

## Consultation on Dogger Bank possible Special Area of Conservation

### Template for responding to the consultation

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#### **NOTES**

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### Sites and their associated boundaries

SAC1) Do you support the scientific basis for the Dogger Bank site being put forward in this round of consultation?

No. The NSRAC has serious concerns regarding the statement (Impact Assessment doc: Summary: Policy Option 1 (propose designation)):

*'The option to search for an alternative site is not been considered further here as there are no known alternative sites. If this site is not designated there is a significant risk that the EC will judge the UK's contribution to the network of SACs for sandbank to be insufficient, which could lead to infraction proceedings. Alternative sites of similar quality and extent are not currently known to exist (known alternatives were considered in the scoping stage but not recommended on scientific grounds).'*

The NSRAC finds this reasoning unsatisfactory, giving the impression that the proposal is inspired by legal more than scientific arguments, raising a number of questions including:

- Were no smaller sites available that would fulfil the UK's requirements under the Habitats Directive? Notwithstanding an 18% shrinkage of the boundary since the 2008 proposal, if Dogger Bank was the only available example, is designation of a pSAC on the scale envisaged not an over-reaction to the wish to comply?
- Notwithstanding that socio-economic factors cannot influence site selection and boundary-setting, and given that management measures are likely to restrict and displace fishing effort, could a smaller proportion of the site not have been considered in order to achieve a better balance between environmental and fishing interests?
- Within the UK's obligation to meet its requirements for designating sandbank habitat, it should be possible to reduce the extent of the Dogger Bank pSAC or adopt comparable areas in the North Sea, thereby relieving pressure on an area that is of critical importance to European fishing fleets, and also alleviating damage (caused by increasing discarding and inflicting benthic damage) resulting from displacement to other areas.
- A better balance between environmental and fishing interests would enhance respect for and compliance with the management measures that are likely to be introduced.

See also SAC4 (below)

SAC2) Please indicate if you have any scientific information, not already referenced in the SAC Selection Assessment document for Dogger Bank site, to support your response to SAC1.

No

SAC3) Do you have any information additional to that included in the SAC Selection Assessment document about the condition of Annex I habitats within the Dogger Bank site boundary that you would like to share with the JNCC?

While we support that the Dogger Bank is a *spawning* ground for flatfish, we question the area's function as a *nursery* for flatfish, due to the highly dynamic nature of the sandbanks and lack of sheltering areas (see IA p. 49, Table 4.6).

SAC4) Do you have any further comments on the scientific selection of the Dogger Bank as SAC?

Concerning the **Draft Conservation Objectives (and Advice on Operations)**, namely (and paraphrasing): '*Subject to natural change, restore the sandbanks... to favourable condition, such that the natural environmental quality is maintained, the natural processes are maintained, and the extent, physical structure, diversity, community structure, and typical/representative species are restored*', the NSRAC has difficulty with the issue of restoration in terms of what the goal of restoration is, and – were that definable - whether such restoration is feasible and cost-effective, given:

- a) The highly dynamic nature of the Dogger Bank and its hydrography
- b) The conservation objectives are qualified by '*Subject to natural change...*'
- c) § 1.8: '*For offshore sites, there is presently insufficiently detailed information on i) the existing condition of qualifying interest features, and ii) the preferred or target condition of interest features. This currently limits identification of measures and associated targets for condition monitoring It is anticipated that further information on the condition of interest features will be obtained through baseline monitoring and surveys*'.

Regarding (b) and (c):

- a) If '*Subject to natural change*' is applied as a de facto let-out clause, how will JNCC distinguish that from human induced change, such as from fishing?
- b) NSRAC interprets this as meaning that there is relatively poor understanding of the site, its dynamic processes and therefore changes thereto (indeed the latter, being indirect impacts, seem not to be under examination, in contrast with the determination of direct impacts). This lack of baseline leads us to challenge the concept of defining/quantifying to what condition, and over what timescale, the site will be 'restored'. Nor is any methodology or timescale given for collecting the '*further information*' needed to inform changes to this baseline, even if we knew what it was in the first place. Importantly for NSRAC, how will the response of biodiversity and fish stocks to displaced fishing effort be assessed if fishing was displaced from the area?

