49.934' N	9 45.38' E
4	54 49.961' N	9 45.44' E
4	54 49.964' N	9 45.496' E
4	54 50.005' N	9 45.698' E
4	54 50.044' N	9 45.778' E
4	54 50.033' N	9 45.902' E
5	54 50.845' N	9 52.297' E
5	54 50.789' N	9 52.249' E
5	54 50.763' N	9 52.206' E
5	54 50.688' N	9 51.99' E
5	54 50.617' N	9 51.601' E
5	54 50.586' N	9 51.244' E
5	54 50.584' N	9 51.162' E
5	54 50.605' N	9 51.077' E
5	54 50.393' N	9 49.586' E
5	54 50.428' N	9 49.548' E
5	54 50.46' N	9 49.534' E
5	54 50.526' N	9 49.535' E
5	54 51.514' N	9 52.659' E
5	54 50.579' N	9 49.494' E
5	54 50.641' N	9 49.416' E
5	54 50.691' N	9 49.392' E
5	54 50.747' N	9 49.373' E
5	54 50.79' N	9 49.384' E
5	54 50.872' N	9 49.45' E
5	54 51.007' N	9 49.483' E
5	54 51.087' N	9 49.459' E
5	54 51.131' N	9 49.47' E
5	54 51.444' N	9 49.704' E
5	54 50.934' N	9 52.32' E
5	54 51.04' N	9 53.093' E
5	54 51.025' N	9 52.244' E
5	54 51.032' N	9 52.311' E
5	54 51.062' N	9 52.402' E
5	54 51.005' N	9 52.497' E
5	54 50.894' N	9 52.324' E
5	54 50.989' N	9 52.601' E
5	54 51.013' N	9 52.736' E
5	54 51.014' N	9 52.844' E
5	54 51.046' N	9 52.971' E
5	54 50.657' N	9 50.869' E
5	54 51.035' N	9 53.181' E
5	54 51.029' N	9 53.316' E
5	54 50.967' N	9 53.368' E
5	54 50.922' N	9 53.438' E
5	54 50.905' N	9 53.538' E
5	54 50.908' N	9 53.676' E
5	54 50.941' N	9 53.838' E
5	54 51.073' N	9 54.04' E
5	54 51.25' N	9 54.301' E
5	54 51.306' N	9 54.332' E
5	54 51.437' N	9 54.369' E
5	54 51.514' N	9 54.368' E
5	54 51.587' N	9 54.283' E
5	54 51.836' N	9 53.012' E
5	54 51.504' N	9 52.282' E
5	54 51.685' N	9 51.909' E
5	54 51.717' N	9 51.767' E
5	54 51.723' N	9 51.672' E
5	54 51.706' N	9 51.266' E
5	54 51.706' N	9 51.022' E
5	54 51.78' N	9 50.774' E
5	54 51.785' N	9 50.697' E
5	54 51.701' N	9 50.123' E
5	54 51.444' N	9 49.704' E
5	54 50.635' N	9 50.794' E
5	54 50.595' N	9 50.791' E
5	54 50.529' N	9 50.837' E
5	54 50.476' N	9 50.852' E
5	54 50.419' N	9 50.825' E
5	54 50.389' N	9 50.781' E
5	54 50.655' N	9 50.993' E
5	54 50.36' N	9 50.71' E
5	54 50.287' N	9 50.123' E
5	54 50.257' N	9 49.953' E
5	54 50.256' N	9 49.87' E
5	54 50.284' N	9 49.791' E
5	54 50.344' N	9 49.677' E
6	54 52.192' N	9 52.057' E
6	54 52.385' N	9 51.526' E
6	54 52.418' N	9 51.25' E
6	54 52.605' N	9 51.175' E
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6	54 52.771' N	9 51.344' E
6	54 52.831' N	9 52.061' E
6	54 52.781' N	9 52.12' E
6	54 52.633' N	9 52.041' E
6	54 52.574' N	9 52.131' E
6	54 52.531' N	9 52.233' E
6	54 52.473' N	9 52.344' E

6	54 52.458' N	9 52.374' E
6	54 52.4' N	9 52.49' E
6	54 52.351' N	9 52.422' E
6	54 52.831' N	9 51.596' E
7	54 49.116' N	9 59.562' E
7	54 49.249' N	10 0.171' E
7	54 48.776' N	10 1.256' E
7	54 48.341' N	10 0.994' E
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7	54 48.492' N	9 59.239' E
7	54 49.116' N	9 59.562' E
8	54 49.795' N	10 2.926' E
8	54 50.228' N	10 1.616' E
8	54 50.578' N	10 1.454' E
8	54 50.739' N	10 2.384' E
8	54 50.739' N	10 2.384' E
8	54 50.732' N	10 2.688' E
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8	54 50.718' N	10 3.191' E
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8	54 50.263' N	10 4.464' E
8	54 49.533' N	10 4.343' E
8	54 49.779' N	10 5.347' E
8	54 49.611' N	10 5.838' E
8	54 48.625' N	10 5.639' E
8	54 47.05' N	10 5.375' E
8	54 46.423' N	10 4.986' E
8	54 46.235' N	10 4.119' E
8	54 47.75' N	10 3.306' E
8	54 48.324' N	10 3.243' E
8	54 49.298' N	10 3.069' E
9	54 52.544' N	10 5.93' E
9	54 52.37' N	10 6.044' E
9	54 52.276' N	10 5.981' E
9	54 52.209' N	10 5.668' E
9	54 52.018' N	10 5.799' E
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9	54 50.892' N	10 6.316' E
9	54 53.11' N	10 4.169' E
9	54 53.11' N	10 4.169' E
9	54 53.021' N	10 4.203' E
9	54 52.869' N	10 4.209' E
9	54 52.754' N	10 4.272' E
9	54 52.639' N	10 4.306' E
9	54 52.478' N	10 4.046' E
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9	54 52.473' N	10 1.892' E
9	54 53.22' N	10 4.134' E
9	54 52.302' N	10 1.138' E
9	54 52.091' N	10 1.159' E
9	54 51.775' N	10 2.023' E
9	54 51.808' N	10 2.257' E
9	54 51.686' N	10 2.487' E
9	54 51.606' N	10 2.445' E
9	54 51.531' N	10 2.457' E
9	54 51.461' N	10 2.309' E
9	54 51.233' N	10 1.892' E
9	54 51.146' N	10 1.847' E
9	54 51.08' N	10 1.889' E
9	54 51.024' N	10 2.022' E
9	54 50.978' N	10 2.192' E
9	54 50.935' N	10 2.372' E
9	54 50.899' N	10 2.613' E
9	54 50.861' N	10 2.786' E
9	54 50.862' N	10 2.989' E
9	54 50.941' N	10 3.225' E
9	54 50.87' N	10 3.465' E
9	54 50.869' N	10 3.699' E
9	54 50.834' N	10 3.776' E
9	54 50.77' N	10 3.821' E
9	54 50.712' N	10 3.916' E
9	54 50.692' N	10 3.999' E
9	54 53.233' N	10 4.607' E
9	54 53.196' N	10 4.721' E
9	54 52.901' N	10 4.936' E
9	54 52.939' N	10 5.179' E
9	54 52.923' N	10 5.305' E
9	54 52.821' N	10 5.659' E
9	54 52.635' N	10 5.808' E
9	54 52.6' N	10 5.883' E
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10	54 55.217' N	10 14.732' E
10	54 55.14' N	10 14.777' E
10	54 55.089' N	10 14.88' E
10	54 54.692' N	10 14.915' E
10	54 54.739' N	10 14.421' E
10	54 55.758' N	10 13.576' E
10	54 55.263' N	10 14.729' E
10	54 55.818' N	10 14.632' E
10	54 55.758' N	10 13.576' E
10	54 55.643' N	10 14.649' E
10	54 55.577' N	10 14.629' E
10	54 55.48' N	10 14.561' E
10	54 55.428' N	10 14.629' E
10	54 55.342' N	10 14.641' E
11	54 59.867' N	10 10.894' E
11	54 58.931' N	10 10.949' E
11	54 59.498' N	10 11.882' E
11	55 0.436' N	10 10.201' E
11	55 0.592' N	10 10.779' E
11	55 0.436' N	10 10.201' E

