Report of the FIMPAS Workshop 2
Fishery Impact and Conflicts with Conservation Objectives

30 June – 2 July 2010
Neufchatel–Hardelot, France
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# Introduction

The Chair Paul Connolly opened the meeting, welcomed the participants and presented a roadmap for the meeting (Figure below). The agenda was approved. The participants presented themselves at a tour-de-table (See list of participants in Annex I). The meeting had a broad range of participants covering the fishing industry, NGOs, managers and scientists.

The presentations given at the workshop are available on the FIMPAS SharePoint site (http://groupnet.ices.dk) or through the ICES Secretariat.

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<tr>
<th><strong>FIMPAS Workshop II - Roadmap</strong></th>
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</tr>
<tr>
<td>(1) Dogger; (2) Cleaver; (3) Frisian Front; (4) Economists</td>
</tr>
<tr>
<td>Conflicts – Identify; Scope; Features; Strengths;</td>
</tr>
<tr>
<td><strong>3</strong></td>
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<td>Recap Day 2</td>
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<td>Objectives Day 3</td>
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<tr>
<td>*** Plenum Discussion ***</td>
</tr>
<tr>
<td>On Overall Workshop Conclusions</td>
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<tr>
<td>Preparing for Workshop III</td>
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</table>
2 Status of the FIMPAS project

Ton IJlstra (presentation 1) reviewed the status of the FIMPAS project. He noted that the 1st FIMPAS workshop had concluded that the marine mammals issue is beyond the Natura 2000 considerations because the designated areas are not specific areas for mating or foraging for the marine mammal areas and protection would have a wider scope than the three Natura 2000 areas. The process that will follow after the FIMPAS project has presented its conclusions is not clear at the moment.

Bruno Hoffstadt informed on the German Natura 2000 process: two working groups have been established to develop proposals for management options for fisheries regulations by the end of this year 2010. This proposal will be based on agreement between the fisheries and the conservation sides.

Hans Lassen (presentation 2) reviewed the output from workshop 1 and summarized the conclusions from the 1st workshop. In particular he drew the attention to the maps of fishing activity in the Natura 2000 sites in the years 2006-2008 that were available as posters.

On the 2nd day, the report on the economic study (1st phase) was briefly introduced by Hans Lassen. Han Lindeboom presented preliminary results from an experiment with tagged sole and cod in an area closed to fishing (windmill park). There are differences in migration patterns between sole and cod and some of the tagged fish may have been outside the area.

In parallel with the FIMPAS project, Germany, UK and the Netherlands discuss the coordination of the management proposals to be presented to EC. Hans Nieuwenhuis reflected on the process on the 2nd day of this workshop, condensing that the approach taken by the three countries is based on the same principles and that it would be possible to reconcile the regulatory proposals. He structured the draft proposals according to the model presented in Annex V. He also noted that more discussion focusing on the Dogger Bank would take place among the countries and that there were no firm conclusions from these discussions at this point in time.

Workshop 1 raised questions about our understanding on the impact of different types of gillnets and therefore a special workshop was considered at that meeting. Ton IJlstra and Hans Lassen had met with Danish industry, administration and fisheries scientists on 17 June in Copenhagen. Ton IJlstra reported from this meeting. Comparing the information on the gillnet fishery presented at this meeting with data in the IMARES report (Deerenberg et al. 2010) shows differences that the steering group will look further into. A central issue is the difference in the Danish gillnet fishery between 2006-2008 and 2009.

Christian Pusch informed on the work ongoing in Germany with: Fishery experimental Enclosures. EMPAS is establishing an undisturbed area where Rays occurred in the past. He pointed out that quite some time for recovery is needed.

Action point: Steering group has to resolve the difference in gillnet fisheries reported by IMARES and by the local Danish industry. ICES has to summarise through its network the available knowledge.