JNCC acknowledges the scale of these challenges in its SAC Selection Assessment doc, p. 12 of which says: '*Active restoration of habitat on the Dogger Bank would be difficult since the structure and functions of the habitat and methods to restore it are not known (and are unlikely to be cost-effective).*'

The same text goes on to say: '*However, a cessation of anthropogenic disturbance could allow natural recovery of the biological communities associated with Dogger Bank. The suggested grading for this criterion is II: restoration possible with average effort.*'

The NSRAC challenges that, under the conditions conceded by JNCC itself, restoration is possible with 'average effort' and we also challenge the ability to measure any restoration.

In this regard, we would also query the answer 'Yes' to the question on p. 1 of the Impact

Assessment (IA), namely *'Are there arrangements in place that will allow systematic collection of monitoring information for future policy review'*. We cannot support this confidence without a better understanding of the methodology intended and resource available. However, we do note the statement on p.34 of the IA that *'Experimental closures may be considered, to inform future management measures based on their relative success'* and that these are further elaborated in the Minimum Scenario (Impact Assessment doc p. 37, Table 4.1); see comments on this under IA response, below.

Collectively, these methodological shortcomings have significant implications for NSRAC, given that the site is judged to be 'highly vulnerable' to physical disturbance from demersal trawling. If there is not a systematic methodology for assessing the condition of the benthos, the impacts attributed to the fishing sector cannot be quantified and therefore any potential amelioration of impacts (due to gear changes or partial or wider exclusion of fishing from the site) cannot be assessed or amenable to appropriately weighted adaptive management. Under these conditions of uncertainty, the NSRAC is concerned that fisheries management measures for the site may be excessively precautionary and punitive.

#### §23/2.4: Vulnerability and Risk Assessments

Fishing is identified as a *'high risk' activity..to which the [SAC] feature is highly or moderately vulnerable.'* Although it is acknowledged that *'..clearly not all activities associated with these industries are detrimental to interest features'*, Table 1 still attributes blanket 'high' vulnerability from fishing to *'physical disturbance or abrasion'* and *'selective extraction of species'*. The Impact Assessment doc is much more nuanced in its assessment of the role of different fishing metiers (of which there are several) in the Dogger Bank pSAC, and therefore we point out that it is a crude approximation to attribute a uniformly high vulnerability rating to fishing in Table 1.

Note also that, compelled by the need to reduce fuel consumption, the introduction of pulse trawling (obviating the need for tickler chains) or a 'sumwing' which enables Dutch beam trawls to skim over the seabed, has potential to significantly reduce beam-trawl impacts in the coming years. UK beam-trawlers have also achieved significant reduction in discards as an outcome of a Fisheries Science Partnership project.

In addition, the risk assessment only identifies demersal fishing as a high risk activity on the basis that site-specific activities (gas, oil, renewable) will be regulated by the Habitats Directive process to avoid adverse effects. However, if baseline data on quality and processes isn't available (see above), how will it be determined if an activity is damaging or not, especially in combination?

Under Non-physical disturbance/Noise, noise is categorised as *'No known vulnerability'*. Presumably this means not specifically for Dogger Bank, in keeping with the statement in App II, p. 16 that *'It has not been possible to determine whether the interest feature is sensitive to noise (acoustic)...'*. However, especially given the mix of fish species on Dogger Bank which are known to be sensitive to pile-driving sound, the more generic evidence is arguably admissible here, given that there is growing evidence of the effects of pile-driving noise on fish behaviour (e.g. [http://www.offshorewindfarms.co.uk/Assets/COWRIE%20FISH%2006-08\\_Technical%20report\\_Cefas\\_31-03-10.pdf](http://www.offshorewindfarms.co.uk/Assets/COWRIE%20FISH%2006-08_Technical%20report_Cefas_31-03-10.pdf)). The authors of that study conclude that while the reaction thresholds and therefore the impacts are unknown, the results imply a 'relatively large zone of behavioural response' and that 'the concerns raised about the potential effects of pile-driving noise on fish were well founded'.