12	55 1.129' N	10 10.216' E
12	55 0.773' N	10 10.374' E
12	55 0.577' N	10 9.259' E
12	55 0.846' N	10 8.761' E
12	55 0.95' N	10 8.784' E
12	55 1.389' N	10 8.149' E
12	55 1.738' N	10 8.665' E
12	55 1.835' N	10 8.986' E
12	55 1.602' N	10 9.315' E
12	55 1.852' N	10 10.252' E
12	55 1.586' N	10 10.865' E
12	55 1.586' N	10 10.865' E
13	54 57.138' N	10 1.498' E
13	54 56.926' N	10 1.595' E
13	54 56.67' N	10 1.883' E
13	54 56.536' N	10 2.003' E
13	54 56.8' N	10 2.747' E
13	54 57.047' N	10 2.535' E
13	54 57.311' N	10 2.159' E
13	54 56.751' N	10 1.792' E
13	54 56.583' N	10 2.572' E
13	54 57.024' N	10 1.573' E
13	54 57.311' N	10 2.159' E
13	54 57.344' N	10 1.985' E
14	54 59.342' N	9 59.98' E
14	54 59.306' N	9 59.73' E
14	54 59.188' N	9 59.647' E
14	54 59.342' N	9 59.98' E
14	54 57.67' N	10 1.436' E
14	54 59.018' N	9 59.858' E
14	54 58.912' N	9 59.993' E
14	54 58.748' N	10 0.122' E
14	54 58.697' N	10 0.19' E
14	54 57.731' N	10 0.913' E
14	54 58.77' N	10 1.091' E
14	54 57.934' N	10 0.78' E
14	54 58.163' N	10 0.584' E
14	54 58.329' N	10 0.464' E
14	54 57.837' N	10 1.797' E
14	54 59.159' N	9 59.713' E
15	55 7.061' N	9 58.268' E
15	55 7.371' N	9 58.186' E
15	55 7.425' N	9 57.391' E
15	55 7.425' N	9 57.391' E
15	55 7.04' N	9 57.371' E
16	55 6.926' N	9 56.402' E
16	55 6.581' N	9 56.535' E
16	55 6.724' N	9 55.371' E
16	55 6.917' N	9 55.374' E
16	55 6.917' N	9 55.374' E
16	55 7.086' N	9 55.828' E
17	55 5.687' N	9 52.437' E
17	55 6.623' N	9 54.685' E
17	55 5.243' N	9 54.787' E
17	55 5.651' N	9 56.322' E
17	55 5.266' N	9 55.606' E
17	55 5.334' N	9 54.238' E
17	55 5.687' N	9 52.437' E
17	55 5.357' N	9 53.259' E
17	55 6.141' N	9 56.307' E
17	55 6.478' N	9 55.548' E
18	55 4.505' N	9 52.71' E
18	55 5.288' N	9 54.25' E
18	55 5.021' N	9 54.969' E
18	55 4.153' N	9 53.836' E
18	55 4.365' N	9 52.05' E
18	55 4.829' N	9 51.488' E
18	55 4.595' N	9 51.553' E
18	55 5.288' N	9 54.25' E
18	55 5.3' N	9 52.485' E
18	55 5.076' N	9 51.644' E
19	55 1.54' N	9 55.631' E
19	55 1.138' N	9 54.303' E
19	55 1.54' N	9 55.631' E
19	55 1.616' N	9 54.495' E
19	55 1.657' N	9 53.627' E
19	55 1.365' N	9 53.469' E
19	55 1.215' N	9 53.886' E
19	55 1.174' N	9 54.05' E
19	55 1.136' N	9 54.77' E
19	55 1.174' N	9 55.102' E
19	55 1.546' N	9 53.513' E
19	55 1.154' N	9 55.437' E
19	55 1.272' N	9 55.766' E
19	55 1.127' N	9 54.513' E
20	54 55.327' N	10 2.909' E
20	54 55.865' N	10 2.968' E
20	54 55.043' N	10 4.181' E
20	54 56.032' N	10 3.14' E
20	54 55.263' N	10 4.343' E
20	54 54.879' N	10 3.415' E
20	54 56.029' N	10 3.434' E
20	54 56.032' N	10 3.14' E
21	55 4.083' N	9 48.621' E
21	55 3.677' N	9 49.439' E
21	55 3.472' N	9 50.486' E
21	55 3.62' N	9 50.547' E
21	55 4.46' N	9 49.517' E
21	55 3.434' N	9 49.936' E
21	55 4.46' N	9 49.517' E
22	54 52.703' N	9 37.962' E
22	54 52.556' N	9 38.113' E
22	54 52.703' N	9 37.962' E
22	54 52.674' N	9 37.675' E
22	54 52.563' N	9 37.608' E
22	54 52.437' N	9 37.66' E
22	54 52.419' N	9 37.969' E
23	55 1.982' N	9 53.721' E
23	55 3.253' N	9 51.284' E
23	55 2.963' N	9 51.067' E
23	55 2.734' N	9 51.219' E
23	55 2.675' N	9 51.294' E

23	55 2.419' N	9 51.517' E
23	55 2.337' N	9 51.79' E
23	55 2.056' N	9 52.057' E
23	55 1.651' N	9 52.695' E
23	55 1.699' N	9 53.646' E
23	55 2.366' N	9 53.366' E
23	55 3.278' N	9 52.154' E
23	55 3.253' N	9 51.284' E
24	55 7.248' N	10 1.614' E
24	55 7.217' N	10 1.481' E
24	55 7.247' N	10 1.341' E
24	55 7.18' N	10 1.006' E
24	55 6.396' N	10 1.726' E
24	55 6.133' N	10 2.688' E
24	55 6.346' N	10 3.264' E
24	55 6.46' N	10 3.326' E
24	55 7.281' N	10 1.685' E
24	55 7.248' N	10 1.614' E
24	55 6.842' N	10 2.743' E
25	54 58.043' N	10 11.492' E
25	54 58.068' N	10 11.479' E
25	54 58.489' N	10 11.412' E
25	54 58.689' N	10 11.455' E
25	54 58.763' N	10 11.491' E
25	54 59.001' N	10 11.714' E
25	54 59.027' N	10 12.099' E
25	54 58.305' N	10 12.475' E
25	54 58.32' N	10 12.336' E
25	54 58.24' N	10 12.261' E
25	54 58.131' N	10 12.25' E
25	54 58.094' N	10 12.264' E
25	54 58.01' N	10 12.268' E
25	54 57.94' N	10 12.311' E
25	54 57.901' N	10 12.35' E
25	54 57.79' N	10 12.371' E
25	54 57.698' N	10 12.471' E
25	54 57.618' N	10 12.585' E
25	54 57.479' N	10 12.689' E
25	54 57.368' N	10 12.942' E
25	54 57.216' N	10 13.195' E
25	54 57.142' N	10 13.323' E
25	54 57.017' N	10 13.555' E
25	54 56.931' N	10 13.616' E
25	54 56.836' N	10 13.829' E
25	54 56.65' N	10 14.154' E
25	54 56.504' N	10 14.357' E
25	54 56.016' N	10 14.196' E
25	54 56.017' N	10 13.938' E
25	54 56.047' N	10 13.818' E
25	54 56.047' N	10 13.728' E
25	54 56.074' N	10 13.63' E
25	54 56.105' N	10 13.588' E
25	54 56.157' N	10 13.548' E
25	54 56.193' N	10 13.538' E
25	54 56.211' N	10 13.491' E
25	54 56.239' N	10 13.439' E
25	54 56.316' N	10 13.38' E
25	54 56.351' N	10 13.235' E
25	54 56.406' N	10 13.156' E
25	54 56.661' N	10 13.088' E
25	54 56.735' N	10 13.174' E
25	54 56.76' N	10 13.272' E
25	54 56.873' N	10 13.244' E
25	54 57.033' N	10 13.114' E
25	54 57.061' N	10 13.077' E
25	54 57.111' N	10 12.976' E
25	54 57.174' N	10 12.908' E
25	54 57.206' N	10 12.819' E
25	54 57.291' N	10 12.683' E
25	54 57.287' N	10 12.589' E
25	54 57.295' N	10 12.529' E
25	54 57.312' N	10 12.476' E
25	54 57.359' N	10 12.384' E
25	54 57.406' N	10 12.321' E
25	54 57.488' N	10 12.204' E
25	54 57.594' N	10 12.116' E
25	54 57.625' N	10 12.083' E
25	54 57.645' N	10 12.069' E
25	54 57.678' N	10 12.02' E
25	54 57.702' N	10 11.997' E
25	54 57.729' N	10 11.947' E
25	54 57.76' N	10 11.905' E
25	54 57.772' N	10 11.893' E
25	54 57.781' N	10 11.867' E
25	54 57.799' N	10 11.834' E
25	54 57.844' N	10 11.769' E
25	54 57.861' N	10 11.748' E
25	54 57.871' N	10 11.738' E
25	54 57.897' N	10 11.718' E
25	54 57.923' N	10 11.655' E
25	54 58.021' N	10 11.512' E
25	54 58.043' N	10 11.492' E
25	54 56.947' N	10 13.256' E
26	55 2.406' N	9 55.459' E
26	55 3.147' N	9 53.862' E
26	55 3.758' N	9 54.315' E
26	55 3.835' N	9 55.545' E
26	55 3.734' N	9 55.911' E
26	55 4.09' N	9 56.653' E
26	55 3.017' N	9 58.579' E
26	55 2.908' N	9 59.105' E
26	55 2.694' N	9 59.185' E
26	55 2.125' N	10 0.197' E
26	55 1.798' N	10 0.078' E
26	55 1.731' N	9 59.062' E
26	55 2.174' N	9 58.022' E
26	55 2.093' N	9 57.502' E
26	55 2.11' N	9 56.562' E
26	55 2.406' N	9 55.459' E
27	55 6.18' N	10 3.938' E
27	55 5.344' N	10 4.361' E
27	55 5.256' N	10 4.302' E

27	55 5.201' N	10 4.182' E
27	55 5.138' N	10 4.192' E
27	55 5.093' N	10 4.24' E
27	55 4.832' N	10 4.315' E
27	55 4.606' N	10 4.339' E
27	55 4.549' N	10 4.435' E
27	55 4.525' N	10 4.62' E
27	55 4.284' N	10 4.335' E
27	55 4.329' N	10 3.358' E
27	55 4.686' N	10 3.222' E
27	55 5.106' N	10 3.562' E
27	55 5.274' N	10 2.929' E
27	55 5.45' N	10 2.804' E
27	55 5.751' N	10 2.814' E
27	55 6.18' N	10 3.938' E
28	55 3.933' N	10 5.745' E

28	55 3.835' N	10 7.238' E
28	55 3.602' N	10 7.282' E
28	55 3.373' N	10 6.635' E
28	55 2.859' N	10 7.445' E
28	55 2.581' N	10 7.321' E
28	55 2.027' N	10 6.512' E
28	55 2.053' N	10 5.121' E
28	55 2.826' N	10 3.918' E
28	55 3.022' N	10 4.233' E
28	55 3.283' N	10 5.237' E
28	55 3.481' N	10 5.27' E
28	55 3.933' N	10 5.745' E

Annex J - Fishery data: Description of methods

This Annex describes the methods used in the analyses of fishing activity in and around the Natura 2000 sites covered in the present proposal. Fishery data in terms of logbook and VMS data have been forwarded by Swedish fishery authorities for the period 2011-2015 and by German fishery authorities for the period 2011-2015 upon special request. Fishery data has also been forwarded by Polish fishery authorities for the period 2011-2015, where Estonian fishery data has been forwarded for the period 2010-2012.

The Danish Technical University, Institute of Aquatic Resources (DTU Aqua) has carried out the analyses for the Danish AgriFish Agency in accordance with the Commissions guidelines from 2008 *"Fisheries measures for marine Natura 2000 sites – A consistent approach to request for fisheries management measures under the Common Fisheries Policy".* Special focus has been given to the impact the proposed fishery management measures might have on current fishing activities in and around the concerned Natura 2000 sites.