ICES has to contact the Bundesamt für Naturschutz (Germany) and update the FIMPAS project on the status of the experimental fishery enclosures.
3 Pre-assessment of the Gear Impact

The Chair reminded the workshop participants that workshop 1 had taken a critical look on the availability of data and concluded that in general the data were sufficient and a sound scientific basis for the development of fisheries measures.

Charlotte Deerenberg (IMARES) presented the pre-assessment report of conflicts between conservation objectives and fisheries. The maps that were available are inserted in Annex III. She apologised that the UK and Belgian fisheries data had not been included on the maps presented in the report and noted that the 2007 UK data were presented as separate posters. Below an overview of potential direct impacts of fisheries on habitats and species and the main mechanisms through which they may affect populations and communities is shown. The IMARES report looks at the distribution of fisheries (by major gear types) and the fisheries impacts on the three areas.

The impacts that are considered are those defined in the established conservation objectives (Jak et al. 2009). Each protected area has different conservation objectives. She also pointed to differences between years in fisheries behaviour. This was emphasized by several comments from plenum: fisheries have changed on the Dogger Bank, and the bottom is not as severely influenced as previously.

The Danish industry questioned whether the sandeel effort has been included in the maps and Charlotte Deerenberg (IMARES) said she would confirm this after the meeting. Later in the meeting the Danish industry provided a map that is available as Annex IV.

**Action point. Steering group should organise the inclusion of Belgian and UK fisheries data to the Danish, Dutch and German data, and should assure a complete VMS dataset and maps.**

The experience with the use of pingers as a mitigation measure to avoid bycatch of cetacean and in particular of harbour porpoise was discussed. ICES will at a work-
shop 28-30 September 2010 review the use of pingers and look at potential other mitigation measures. Belgium noted that it has information available on this point but harbour porpoises do not seem to occur frequently in the Belgian fisheries. The Belgian report will be released in May 2011. Christian Pusch noted that the use of pingers will scare away harbour porpoise, which at least seems contradicting the conservation objective in the area. It was also noted that some nets might have no negative effects on harbour porpoise but affect seabirds.

**Action point:** Steering group should distribute ICES conclusions on mitigation measures (when available) to FIMPAS network by 25 October 2010.

The IMARES report summarized the status of impact in an impact table. This table was updated during the meeting and the final table is given in the ‘Conclusion’ section.

Monique van de Water (North Sea Foundation), on behalf of North Sea Foundation, WWF Germany, WWF Denmark, and WWF Netherlands, presented a vision for a future North Sea (Christiansen 2009). She recognised that many different human activities impact on the North Sea ecosystem, e.g. fisheries, shipping, waste, eutrophication, climate change, underwater noise, etc. However, fisheries are one of the main pressures on the North Sea ecosystem. Fisheries affect the system at several levels: on fish populations; vulnerable and roaming species; bottom life; diversity, structure and function. She listed five basic elements of a healthy North Sea

1) Various habitat types,
2) High local biodiversity
3) Higher biomass at higher trophic levels and older individuals
4) Higher productivity at higher trophic levels
5) Fewer fluctuations in populations of fish

She presented a report based on a literature review of the impact of beam trawling on the habitats.
4 **Poster session**

Selected maps from Deerenberg *et al.* (2010) were available as posters and the first day of the workshop was closed with a poster session. The participants discussed the distribution of the fisheries (2006-2008) and distributions of habitats, guillemots and harbour porpoises.

This session was found useful by the participants. The data were found useful but also lacking information in several ways. In particular as noted above the lack of UK data was noted with regret.

The Danish industry pointed to limitations in particular of the gillnet data and to a separate report of the Danish gillnet fishing in 2009 which is available on the FIMPAS SharePoint site.
5 Breakout groups

5.1 General comments

The lack of UK (and Belgian) VMS/logbook data in the IMARES report made it difficult to draw firm conclusions on potential conflicts for all three areas. Another general data problem is that there is no VMS/logbook data for vessels below 15m which however was not seen as the major issue with the fisheries data as the three designated areas (Dogger Bank, Cleaver Bank and Frisian Front) are generally fished by larger vessels. When small vessels occur (<15m) these are gillnetters.

