

Fishing activities on the Dutch Dogger Bank

Supplement to LEI Memorandum 13-051

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Introduction

In response to a request from the Ministry of Economic Affairs an update of the data and analyses on the fishing activities of the Dutch fishing fleet on Dutch part of the Dogger Bank for the years 2012 and 2013 has been made. In this update the same data sources and methods have been used as in the memorandum that was published previously (Bartelings et al., 2013).

Results

Table 1 shows the developments in total landings, landings value and contribution to the Gross Value Added (GVA)¹ of the Dutch fishing fleet on the Dutch Dogger Bank.

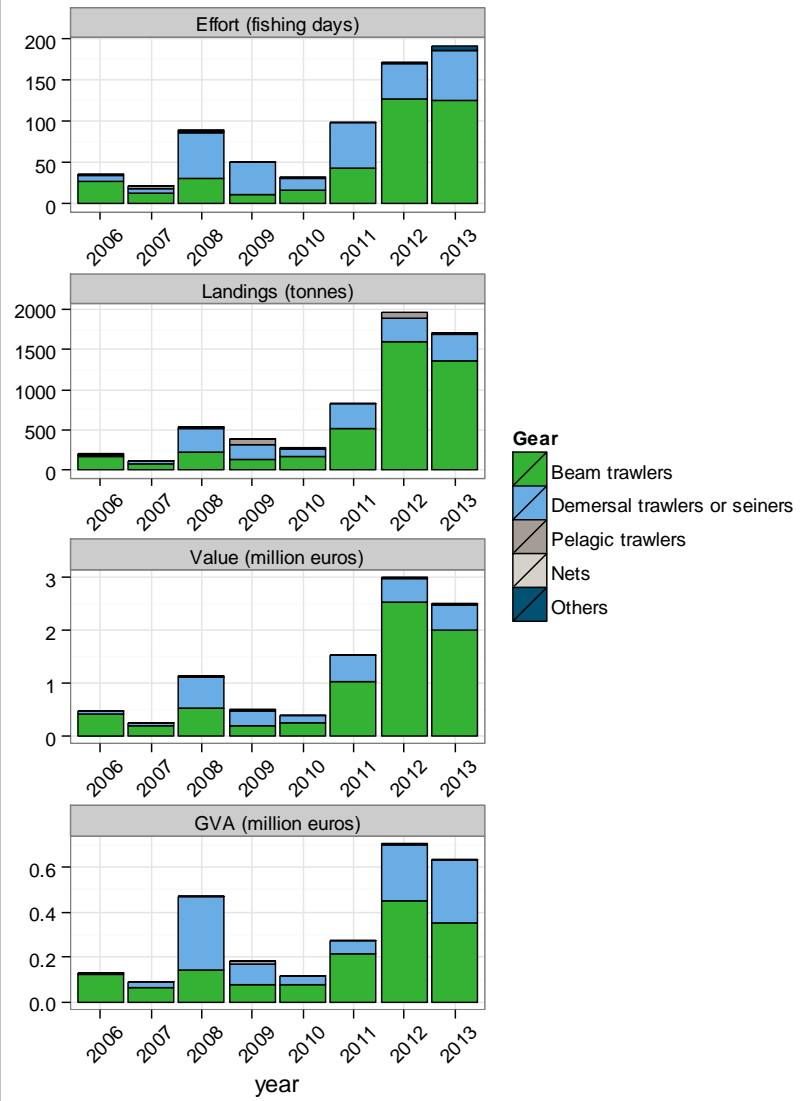
Table 1	Overview of landings and values of the Dutch fishing sector in the Dutch part of the Dogger Bank							
	2006	2007	2008	2009	2010	2011	2012	2013
<i>Landings (tonnes)</i>								
Dutch Dogger Bank	204	114	537	386	276	828	1,970	1,703
<i>Value (1,000 euros)</i>								
Dutch Dogger Bank	476	263	1,130	509	401	1,529	2,997	2,493
<i>Gross Value Added (1,000 euros)</i>								
Dutch Dogger Bank	133	90	473	180	119	276	704	635
a) preliminary estimates; Source: Logbook data and VMS data, processed by LEI .								

Fishing intensity has been low on the Dutch Dogger Bank, but due to the increasing plaice TAC and the good fishing opportunities for plaice in this area, fishing intensity has increased substantially during the last years (Figure 1). The total value of landings increased by around 500% from 2010 to 2012 (€3m). In 2013 landings decreased again by around 20% to €2.5m. Because of this increase in fishing activity, the contribution to the GVA increased to around €0.6m. In general, most of the effort in the area was deployed by beam trawlers and also some demersal trawling took place.