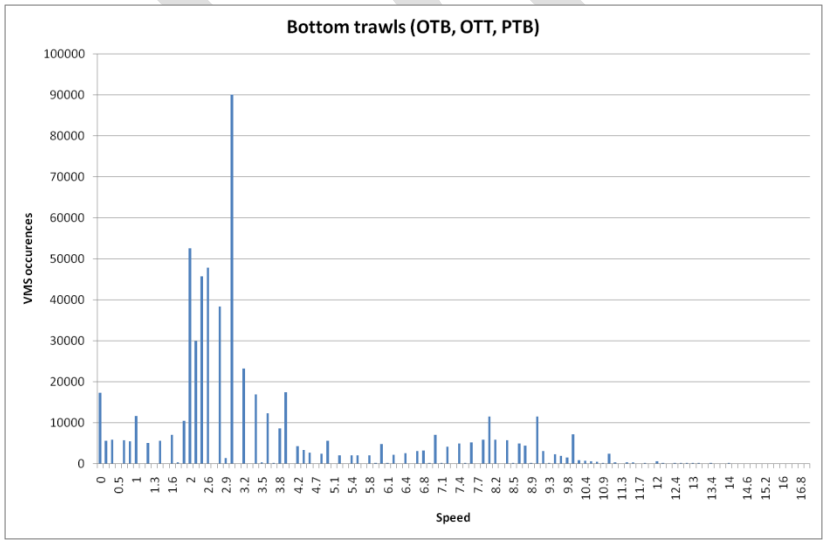
The Natura 2000 sites in which fishery management measures are proposed are located in several ICES squares. By combining logbook data and VMS pings, fishing intensity for a smaller area, such as a Natura 2000 site, can be estimated. Methods for working with the combined logbook/VMS data have been developed during the EU project "Development of tools for logbook and VMS data analysis" (No Mare/2008/10 Lot2), resulting n the R-package VMStools. This method has also been recommended by the ICES groups SGVMS/WGSFD. DTU Aqua's analysis of fishery data in relation to present proposal follows these recommendations.

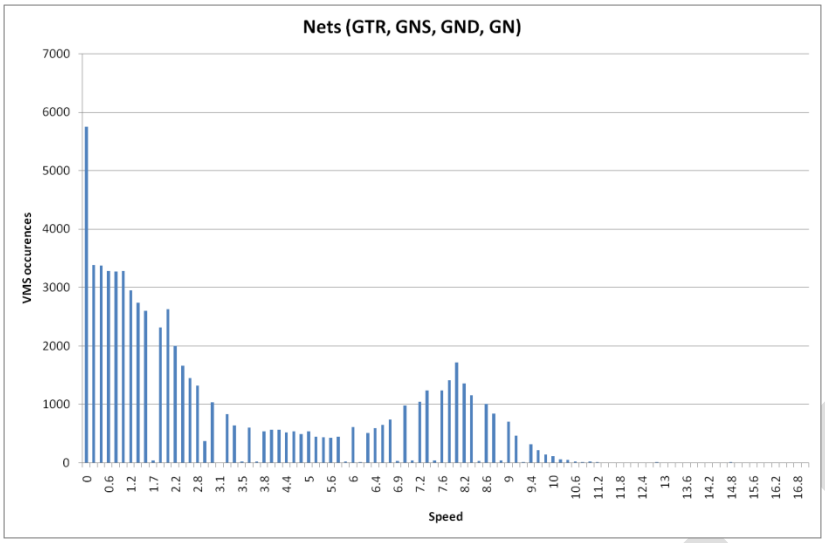
Description of methods

VMS data have been merged with logbook data using vessel-id and date as a unique key. The combined data give information on gear types used in each trip and information about vessel-id, position, time and speed.

When the gear type is known, a speed filter can be applied to the VMS data, whereby only the active fishing operations are analyzed. The speed filters used in this analysis are based on speed histograms given by gear groups. Two examples of speed histograms for bottom trawls and nets are displayed below in figure 1 and 2.

Figure 1 and 2. Speed histograms for bottom trawls and net types





The table below shows the speed filters used in analyses carried out in relation to the present proposal.

Gear group	**Gear codes**	**Min speed**	**Max speed**
Dredge	DRB, DRO, DRC, BMS	2	4.5
Bottom trawls	OTB, OTT, PTB, TBN, TBS	2	4
Beam trawl	TBB	2	4
Pelagic trawls	OTM, PTM	2	4
Lines	LH, LHP, LL, LLD, LLS, LX	0	0.1
Traps	FPO, FYK, FPN	0	4
Nets	GTR, GNS, GND, GN	0	4
Anchored seine	SDN	0	4
Fly shooting seine	SSC	0	4
Purse seine	PS	0	4

An uncertainty in this method is that the speed filters applied, are very general. However, it is the experience of DTU Aqua that the above given speed filters give a good overall picture of the fishing activity subdivisions 22-24. Another challenge with the data set is that VMS was only mandatory for vessels >=15 m oal in 2011, however in 2012 VMS became mandatory for vessels >=12 m oal. For Danish vessels in 2011, 45% of the landing weight from subdivisions 22-24 was from vessels without VMS, in 2012 the percentage was 25, in 2013 20 and in 2014 24. For the 2015 the value was 21.

Description of data: VMS and logbook data for DK, SE and DE vessels [to be updated with PL, EE data]

German data includes landing data for the Natura 2000 sites and VMS positions within the Natura 2000 sites for the years 2011-2015 and fishing effort data per 0.05 degrees squares in the Danish EEZ. The **Swedish data** included summarized weight and values for the Natura 2000 areas concerned (given for the entire fleet). Swedish VMS positions has also been provided for the years 2011-2015.
In the **Danish data**, mobile bottom contacting gears are defined as Bottom trawls, Beam trawls, Anchored Seines, Fly shooting seines and Dredges. Other gears include Nets, Lines, Pelagic trawls, Traps and Purse seines. In the **German data** mobile bottom contacting gears are defined as OTB, PTB, SSC, TBB, DRB and SDN. Other gears include GNS, GTR, OTM and PTM. In the **Polish data** mobile bottom contacting gears are defined as OTB. The **Polish data** was sent to Denmark for the area defined as D7, which covers 1/9 ICES square 38G4. The site 'Adler Grund and Rønne Banke, however, also covers a small part of ICES square 39G4.

Description of data: Landing weight and values for DK, SE and DE

In order to assess the impact of the proposed fisheries management measures, landings weight and value need to be assessed per Natura 2000 site for different gear groups.

Logbooks contain information about landed weight by species while sales notes data includes weight and value by species per fishing trip.

For the **Danish data**, DTU Aqua has merged these estimates to distribute the value on the trip proportionally to the landings weight. The dataset including species, weight and value is then merged with the VMS positions by vessel-id and date. This means that the weight and value by species is distributed evenly out on VMS positions where fishing activity is assumed, by vessel-id and date.

The landings and values by species within a Natura 2000 area can then be summarized (see section 6.2). An average exchange rate of 7.45 DKK/EUR has been used in the analyses.

The **Swedish data** on landings in the Natura 2000 areas were received as landed kg per year per Natura 2000 area, DCF level 6 metier and species. The data used is based on Swedish logbooks, which include fishing event positions. The dataset covers the whole Swedish fleet, thus also landings from smaller vessels <12 meters. To estimate the value of the Swedish landings, the species prices per kg from the Danish landings have been used.

The **German data** was sent to Denmark with number of vessels, fishing hours, total value, total weight and landings by species by year, Natura 2000 area, gear and vessel length for the years 2010-2015.

The **Polish data** was sent to Denmark for the area defined asD7 (Annex K, figure 1), which covers 1/9 ICES rectangle 38G4. The site 'Adler Grund and Rønne Banke, however, also covers a small part of ICES rectangle 39G4. In addition parts of the shown Polish landings may be from fishing outside the Natura 2000 site. Data covers number of vessels, number of fishing hours, total value, total weight and landings by species by year, Natura 2000 area, gear and vessel length for the years 2012-2015.

Annex K shows the landings from the four Natura 2000 areas compared to the total fishery in subdivisions 22-24. In total for Danish vessels, they contribute to 6.07 % of the landings from subdivisions 22-24 from vessels with VMS when looking at the average of 2011-2015 landings. The value of the landings for the 3 Natura 2000 areas contribute to 6.11 % of the value of landings from subdivisions 22-24 from vessels with VMS when looking at the average of the value of landings in 2011-2015. In Annex K, landings and value of landings for the three Natura 2000 areas is shown by year, gear group and species.

The Swedish vessels have landings with a value of 2927 euro on average for 2011-2015 from the site 'Adler Grund og Rønne Banke'. German vessels have landings from all three sites, with annual variations. In Flensborg Fjord, the average value of the landings from German vessels in 2011-2015 was 46977 euro.

Annex K - Total landings and catch value per Member State per Natura 2000 site

This annex contains information of total landings (bottom trawls) and catch value per Member State per site per year (table 1-13) and at species level per country per site per year (table 14-18).

Data in the following tables are not specified with thousands-seperator. All the values are in total kilograms.