Bycatch of harbour porpoises is seen as the major issue concerning marine mammals. Gillnetting is expected to lead to frequent removal/damage of harbour porpoises. In deep water cod nets are expected to have a higher effect than sole nets. Thus, the removal effect of cod nets is expected to be medium, the effect of sole nets is expected to be low. It may be possible to lower the effects of gillnetting by making it more sonically visible. This is still being researched. Mid-water trawling is expected to lead to few removal/damages. The outbreak group is uncertain about the effect, more research may be needed for this area. Regulating the bycatch of marine mammals through gillnets would introduce restrictions on the fishery in the North Sea and such regulations would apply also to the Natura 2000 areas. However, the designated FIMPAS Natura 2000 areas were not found to be of special importance for harbour porpoise compared to neighbouring areas.

The analysis distinguishes among beam trawl, otter board trawl, Danish seine (incl. Flyshooting), and gillnets.

The effects are classified low-medium-high. Some participants found that more distinction is needed. Effects need to be separated between actual and potential effects, especially when the potential effect may be high (all types of trawling), while the actual effect is currently very low due to the preventive effect of the habitat type.

There was a general request to include turbidity created by trawl fishing among the impacts on the marine environment:

Noise disturbance: Beam trawling with stone mats probably has the biggest effect, with tickler chains being second. There is also the general boating sound from fishing vessels and the mercantile traffic. Furthermore, there is military activity in the Frisian Front area which causes noise disturbance. It is unknown how noise is perceived by the animals. The presence of ships and fishing vessels cause most of the disturbance.

Visual disturbance: Concluding on the effect of visual disturbance is very difficult; there are very many different views.

For the Dogger and the Cleaver Banks seals and sea birds do not occur in significant numbers in Dogger Bank. Harbour porpoises occur on the Banks but the Bank is not an area of special importance for Harbour porpoises. Therefore the potential conflicts between fisheries and conservation objectives seem to be confined to habitat impacts from the fisheries.

5.2 Dogger Bank (Chair: Han Lindeboom)

The habitat is not homogeneous and it was found relevant to distinguish between the top and flanks of the Bank. Jak et al. (2009) points out the need to improve the habitat quality of the Dogger Bank.
Dogger Bank is an area which is fished by several North Sea Countries (B, DK, D, NL, UK). The fisheries on the Bank are mainly beam trawling (flatfish) and otter board trawling (flatfish and sand eel) plus some Danish seine fishing (flatfish). There was very little gillnet fishing on the Bank in 2006-2008 while in 2009 some Danish gillnet fishing occurred. The gear-impact that was presented is reproduced below. The matrix indicates the issues where there was disagreement within the group.