¹ The results up to 2010 are comparable to those of the previous memorandum. For 2011, the contribution to the GVA was updated using the actual economic data, whereas the results for 2013 are preliminary estimates, based on the proportion of GVA and landings value in 2012.

Figure 1

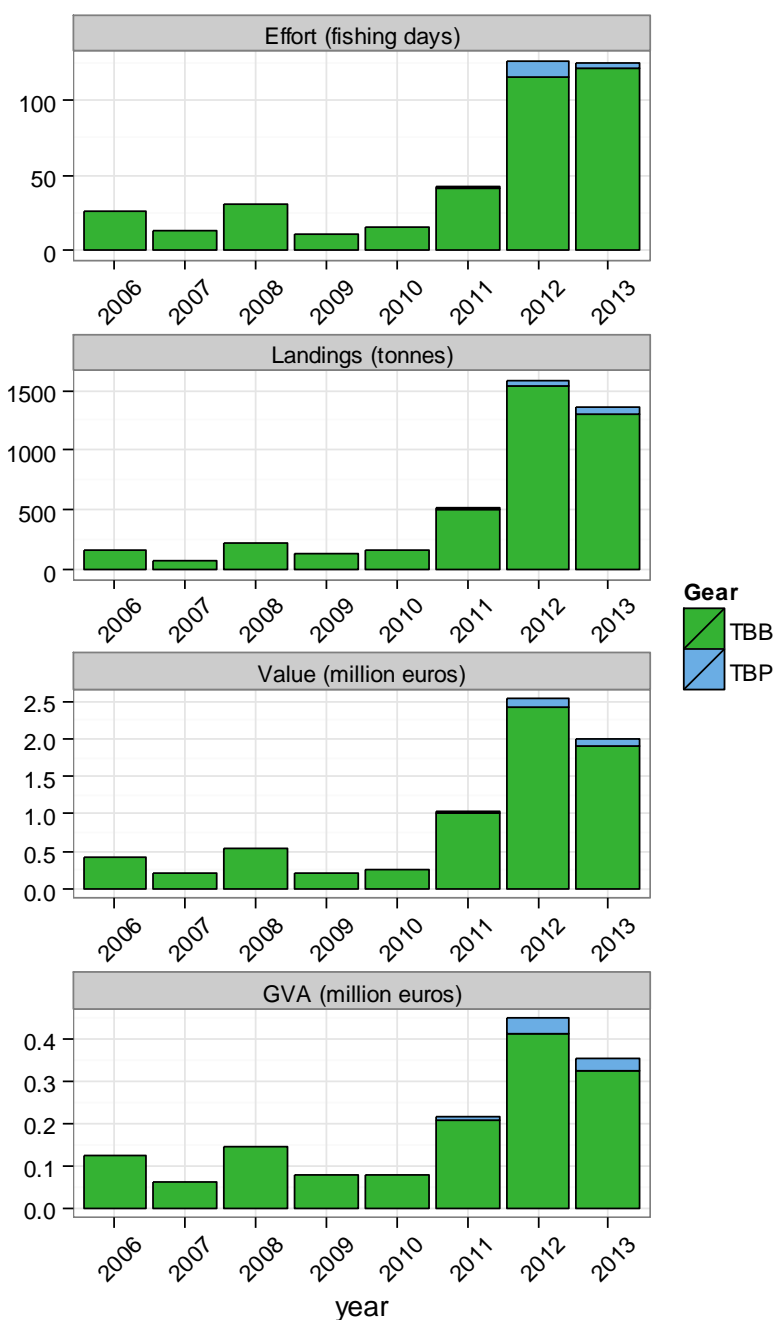
Historical trends of the fishing activities in the Dutch Dogger Bank by the Dutch fleet. Effort, landings, value of landings and GVA are given by gears aggregated at the level of European codes (see Appendix 4 of Memorandum 13-051)



Source: Logbook data and VMS data, processed by LEI.

The beam-trawl fishery on the Dutch Dogger Bank was carried out almost exclusively by traditional beam trawlers (TBB) (Figure 2). This is mainly because pulse fishing (TBP) is not allowed north of 55 north latitude and therefore a large part of the Dutch Dogger Bank is not accessible for pulse trawlers. Moreover, the fisheries on the Dogger Bank are targeting plaice, whereas the pulse gear has been used for sole fishing. The total value of landings from the beam trawl fishery was highest in 2012 (€2.5m). In 2013 landings and their value decreased again by approximately 20%, resulting in a contribution to the GVA of approximately €0.3m in 2013, three times higher than on average in the years between 2006 and 2010.