Table 1: Total landings (kg) from Danish vessels in the Western Baltic Sea 2011-2015

Vessel type/Year	2011	2012	2013	2014	2015	Mean (2011-2015)
Vessels with VMS	14,037,181	18,549,678	22,246,968	15,462,111	17,326,275	17,524,443
Other vessels	11,572,859	6,257,508	5,706,704	4,930,691	4,486,854	6,590,923
Sum	25,610,040	24,807,186	27,953,672	20,392,802	21,813,129	24,115,366

Table 2: Total landings (kg) from Danish vessels in the three Natura 2000 areas

N2000 area/Year	2011	2012	2013	2014	2015	Mean (2011-2015)
Adler Grund og Rønne Banke	1,143	35,508	1,276	8,783	1,248	9,592
Centrale Storebælt	153,432	177,243	402,320	270,787	766,338	354,024
Flensborg Fjord	1,369,233	796,330	790,650	263,345	276,839	699,279

Table 3: Total landings (kg) from Swedish vessels in the three Natura 2000 sites

N2000 area/Year	2011	2012	2013	2014	2015	Mean (2011-2015)
Adler Grund og Rønne Banke	8,000	0	3,495	0	0	2.299
Flensborg Fjord	0	0	0	0	0	0
Centrale Storebælt	0	0	0	0	0	0

Table 4: Total landings (kg) from bottom trawls for German vessels in the three Natura 2000 sites

Natura 2000 area/year	2011	2012	2013	2014	2015	Mean (2011-2015)
Adler Grund og Rønne Banke	1,049	41,087	154	119	0	8,482
Centrale Storebælt og Vresen	4,040	0	0	0	0	808
Flensborg Fjord	98,388	34,657	111,298	72,681	73,642	78,133

Tabel 5: Total landings (kg) from bottom trawls for Estonian vessels in the Natura 2000 site 'Adler Grund og Rønne Banke'

Natura 2000 area/Year	2010	2012	Mean
Adler Grund og Rønne Banke	145	2.417	1.281

Tabel 6: Total landings (kg) from bottom trawls for Polish vessels in the Natura 2000 site 'Adler Grund og Rønne Banke' (D7) see figure 1

Natura 2000 area/Year	2011	2012	2013	2014	2015	Mean
Adler Grund og Rønne Banke	0	7,428	21,185	475	0	5.818

Table 7: Value of the total landings (EUR) from Danish vessels in the Western Baltic

Vessel type/Year	2011	2012	2013	2014	2015	Mean (2011-2015)
Vessels with VMS	8,408,763	13,803,121	13,689,495	10,655,961	12,154,234	11,742,315
Other vessels	15,759,031	11,711,196	10,529,810	9,121,201	9,221,008	11,268,449
Sum	24,167,794	25,514,317	24,219,305	19,777,162	21,375,242	23,010,764

Table 8: Value of the total landings (EUR) from Danish vessels in the three Natura 2000 sites

Natura 2000 area/Year	2011	2012	2013	2014	2015	Mean (2011-2015)
Adler Grund og Rønne Banke	1,271	47,483	1,504	13,694	717	12,934
Centrale Storebælt	199,333	317,309	407,504	424,917	604,266	390,666
Flensborg Fjord	370,018	607,521	583,964	269,903	326,348	431,551

Table 9: Value of the landings (EUR) from Danish vessels in the three Natura 2000 sites:

Natura 2000 area	EUR 2011	EUR 2012	EUR 2013	EUR 2014	EUR 2015	Mean (2011-2015)
Adler Grund og Rønne Banke						
Bundtrawl						
Atlantic Cod	300	41,099	1,393	13,483	535	11,362
Atlantic Herring	0	0	0	0	5	1
European Flounder	0	28	32	50	3	22
European Plaice	0	269	53	17	22	72
Saithe	0	0	0	21	0	4
Sandeels	0	0	0	0	125	25
Turbot	0	6	23	61	12	20
Whiting	0	26	3	62	15	21
Pelagisk trawl						
Atlantic Cod	922	0	0	0	0	184
Atlantic Herring	0	6,056	0	0	0	1,211
European Flounder	3	0	0	0	0	1

European Plaice	18	0	0	0	0	4
Centrale Storebælt og Vresen						
Bundtrawl						
Atlantic Cod	154,925	129,616	165,026	224,912	195,437	173,983
Atlantic Halibut	0	0	9	28	14	10
Atlantic Herring	0	0	915	0	2,325	648
Brill	3,061	4,971	4,133	3,199	2,943	3,661
Common Dab	3,640	7,879	4,296	4,020	3,721	4,711
Common Sole	10,117	26,311	23,956	30,918	46,048	27,470
European Anchovy	0	0	0	0	6	1
European Flounder	1,950	9,040	16,778	18,055	4,403	10,045
European Hake	0	0	17	29	10	11
European Plaice	8,109	32,821	30,684	37,549	55,460	32,925
Haddock	11	0	0	5	11	6
Lemon Sole	370	1,244	1,129	994	1,187	985
Ling	44	37	51	55	87	55
Lumpfish	789	376	335	2,628	3,255	1,477
Norway Lobster	0	0	673	0	0	135
Saithe	0	0	8	3	55	13
Sea Trout	0	0	0	0	0	0
Sprat	10,006	4,650	19,012	0	15,992	9,932
Tub Gurnard	0	4	7	14	31	11
Turbot	2,592	3,970	3,668	5,339	4,269	3,968
Unknown Species	3	20	10	13	0	9
Whiting	1	0	51	0	3	11
Garn						
Atlantic Cod	0	41,043	83,261	84,729	119,540	65,715
Atlantic Mackerel	0	38	0	0	0	8
Brill	0	3,252	1,461	705	5,693	2,222
Common Dab	0	1,703	1,566	590	1,005	973
Common Sole	0	31,379	11,164	4,745	13,481	12,154
European Eel	0	0	0	0	123	25
European Flounder	0	924	1,167	387	69	509
European Plaice	0	10,380	5,929	3,590	9,967	5,973
Lemon Sole	0	111	174	60	60	81
Ling	0	46	305	535	92	196
Lumpfish	0	1,137	343	560	2,691	946
Saithe	0	0	0	55	2,444	500
Turbot	0	2,671	696	389	980	947
Unknown Species	0	99	4	0	0	21
Pelagisk trawl						
Atlantic Cod	0	0	39	485	316	168
Atlantic Herring	0	0	1,106	0	16,962	3,614
Brill	0	0	123	39	0	32
Common Dab	0	0	28	0	17	9
Common Sole	0	0	310	78	0	78
European Anchovy	0	0	0	0	20	4
European Flounder	0	0	128	13	2	29
European Plaice	0	0	666	176	13	171
Sprat	3,715	3,573	28,173	0	95,520	26,196
Turbot	0	0	17	41	0	12
Whiting	0	0	95	0	11	21

Flensborg Fjord, Bredgrund og farvandet omkring Als						
Bundtrawl						
Atlantic Cod	29,410	348,216	287,512	166,020	186,017	203,435
Atlantic Herring	0	0	0	0	0	0
Brill	1,469	692	990	412	411	795
Common Dab	2,621	22,490	15,889	9,705	10,313	12,204
Common Sole	162	267	423	388	193	287
European Eel	0	0	215	0	0	43
European Flounder	1,210	19,085	21,335	17,394	13,182	14,441
European Plaice	11,693	105,675	112,395	73,266	108,834	82,372
Haddock	0	3	3	4	21	6
Lemon Sole	55	887	1,833	666	557	799
Lumpfish	18	145	114	118	475	174
Mullets	2	6	3	0	0	2
Saithe	0	3	4	28	11	9
Sea Trout	11	2	0	0	0	3
Sprat	0	0	0	348	0	70
Turbot	401	2,129	2,642	1,429	1,345	1,589
Whiting	130	60	602	125	58	195
Pelagisk trawl						
Atlantic Cod	1,312	1,122	346	0	0	556
Atlantic Herring	0	0	12,315	0	6	2,464
Brill	7	0	0	0	0	1
Sprat	321,515	93,887	127,206	0	4,925	109,507
Sticklebacks	0	12,850	0	0	0	2,570
Whiting	0	0	136	0	2	28

Table 10: Value of the landings (EUR) from bottom trawls for Swedish vessels in the three Natura 2000 sites

Natura 2000 area/Year	2011	2012	2013	2014	2015	Mean
Adler Grund og Rønne Banke	10,407	0	4,228	0	0	2,927
Flensborg Fjord og havet omkring Als	0	0	0	0	0	0
Centrale Storebælt og Vresen	0	0	0	0	0	0

Table 11: Value of the landings (EUR) from German vessels in the three Natura 2000 sites

Natura 2000 area/Year	2011	2012	2013	2014	2015	Mean (2011-2015)
Adler Grund og Rønne Banke	1,059	56,945	197	139	0	11,668
Centrale Storebælt og Vresen	10,048	0	0	0	0	2,010
Flensborg Fjord	48,530	35,473	56,930	37,591	56,363	46,977

Table 12: Value of the landings (EUR) from Estonian vessels in the Natura 2000 site 'Adler Grund og Rønne Banke'

Natura 2000 area/Year	2010	2012	Mean
Adler Grund og Rønne Banke	159	2.861	1.510

Table 13: Value of the landings (EUR) from Polish vessels for the Natura 2000 site 'Adler Grund og Rønne Banke (D7) see figure 1

Natura 2000 area/Year	2011	2012	2013	2014	2015	Mean
Adler Grund og Rønne Banke	0	4,983	32,851	114	0	7,589

Table 14: Weight (kg) of landings per specie level from Danish vessels by year (2010-2015)