<table>
<thead>
<tr>
<th>Gear</th>
<th>Beam trawl</th>
<th>Otter board trawl</th>
<th>Seine net</th>
<th>Gillnet general</th>
<th>Gillnet Porpoise</th>
<th>Mid-water trawl</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Removal</strong></td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
</tr>
<tr>
<td><strong>Non-target catch</strong></td>
<td>(1)/medium</td>
<td>(1)/Low</td>
<td>(2)/Low</td>
<td>(2)/Low</td>
<td>(2)/Low</td>
<td>(2)/Low</td>
</tr>
<tr>
<td></td>
<td>(3)/high</td>
<td>(4)/Medium</td>
<td>(3)/Medium</td>
<td>(3)/Medium</td>
<td>(7)</td>
<td>(1)/Medium</td>
</tr>
<tr>
<td><strong>Damage</strong></td>
<td>Low</td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Not applicable</td>
<td>Very low</td>
</tr>
<tr>
<td><strong>(habitat)</strong></td>
<td>(1)/Medium</td>
<td>(2)/Low</td>
<td>(2)/Low</td>
<td>(2)/Low</td>
<td></td>
<td>(4)/Low</td>
</tr>
<tr>
<td></td>
<td>(3)/High</td>
<td>(6)</td>
<td>(3)/Medium</td>
<td>(1)/?</td>
<td></td>
<td>(4)/Low(1)</td>
</tr>
<tr>
<td><strong>Discards</strong></td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Not applicable</td>
<td>Low</td>
</tr>
<tr>
<td><strong>(food)</strong></td>
<td>(2)/Low</td>
<td>(1)/Low</td>
<td>(2)/Low</td>
<td>(2)/Low</td>
<td></td>
<td>(5)/? (4)</td>
</tr>
<tr>
<td></td>
<td>(1)/Medium</td>
<td>(3)/?</td>
<td>(3)/?</td>
<td>(3)/?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>Zero</td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Not applicable</td>
<td>Very low</td>
</tr>
<tr>
<td><strong>(food)</strong></td>
<td>(1)/Very low</td>
<td>(1)/Low</td>
<td>(3)/Low</td>
<td>(2)/Low</td>
<td></td>
<td>(9)</td>
</tr>
<tr>
<td></td>
<td>(1)/Low</td>
<td>(5)/Medium</td>
<td>(4)/Medium</td>
<td>(1)/?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Turbidity</strong></td>
<td>Zero</td>
<td>Very low</td>
<td>Very low</td>
<td>Very low</td>
<td>Not applicable</td>
<td>Zero</td>
</tr>
<tr>
<td><strong>(food)</strong></td>
<td>(1)/Low</td>
<td>(1)/Low</td>
<td>(8)/Low</td>
<td>(9)</td>
<td></td>
<td>(9)</td>
</tr>
<tr>
<td></td>
<td>(4)/medium</td>
<td>(3)/Medium</td>
<td>(1)/?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Noise, visual disturbance</strong></td>
<td>Assumed minor, but loudest among fishing techniques</td>
<td>Assumed minor, second loudest among fishing techniques</td>
<td>Assumed minor, third loudest</td>
<td>Very low</td>
<td>Pingers?</td>
<td>Minor</td>
</tr>
</tbody>
</table>

During the discussions the point was made that the conflict analysis could be deepened with a focus on the typical species indicators. It was also noted that there is scientific evidence that the exclusion of beam trawling from an area has a positive effect on the habitat quality. It was realised that a fishing ban will introduce change although it may be difficult to predict the resulting habitat. The EMPAS experimental enclosures will assess the impact of zero fishing. Finally, the comment was made that there is a need to look at the sandy areas in particular.

5.3 **Clever Bank (Chair: Godfried van Moorsel)**

There are significant habitat differences within the Cleaver Bank. The Botney Cut is far muddier then the rest of the Cleaver Bank and this is where most of the beam trawling takes place. The H1170 habitat type (reefs) is mostly outside of the Botney
Cut. The reef area is being fished only by big beam trawls (beam trawl II) with specialized gear: stone mats. Other areas are also fished by smaller beam trawls, possibly with tickler chains.

The Botney Cut is deeper than the rest of the Cleaver Bank area and therefore, turbidity is much more an issue here than in the two other areas.