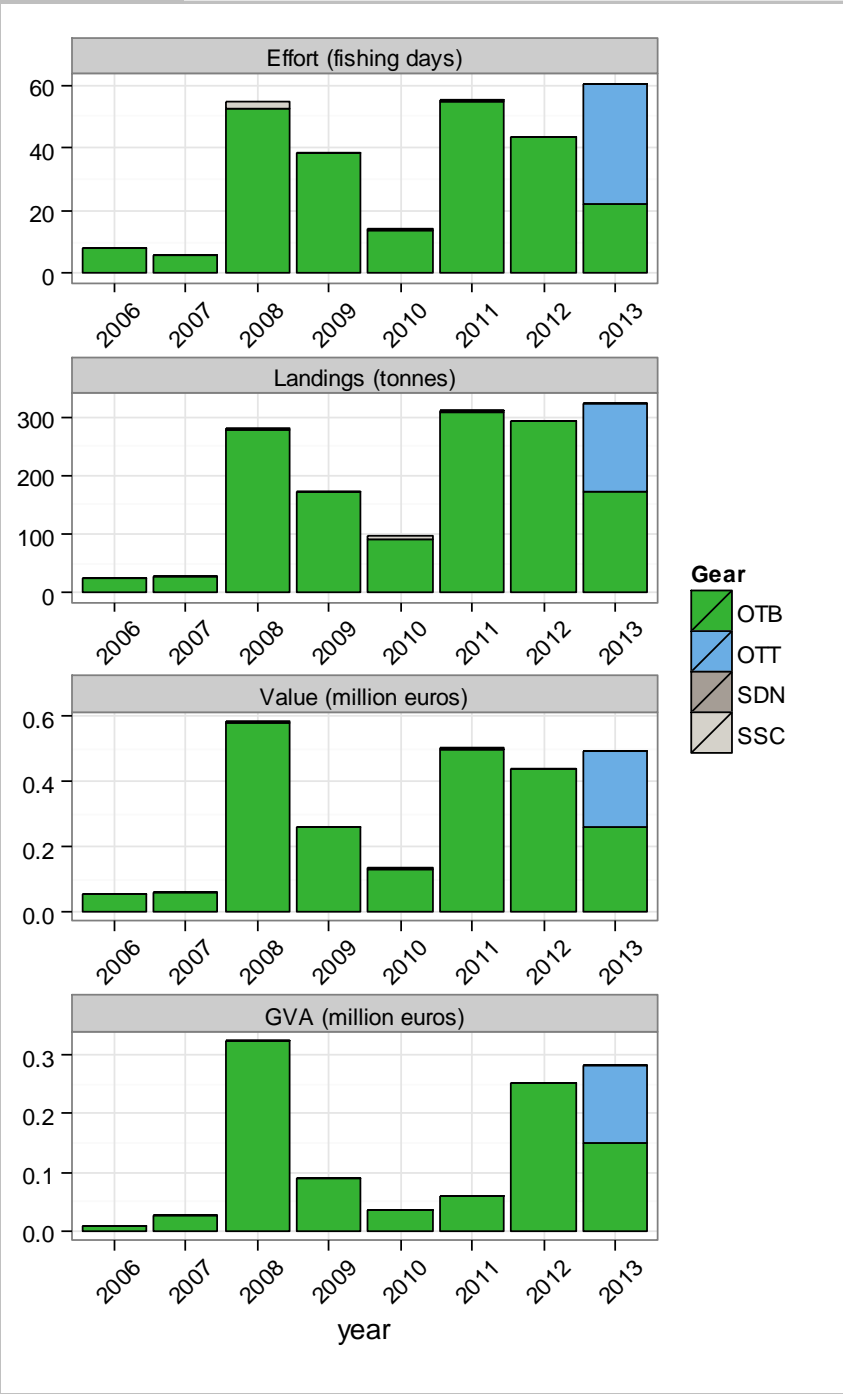
Figure 2 Historical trends of the fishing activities in the Dutch Dogger Bank by the Dutch beam trawlers. Effort, landings, value of landings and GVA are given by gears aggregated at the level of European codes (see Appendix 4 of Memorandum 13-051)



Source: Logbook data and VMS data, processed by LEI.