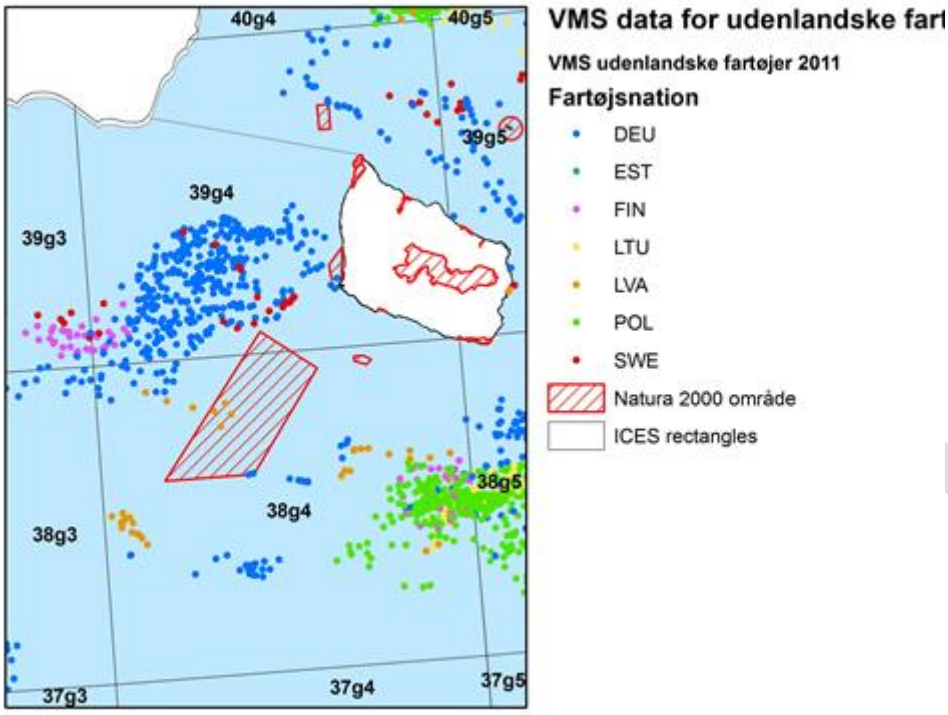
Natura 2000 area	KG 2011	KG 2012	KG 2013	KG 2014	KG 2015	Mean (2011-2015)
Adler Grund og Rønne Banke						
Bundtrawl						
		24,54				
Atlantic Cod	269	5	1,102	8,470	522	6,981
Atlantic Herring	0	0	0	0	24	5
European Flounder	0	66	106	145	13	66
European Plaice	0	259	57	23	28	74
Saithe	0	0	0	33	0	7
Sandeels	0	0	0	0	642	128
Turbot	0	1	6	14	3	5
Whiting	0	26	5	98	17	29
Pelagisk trawl						
Atlantic Cod	837	0	0	0	0	167
		10,61				
Atlantic Herring	0	0	0	0	0	2,122
European Flounder	9	0	0	0	0	2
European Plaice	24	0	0	0	0	5
Centrale Storebælt og Vresen						
Bundtrawl						
		60,42	95,05	123,9	82,24	
Atlantic Cod	77,224	8	1	54	9	87,781
Atlantic Halibut	0	0	1	3	2	1
Atlantic Herring	0	0	2,771	0	9,624	2,479
Brill	448	821	636	447	560	582
Common Dab	4,968	9,887	6,209	5,304	4,468	6,167
Common Sole	808	2,076	1,893	2,672	3,645	2,219
European Anchovy	0	0	0	0	25	5
		15,77	30,33	30,84	11,73	
European Flounder	3,247	7	3	4	6	18,387
European Hake	0	0	13	33	7	11
		29,76	31,10	40,68	50,31	
European Plaice	7,759	0	7	4	1	31,924
Haddock	14	0	1	6	12	7
Lemon Sole	69	305	219	190	211	199
Ling	16	12	30	22	48	25
Lumpfish	214	40	51	1,221	1,384	582
Norway Lobster	0	0	105	0	0	21
Saithe	0	0	6	7	39	10
Sea Trout	0	0	0	0	0	0
		13,36	63,88		66,19	
Sprat	42,852	0	4	0	1	37,257
Tub Gurnard	0	2	2	6	24	7
Turbot	292	557	481	601	549	496
Unknown Species	2	10	5	10	0	5
Whiting	1	0	168	1	3	35
Garn						

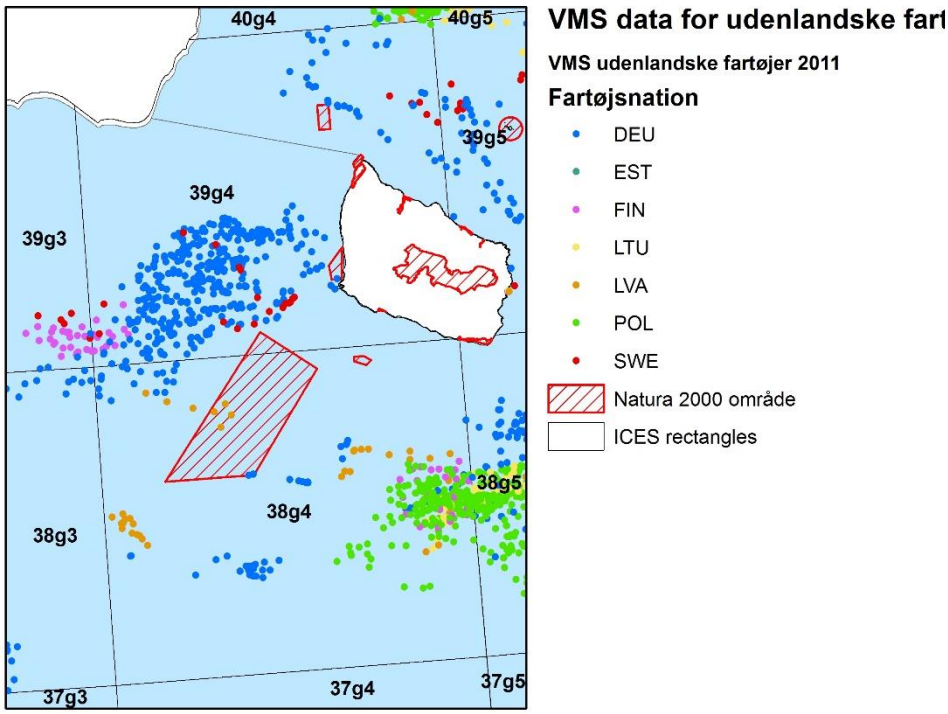
		16,05	54,73	58,04	51,71	
Atlantic Cod	0	2	9	2	4	36,109
Atlantic Mackerel	0	14	0	0	0	3
Brill	0	606	283	108	952	390
Common Dab	0	2,085	2,214	789	1,236	1,265
Common Sole	0	1,993	809	334	860	799
European Eel	0	0	0	0	9	2
European Flounder	0	1,498	1,935	624	145	840
European Plaice	0	8,905	5,999	3,544	8,391	5,368
Lemon Sole	0	26	31	12	8	15
Ling	0	17	166	223	42	90
Lumpfish	0	324	104	582	1,012	404
Saithe	0	0	0	71	1,790	372
Turbot	0	530	111	42	117	160
Unknown Species	0	26	2	0	0	6
Pelagisk trawl						
Atlantic Cod	0	0	11	176	424	122
					71,32	
Atlantic Herring	0	0	3,542	0	6	14,974
Brill	0	0	14	4	0	4
Common Dab	0	0	34	0	19	11
Common Sole	0	0	20	5	0	5
European Anchovy	0	0	0	0	82	16
European Flounder	0	0	241	25	5	54
European Plaice	0	0	567	196	12	155
		12,13	98,19		397,0	
Sprat	15,517	0	4	0	62	104,580
Turbot	0	0	2	3	0	1
Whiting	0	0	339	0	46	77
Flensborg Fjord, Bredgrund og farvandet omkring Als						
Bundtrawl						
		187,6	183,1	113,1	88,17	
Atlantic Cod	16,004	32	88	10	6	117,622
Atlantic Herring	0	1	0	0	0	0
Brill	269	122	175	66	100	146
		31,95	28,61	18,01	15,73	
Common Dab	4,504	0	4	9	0	19,763
Common Sole	12	20	32	34	17	23
European Eel	0	0	16	0	0	3
		38,77	46,85	34,39	35,36	
European Flounder	2,609	5	9	2	4	31,600
		105,1	129,8	95,62	118,3	
European Plaice	11,629	66	73	8	65	92,132
Haddock	0	3	2	9	20	7
Lemon Sole	11	190	347	124	98	154
Lumpfish	8	23	14	80	243	74
Mullets	1	4	2	0	0	1
Saithe	0	3	4	80	10	19
Sea Trout	3	1	0	0	0	1
Sprat	0	0	0	1,358	0	272
Turbot	52	352	404	199	217	245
Whiting	286	96	1,246	247	123	400

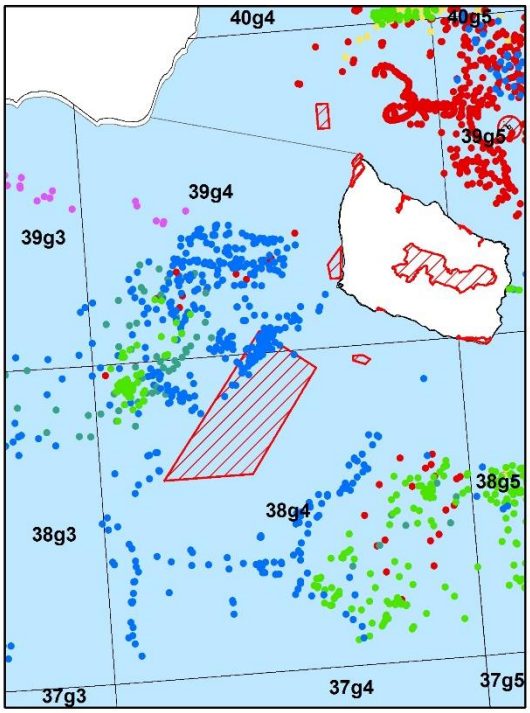
Pelagisk trawl

Atlantic Cod	638	603	160	0	0	280
Atlantic Herring	0	0	35,25 7	0	21	7,056
Brill	1	0	0	0	0	0
Sprat	1,333,206	379,641	364,067	0	18,346	419,052
Sticklebacks	0	51,749	0	0	0	10,350
Whiting	0	0	390	0	8	79

Map showing fishing activity with mobile bottom contacting gears in Danish EEZ in and around the Natura 2000 site 'Adler Grund og Rønne Banke'