The breakout group concluded on the following gear-impact matrix:

### Gear Impact matrix

<table>
<thead>
<tr>
<th>Habitats</th>
<th>Chain mats: high</th>
<th>Tickler chains: Potentially high</th>
<th>Potentially high</th>
<th>Potentially medium</th>
<th>Low/very low</th>
<th>NR</th>
<th>Potentially high</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1170</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marine mammals</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Harbour porpoise</td>
<td>Low</td>
<td>NR</td>
<td>NR</td>
<td>Medium (cod net) or low (sole net)</td>
<td>NR</td>
<td>NR</td>
<td></td>
</tr>
</tbody>
</table>

| Seals | NR | NR | NR | NR | NR | NR |

---

<table>
<thead>
<tr>
<th>Habitats</th>
<th>Chain mats: high</th>
<th>Tickler chains: Potentially high</th>
<th>Potentially high</th>
<th>Potentially medium</th>
<th>Low/very low</th>
<th>NR</th>
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</tr>
</thead>
<tbody>
<tr>
<td>H1170</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marine mammals</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Harbour porpoise</td>
<td>Low</td>
<td>NR</td>
<td>NR</td>
<td>Medium (cod net) or low (sole net)</td>
<td>NR</td>
<td>NR</td>
<td></td>
</tr>
</tbody>
</table>

| Seals | NR | NR | NR | NR | NR | NR |
5.4 Frisian Front (Chair: Kate Tanner)

This area is designated under the Birds Directive. The conservation objectives (Jak et al. 2009, Chapter 7) consider four species:

- Great skua: Aug – September (180 birds) – not dependent on Frisian Front
- Common guillemot: July August (20,000 birds) – move from Scotland into northern part of North Sea
- Great black gull: June – July (no numbers) not dependent on Frisian Front – maintain area in order to sustain population
- Lesser black gull: June – July (no numbers) not dependent on Frisian Front – maintain area in order to sustain population

Noise and visual disturbance: Common guillemots are affected. The effects are at night and related to hauling the net and light. However the impact seems to be low.

The gear-impact matrix that was presented is reproduced below

### Gear – impact matrix on conservation objective

<table>
<thead>
<tr>
<th>Gear</th>
<th>Removal &amp; damage</th>
<th>Removal &amp; damage (food)</th>
<th>Discards (food)</th>
<th>Structure (food)</th>
<th>Turb. (food)</th>
<th>Noise, visual dist.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beam trawl Flat vs shrimp</td>
<td>Very low</td>
<td>Very low (not target spp)</td>
<td>+ve effect on GS, GBBG, LBBG n/a GU</td>
<td>?Low Productivity of area mainly pelagic</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Otter board trawl Flat vs sandeel</td>
<td>Very low</td>
<td>Sandeel fishery? (GU) - No</td>
<td>+ve effect on GS, GBBG, LBBG n/a GU</td>
<td>?Low</td>
<td>NA</td>
<td>?Low</td>
</tr>
<tr>
<td>Seine net</td>
<td>Very low</td>
<td>Very low (not target spp)</td>
<td>+ve effect on GS, GBBG, LBBG n/a GU</td>
<td>?Low</td>
<td>NA</td>
<td>?Low</td>
</tr>
<tr>
<td>Gill net</td>
<td>?Intensity GU Medium max</td>
<td>Very low (not target spp)</td>
<td>NA</td>
<td>[Ghost fishing?]</td>
<td>NA</td>
<td>Lower</td>
</tr>
<tr>
<td>Mid-water trawl</td>
<td>Very low/ NA</td>
<td>Very low (not target spp) / NA</td>
<td>See above/ NA</td>
<td>NA</td>
<td>NA</td>
<td>See above/ NA</td>
</tr>
</tbody>
</table>
6 Plenum discussion

The breakout group chairs presented results from the three breakout groups with a focus on the gear-impact matrices to plenum.

A Panel consisting of Monique van de Water (North Sea Foundation), Wim den Boer (Fisher), Charlotte Deerenberg (substituting Kate Tanner – Frisian Front), Godfried van Moorsel (Cleaver Bank), Han Lindeboom (Dogger Bank) and Ton IJlstra (FIMPAS steering group) commented on these presentations. These interventions were supplemented by comments from the floor.