To enlarge on these concerns, pile driving and seismic activity (air guns) in connection with the windfarm and boat, and dredging noise associated with sand/gravel extraction, may affect fish and invertebrates on the Dogger Bank adversely. Pile driving can kill fish in the immediate proximity, deafen those at a distance, and displace fish from preferred habitats. Seismic surveys associated with oil and gas exploration and with surveys of wind farm sites are known from Norwegian work to affect the behaviour of fish. Dredging will have a number of effects. The fish to be affected would include the common demersal species, some of which (plaice, sole and sandeels) may be especially affected by ground borne vibration from both pile driving and seismic surveys (with both sources there is much energy entering the ground setting up Rayleigh waves which run across the seabed). If we consider how many wind turbines are going to be installed in the area, and the number of piles to be driven, and the number of 'strikes' per pile, and the large distance over which the sound will be transmitted, then the Dogger Bank may be subjected to incessant exposure to impulsive sounds for the next ten years. (See also answer to IA2, below).

One concern is whether sound in some areas might mask the communication sounds of fish in adjacent areas. Both cod and haddock make considerable use of sound during courtship. If there are spawning aggregations of these species on the Dogger Bank (and no-one knows if there are or not) then their spawning behaviour may well be affected adversely by the general increase in background noise which will be take place in the North Sea as a result of windfarm developments. Masking of sounds by noise is known to occur in cod and haddock (A. J. Hawkins, pers comm). It has been suggested that sound recording buoys should be placed in the sea before windfarm developments take place to ascertain what the ambient noise level is before, during (10 years?) and after the construction activities. If put in position now such buoys would detect any fish and cetacean sounds and provide baseline information to enable judgement of the likelihood of any effects. Suitable buoys are available but they are vulnerable to capture by trawls and so far have not been deployed extensively in the North Sea.

Under Non-toxic contamination – Changes in nutrient loading, the only attributed source is 'outfalls', i.e. 'sewage from oil and gas industry onsite' (App III, p. 18) but not from the wider marine environment. Diffuse pollution from riverine nutrient loading entering the North Sea is thus excluded, which is inconsistent given that this source is identified as a potential issue in the document on Selection Assessment (see that document §12, p. 19).

### **SAC Selection Assessment doc**

p. 11: We note that '*Due to the shallow nature of the area and the difficulty of defining the edge of the [Dogger] bank itself, the possible SAC boundary does not include an additional margin to allow for mobile gear on the seabed being some distance from the location of the vessel on the sea surface*', and that location could of course be outside the pSAC boundary. This potential loophole and its potential legal implications for damage to the interest feature of the site is a concern to the NSRAC which needs consideration in the management measures for the site.

p. 14, §10: Sites to which this site is related: We note that, although the pSAC has diminished in area (by 18% compared to the Oct 2008 boundary) with the new boundary, the boundary now extends further north than earlier versions, altering its alignment with the Netherlands pSCI. In this regard, we also note that '*Resolution of a final boundary node at the UK-Netherlands median line has been discussed with the Netherlands, and will be resolved after consultation on the scientific justification for the UK part of the Dogger Bank*'. Other things being equal, the NSRAC would welcome a smoothing of the confluence of the NE edge of the UK pSAC boundary and the adjacent part of the Dutch boundary, in order to

facilitate spatial management of fisheries activity and compliance with potential management measures.