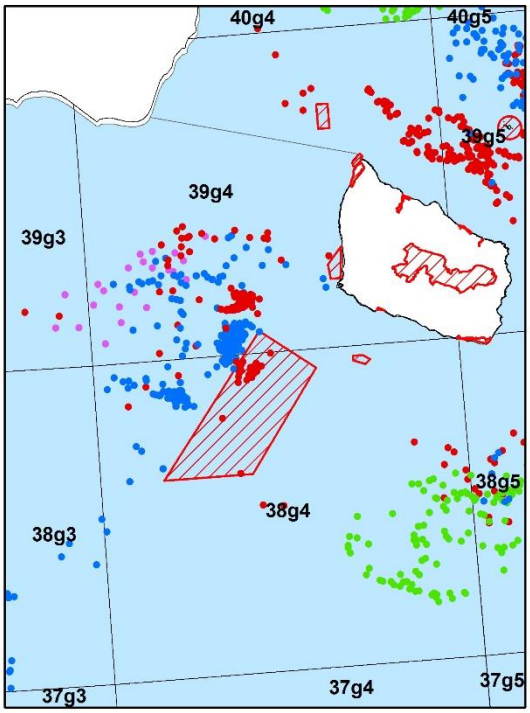


VMS data for udenlandske fart

VMS udenlandske fartøjer 2012

Fartøjsnation

- DEU
- EST
- FIN
- LTU
- LVA
- POL
- SWE
- Natura 2000 område
- ICES rectangles

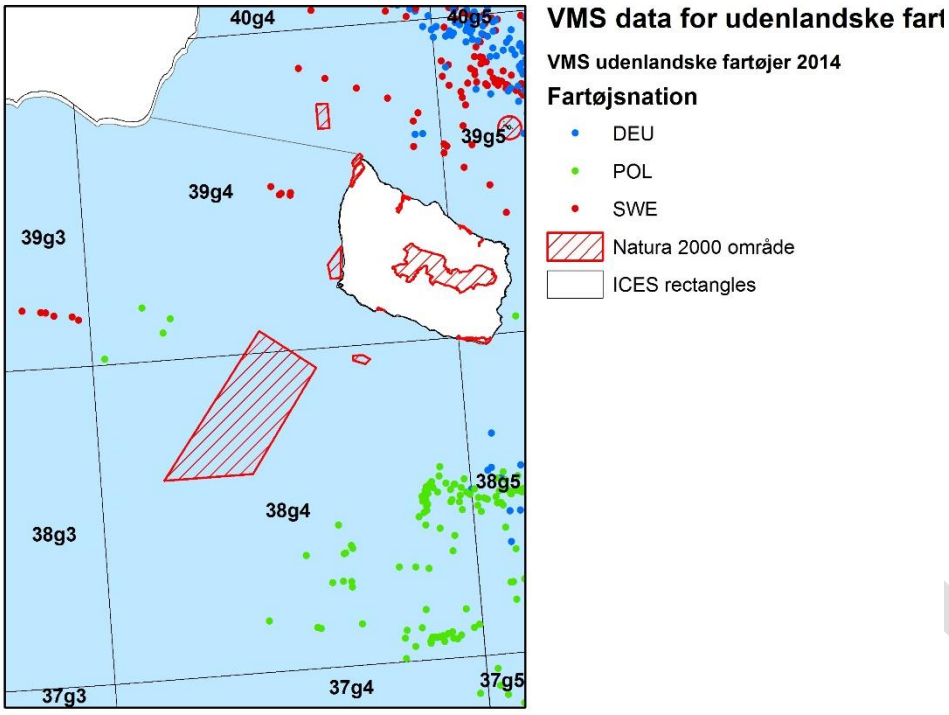


VMS data for udenlandske fart

VMS udenlandske fartøjer 2013

Fartøjsnation

- DEU
- FIN
- POL
- SWE
- Natura 2000 område
- ICES rectangles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37g5
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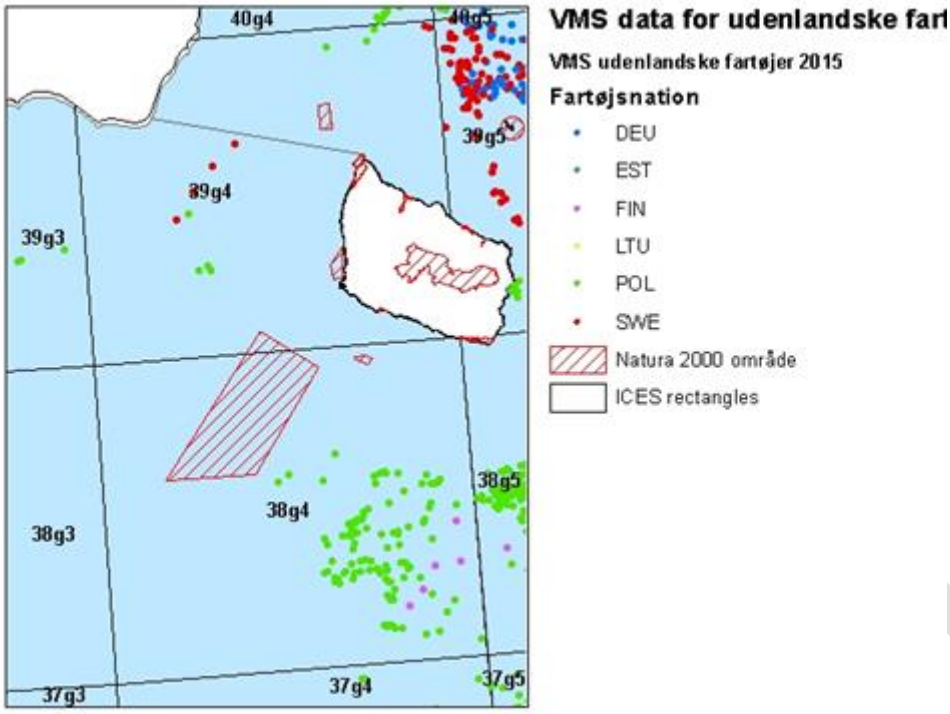
VMS udenlandske fartøjer 2014
Fartøjsnation
DEU
POL
SWE
Natura 2000 område
ICES rectangles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37g4
37g5
VMS data for udenlandske far
VMS udenlandske fartøjer 2015
Fartøjsnation
DEU
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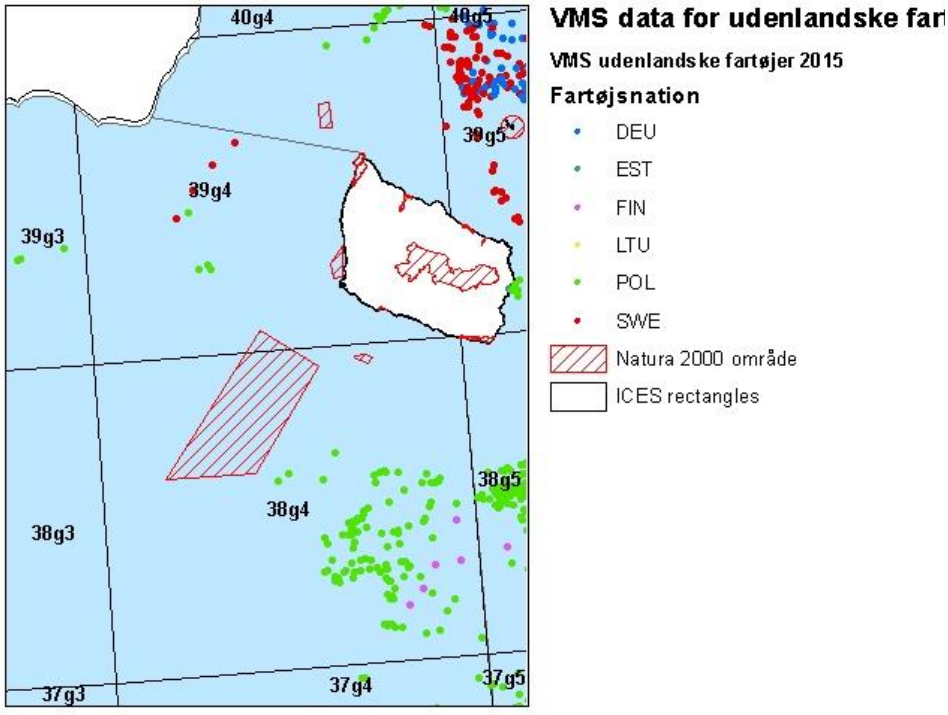
FIN
LTU
POL
SWE
Natura 2000 område
ICES rectangles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39g4
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38g4
38g3
37g3
37g4
37g5
VMS data for udenlandske far
VMS udenlandske fartøjer 2015
Fartøjsnation
DEU
EST
FIN
LTU
POL
SWE
Natura 2000 område
ICES rectangles

Table 15: Weight (kg) and value (€) of landings from Swedish vessels by year (2010-2015)

Natura 2000 site	2011		2012		2013		2014		2015	
	KG	EUR	KG	EUR	KG	EUR	KG	EUR	KG	EUR
Adler Grund og Rønne Banke										
Bottom trawl										
Atlantic Cod	8000	10407	0	0	3495	4228	0	0	0	0
Gillnet										
Atlantic Cod	0	0	57	60	0	0	0	0	0	0
European Flounder	0	0	80	48	0	0	285	142	0	0
European Plaice	0	0	9751	11954	210	254	229	258	0	0
Longlines										
Atlantic Cod	0	0	0	0	9619	11636	0	0	0	0
Pelagic trawl										
Atlantic Cod	0	0	0	0	0	0	600	143		
Atlantic Herring	0	0	0	0	0	0	36000	14203		
Sprat	0	0	0	0	0	0	0	0		

Table 16: Weight (kg) of landings from German vessels by year (2010-2015)

Natura 2000 site	KG 2011	KG 2012	KG 2013	KG 2014	KG 2015	Mean (2011-2015)
Adler Grund og Rønne Banke						
Bottom trawl						
Atlantic Cod	855	40,626	123	24	0	8,326
Common Dab	1	2	0	50	0	11
European Flounder	170	277	27	35	0	102
European Plaice	9	175	4	9	0	39
Saithe	0	0	0	1	0	0
Turbot	9	3	0	0	0	2
Whiting	6	2	0	0	0	2
Centrale Storebælt og Vresen						
Bottom trawl						
Atlantic Cod	655	0	0	0	0	131
Brill	93	0	0	0	0	19
Common Dab	282	0	0	0	0	56
Common Sole	529	0	0	0	0	106
European Flounder	1,313	0	0	0	0	263
European Plaice	1,088	0	0	0	0	218
Haddock	12	0	0	0	0	2
Lemon Sole	11	0	0	0	0	2
Lumpfish	4	0	0	0	0	1
Turbot	53	0	0	0	0	11
Flensborg Fjord						
Bottom trawl						
Atlantic Cod	4,990	9,858	8,526	6,667	4,596	6,927
Atlantic Herring	3,496	2,863	15,420	10,442	5,362	7,517
Brill	89	4	3		1	19
Common Dab	4,790	6,185	3,199	5,885	15,594	7,131
Common Sole	14	36	3	5	6	13
European Anchovy	0	0	18,904	0	2,177	4,216
European Flounder	9,140	6,687	6,020	2,976	5,902	6,145
European Plaice	5,809	8,961	6,433	5,447	16,191	8,568
Haddock	11	0	0	120	5	27
Jack and horse mackerels ne	0	0	17,765	9,676	0	5,488
Lemon Sole	1	0	16	2	0	4
Saithe	0	0	0	29	2	6
Sandeels	0	0	2,761	0	0	552
Sprat	26,010		21,616	12,892	19,654	16,034
Turbot	112	23	25	34	90	57
Whiting	43,922	41	10,603	18,499	4,054	15,424
Witch Flounder	0	0	2	6	8	3