The following points were made:

- There is insufficient data showing how much gillnetting takes place in this area;
- VMS/logbook data are not very detailed, e.g. the beam trawl chain mat fishery on the Cleaver Bank cannot be specifically identified. There is no VMS data for vessels < 15 m oal;
- Gillnets have negative effects no matter the mesh sizes. However, FIMPAS already concluded that the data availability on gillnet fishing effects is low.
- The German EMPAS project considered the impact from trawls to be very low, but the FIMPAS stakeholders consider it to be high. However, the trawls considered in these two projects are rather different and it is demonstrated that there is significant impact on benthic communities on the Dogger Bank. The conservation objective is to improve the sand bank quality in the habitat areas.
- Fishermen claim that a heavy storm does more damage to the sea bottom than beam trawling. However, it was recognised that beam trawling adds to the damage. Storms are part of nature, they cannot be stopped, but the impact of beam trawling can be changed.
- Possible additional protection in the area from noise and visual disturbance should be considered, there seems to be a particular time window, when disturbance was more noticeable, namely August to October.
- When considering relevant measures for the Cleaver Bank there was a call for taking into account the wider area, and not alone the stones, i.e. have a broader view on protecting the Cleaver Bank than only the H1170 habitat.
The workshop showed a diversity of viewpoints and there was a lively debate with no consensus on all issues at this stage. The workshop has identified a number of key issues and tasks that should be addressed as the project formulates its proposal for management actions required to meet the conservation objectives. It is essential that the communication among the FIMPAS participants continues to develop these management proposals in the next period.

### Conservation Objectives

<table>
<thead>
<tr>
<th>CONSERVATION OBJECTIVES</th>
<th>Fishing gear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beam trawl</td>
</tr>
<tr>
<td>Habitats</td>
<td></td>
</tr>
<tr>
<td>Dogger Bank</td>
<td>High</td>
</tr>
<tr>
<td>H1110_C Inundated sand-banks</td>
<td></td>
</tr>
<tr>
<td>Cleaver Bank</td>
<td>High</td>
</tr>
<tr>
<td>H1170 Open-sea reefs</td>
<td></td>
</tr>
<tr>
<td>Marine mammals</td>
<td></td>
</tr>
<tr>
<td>Harbour porpoise</td>
<td>Low</td>
</tr>
<tr>
<td>Harbour seal</td>
<td>Low</td>
</tr>
<tr>
<td>Grey seal</td>
<td>Low</td>
</tr>
<tr>
<td>Seabirds</td>
<td></td>
</tr>
<tr>
<td>Great skua</td>
<td>Low</td>
</tr>
<tr>
<td>Great black-backed gull</td>
<td>Low</td>
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<tr>
<td>Common guillemot</td>
<td>Medium</td>
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<tr>
<td>Lesser black-backed gull</td>
<td>Low</td>
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The main workshop conclusions for each area are as follows:
- **Frisian Front** – There was consensus on the issues that impact on the conservation objectives and therefore guide the discussion on appropriate management measures. The focus was directed on gillnet fishery and ghost fishing and their effects on sea birds, in particular on the impact of gillnets on guillemots. Other diving birds are not in the observation objectives for the Frisian Front. However, the number of guillemots caught is unknown. Not much is known about ghost fishing. There appears to be consensus on the general effects of fishing.

- **Cleaver Bank** – There was consensus that the focus for appropriate management measures should be on the beam trawl fishery. However, the differences in habitat type with the Botney Cut being different (muddy) to the rest of the designated area (boulders and reefs) was pointed out and may form a basis for differentiating the measures within the areas. There is disagreement of the effects of beam trawling relative to the natural impacts (storms).

- **Dogger Bank** – Focus on the effects of the beam trawl fishery. As for the Cleaver Bank there is disagreement of the effects relative to the natural impacts (storms). Some differences between habitats on the Dogger Bank.

