[Final Draft, 12 July 2017] Proposal for Fisheries Management Measures to protect the Common Guillemot (A199) in the Frisian Front Special Protection Area

Draft Submission to the European Commission

Content

1. Executive Summary

The Frisian Front lies in the central region of the Dutch Exclusive Economic Zone (EEZ). It is an area of 2882 km^2. High concentrations of fish and bird species are observed there. Guillemots (*Uria aalge*) in particular come here in great numbers in summer and autumn to raise their young and moult. The conservation objective for common guillemot at national level is to maintain the extent and quality of habitat. Common guillemot occurs everywhere on the Frisian Front and is regularly present in large numbers from July to November (and beyond in smaller numbers). The protection of the rearing grounds for young common guillemots, such as the Frisian Front, will help maintain the population

This document contains a request to the European Commission to regulate fisheries in the Frisian Front for the protection of the common guillemot (A 199). This request has been drafted to enable The Netherlands to meet its commitments under the Birds Directive and in accordance with the guidance provided for by the European Commission for proposing measures for the management of fisheries for this purpose under the Common Fisheries Policy.

It proposes the following:

- To prohibit gillnet fishing in the Frisian Front area from 1 June-30 November of each year.

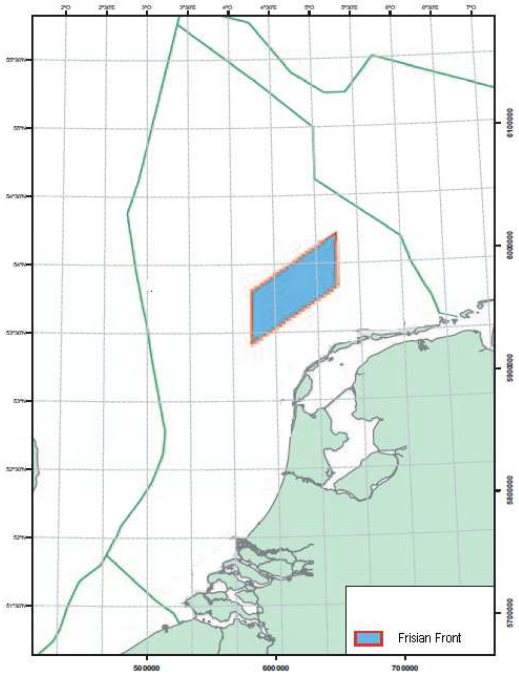


Figure 1. Frisian Front in Dutch EEZ (Source: Integraal Beheerplan 2015).

2. Introduction

This document contains a proposal for regulation of fisheries activities, in the context of the Common Fisheries Policy. The aim of such regulation is to ensure a key contribution to achieving the Natura 2000 conservation objective for the bird species common guillemot (*Uria aalge*, A199) in the area of the Frisian Front. The area is located in the EEZ of The Netherlands.

PM This document is submitted to the ad hoc working group of the Scheveningen Group by the initiating Member State The Netherlands. Final approval of the Joint Recommendation was agreed by those Member States with a direct fisheries management interests in the "High Level Group" and submitted to the commission by its Chair.

This chapter contains a description of the Birds Directive in the marine environment and of the Common Fisheries Policy. It describes how these two policy frameworks relate to each other.
Chapter 3 describes the history and processes leading up to the current proposal. Chapter 4 through 7 describe the relevant background information of the proposal, including the boundaries, natural features, and conservation objectives. These sections is structured in accordance with the requirements (the "11 information points") as requested by the European Commission[1]. Chapter 8 gives insight into fleet activity and the fleet segments affected by the measures. Chapter 10 contains proposals for monitoring, control and enforcement. The actual proposal, the key considerations and rationale for the proposal are contained in chapter 9.

2.1 Birds Directive in marine environment

The Birds Directive[2] was adopted in 1979. The Directive is aimed at conserving (the natural habitats of) European wild bird populations. An important element of this directive is the designation and protection of Special Protection Areas (SPAs). SPAs and Special Areas of Conservation (SACs, under the Habitats Directive) jointly constitute an ecologically coherent network of conservation areas, the so-called Natura 2000 Network. The main objective of the Birds Directive is the protection of habitats for endangered as well as migratory species listed in Annex I of this directive.

For a long time it was unclear whether the Birds Directive was applicable outside territorial waters in the marine environment. In 2005 the European Court of Justice (ECJ) ruled that the Habitats Directive not only applies to the territorial see, but also to areas outside the territorial sea where Member States exercise Sovereignty[3]. There is no reason to assume this

1 In its document entitled "Fisheries Measures for Marine Natura 2000 Sites – A consistent approach to request for fisheries management measures under the Common Fisheries Policy"; see also "Guidelines for the establishment of the Natura 2000 Network in the marine environment. Application of the Habitats and Birds Directive", for paras. 3.1 – 3.3 incl. Both documents can be found on http://ec.europa.eu/environment/nature/natura2000/marine/index_en.htm.

2 Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds, OJ L 103, 25.4.1979, p. 1–18.
3 ECJ case C-6/04, 20 Oct 2005.

would not similarly apply to the Birds Directive. Since then, the international effort to extend the Natura 2000 network into the marine environment has picked up momentum and had grown on an annual basis. Some of the most important milestones in this respect include the establishment of the 2007 guidelines for application of the Birds and Habitats Directives in the marine environment. Since 2003 a European marine expert group has been active to facilitate the implementation of the Natura2000 network in the marine environment.

2.2 European Common Fisheries Policy

The European Common Fisheries Policy (CFP) is a key policy framework for the current proposal. Any regulation of fisheries in European marine waters must follow the principles, rules and procedures of the CFP. The basic rules are laid down in Basic Regulation EC 1380/2013, which is the umbrella policy framework of the CFP. European Commission guidance on the management of fisheries in a Natura 2000 site proposes a procedure by which fisheries measures should be obtained. This procedure is explained and updated according to the revised Basic Regulation, in particular article 11, in paragraph 2.3.2 below. Using this guidance, a Member State hosting a particular SCI, SPA or SAC should formulate a request for CFP measures to the European Commission. The European Commission, based on this proposal, should take required further action to transform this proposal into EU law. The present document substantiates and underpins such a request for regulation of fisheries in light of the conservation objectives for the bird species common guillemot (A199) in the area of the Frisian Front.

2.3 Reconciling nature conservation and fisheries policy

Proposing fisheries measures to the European Commission poses specific challenges, because both the rules and procedures of nature policy (Birds and Habitat Directive) and fisheries policy (CFP) must be adhered to simultaneously. For this purpose, the European Commission has provided specific guidance documents to Member States. Notwithstanding the revised CFP these documents have been at the basis of this background document.

2.3.1 Marine Guidelines (2007)

In 2007, the European Commission established the *Guidelines for the establishment of the Natura 2000 network in the Marine Environment. Application of the Birds and Habitats Directive (May 2007)*. This guidance document provides advice inter alia on selection criteria, boundary setting, and definitions of habitat types. This document has been used as a basic starting point for Chapter 5 - 7 of the present document.

2.3.2 Guidelines for requesting CFP measures in N2000 sites (2008)

In 2008, the European Commission Services published the guidance document called *Fisheries measures for marine Natura 2000 sites - A consistent approach to request for fisheries management measures under the Common Fisheries Policy.* This document provides guidance on how Member States should prepare and submit a proposal for fisheries measures in the CFP framework, for delivering Natura 2000 conservation objectives. It contains

- 11 information items of which the Commission considers that they should be part of the proposal (they are discussed in detail in chapter 3 below);
- The basic procedure for proposing measures in the territorial sea and EEZ;
- The criteria that the European Commission will consider in taking the proposal forward in the CFP decision making context:
    - Consultation with stakeholders (notably involvement of ~~R~~AC) and scientific underpinning;
    - Proportionality (appropriate balance between sustainable exploitation of resources and the need to conserve important habitats, including a precautionary approach to fisheries management);
    - Non discrimination (equal treatment of Member States);
    - Monitoring and control measures.

Article 11 Reg. 1380/2013 provides conditions for management measures affecting fisheries. Paragraph 3 of this article states the following:

> *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. The initiating Member State and the other Member States having a direct management interest may submit a joint recommendation, as referred to in Article 18(1), 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.*

Under the auspices of the High Level Scheveningen Group a Technical FISH-ENVI Working Group has been established. This group has adopted the terms of reference for the procedure of submission of a joint recommendation to the Scheveningen Group. The procedure for the adoption of this Joint Recommendation follows the terms of reference for the Scheveningen Group.

3. Process

3.1 FIMPAS project

In 2009, The Netherlands started the FIMPAS project (Fisheries Measures in Marine Protected Areas)[4]. This project deals with 3 Natura 2000 sites in the Dutch EEZ: *Frisian Front, Cleaver Bank* and the Dutch sector of the *Dogger Bank*. Overall responsibility for the management of the project rests with the FIMPAS Steering Group, composed of experts from The Netherlands government, ICES and the Irish Marine Institute.

In the project a series of workshops has been held with stakeholders from fishing sector, NGO's and science communities to review existing data and scientific information on the interaction of fisheries with natural features in the Natura 2000 sites. Preceding the three workshops literature reviews were made available to participants. ICES committed such reviews to contractors (van Hal *et al*., 2010; Deerenberg *et al*., 2010; ICES, 2011a) The basic philosophy of FIMPAS is one of transparent decision making, involving the relevant stakeholders. All relevant information was made available through a dedicated website[5].

The third and last FIMPAS workshop reached agreement on a proposal for fisheries measures for the Frisian Front, namely to ban gillnet fisheries on the Frisian Front from 1st of June to 30th of November of each year. This proposal is further explained in section 9.

3.2 ICES advice

On September 4, 2012 the FIMPAS Steering Group sent in a request to ICES ACOM for scientific advice. ICES was requested to advise on the degree to which the implementation of this proposed fisheries measures would contribute to the achievement of the conservation objectives. In preparing its response ICES was asked to advise on the changes that can be attributed solely or primarily to the implementation of the proposed fisheries measures.

ICES presented its advice to the FIMPAS Steering Group on November 23, 2012. In essence, the ICES advice supports the proposed measure. The total body of information gathered in all of the processes described above has been incorporated in the current proposal to the European Commission.

Opmerking [AMS1]: The ICES advice will be added as an Annex and text amended accordingly

3.3 Principles

The following principles are at the heart of the cooperative FIMPAS process:

1. *Sound scientific basis*
   The process is centred around a scientific approach, notably through the involvement of ICES. ICES held the secretariat of the workshop series and ensured the scientific input into the workshops by commissioning literature reviews and data compilations. In the final stage, the ICES scientific Advisory Committee ACOM was requested to present formal scientific advice on the proposed fisheries measures.

4 http://www.noordzeenatura2000.nl

5 http://groupnet.ices.dk/FIMPAS

2. *Stakeholder involvement and multilateral coordination*
   An important feature of the process is the involvement of key stakeholders in the process, starting from the very early stages. The FIMPAS process invited participation from four key communities: fishing industry; science; environmental/nature organisations and government. Invitations and participation in the meetings were well balanced across these sectors. Governments from the Netherlands, Belgium, Germany, United Kingdom and Denmark attended.

3. *Transparency*
   FIMPAS was designed to be absolutely transparent: Transparent on the data being used, on the steps being taken, on the methodology which is used, and on the stakeholders involved. Hence, data and information was available to all in a dedicated website.

4. *Proportionality*
   An approach was sought that would deliver a regulatory proposal that delivers a key contribution to the achievement of the conservation objectives while minimising the effect on the fishing industry. A key safeguard in the process to deliver such an outcome was to follow the European Commission guidance in this regard, which described a proportional approach as an approach balancing sustainable exploitation of resources and the need to conserve important habitats, including a precautionary approach to fisheries management. Another way of delivering a proportional outcome was by involving both nature organizations and fishermen in the process (see 2).

5. *Non discrimination*
   The proposal will need to ensure that measures are not applied in a discriminatory manner. A coordinated approach in the FIMPAS project was the only way of ensuring non discrimination for fleets affected by the proposed measures. Ultimately, a proposal is presented to the European Commission for regulation in the framework of the CFP, thus ensuring a level playing field for the fishing sector affected.

3.4 Regional (stakeholder) process

An important feature of the FIMPAS project was the involvement of neighbouring Member States in the process. This started from the very early stages. Governments and stakeholders from The Netherlands, Belgium, Germany, United Kingdom and Denmark attended all three FIMPAS workshops.

Following the FIMPAS process, on January 17, 2017, the Ad hoc Scheveningen Group meeting in London was informed on the Government's proposal to protect the Frisian Front SPA. This meeting was also attended by representatives from the NSAC.

On February 23, 2017, the NSAC, meeting in Edinborough, was also informed on the proposal for the Frisian Front SPA.