The NSRAC also notes with concern that the approach adopted by the UK to boundary setting and features of interest for the Dogger Bank pSAC is inconsistent with that taken by the German and the Dutch Governments to their components of the Dogger Bank. As was made clear at the recent Marine Natura 2000 experts meeting in Brussels in September 2010, level playing field and consistency issues are priorities for the European Commission. Member States were made aware of the need to demonstrate that any inconsistencies are scientifically valid and have not been made for anything other than scientific reasons. Given that the approaches adopted by both Germany and the Netherlands would seem more inclusive and more precautionary than that adopted by the UK (in relation to both boundaries and features) the UK appears open to criticism in this regard.

Moreover, these differences have potentially serious operational implications for fishing fleets which move freely across the boundaries of the tri-nation Dogger Bank Natura 2000 complex, an issue which the NSRAC has been at pains to emphasise now for several years. The shared boundaries of, respectively, the UK, Dutch and German SAC sites argue indisputably for common management measures across this Natura 2000 complex. It is already unwelcome enough that each of the national jurisdictions have arrived at different conservation objectives and selection criteria for their respective SACs.

The NSRAC therefore urges most strongly, in the interests of practical regulation of fishing activity of mobile fleets whose effort is routinely trans-boundary across national EEZs, that the spatial scale of management measures should be harmonised across the UK, Dutch and German SACs.

In this regard, we welcome the statement in the Impact Assessment (p. 27, top) that '*Work to develop coordinated management measures has already commenced.*' The NSRAC considers this coordination not just desirable but absolutely essential, indeed a *sine qua non* for fit-for-purpose maritime spatial management, and essential for compliance with the 10<sup>th</sup> of the 11 requirements from Member States in the Commission's '*Fisheries measures for Marine Natura 2000 sites: a consistent approach to requests for fisheries management measures under the CFP.*'

Moreover, given that some displacement of fishing activity is virtually inevitable, not least from offshore windfarm developments, the NSRAC seeks the spatial scale of measures to be considered not just for the tri-nation Dogger Bank Natura 2000 complex but the whole of the central-southern North Sea.

Of special significance here is the designation of the candidate SAC North Norfolk sandbanks and Saturn Reef which is an important fishing ground for flatfish and (Denmark) sandeel. In addition, we have the establishment of the Round 3 windfarm development zones Hornsea and East Anglia, not to mention emerging MCZs. The Danish sandeel fleet fishes all the major sandbanks in the North Sea, including those to the south of the Dogger Bank but Dogger is by far the biggest source of its sandeel landings (see IA4, below).

Given this array of development, all of which have the potential to displace fishing activity (see also IA3), it is incumbent on the UK and its neighbouring North Sea Member States to address the activity of the fleets in a coordinated and coherent manner across the central-southern North Sea region such that the potential *cumulative displacement* from an array of sites (both MPAs and windfarm development) is properly addressed and mitigated.

### Associated Impact Assessment

IA1) Do you have any further information on assessing the value of goods and services for European habitats for the Impact Assessment for Option 1: Designate the site?

No

IA2) Are there any other significant activities at Dogger Bank that the IA has not identified?

Under SAC4 (above), the NSRAC has expressed its concerns about potential sound disturbance to fish populations and their behaviour arising from the prospect of pile-driving for installing wind turbines. The precautionary principle argues that any licensing for windfarms within a pSAC, as on Dogger Bank, should prohibit pile-driving as a foundation technique and give priority to alternative measures.

IA3) Can you provide any information to inform estimates of what vessels would do in response to closing Dogger Bank or part of it to certain types of fishing methods?

#### **Impact assessment (IA)**

The NSRAC found several misleading typo errors in this document which did not help navigate a complex text:

- In the body text, pp 27 and 28, reference to Table 5 should say 2.4
- Likewise on p. 32, text reference to Table 2.7 should say 2.6
- On p. 32, text reference to Table 2.8 should say 2.7
- Also on p. 32 it is stated that ' the majority of catch by weight is caught by unspecified otter trawls' but the Table to which this refers (2.7, not as stated 2.8) shows that beam trawls catch almost twice the tonnage of unspecified otter trawls.