There were some disagreements among the participants between the industry on the one side and scientists on the other side. The disagreement concerned primarily the fisheries on the Dogger Bank. The discussion points were the impacts that beam trawl have on the bottom compared to the natural impact from storms. Concerning the impact by gillnetting the concern is on the differences that different gillnets may have on bycatch.
8 Next steps – Preparations for FIMPAS workshop 3 (24–26 January 2011, Den Helder, Netherlands)

The preparation of FIMPAS WK1 and WK2 was based on scientist background papers while the preparations for WK 3 will be based on a proposal developed by the FIMPAS Steering Group. The Steering Group plans the following activities in the 2nd half of 2010:

- The socio-economic study of the Gross added value of the fishery by area will be translated into English and uploaded to the FIMPAS SharePoint site (LEI report Oostenbrugge et al 2010)
- An intersessional workshop with STECF involvement on the socio-economic study is under discussion
- Presentations of the status of FIMPAS by the Steering Group to ICES ACOM, EXCOM NSRAC, and the Dutch public
- The FIMPAS Steering Group will develop a proposal for management options. This proposal will be an open list that FIMPAS participants will be invited to comment on and to propose additions to at the 3rd FIMPAS workshop. The Steering Group will draw on the ICES expert network for expert reviews to assist the Steering Group. Candidates for such further elaborations include the gillnet discussion (should we distinguish between several classes of gillnets, enforcement issues with such distinctions) and the possible impact and extent of ghost fishing, furthermore the noise and visual disturbance will be considered
- The international module (Dogger Bank) conservation objectives which are discussed among Germany, Netherlands and UK will remain on the FIMPAS agenda
- The economic evaluation of management proposals will be done at or after the 3rd FIMPAS workshop
9 Closure

The Chair Paul Connolly thanked everybody for their contributions and wished the participants a safe journey home. He hoped that they all will meet in Den Helder next January. He stressed the importance that the discussions continue and that all the communication channels remain open until all outstanding work is completed. The period between now and the end of the year is critical for the success of the workshop which aims to develop management actions that meet the conservation objectives and the understanding of their socio-economic consequences.
10 References


Van Oostenbrugge, J.A.E., Bartelings, H. and F.C. Buisman. 2010. Inventory of fishing activities at the North Sea (Executive summary) LEI

Christiansen, S. 2009 Towards good environmental status. A network of marine protected areas for the North Sea. WWF Germany.

FIMPAS – information on Danish Fishery in Dutch Natura 2000 areas. 2009.
# Annex I FIMPAS WK2 participants

## FIMPAS – 2 – WORKSHOP

**Hardelot, France**

**30 June – 02 July 2010**

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Annex II Agenda

Chair: Paul Connolly
Venue: Neufchatel-Hardelot, France

Wednesday 30 June (Opening at 11:00)
Opening and layout of work
Welcome and Tour de table

Presentations
- Presentation 1 (Ton IJlstra): Overview of FIMPAS where are we; what to do next
- Presentation 2 (Hans Lassen): Review of WK1 outputs (Van Hal et al. 2010): a) Area characteristics, b) conservation objectives, c) fisheries and d) Impacts
- Presentation 3 (Paul Connolly): Objectives for WK2
- Presentation 4 (Ton IJlstra): Report on Gillnet issues incl. discussion with Danish industry. Gear considerations that were raised during Workshop 1 including gillnet issues. The Dutch industry has investigated gillnet fishing outside 12 Nm and informed FIMPAS that only 1 vessel operates gillnets outside 12 Nm.
- Presentation 5 (Charlotte Deerenberg, IMARES): Background paper with conflict analysis. Which fishing activities exist on which ground? Which are the impacts of the fisheries and which are the conservation objectives? – Proposal for Gear- Environment Impact-Matrix

Plenum discussion of conflict analysis
Poster session. Highlighting the overlap between fisheries and environmental concerns. Identify the areas where the conservation objectives are challenged. Posters/projections showing maps of fisheries for general discussion among the participants.