This proposal was sent to the Scheveningen ad hoc group and the NS AC on 22 May 2017 and presented at the Ad hoc Scheveningen Group meeting in The Hague, June 20, 2017, also attended by NSAC representatives.

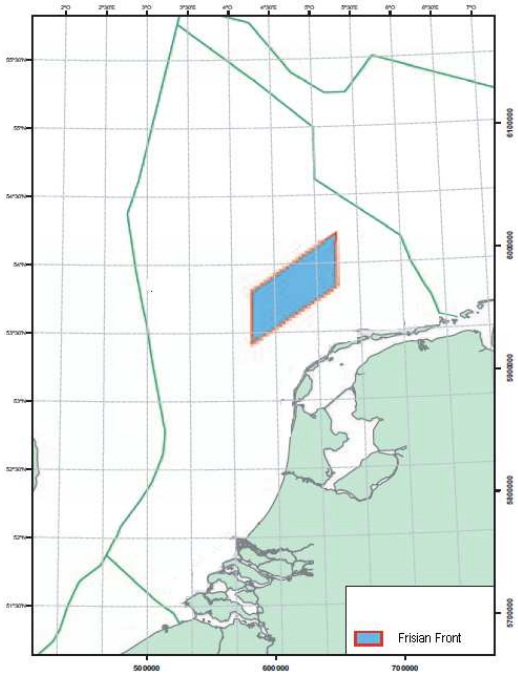
The total body of information gathered in all of the processes described above has been incorporated in the current proposal to the European Commission.

[PM next steps]

4. The Frisian Front and its natural features

The Frisian Front lies in the central region of the Dutch Exclusive Economic Zone (EEZ). It is an area of 2882 km^2.

Figure 4.1: Frisian Front in Dutch EEZ (Source: Integraal Beheerplan 2015).



The Frisian Front lies in the narrow transitional zone between the shallow southern half of the Dutch North Sea and the deeper northern half. It is also the point where water from the English Channel from the south meets Atlantic water from the north. Silty water from East Anglia and water from the Thames and Humber rivers cross the North Sea here. Over a relatively short distance the North Sea floor drops here 10 to 15 meters. In addition, there is a separation between the various bodies of water, which ensures that the area is extremely rich in food here. Silt deposits here because of changes in waterflow rates due to the rapid deepening and meeting of water bodies. Across a short distance, the seabed composition changes towards the north, from sand to silt to silty sand. In summer, the water from the deeper northern part is stratified (Lindeboom *et al*., 2005, Prins *et al.*, 2011). Where this stratified northern water borders on permanently mixed water from the south, a front emerges. Here, increased concentrations of nutrients from the lowest water layer of the deeper northern half become available to the phytoplankton, resulting in increased primary production. The above results in a high biomass and diversity of benthic species (Lindeboom *et al*., 2005). The area does not qualify for protection under the Habitats Directive. The Frisian front area does have the highest benthic species richness in the Dutch EEZ. There are many large growing macrobenthic species. There is also a high macro and megabenthic species richness. The area contains high densities and biomasses of megabenthos and many

rare megabenthic species (Bos *et al*., 2011). For instance, ocean quahog (*Arctica islandica*) is present throughout the area in relatively high numbers.

Also, higher concentrations of fish and bird species are observed. Guillemots (*Uria aalge*) in particular come here in great numbers in summer and autumn to raise their young and moult (van Roomen *et al*. 2013, van Bemmelen *et al*., 2013, Lindeboom *et al*., 2005). In this period, great skuas (*Stercorarius skua/Catharacta skua*), which migrate through the southern North Sea towards south-west European and north-west African open sea areas (Jonsson 1993), are also found regularly on the Frisian Front. Lesser black-backed gull are assumed to be present in June and July, while great black-backed gull can regularly be encountered in late October to November. Only the common guillemot is a qualifying species for the Frisian Front under the Birds Directive. Amongst other factors, the boundaries of the Frisian Front are determined by the concentration of bird species (Lindeboom *et al*., 2005).

Common guillemot in the Frisian Front

After the breeding season, common guillemot males swim with their young, mostly from the Scottish breeding colonies, to remote places such as the Frisian Front to forage. The young cannot yet fly at this stage and the adults use this time to moult (Jak *et al*., 2009, van Roomen *et al*., 2013). Like penguins, common guillemots hunt under water for food, at depths averaging between 20 and 50 metres, using their wings to generate propulsion. Common guillemots eat mainly fish, in addition to squid and worms. Common guillemots occur everywhere on the Frisian Front and is regularly present in large numbers from July to November.

5 The Frisian Front in the context of the Birds Directive

The Frisian Front is relevant for birds under the Birds Directive. Sites under the Birds Directive are designated directly without any prior notification procedure to the EC.

5.1 Conservation objective for the common guillemot (A199)

The FIMPAS project started with a scope of four bird species of interest in the Frisian Front area, based on the advice contained in Jak *et al*. (2009). These were the lesser and great black backed gull, the great skua and the common guillemot. FIMPAS concluded that no fisheries measures should be proposed for the lesser black-backed gull, great black-backed gull and great skua. Their presence is linked to discarding activities of fishing boats, since they forage on discarded fish and offal (see also van Bemmelen, 2010). Because of the CFP policy objective to limit discarding, the numbers of these birds are expected to decline with declining discards, for which no compensation could be imagined. The common guillemot is the only species that is negatively influenced by fisheries. In its advice, ICES considers these FIMPAS conclusions to be appropriate. Thus, this proposal only concerns the common guillemot, which is also the qualifying species for the Frisian Front (> 20,000 individuals).

Opmerking [AMS2]: More information will be added on influence fisheries and ICES advice

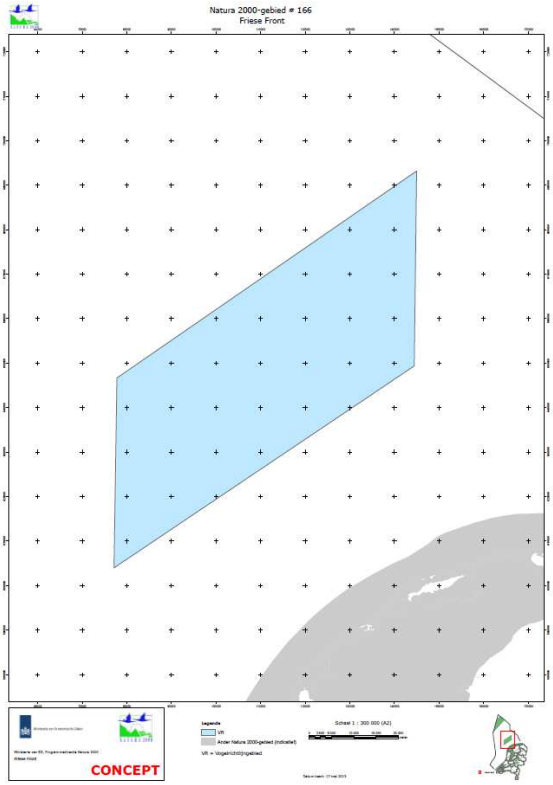
The conservation objective for common guillemot at national level is to maintain the extent and quality of habitat, based on Jak *et al*. (2009) and ICES (2011). Common guillemot occurs everywhere on the Frisian Front and is regularly present in large numbers from July to November (and beyond in smaller numbers). The protection of the rearing grounds for

young common guillemots, such as the Frisian Front, will help maintain the population (Jak *et al*., 2009). In particular, this concerns the summer and autumn period when the young birds forage there and are still not able to fly and the adult birds moult and forage. During this period they cannot fly and are highly vulnerable (ICES, 2011, van Roomen *et al*., 2013).

6 Spatial extent of the site boundaries

The **site boundaries** are given in figure 6.3:

Figure 6.3: Frisian Front GIS contour.



Coordinates, source: Integraal Beheerplan Noordzee 2015. Scientific rationale for these boundaries are given in Lindeboom *et al*. (2005).

X-Coordinate	Y-Coordinate
5,23371	54,2233
5,22712	53,8297
4,21599	53,4165
4,21497	53,7998

7 Impact analysis: impacts from fishing on bird species

7.1 Threats on common guillemot from different types of fishing gear

Fishing occurs all over the southern North Sea. The Frisian Front is an important fishery ground, albeit as part of a much larger area in the Southern North Sea (see effort maps in section 8). It is important to make a distinction between different gear types in terms of their impact on the common guillemot. In preparation of the FIMPAS workshops, Deerenberg *et al*. (2010) provided an overview of the gear impacts in relation to this bird species. This review was assessed at the FIMPAS workshops (ICES, 2010a; ICES, 2010b and ICES, 2011)).

Bycatch: gillnets

Fixed and drift gillnets cause the greatest by-catch of seabirds (Deerenberg *et al*., 2010). Žydelis (2009 and 2013) reviewed studies reporting bird by-catch in coastal gillnet fisheries in the Baltic Sea and the North Sea region. All species of diving birds that occur in the study region have been reported as dying in gillnets. By-catch rates varied depending on species foraging technique and were influenced by net parameters and fishing depth. They were especially high for guillemots (Österblom, 2002). The same applied to studies around Britain (Tasker *et al*., 2000). During the FIMPAS project, an attempt was made to discern the different types of gillnets used in the Frisian Front area. However, no specific literature was available on this issue. ICES could not advise on this matter either, although it was explicitly invited to comment on the need to discern different net types. In practise, it is known that gillnetting in the area is mainly aimed at catching cod, which entails the use of net types that are associated with high by-catch rates (ICES, 2010b; ICES, 2011; ICES, 2012). The effect of gillnets on common guillemot is rated **high** by FIMPAS (ICES, 2010b and ICES, 2011).

Opmerking [AMS3]: References added. A call for more scientifc information on area, period and bycatch is outstanding, and ICES advice will be added.

Bycatch: trawl and seine fishery

The information on the by-catch of sea birds by beam trawls is based on observations made during many years of surveys (e.g. de Boois and Bol, 2009). In general, no sea birds are caught as bycatch in the beam trawl surveys (de Boois, pers. comm.). Additional information is available from the observer programme on discards from commercial ships using both beam trawls and otter board trawl (e.g. van Helmond and van Overzee, 2010). During both types of surveys, over the years there is only one documented case of a puffin *Fratercula arctica* caught (alive!) in a beam trawl (54°13'N, 01°35'E, 29 November 2005). After publication of this case, two guillemots (dead) were brought in by beam-trawling fishermen for stomach analyses (Dutch Seabird Group, unpubl.). FIMPAS concluded that there was no hard scientific evidence for bycatch. Combining information, the effect is rated **low** (ICES, 2011).

Food availability

The common guillemot eats mainly fish, which are caught by diving (Jak *et al*., 2009). It is difficult to demonstrate the impact of fisheries on seabirds through food competition. The bottom trawl fishery negatively affects the zoobenthos and demersal fish populations in the area. As most fish species are very mobile, it is not certain whether this will cause any local effects on the residing bird species. In addition, the specific diet of the seabirds at the Frisian

Front is only poorly known (Deerenberg *et al*., 2010). FIMPAS rates the effect of fisheries on food availability as **low**.

Sound and visual disturbance

FIMPAS (ICES, 2010b) found that guillemots are affected by noise and visual disturbance. The effects are at night and related to the hauling of the net and light. However, the impact seems to be **low**. FIMPAS (ICES, 2011) concluded that the Deerenberg *et al*. (2010) conclusion of medium disturbance impact for common guillemot is not supported and should not be considered further, since there is no a priori reason to believe that their foraging is adversely affected by the noise and light from trawling/seining operations. Moreover, if such impacts would exist, these would not only pertain to fishing vessels but to all shipping.

This knowledge on the impact of gears on the conservation status of common guillemot is used in combination with data on fishing effort, to provide rationale for the proposed management measures (section 9).

7.2 Other human activities, and their impact on the common guillemot

The following section gives a preliminary assessment of impacts of other human activities. It does not preclude any further impact assessment.

Besides fisheries there are several other human activities taking place in this area:

Pipelines and cables

Multiple pipelines and telecom cables transect the Frisian Front area (van der Burg *et al*., 2012). There is no effect of these existing cables and pipelines on the common guillemot, as they are located under water buried in the substrate.

Platforms

There are 20 fixed platforms (for oil/gas drilling) situated within the Frisian Front area. Next to this, movable exploration platforms (which perform test drills that take 1 to 3 months) have also been reported to be used in or near the site. Each platform has a no fishing zone with a radius of 500 meters (Lindeboom *et al*., 2008).

At night the platforms are lit. This can cause a light disturbance up to 5 km around the platform (Tamis *et al*., 2011). Per platform this covers a surface area up to 20 km^2. The 20 platforms can potentially influence about 9% (from an estimated 260 km^2) of the Frisian Front area. Tamis *et al*. (2011) assumes that sea birds hardly react to illuminated platforms. Additionally, foraging behaviour is not influenced by light disturbance as the common guillemot is a pursuit-diving bird which forages primarily during daylight. The night disturbance is assumed to be low.