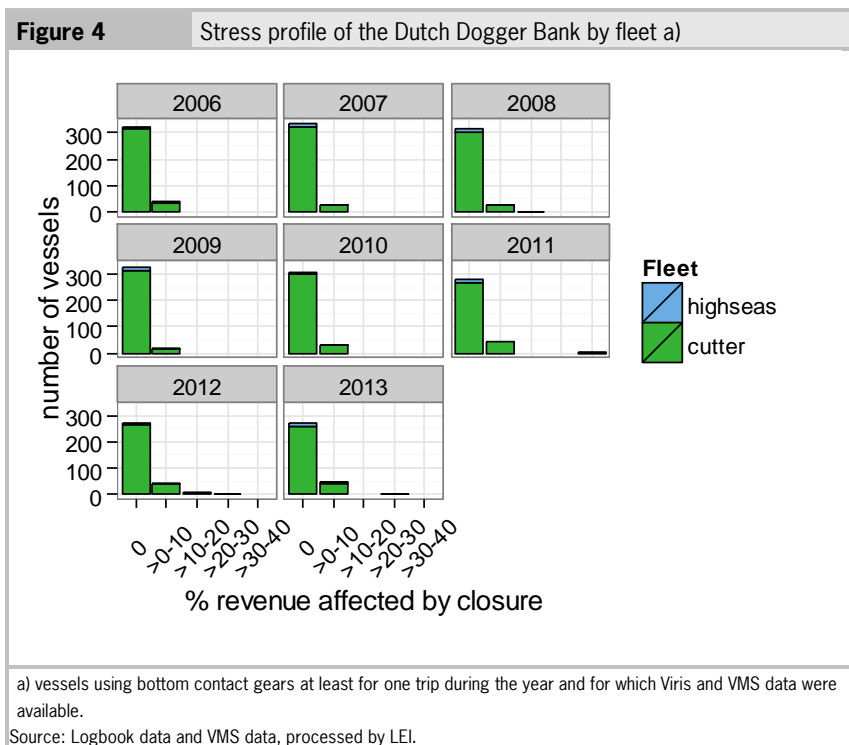
The fishing intensity of demersal trawls was much lower than the intensity the beam-trawl fishery and consisted almost solely of otter board trawl (OTB) (Fig 3). Only in 2013, part of the effort and landings was realised by the twin trawl fishery (OTT). However, this proportion might be larger as there are indications that some of the twin trawl trips have been misreported as otter board trawl. The total landings and landings value was stable for the last three years; total landings were approximately 300 tonnes and their value was about €0.5m. After the economically bad year 2011, GVA was stable at around €0.3m.

Figure 3 Historical trends of the fishing activities in the Dutch Dogger Bank by the Dutch demersal trawlers. Effort, landings, value of landings and GVA are given by gears aggregated at the level of European codes (see Appendix 4 of Memorandum 13-051)



Source: Logbook data and VMS data, processed by LEI.

In order to show the dependency of individual vessels from the area, a stress profile has been made for the whole area of the Dutch part of the Dogger Bank. This graph shows the dependency of individual vessels, measured by the value of landings from the area (which would be affected by a theoretical closure) relative to the total value of landings. The individual dependency levels are then aggregated in the profile shown Figure 4. More details about the background of the calculation method can be found in Hamon et al. (2013). The analysis suggests that around 40 vessels have been active in the selected area each year and that this number has increased from 2009 onwards. For most of the impacted vessels, less than 10% of the revenue came from the selected area. In the last 3 years, a limited number of vessels obtained more than 10% of their revenue from the area.



Conclusions

The fishing intensity in the Dutch part of the Dogger Bank has shown considerable growth over the last years, mainly due to increasing fishing opportunities for plaice. As such, the total value of landings from this part of the North Sea has increased from around €0.5m in from 2006 to 2010 to approximately €2.5m in 2013. With these landings, the contribution of the fishery in this area to the total value of landings and the GVA of the total Dutch demersal fisheries is still relatively low compared to other areas; approximately 1% and 0.5% respectively (STECF, 2014). Some of the vessels that are operating in the area obtain a large part of their revenues from this area, but the dependency of most of the vessels on fishery revenues from this areas is low (<10%).

It should be noted that the results presented here are not exact numbers but estimates based on a complex estimation procedure with multiple assumptions. More about the assumptions and the resulting uncertainty in the estimates can be found in Oostenbrugge et al. (2010).

Literature

- Bartelings, H., K. Hamon and J.A.E. van Oostenbrugge, 2013. Fishing activities on the Dogger Bank 2006-2011 LEI Memorandum 13-051. LEI Wageningen UR, The Hague. May 2013.
- Hamon, K., J.A.E. van Oostenbrugge and H. Bartelings, 2013, Fishing activities on the Frisian Front and the Cleaver Bank Historic developments and effects of management. LEI Memorandum 13-050. LEI Wageningen UR, The Hague. May 2013.
- Oostenbrugge, J.A.E. van, H. Bartelings and F.C. Buisman, 2010. Verspreidingskaarten voor de Noordzeevisserij; Methodiek en toepassing Natura 2000-gebieden (in Dutch). LEI-rapport 2010-066 ISBN/EAN: 978-90-8615-455-5. LEI Wageningen UR, The Hague. 2010.

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