In addition, it would have been helpful if JNCC had presented a map showing overlap of the 2008 boundary (which was subject to pre-consultation on the NSRAC, also the Lot 7 study) with the boundary now proposed, to facilitate the fishing sector's re-examination of fishing areas at potential risk of restriction.

In the NSRAC's view, and building on the arguments we gave (SAC4) for assessing cumulative impacts, confining the Impact Assessment of fishing activity to the Dogger Bank is spurious given that the financial value of fishing activity in the Dogger Area is contingent on the availability or otherwise of fishing opportunities in other sandbanks in the wider region. We welcome the recognition (IA, p.45) that displacement to alternative fishing grounds may incur higher fuel and labour costs (and we would add also potentially increasing CO2 emissions and hazards to vessel safety), and that such alternative grounds may be less productive and therefore less profitable.

Displacement from an area as large as the Dogger Bank SAC is also likely to intensify fishing pressure on other sites, to the environmental detriment of those, which again calls into question the validity of risk and impact assessments carried out piecemeal on individual sites rather than addressing the overall likely responses of highly mobile fishing fleets. The

Dogger Bank is an area of low discard levels and displacement to neighbouring (and fishing grounds (with typically more muddy substrates) carries a high probability of generating higher discard levels and inflicting other environmental damage on previously less fishery-impacted areas. Even for the beam trawl fleet, Dogger is a 'clean' area to fish, generating very little discards. Reduction of discards is a high priority for the Member States fishing the Dogger Bank, in keeping with the high priority given to this issue by the European Commission, not least in the current reform of the CFP.

There are precedents for unintended consequences of displacement, e.g. the North Sea cod box closure of 2001 led to the beam trawl vessels fishing in previously unimpacted areas (Rijnsdorp *et al.*, 2001), leading to a greater reduction in the total productivity of benthic communities (Dinmore *et al.*, 2003). In conclusion, the NSRAC therefore concurs with the 'Risk of unintended consequences' (IA, p. 53), namely that '*Displacement of fishing effort to alternative grounds may intensify fishing at those grounds to unsustainable levels, causing net damage to fish stocks overall.*'

The need for JNCC and Defra to evaluate such impacts is in keeping with the last of the 11 requirements from Member States in the Commission's '*Fisheries measures for Marine Natura 2000 sites: a consistent approach to requests for fisheries management measures under the CFP*', namely '*Evaluation of possible displacement of fishing effort and impact on new areas*'. The NSRAC sees little evidence in this IA that such an evaluation has been attempted.

The NSRAC also concurs with the risk (IA, p. 53) that '*Fishermen may seek compensation for moving grounds*'.

Taking all these risks into consideration, the NSRAC urges Defra not to ban trawling in the Dogger Bank SAC but rather to focus its efforts on finding other, more appropriate management measures which strike a fair balance between nature conservation, fishing opportunities and thus the sector's economy. Such an approach will also engender industry support for the management measures, leading to compliance and reduced enforcement costs.

Refs:

Dinmore, T.A., Duplisea, D.E., Rackham, B.D., Maxwell, D.L., & Jennings, S. (2003) Impact of a large-scale area closure on patterns of fishing disturbance and the consequences for benthic production. ICES Journal of Marine Science, 60, 371-380.

Rijnsdorp, A.D., Piet, G.J., & Poos, J.J. (2001) Effort allocation of the Dutch beam trawl fleet in response to a temporary closed area in the North Sea. International Council for the Exploration of the Seas, Committee Meeting, CM 2001/ N: 01.

IA4) Can you provide any information to improve the assessment of the costs (and wider impacts) of selecting Dogger Bank?