During the day, the presence of a platform can cause visual disturbance up to 1,5 km around the platform (Tamis *et al*., 2011). Jak *et al*. (2000) cluster effects of visual and sound disturbances together as they cannot be discerned from each other. Diving sea birds and sea

ducks are known to avoid platforms and often change directions in order to pass by at a greater distance (Tamis *et al*., 2011). Per platform visual disturbance covers a surface area up to 1,8 km^2, which means that 20 platforms can potentially influence 1,2% (35 km2) of the Frisian Front area. Jak *et al*. (2000) state that the degree of disturbance by objects mainly seems to be dependant on the speed by which the object moves. As platforms are immobile the degree of disturbance is assumed to be low.

Shipping routes

There are several defined shipping routes that cross the Frisian Front area (van der Burg *et al*., 2012). When comparing these routes to the shipping routes located south of the area, the routes transecting the Frisian Front are not used very intensively. Common guillemot is known to avoid ships. Shipping intensity outside the defined shipping routes is limited in the Frisian Front. Intensities are very low in about 90% of the area. Thus, common guillemot is assumed to have ample possibilities to forage and rest undisturbed. The disturbance by shipping is assumed to be low.

Oil pollution

Common guillemots are very sensitive to oil spills, due to the fact that the birds swim a lot and often group together. Young birds are especially vulnerable (Lindeboom *et al*., 2005). From 1992 to 2010, 493 pollution incidents were registered in and 10 km around the Frisian Front area, most of which (410 incidents or 83%) were oil spills (van der Burg *et al*., 2012). Of these oils spills, 31 had a volume larger than 1 m^3,.The largest spill occurred in 2003 (11,3 m^3). Van der Burg (2012) observed a decline in the number of incidents per year in the Frisian Front (time period 1992 to 2010), which is consistent with the downward trend on a global scale. Also, a strong decline in the volume of oil related incidents was recorded.

8 Fleet activity on the site and in the region for the years 2006-2011

In Frisian Front, the spatial and temporal distribution of the bird species common guillemot are used as the guiding principles in the development of the management measures. For Frisian Front, fisheries data have been collected in order to[6] (1) quantify fisheries pressure on the living area of the bird species (effort, paragraph 8.1), and (2) provide insights in the economic consequences importance of the area for the fishing industry (landing value, paragraph 8.2). Because the proposed management measures in the areas are only related to gillnet fishing, data are only presented for this fishing technique.

Fishing effort was analysed within the framework of the FIMPAS project by IMARES, for 6 Member States (Belgium, Germany, Denmark, France, United Kingdom and The Netherlands). Annex 1 contains the resulting quarterly maps of the fishing effort of gillnetting in the Dutch part of the North Sea (indicated by the dotted line is the EEZ), for the years 2006 – 2008. Q1 = January-March, Q2 = April-June, Q3 = July-September, Q4 = October-December. The main conclusions from these maps are that (1) the fishing intensity of gillnetting is very low; (2) gillnet fisheries was practiced in the area in 2006-2008 only under Danish and UK flag and (3) there is no marked seasonality in fishing but intensities do seem to be a bit higher in the second and third quarter. These conclusions are from 2008-2009, but as the intensity of these fisheries has decreased significantly, there are no indications that these patterns have changed. The only difference is that Dutch gillnet fisheries was more abundant in the years 2010-2013, but decreased quickly after and that German fisheries took place there in 2010, 2013 and 2014, however marginally (Table and figure 8.1).

8.1 Fleet activity for gillnetting

Table 8.1 and Figure 8.1 clearly demonstrate the dynamics of the fisheries. The data shows significant year to year variability in effort among the 2010-2015 years (table 8.1). This variability is mainly driven by TAC/quota, fishing day constraints and fuel prices.

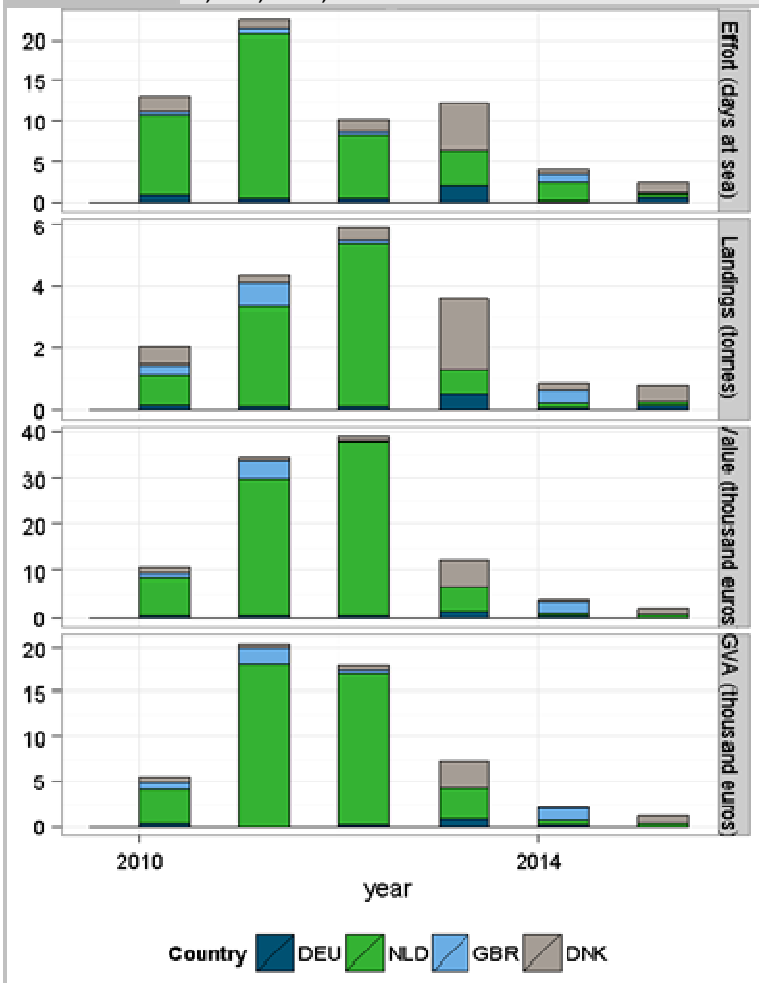
6 This is different from the approach in the Dogger Bank proposal. In that particular case the approach was of searching the least cost locations, within the boundaries of environmental constraints.

Table 8.1: Summary of gillnet fishing effort, landings, value and GVA for all countries (B, D, DK, F, NL, S, UK) in the Frisian Front from 2010-2015 (data from Hamon et al, 2017).

Country 2010	2011	2012	2013	2014	2015*	Average
Effort (days at sea)						
Netherlands	10	20	8	4	2	1	8
Great Britain	0	1	0	0	1	0	0
Denmark	2	1	1	6	1	1	2
Germany	1	0	0	2	0	1	1
Belgium	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-
Landings (tonnes)							
Netherlands	1	3	5	1	0	0	2
Great Britain	0	1	0	0	0	0	0
Denmark	1	0	0	2	0	1	1
Germany	0	0	0	1	0	0	0
Belgium	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-
Value (1,000 euros)							
Netherlands	8	29	37	5	1	1	14
Great Britain	1	4	1	0	3	0	1
Denmark	1	1	1	5	0	1	2
Germany	0	0	0	1	0	0	0
Belgium	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-
Gross Value Added (1,000 euros)							
Netherlands	4	18	17	3	1	0	7
Great Britain	1	2	0	0	1	0	1
Denmark	1	0	1	3	0	1	1
Germany	0	0	0	1	0	0	0
Belgium	-	-	-	-	-	-	-
Sweden	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-

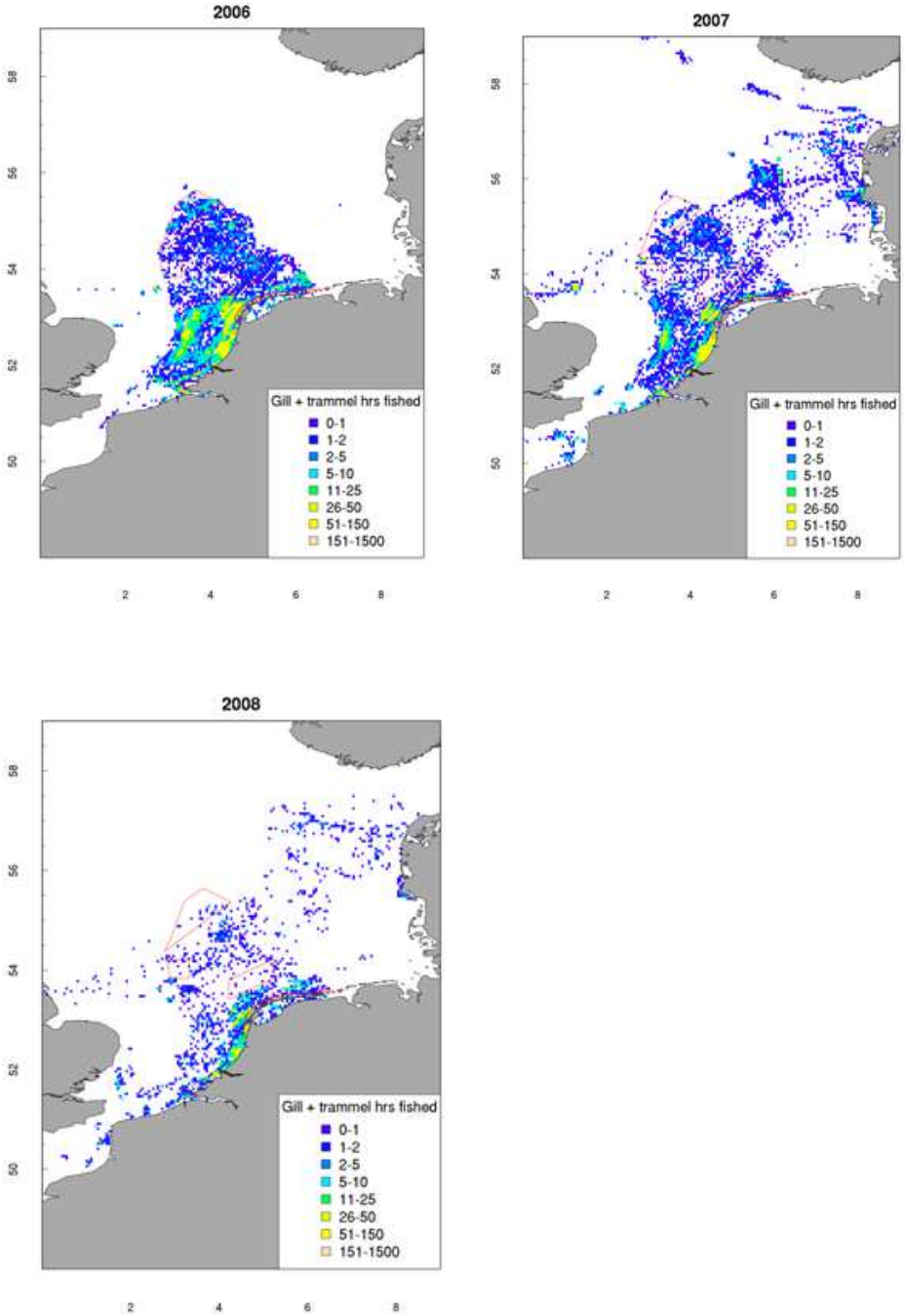
Source: Logbook data and VMS data and data from the Annual Economic report (STECF 2015), processed by WUR, CEFAS, TI,DTU, ILVO, SLU and IFREMER. *2015 GVA data is based on the 2014 GVA factors, 2015 value of landings for Denmark is based on 2014 factor.

Figure 8.1: Historical trend of the fishing activities by the gillnet fleets fishing during the proposed closed season off the Frisian Front. Effort, landings, value of landings and GVA are given by country. Source: Logbook data and data from the Annual Economic report (STECF 2016), processed by WUR, CEFAS, TI,DTU, ILVO, SLU and IFREMER.



Source: Hamon *et al*., 2017.