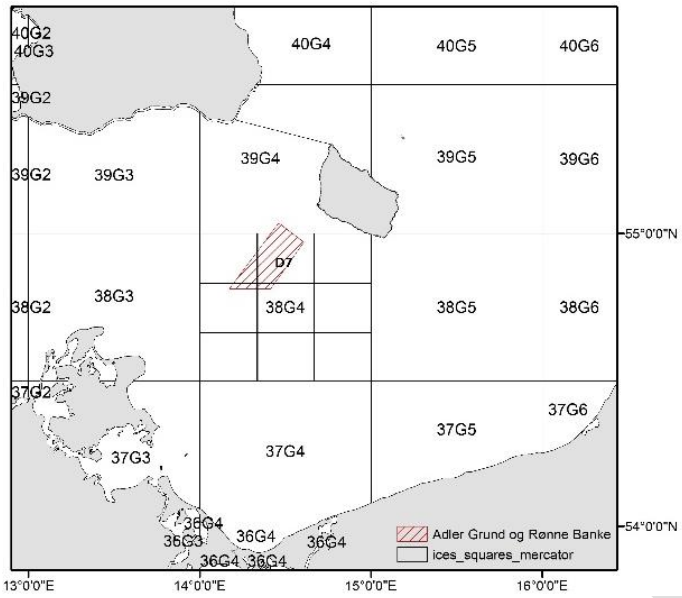
Table 17: Weight (kg) and value (€) of landings from Estonian vessels by year (2010-2012) for the Natura 2000 site 'Adler Grund og Rønne Banke'

Natura 2000 area	Weight (kg)	Estimated value (DKK)	Estimated value (EUR)
2010			
Cod			
Pelagisk trawl			
38G4	145	1182	159
2012			
Cod			
Bottom trawl			
38G4	1657	14643	1965
39G4(24)	760	6675	896

Table 18: Weight (kg) and value (€) of landings from Polish vessels by year (2012-2015) for the Natura 2000 site 'Adler Grund og Rønne Banke' (D7) see figure 1

Year	Gear code	Species	Landing, sales notes (kg)	Value (PLN)	Value (DKK)	Value (EUR)
2012	Bottom trawl (OTB)	Cod	3043	18808	33488	4495
		Flounder	825	1650	2938	394
		Plaice	125	312.5	556	75
		Turbot	10	80	142	19
	Bottom trawl (OTB) and gillnet (GNS)	Flounder	1050	*takeover*	*takeover*	*takeover*
		Plaice	2375	*takeover*	*takeover*	*takeover*
2013	Bottom trawl (OTB)	Cod	18260	133772	237675	31903
		Flounder	2925	3975	7062	948
2014	Bottom trawl (OTB)	Flounder	475	475	846	114
2015	Midwater trawl (OTM)	Herring	9752	8192	14586	1958
		Sandeel	3250	2334	4156	558
		Sprat	9250	6582	11720	1573

Figure 1: Map showing the Polish subarea D7 within ICES rectangle 38G4



Annex L - Fishery effort

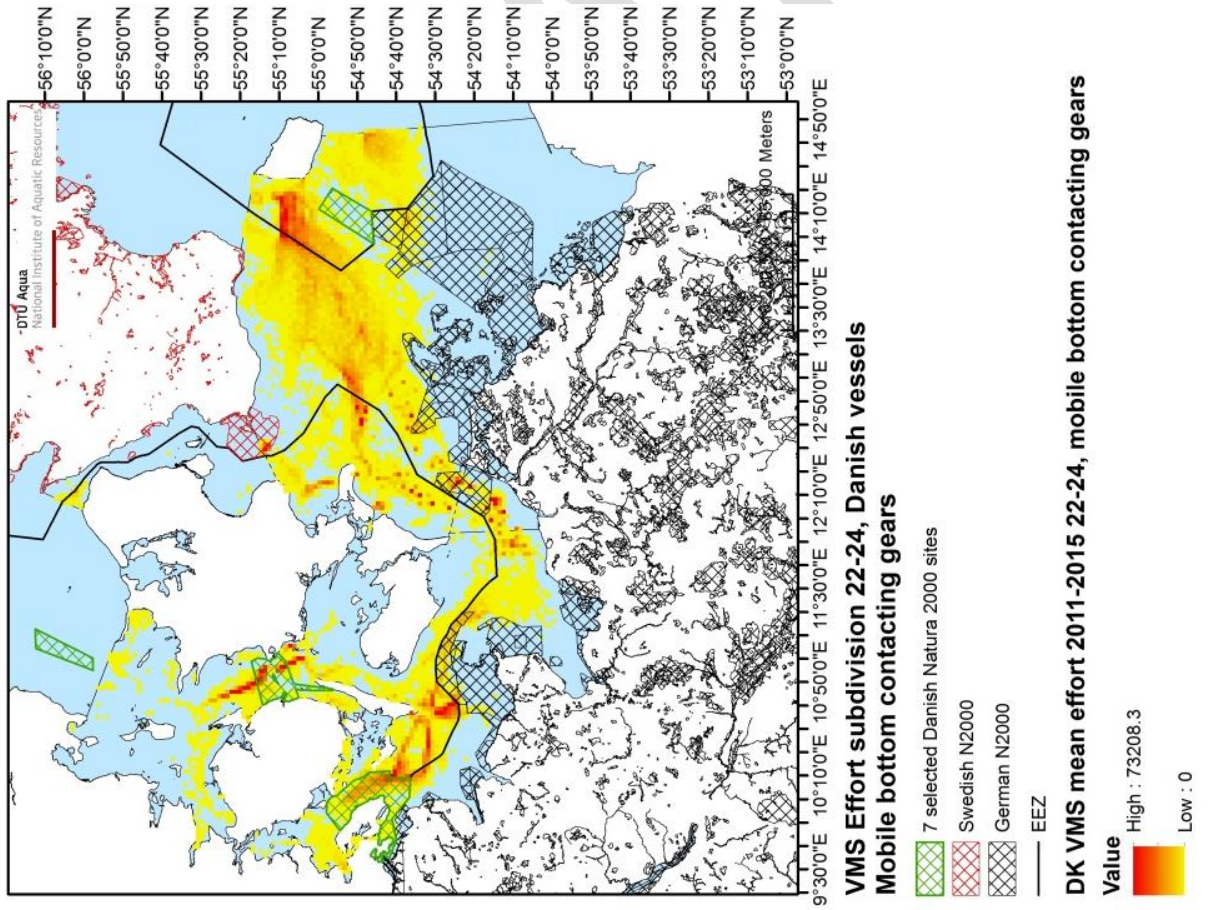
Fishery effort can be expressed as VMS effort to give an indication of where in a given area, fishery takes place and at what intensity. DTU Aqua has analyzed fishery effort in relation to the present proposal for Danish, Swedish and German vessels.

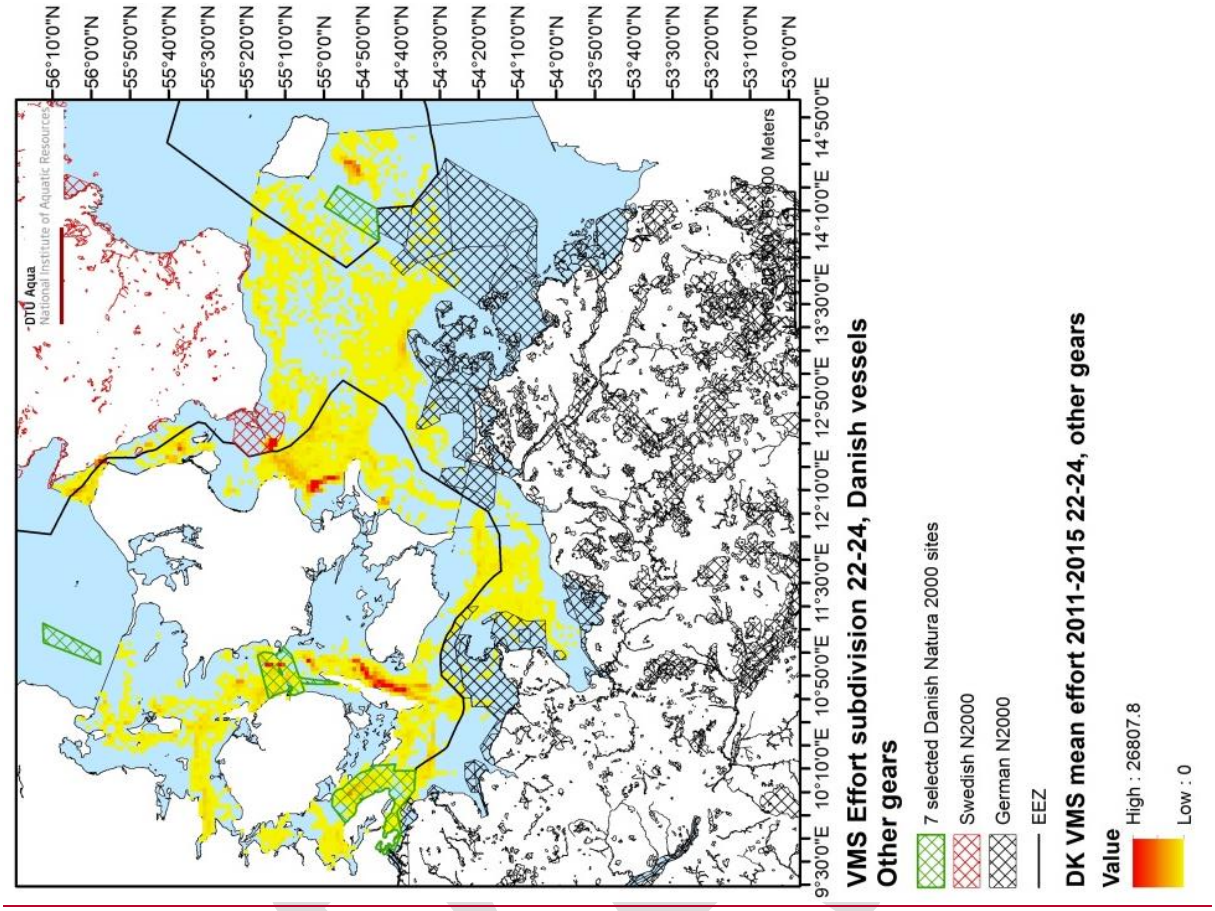
Danish vessels

VMS effort is expressed as VMS point*VMS interval*kW of the vessel for each VMS ping classified as fishing activity. As the VMS interval for Danish vessels is one hour, it will be expressed as VMS point*kW. In 2011, the VMS data are available for vessels >=15 m, whereas in 2012 the VMS data are available for vessels >=12 m. To make a VMS effort estimate that is comparable between years, the amount of extra effort that the vessels of length 12-15 meters are adding to the 2012 data, can be expressed as (VMS*kW 12-15m)/(VMS*kW >=15m). This gives the factor 0.494 for bottom contacting mobile gear groups, and the factor 0.086 for other gear groups. The 2011 data have been raised by these factors accordingly.