Thursday 1 July
Recap of outcome of poster session, Day 1 discussions and objectives of day 2: Introduction to the socio-economic considerations, finalising the discussion on the conflicts (Paul Connolly)

3 Breakout groups (one for each area):
- Dogger Bank (sandy Habitat), Chair: Han de Lindebom (IMARES);
- Cleaver Bank (Reef), Chair: Godfried van Moorsel (EcoSub);
- Frisian Front (Sea birds), Chair: Kate Tanner (Birdlife International).

The task is to identify conflicts and scope, features, and strengths of these conflicts for each area. The steering group will develop guidelines for the discussions.

Breakout groups - Conclusion on an area and preparing presentations
Presentation of the findings by breakout group chairs
Friday 2 July

Overall Workshop conclusions on the conflict analysis (Plenum discussion input from Workshop Chairs)

Preparing for Workshop 3

Closing
Annex III Maps presented at workshop

01 Habits Depth

Legend
water depth meters
-70 to -50
-40
-30
-20
-10 to -20
-10
0 to -5
-4 to -2
-1
0

01 InternationalVMS_v2_Habitat=depth.jpg
03 Mammals

Harbour porpoise March - April
8b  Birds

Guillemot December - January
Beam Trawl Q1  II = mesh size > 80mm
Beam Trawl Q2

II = mesh size > 80mm
Beam Trawl Q3

II = mesh size > 80mm
Beam Trawl Q4 

II = mesh size > 80mm

Legend
Beam trawl II, Q4
Sum(2006-2008) hrs
- 0.1 - 23
- 24 - 81
- 82 - 168
- 169 - 298
- 299 - 754

Fleets: Danish, German and Dutch

13 InternationalVMS_v2_BeamTrawl_I1Q4.jpg
Otter Trawl Q1

I = mesh size 80 - 99 mm

Legend
Otter trawl I, Q1
Sum(2006-2008) hrs
- 0.1 - 43
- 44 - 152
- 153 - 319
- 320 - 569
- 570 - 1123

Fleets: Danish, German and Dutch
23 Otter Trawl Q2  
I = mesh size 80 - 99 mm

Legend
Otter trawl I, Q2
Sum(2006-2008) hrs
0.1 - 43
44 - 152
153 - 319
320 - 569
570 - 1123

Fleets: Danish, German and Dutch

23 InternationalVMS_v2_OtterTrawl_IQ2.jpg
Otter Trawl Q3
I = mesh size 80 - 99 mm

Legend
Otter trawl I, Q3
Sum(2006-2008) hrs
- 0.1 - 43
- 44 - 152
- 153 - 319
- 320 - 569
- 570 - 1123

Fleets: Danish, German and Dutch

24 InternationalVMS_v2_OtterTrawl_IQ3.jpg
Otter Trawl Q4

I = mesh size 80 - 99 mm
Gill nets, Q1

Legend
Gill nets, Q1
Sum(2006-2008) hrs
- 0.1 - 21
- 22 - 65
- 66 - 134
- 135 - 260
- 261 - 593

Fleets: Danish, German and Dutch

30 InternationalVMS_v2_GillNetsQ1.jpg
Annex IV Sandeel fishing grounds in the Southern North Sea (courtesy Danish Fishermen Association)
Annex V Structure for evaluation of habitat quality

For use in the discussion among the countries with EEZ’s on the Dogger Bank (Denmark, Germany, Netherlands, and UK) Hans Nieuwenhuis presented a model that he proposed could be used to achieve comparability among the approaches that the three countries that so far have indicated that they intend to nominated Natura 2000 sites under the Habitat directive on the Dogger Bank, i.e. Germany, Netherlands, and UK.

Abiotic Preconditions
incl. physical disturbance

Characteristics of Good Structure and Function
- Biotic (composition, age structure of species communities)
- Abiotic (shape, sediment structure)
- Ecological function: e.g. food web interrelations

Typical Species
Representative of biotic characteristics and ecological function picked from functional groups