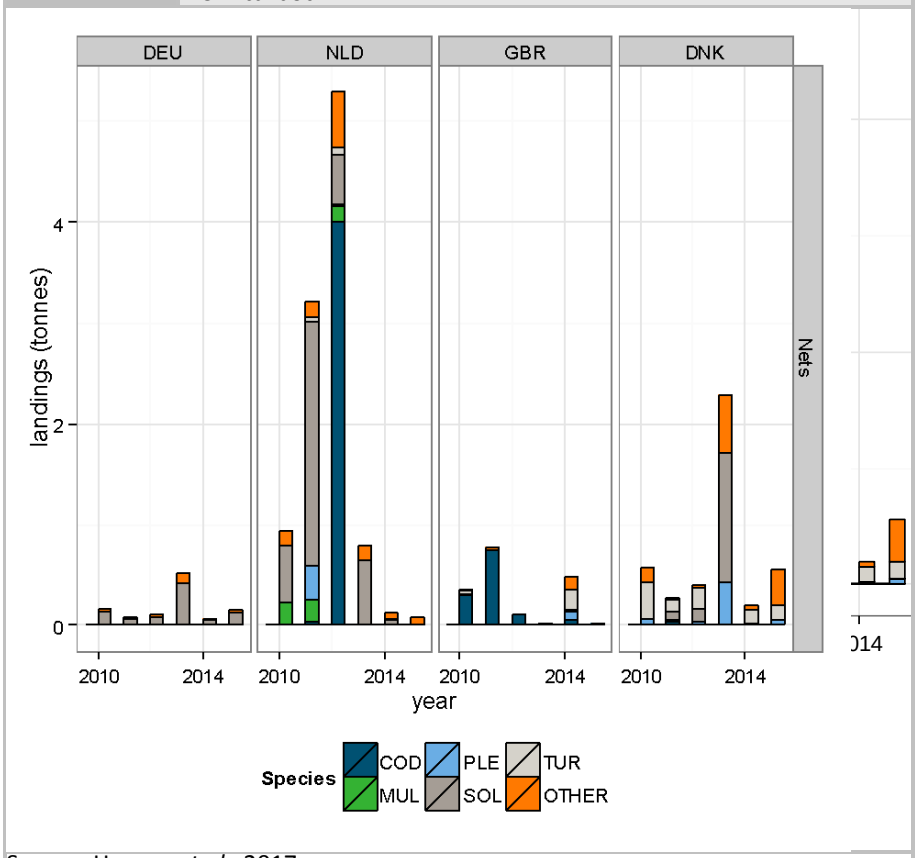
Figure 8.2: Total fishing effort (soak time hours) for gillnets and trammel nets combined for all countries (B, D, DK, F, NL, UK) by year for 2006-2008 (produced by IMARES for FIMPAS Workshop 3, 2011).



8.2 Species targeted

The main species targeted by the gilnetters on the Frisian Front are sole and cod. The other species caught are turbot plaice and mullet. There is a strong variability in the catch combination between years (**figure 8.3)**.

Figure 8.3: Landings in tonnes for the top 5 species per country during the proposed seasonal closure of the Frisian Front for gillnets. Source: Logbook data processed by WUR, CEFAS, TI,DTU, ILVO, SLU and IFREMER. COD=cod, MUL=mullet, PLE=plaice, SOL=sole, TUR=turbot.



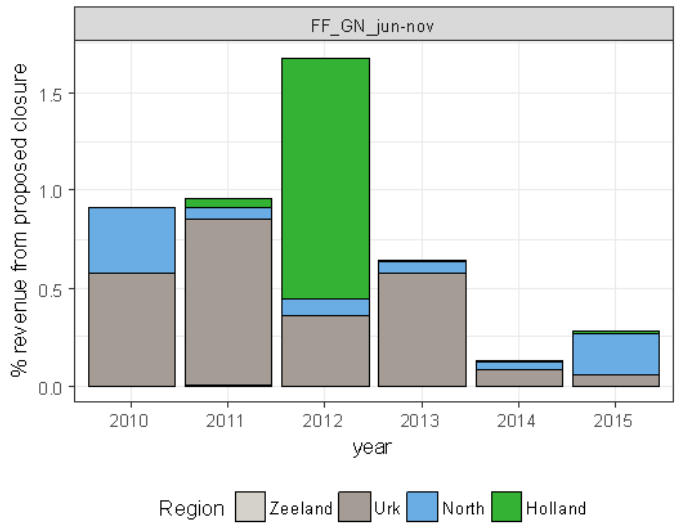
Source: Hamon *et al*., 2017.

8.3 Individual dependency to proposed closure

The dependency of the Dutch fleet to the seasonal closure of the Frisian Front to gillnets is low at the fleet level (around 1% of the revenue of the Dutch vessels operating at least part of the year with gillnets, see **Fout! Verwijzingsbron niet gevonden.**). The vessels from Urk represent most of the activity in the closed areas, followed by North (harbours of Groningen and Friesland) and Holland (South and North Holland) in 2012. On average around 17-18 vessels had some revenue from the area but for most of them the revenue from the

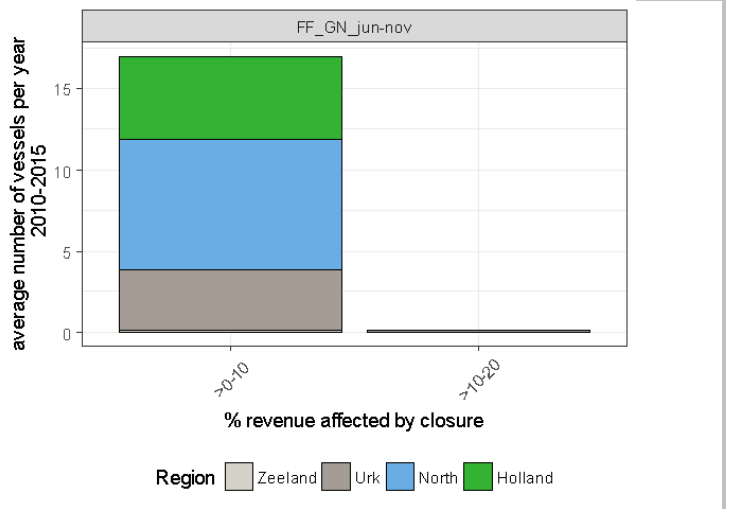
Cleaverbank represented less than 10% of their total revenue (only one vessel, one year had a dependency higher than 10% Figure 8.4). The number of vessels fishing in the proposed areas has decreased over the years studied from 2008 to 2015 from on average 22 to on average 12 vessels (**Fout! Verwijzingsbron niet gevonden.**).

Figure 8.4: Revenue per year and per region of origin in the proposed closed areas by gillnetters as a percentage of the total revenue for the Dutch fleet using gillnets at least part of the year



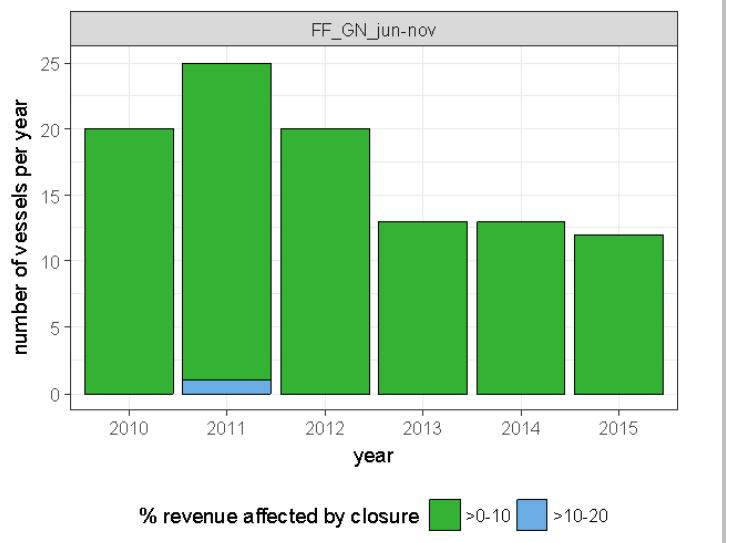
Source: Hamon *et al.*, 2017.

Figure 8.5: Average stress profile of the Dutch gillnet fleet over the years 2010-2015



Source: Hamon *et al.*, 2017.

Figure 8.5: Number of vessels active in the proposed closed areas per year and percentage of their revenue with gillnets in these areas



Source: Hamon *et al*., 2013.

8.4 Conclusions

The fishing activities reported by gillnetters on the Frisian Front during the proposed closure (June to November) are very low. The Dutch gillnet fleet is the most active there with an average of 8 days at sea, 2 tonnes of landings and 14 k€ of revenue from the area. Other gillnet fleets active in the area are the Danish, British and German fleets with an average annual revenue from the area/season of 2, 1 and less than 1 k€ respectively. In recent years there seem to a declining trend for the Dutch gillnet activity on the Frisian Front. While up to 25 vessels used to have some activity there in the June-November period, the number of vessels active in the area decreased down to 12 vessels in 2015 and over the period no vessel has shown a great dependency to the area (one vessel had 10-20% of its revenue from the area/season in 2011, otherwise all vessels get less than 10% of the revenue from the area/season).

The reported values of the areas of interest do not necessarily reflect the value of these areas for the fishing sector in the (near) future. The value of an area results from the combination of available fish and the effort applied in an area. If one of these factors changes, the value of such an area changes as well. When fishers move their effort to different locations, the future value of these areas will decline and closure of these specific areas may result in smaller economic losses. We assume that fishers move their effort to other locations in case of area closures. The effects of moving effort to another location (displacement) on catch and revenue are less well understood. Although attempts have been

made (Oostenbrugge, Slijkerman et al. 2015) research in the field of displacement remains necessary. If effects are small at the scale of the fleet, this does not imply that individual fishers will not be affected substantially by a closure of a specific area at sea. The effects of closing a specific area are generally thought to have less effect fleet wide than on specific individuals or fishing companies.

9 Management Measures

9.1 Description of the management measures

Gillnet fishing is banned in the Frisian Front from 1st of June to 30th of November of each year. This pertains to gear codes GN, GNS and GTR under the Annex XI in EU regulation 404/2011.

9.2 Policy considerations guiding the development of the management measures

In the FIMPAS project, a number of management principles were established (ICES, 2011) which were discussed with stakeholders at the third FIMPAS workshop. Also the principles mentioned in chapter 2 (legal frameworks of Birds Directive and Common Fisheries Policy and the appropriate EC guidance documents) are of crucial importance. These principles were used to develop the appropriate policy response to mitigate the impact of fisheries in light of the conservation objectives, as specified in chapter 5.

More specifically, the following policy considerations lead to the proposed management measure of a seasonal gillnetting ban in relation to the Frisian Front conservation objective.

1) A key consideration is that the measure should **deliver the conservation objectives and be directly linked to it**. In this case the measure is linked to the conservation objective for the common guillemot. On the Frisian Front fishing with gillnets has a negative impact on this conservation objectives through bycatch in gillnets. The proposed management is directly aimed at taking away the risk of bycatch of the common guillemot by banning gillnet fishing. Management is not proposed for other fisheries activities, since related impact is ranked low (see chapter 7).

2) Another key consideration is that the measures should be directed (if possible) at **seasonal vulnerability** of species for which conservation objectives have been set. This lead to the proposal of banning the risk-prone gillnet fisheries only in the season when the guillemots are vulnerable in the area (summer-fall).

3) The proposed measure should be **scientifically sound**, which was the reason for seeking ICES advice on it. ICES agrees with the proposed measure (chapter 3). Refer also under precautionary approach under item 4 below.

4) According to the EC Guidance the measure needs to be proportional: *id est* "an appropriate balance between sustainable exploitation of resources should be sought, including a precautionary approach to fisheries management".

   The proposed management is thought to be **proportional** because it is only directed at fisheries with a known and high impact (gillnet fisheries), and not to other techniques with no or low impact. Furthermore the measure is only applicable in the season when birds are vulnerable.

   At the same time, the measure is **precautionary** in two ways. The common guillemot is

especially vulnerable from July-November. Hence including the June month can be seen to be precautionary. This was proposed and agreed at the third FIMPAS workshop in order to accommodate ever earlier arrivals of moulting birds and adults with their chicks, in light of climate change. The reason for this is that the guillemot is particularly vulnerable in this early part of the season when both moulting birds and fledglings are incapable of flight. The proposal is also precautionary in the sense that in the data show that there was little gillnet fisheries ongoing in the area. But it is acknowledged by ICES advice that gillnet fishery effort may increase for a number of reasons (shift from mobile to stationary gears as a result of fuel cost and reducing impact on benthic environment; recovery of cod stocks). For this reason ICES agrees to invoke the precautionary approach in this particular case.

5) Obviously **consulting stakeholders and building on existing data (including socio-economic data)** were key policy considerations at the heart of the FIMPAS project. See chapter 2 for further explanations on this. There was little disagreement amongst participants in the stakeholder meetings on the impact of gillnetting and on the proposed measure.

6) The measure would need to be **non-discriminatory**, which is the reason for putting this proposal to the European Commission for further decision making in the CFP context. This guarantees that the measure is not only effective in terms of delivering conservation objectives, but also equally applicable to gillnetters from all Member States in the area.

7) The measure needed to be **controllable and enforceable**. The current simplicity and transparency of the proposed binary management measure certainly contributes to ease of control and enforcement.

10 Control, Enforcement and Compliance

[PM The content of this chapter is part of the discussions in the Joint Control Expert Group under the Scheveningen Group.]

The proposed control, enforcement and compliance regime for the Frisian Front SPA consists of a combination of surface and aerial surveillance and remote monitoring of vessel position.