The average VMS effort within cell sizes of 2000 m for the years 2011-2015 is shown in the maps below (figure 1) for bottom contacting mobile gear groups and other gear groups for Danish vessels for the Baltic area.

Figure 1 . Distribution of Danish fishing VMS effort (Number of VMS recordings * vessel kW) by gear group given as an average for the period 2011-2015





The tables below (table 1 and 2) show fishing activity for Danish vessels in the three Natura 2000 sites in relation to fishery in the Baltic Sea in general based on VMS effort.

Table 1. Average (2011-2015) VMS effort inside the Natura 2000 sites and the stone reef buffer zones, relatively to the total VMS effort in the Baltic Sea for Danish vessels with mobile bottom contacting gears.

	Natura 2000 area	Stone reef buffer
Adler Grund og Rønne Banke	0.088	0.021
Centrale Storebælt og Vresen	2.901	0.731
Flensborg Fjord, Bredgrund og farvandet omkring Als	4.663	0.074
Total	7.653	0.826

Table 2. Average (2011-2015) VMS effort inside the Natura 2000 sites and the stone reef buffer zones, relatively to the total VMS effort in the Baltic Sea for Danish vessels with other gear groups.

	Natura 2000 area	Stone reef buffer
Adler Grund og Rønne Banke	0.121	0.016
Centrale Storebælt og Vresen	3.977	2.285
Flensborg Fjord, Bredgrund og farvandet omkring Als	4.079	0.142
Total	8.177	2.443

The maps in figure 1 and data in table 1 and 2 clearly show the very low fishing effort within the Natura 2000 areas when looking at Danish vessels above 12 meters.

Swedish vessels

The forwarded Swedish VMS data contains information on position, date, speed, VMS interval, vessel kW, kW hours, gear and DCF level 6 metier for the years 2011-2015, and could be processed the same way as the Danish data.

The Swedish VMS data has variable ping-period with values between 0.25 or 1. The VMS effort for the Swedish data is calculated as VMS ping*kW*ping period. An average VMS effort map for the years 2011-2015 is calculated in the same way as for the Danish vessels, see figure 2.

Figure 3. Distribution of Swedish fishing VMS effort (Number of VMS recordings * vessel kW * ping-period) by gear group in the Baltic Sea area given as an average for the period 2011-2015

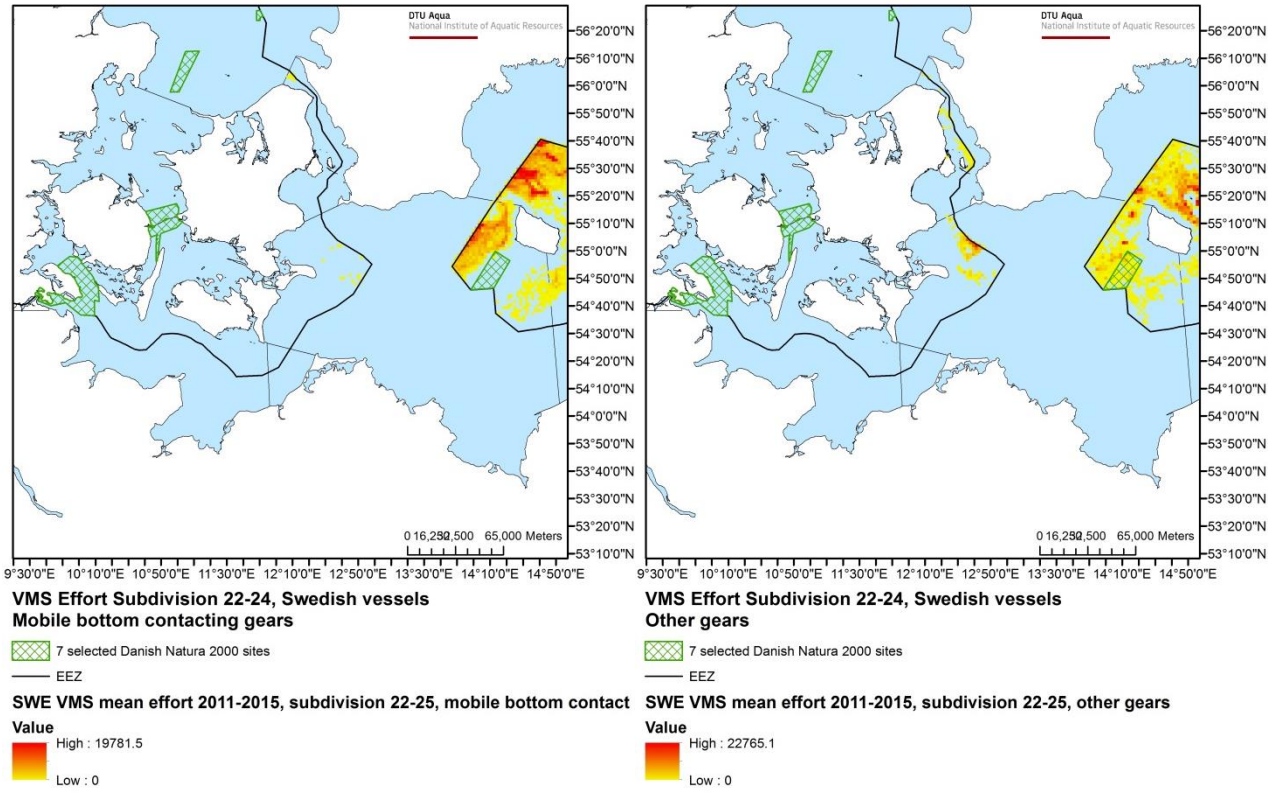
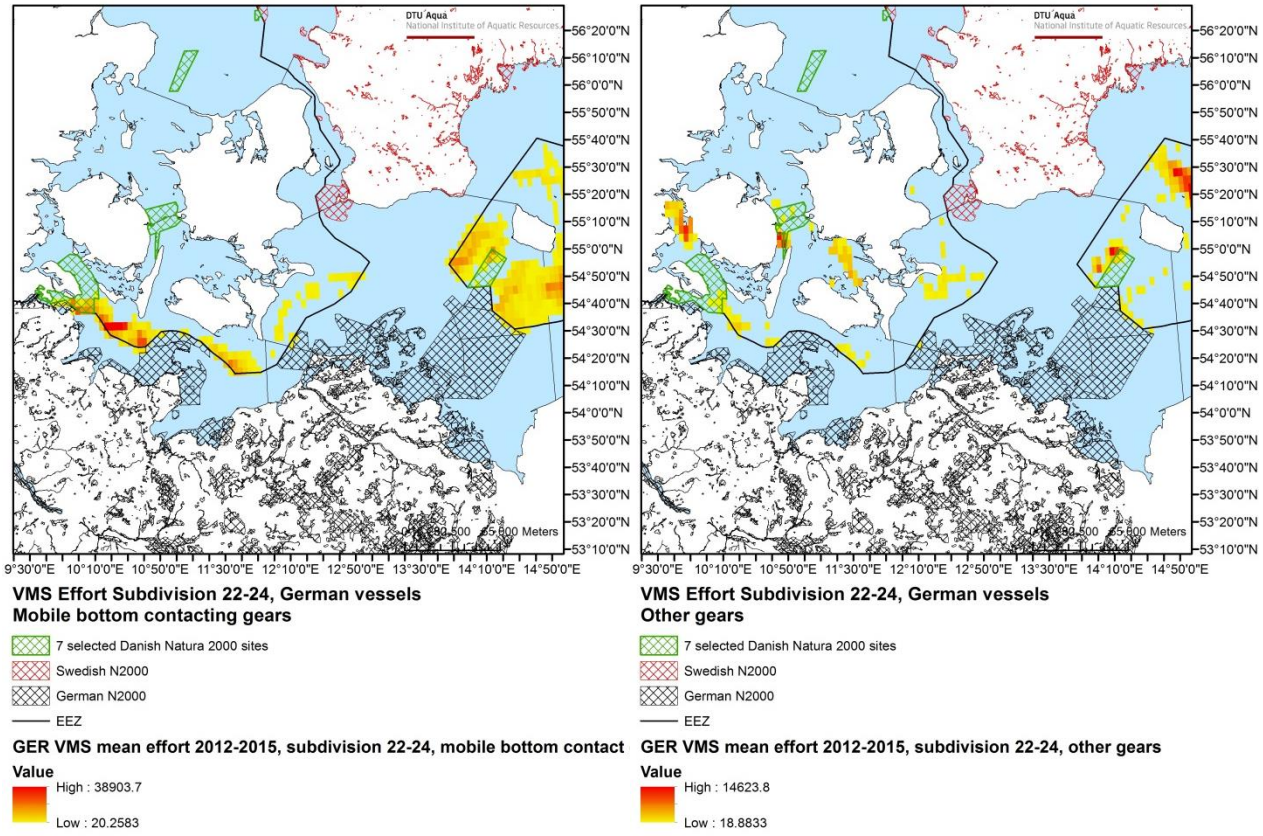


Figure 4 . Distribution of German fishing VMS effort by gear groups given as an average for the period 2010-2015



German data

The German effort data is given for the years 2012-2015 and contains information on effort hours and kW fishing hours for the gear groups DTS (Demersal Trawlers and Seiners), PTS (Pelagic trawlers and Seiners) and PG (Passive Gears). The spatial information is given as C-squares, which is a reference system, at a resolution of 0.05 degrees. The data is split into Mobile Bottom Contacting Gears and Other Gears, and the kW fishing hours is averaged for the years 2012-2015.