Key provisions, in accordance with Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of common fisheries policy (OJ L 343, 22.12.2009, p. 1) to be included in the delegated act to facilitate control enforcement and compliance are:

- During the period of closure fishing activities of all fishing vessels in the management zone shall be controlled by the fisheries monitoring authorities of the coastal Member State by using their system to detect and to record the vessels' entry into, transit through and exit from the fishing restricted areas.

- During the period of closure fishing vessels carrying on board any prohibited gear types within the management zone must use their vessel monitoring system for reporting fishing vessel identification, geographical position, date, time, course and speed. These data shall be transmitted every 10 minutes.
- During the period of closure the vessel will be under the obligation to report to the Fisheries Monitoring Centre of its flag entry and exit of management zone.
- During the period of closure fishing vessels may transit management zone with prohibited gears on board provided that any prohibited gear on board be lashed and stowed during the transit; and
- During the period of closure the high frequency data can also be transmitted via GPRS/GSM. When GPRS/GSM signal is not available data shall be safely stored and forwarded as soon as the signal is available.
- On the level of the Scheveningen Group guidelines for a common approach are in development. This common approach, when ready, will be taken into account in the implementation of the proposal.

11 Monitoring measures

Principal properties
The principle properties of suitable indicators are:
- The indicator can be easily measured;
- The time of reaction on the measure (being reduction or removal of certain activities) should be considered (preferably after 6 or, at the latest, 12 years).

Suitable Indicators
Considering the principal properties as mentioned above and the conservation objective for the habitat of common guillemot at the Natura 2000 site Frisian Front, the following indicators are proposed:
- Numbers of the common guillemot (*biological indicator*), and
- Fishing efforts (*pressure indicator*).

The first indicator provides information on (changes in and actual) population size in the Natura 2000 site Frisian Front. The number of species is thought to be an indicator for the quality of the habitat of the species (e.g. food availability, absence of disturbance).
The latter provides information of fine-scale distribution of fishing effort inside the Natura 2000 site, as well as displacement thereof as a result of the fisheries measures within the protected area.

Monitoring plan
The basic principle of the Dutch monitoring plan for sea birds is as follows.

In the Exclusive Economic Zone (EEZ):

- Annually 4 flights with a moderate-high transect density: information on bird density (all species).
- Annually 4 boat trips : additional information, e.g. calibration. The boat trips are planned in the same period as the flights.

In the Dutch coastal zone:

- Annually 6 flights with a moderate-high transect density: information on bird density (all species).

The flights and boat trips in the EEZ and coastal zone provide sufficient information to be able to report on a national level.

12 Evaluation of possible displacement of fishing effort and impact on new areas

Because the Frisian Front area will be closed for gill netting, some displacement outside the area is likely to happen.
Displacement is difficult to quantify, and it is impossible to predict where exactly activities will be displaced to. External factors (such as fish distribution, TAC/quota, fuel prices, other spatial claims) play a major part in this. However, displacement is assumed to be very limited, as gillnetting activity in the Frisian Front area is very low. Displacement is not likely to influence the conservation objectives because of the fact that the entire Frisian Front area is closed for gillnetting in the period when the birds are vulnerable.

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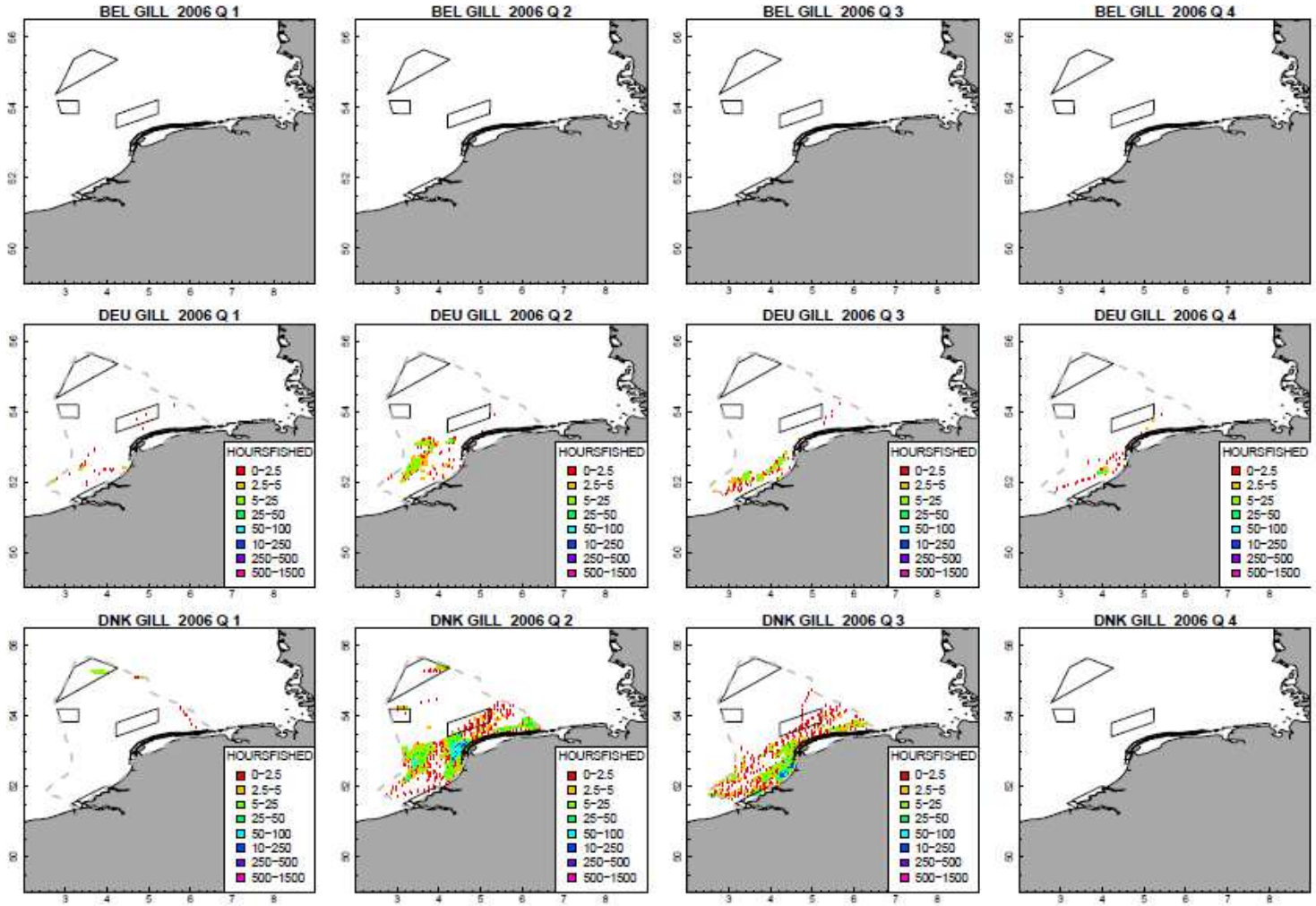
Annex 1

Seasonal trends in fisheries over the years 2006-2008

Because the proposed management measures in the Frisian Front are only related to gillnet fishing, data are only presented for this fishing technique. Fishing effort was analysed within the framework of the FIMPAS project by IMARES, for 6 Member States (Belgium, Germany, Denmark, France, United Kingdom and The Netherlands). This section 3.6 contains the resulting quarterly maps of the fishing effort of gillnetting in the Dutch part of the North Sea (indicated by the dotted line is the EEZ), for the years 2006 – 2008. Q1 = January-March, Q2 = April-June, Q3 = July-September, Q4 = October-December.

The main conclusions from these maps are:

- The fishing intensity of gillnetting is very low.
- Gillnet fisheries was practiced in the area in 2006-2008 only under Danish and UK flag.
- There is no marked seasonality in fishing but intensities do seem to be a bit higher in the second and third quarter.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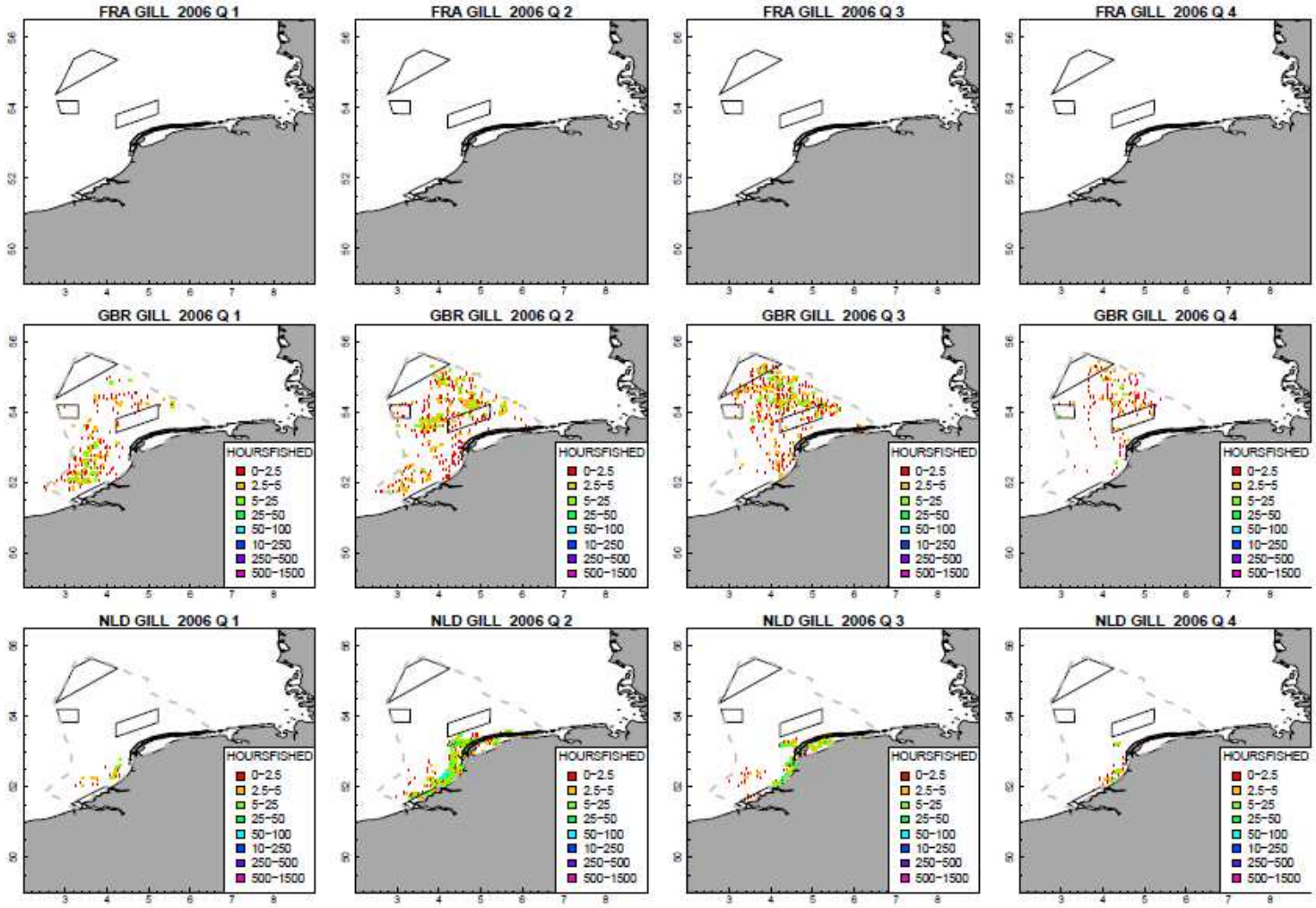
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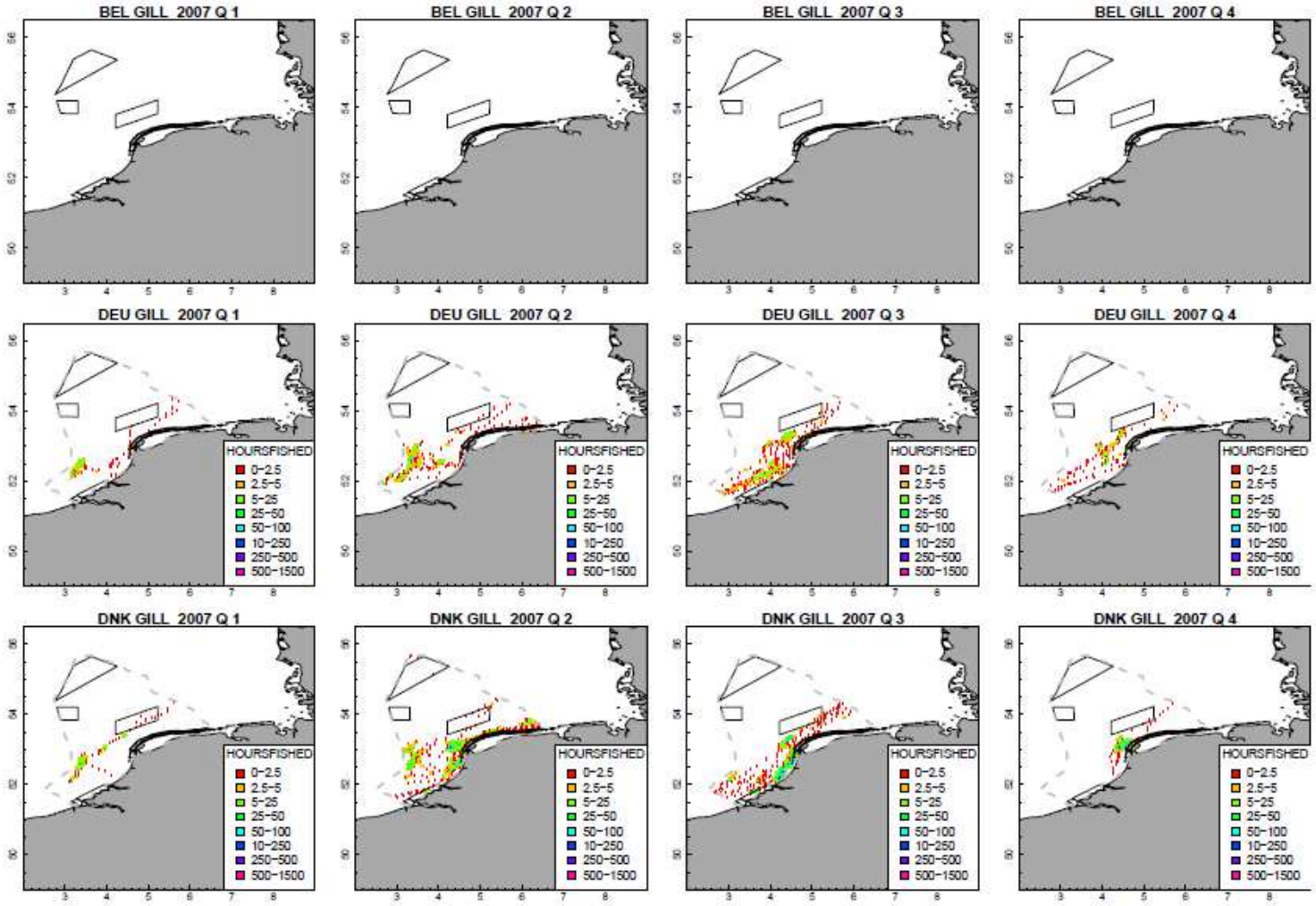
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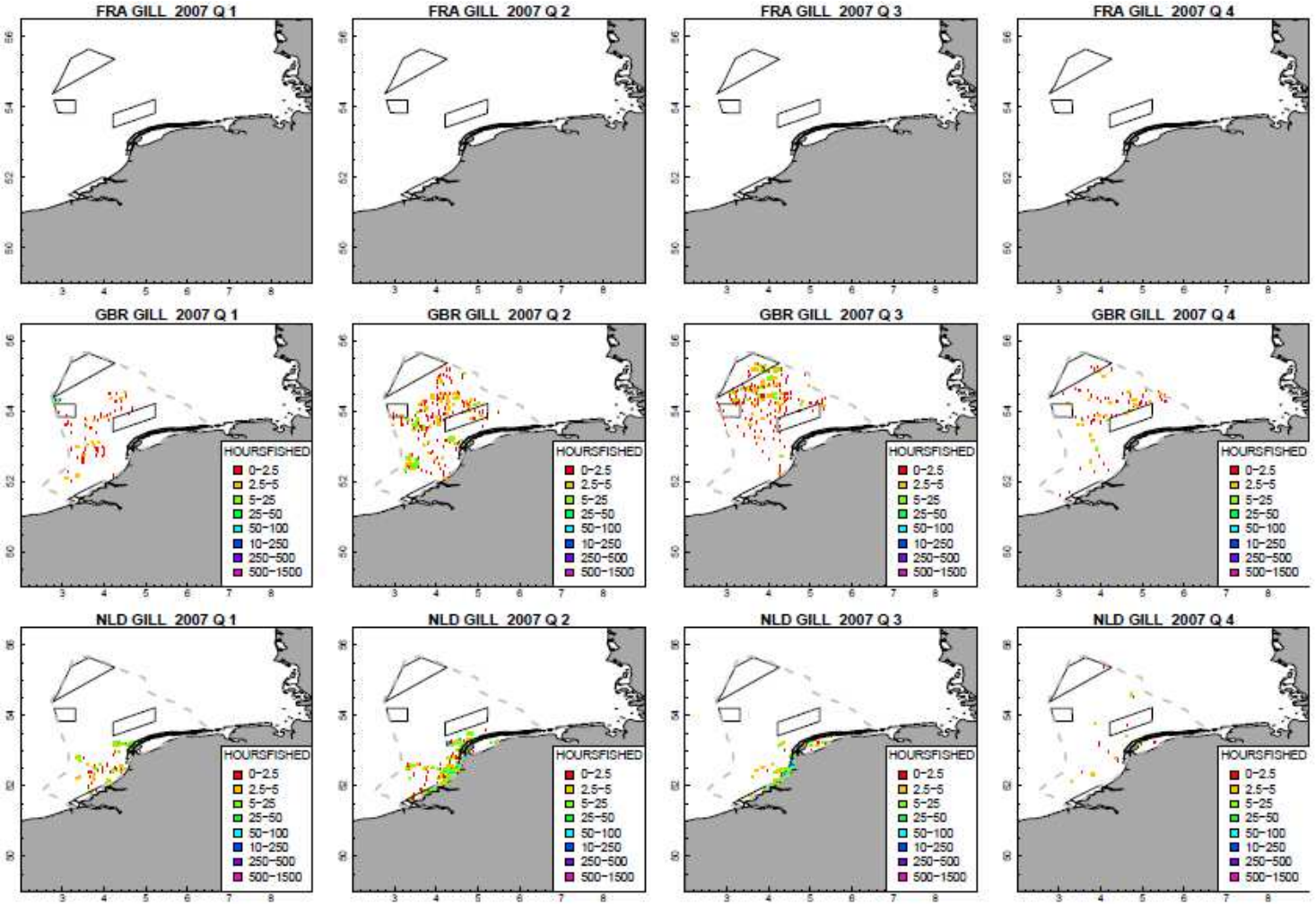
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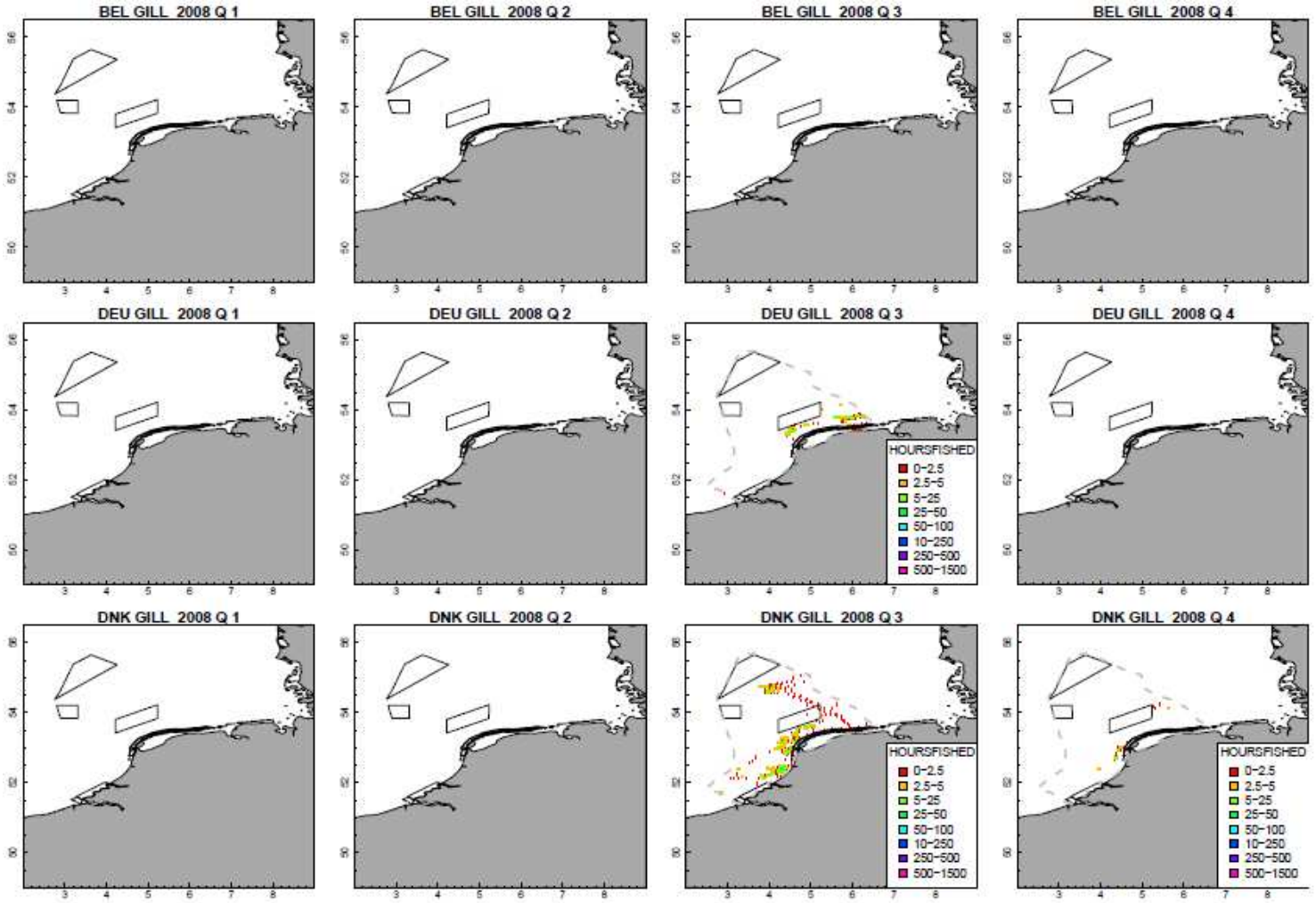
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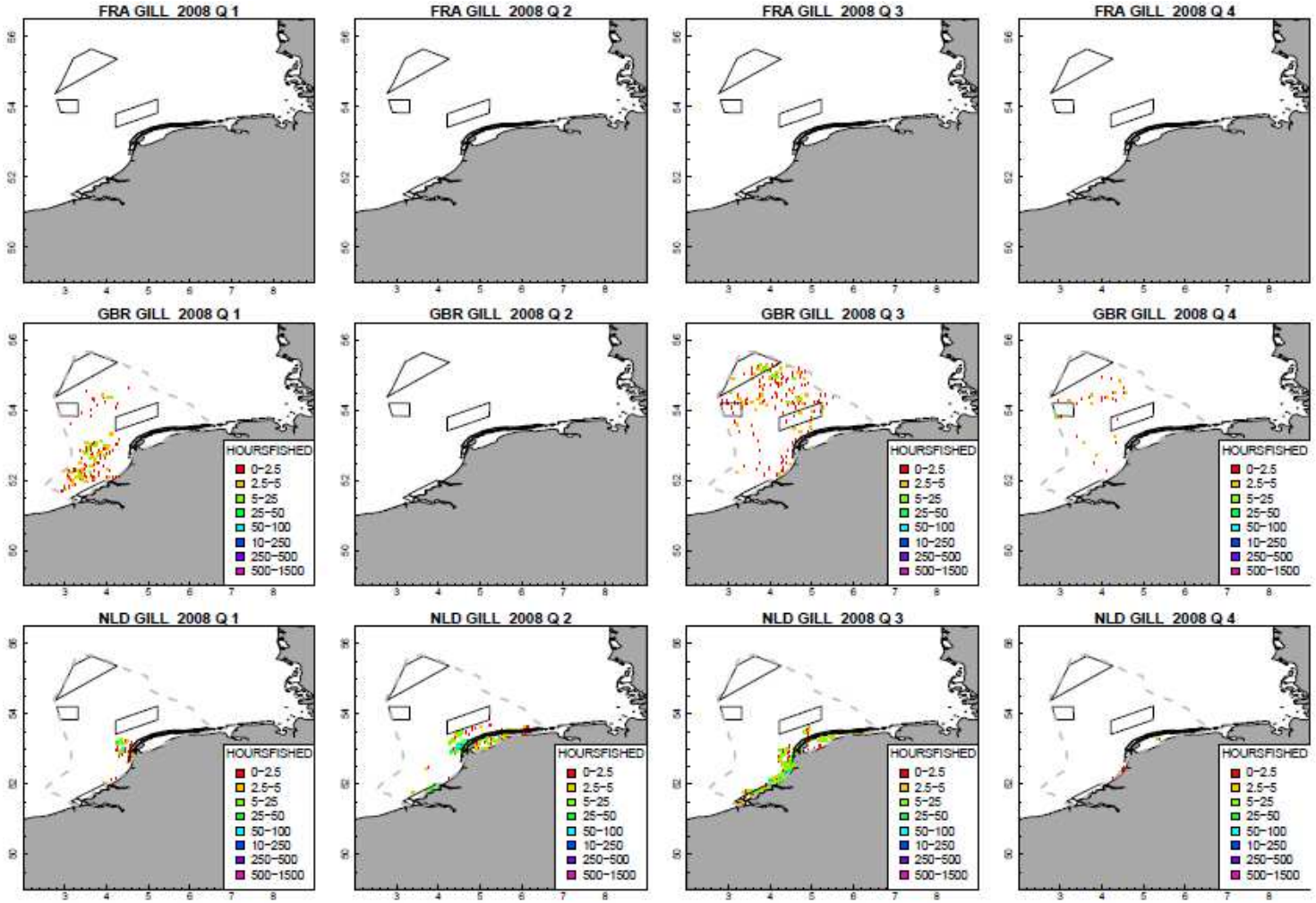
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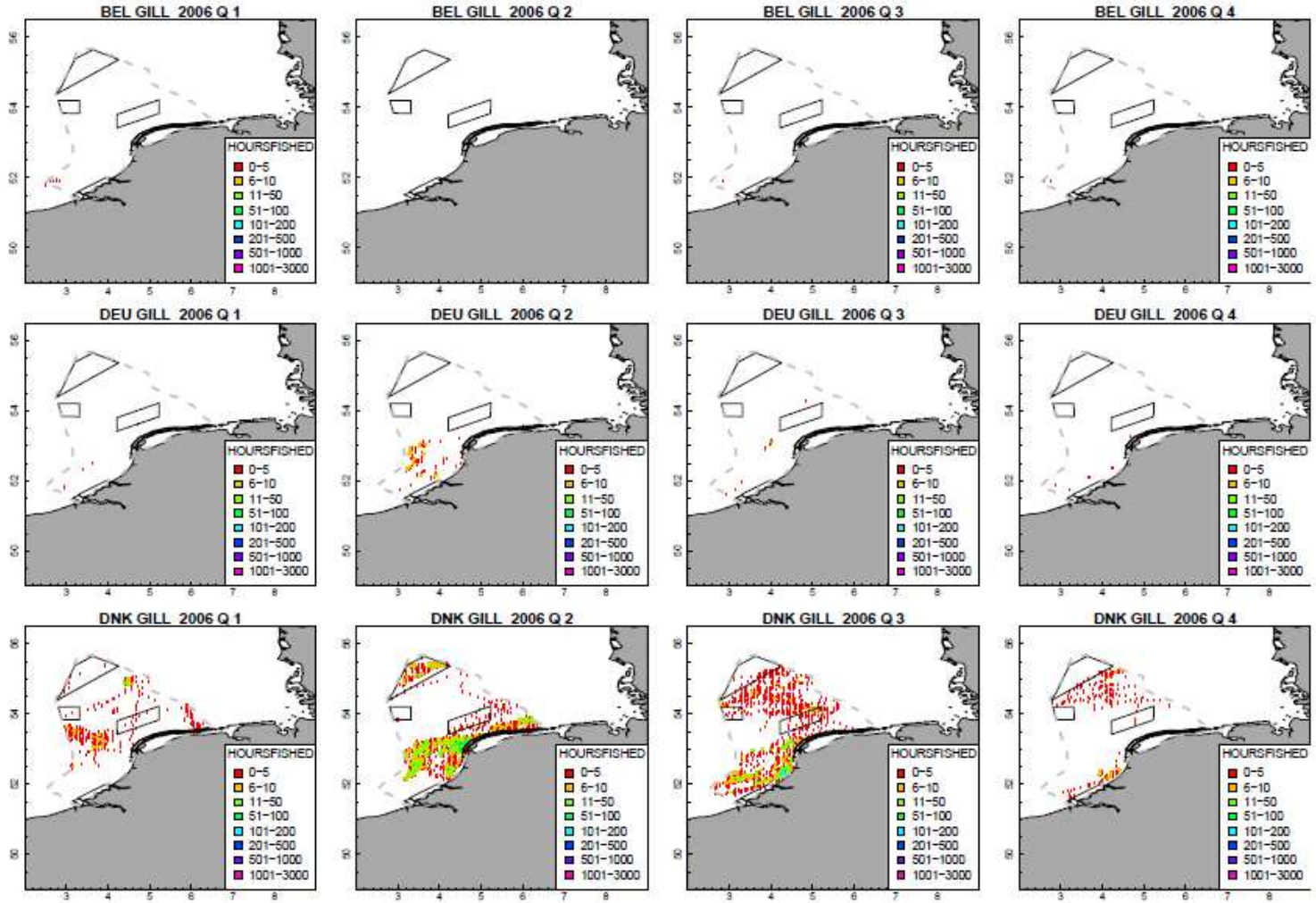

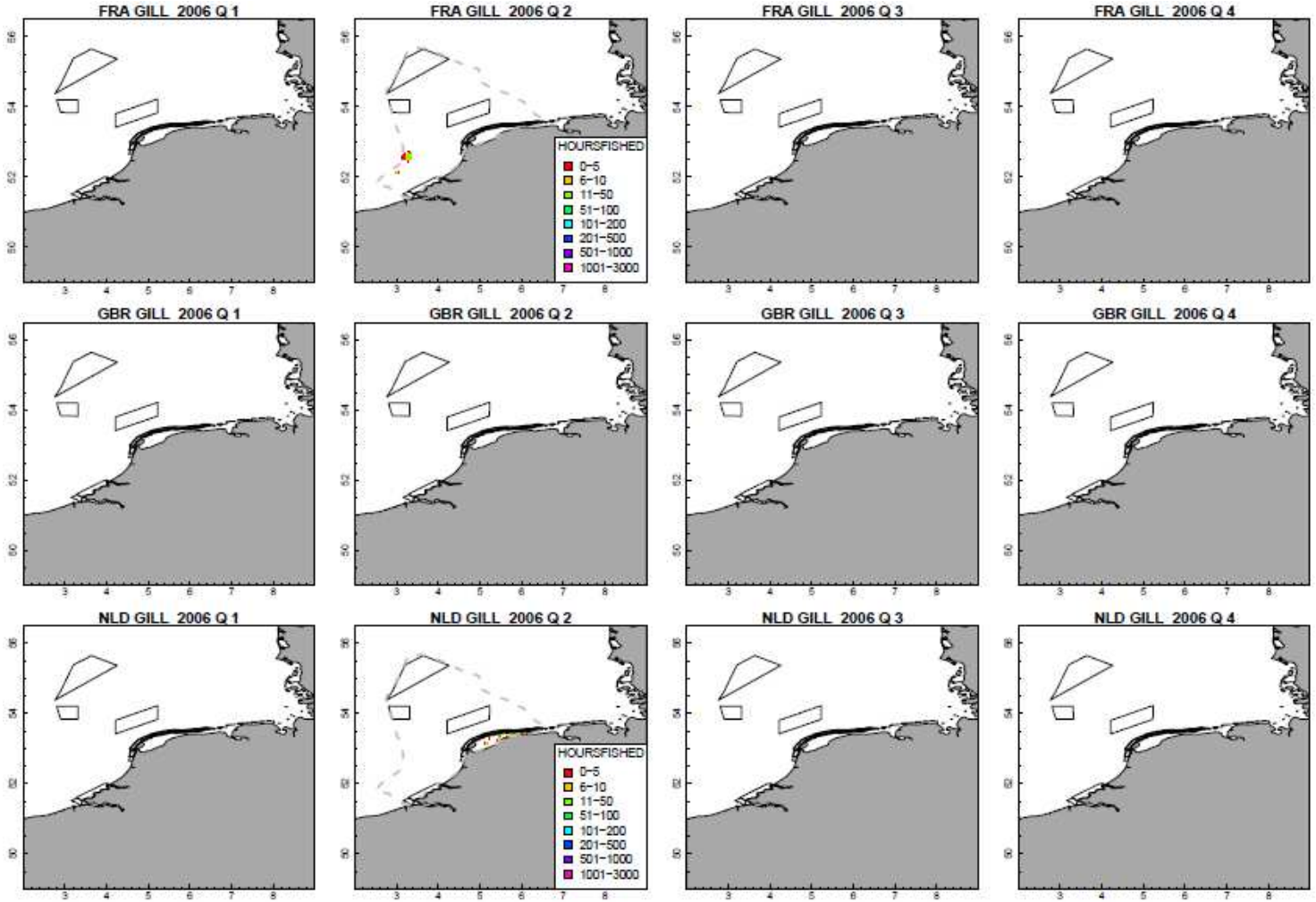
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GBR GILL 2006 Q 4
NLD GILL 2006 Q 1
NLD GILL 2006 Q 2
NLD GILL 2006 Q 3
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HOURSFISHED
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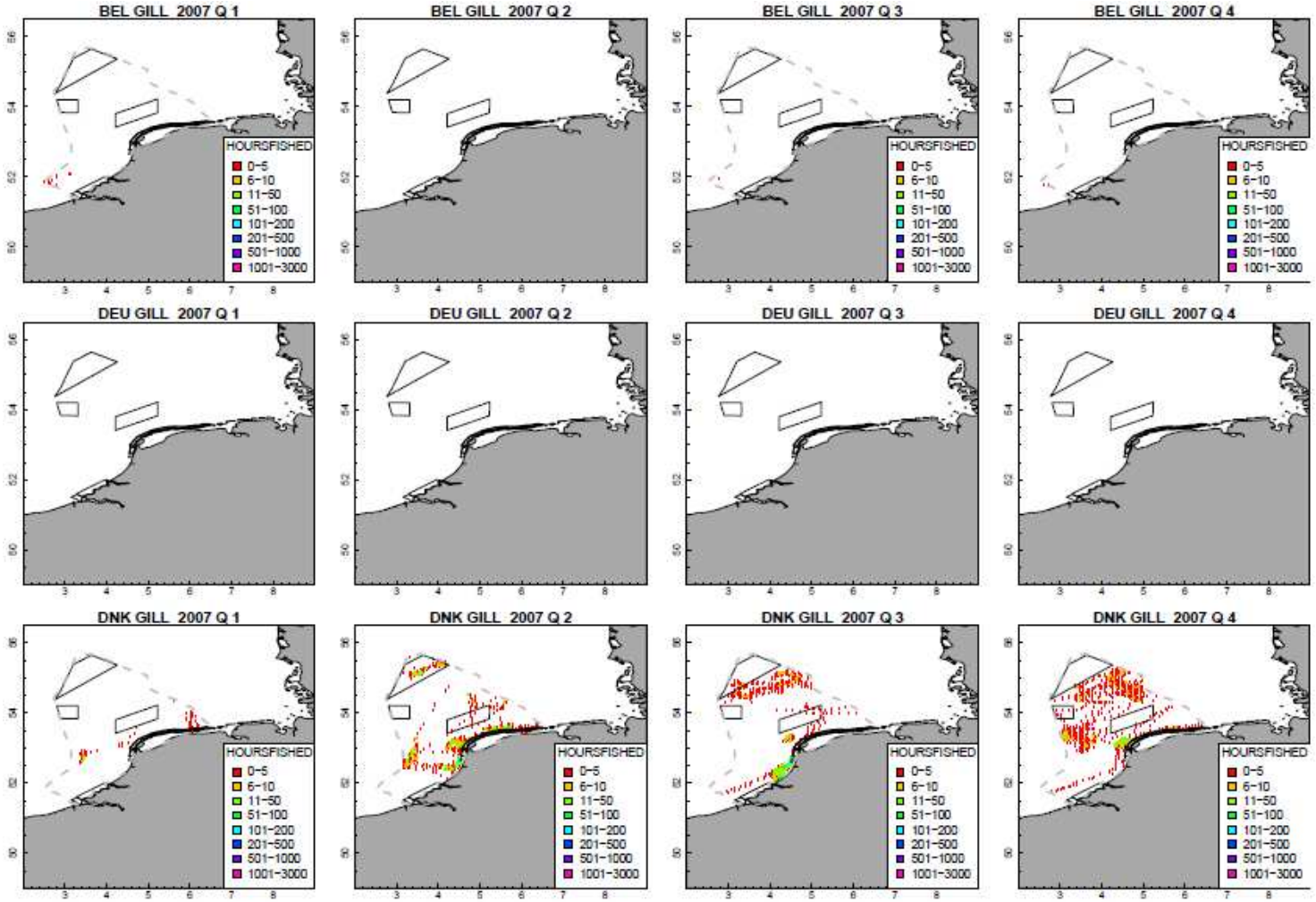
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BEL GILL 2007 Q 4
DEU GILL 2007 Q 1
DEU GILL 2007 Q 2
DEU GILL 2007 Q 3
DEU GILL 2007 Q 4
DNK GILL 2007 Q 1
DNK GILL 2007 Q 2
DNK GILL 2007 Q 3
DNK GILL 2007 Q 4
HOURSFISHED
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11-50
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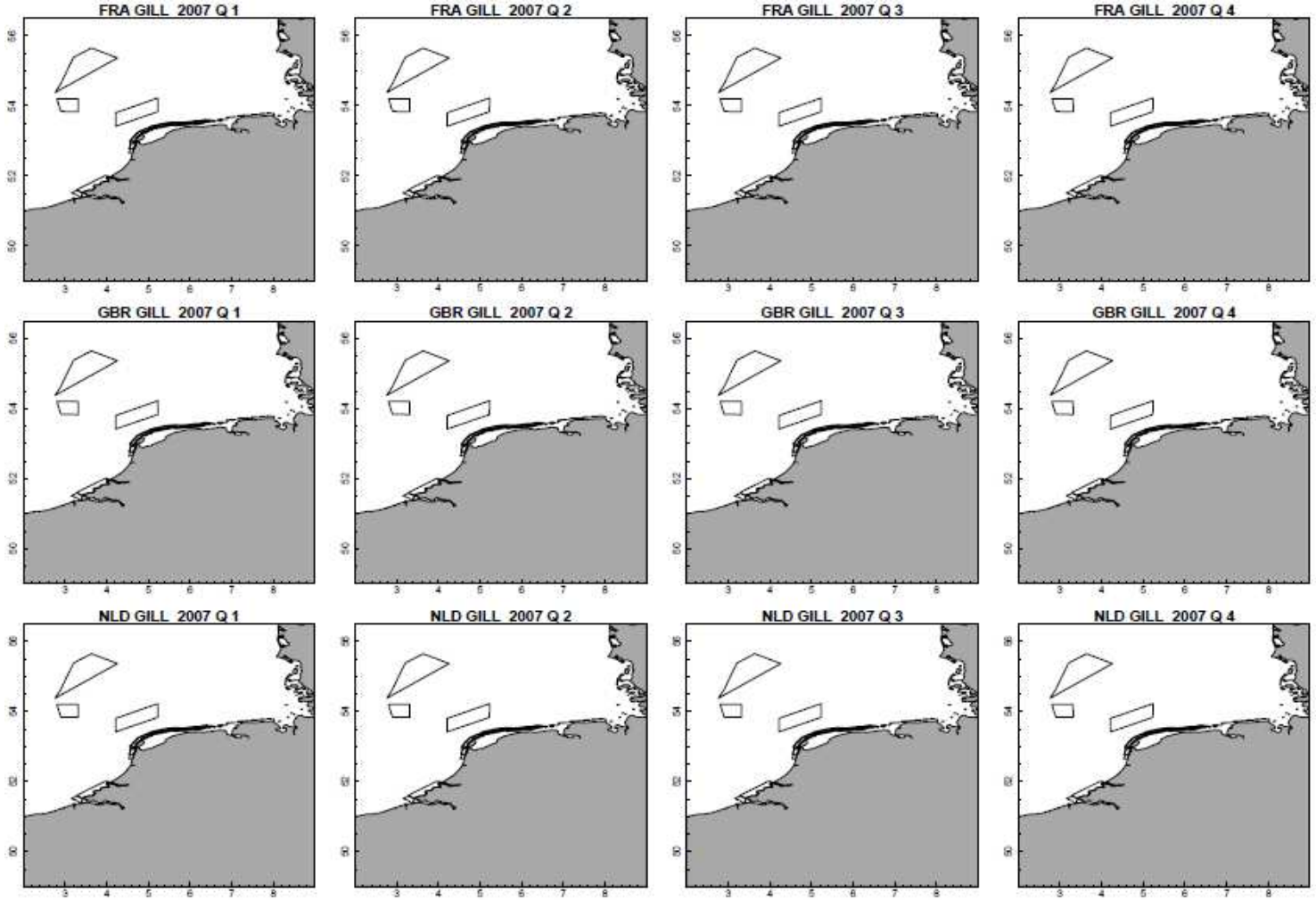
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FRA GILL 2007 Q 2
FRA GILL 2007 Q 3
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GBR GILL 2007 Q 4
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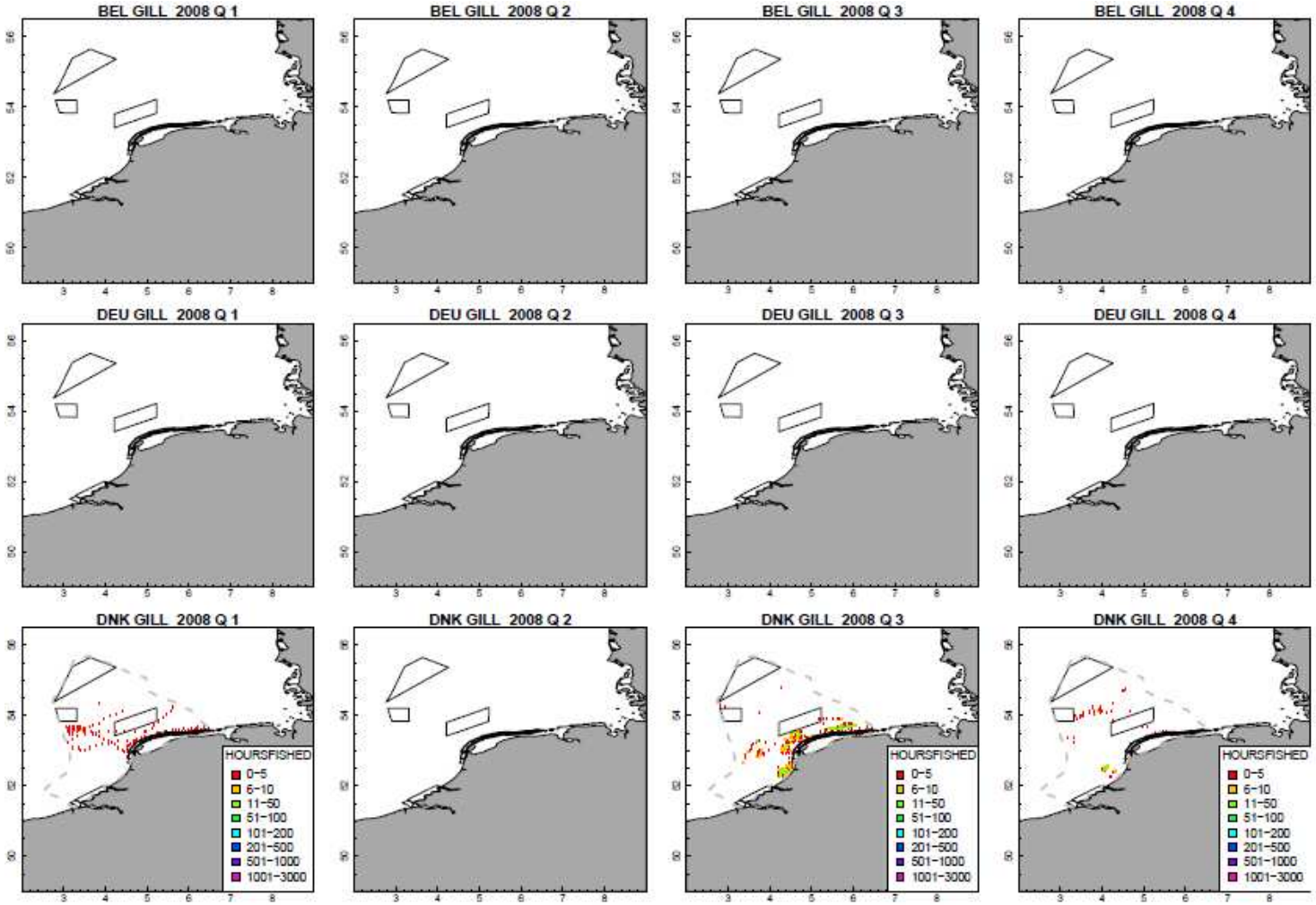
NLD GILL 2007 Q 2
NLD GILL 2007 Q 3
NLD GILL 2007 Q 4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BEL GILL 2008 Q 2
BEL GILL 2008 Q 3
BEL GILL 2008 Q 4
DEU GILL 2008 Q 1
DEU GILL 2008 Q 2
DEU GILL 2008 Q 3
DEU GILL 2008 Q 4
DNK GILL 2008 Q 1
DNK GILL 2008 Q 2
DNK GILL 2008 Q 3
DNK GILL 2008 Q 4
HOURSFISHED
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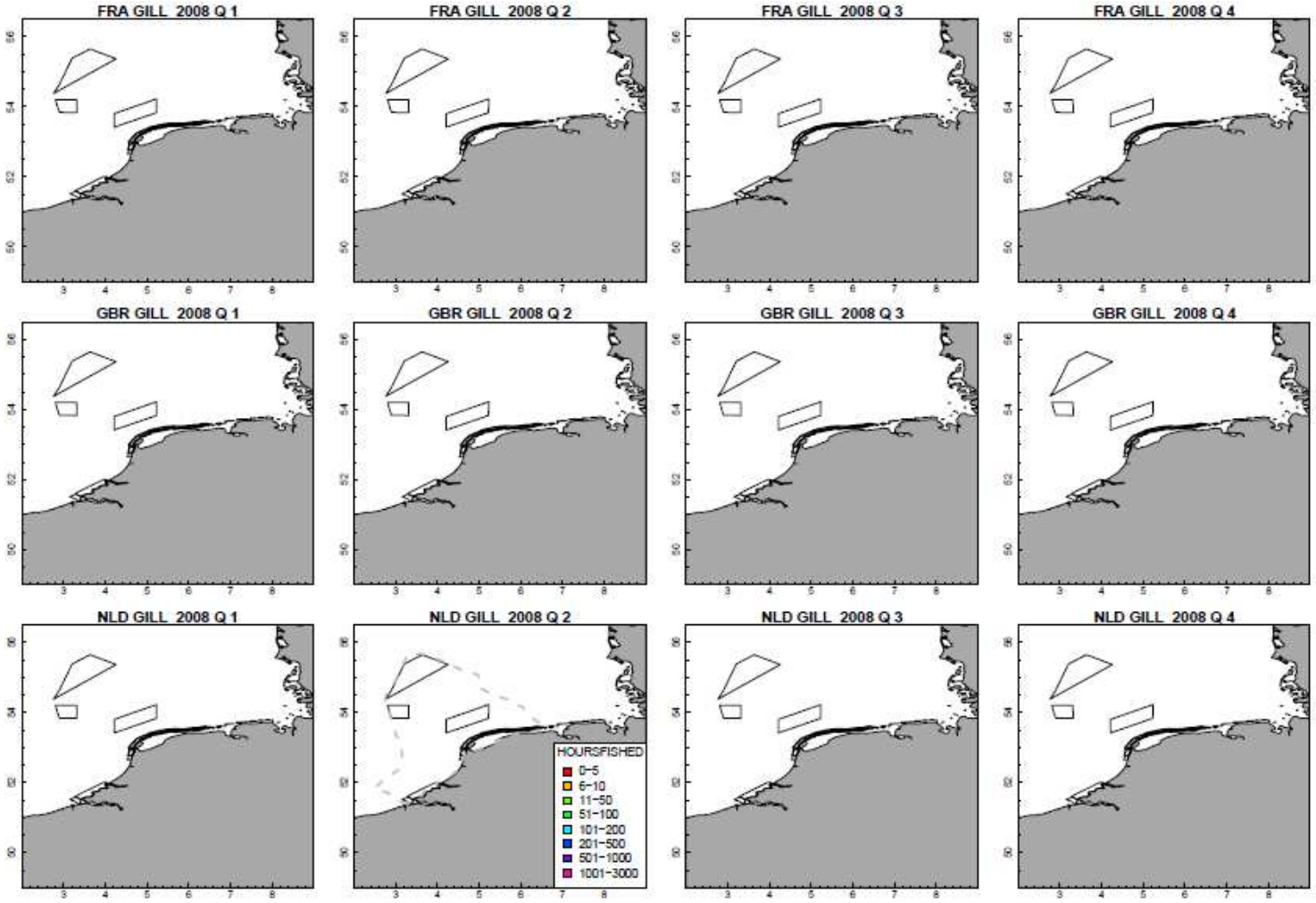
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FRA GILL 2008 Q 2
FRA GILL 2008 Q 3
FRA GILL 2008 Q 4
GBR GILL 2008 Q 1
GBR GILL 2008 Q 2
GBR GILL 2008 Q 3
GBR GILL 2008 Q 4
NLD GILL 2008 Q 1
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NLD GILL 2008 Q 3
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