Whereas VMS has been fundamental to the IA for fisheries, the NSRAC would have expected to see more qualification of its use on the grounds that whereas VMS is a powerful tool, as a generator of dots on maps it also has a significant power to mislead: many factors, notably TACs, fishing effort, gear restrictions and markets, can affect VMS outputs which therefore need careful interpretation, e.g. seasonality of landings has more to do with quota restrictions than fish biology.

Unlike the Lot 7 study, the IA does not address the degree of dependency of given gear

types on the Dogger Bank, to the exclusion of other areas. According to Lot 7, and as the IA also analysis of UK data for 2006 established that 21 beam trawlers, 6 otter trawlers and 3 Danish seine netters fished within the proposed SAC; in 2007, 23 beam trawlers, 8 otter trawlers and 2 Danish seine netters were active in the area. However, unlike the IA, the Lot 7 study goes on to state that *'The total annual hours of fishing within the proposed SAC was estimated to be approximately 4700 for beam trawlers in both years, 400 and 1800 for otter trawlers in 2006 and 2007 and 1200 and 1000 for Danish seine netters. This represents approximately 11% of the beam trawl effort, 4% and 14% of the otter trawl effort and 94% and 79% of the Danish seine effort when compared with the total fishing effort of these vessels within ICES areas IVb & IVc.'*

These data are particularly significant for the Danish seine vessels given the very high dependency of their activity on the pSAC area, in turn dependent on the availability of soft ground. Small as this fleet is, any displacement from the area would be highly damaging to its economic viability.

While the impact assessment acknowledges the absence of data for non-UK registered vessels to non-UK ports, it appears to also substantially underestimate landings from UK registered vessels. As landings data is derived from MFA/MMO sources it is not clear why this should be the case, perhaps an error in data extraction or a deeper flaw in the recording of UK landings data. A third possibility is the methodology used to assign proportions of landings assigned to ICES rectangles to the area of the pSAC, though this does not appear to explain the substantial discrepancies.

The consultation specifically requests information on value of **non-UK landings to non-UK ports:-**

### 1) Danish fisheries (landing into Denmark)

Denmark deploys 3 fishing methods (all very low discards) in the Dogger Bank. In 2008 these collectively yielded ca EUR 23m to the fishermen, representing 6.6% of the total value from Danish landings:

- Gill-nets (4 vessels, catching 100t turbot, value to fishermen ca EUR 1m)
- Danish seines (10 vessels, 1000t plaice (mainly), value ca EUR 2m)
- Sandeel trawlers (30-35 vessels, ca 150,000t (250,000t in 2008), value ca EUR 20m)

Exclusion of the sandeel fishery in particular would impact heavily on the Danish sandeel fleet for which the Dogger Bank (rectangles 37F1, 37F2, 38F1, 38F2, 39F1, 39F2, 39F3) is by far its biggest source of catches and revenue.

Sandeel prices in 2010 were exceptionally high, as the following table shows:

Species	Landings (tonnes)		Value (EUR)	
	2009	2010**	2009	2010**
Sandeel	150,058,000	187,154,750	18,329,232.21 €	37,933,378.86 €
Sprat	20,950,500	2,197,500	2,559,054.36 €	445,399.33 €
Herring	780,000	0	285,825.50 €	0.00 €
Plaice	717,882	632,391	952,036.80 €	812,346.56 €
Turbot	11,165	7,708	89,919.46 €	62,077.85 €

Lemon sole	3,950	3,647	15,906.04 €	14,685.91 €
Other			200,000.00 €	200,000.00 €
<b>Total</b>			<b>22,431,974.38 €</b>	<b>39,467,888.51 €</b>

[\*\* 2010 values are January to October. So, excluding sandeels (season finishes in August), figures for some species will increase when November and December are taken into account.]

These figures show that in 2010 (up till Oct), the Dogger Ban yielded Denmark over £34m for all fish species, including £33m for sandeels alone, and over £710k for plaice. Most landings are in Denmark although some (plaice) is in England and Netherlands.

In recent years, about 50% of Danish sandeel landings have been from Dogger Bank. Displacement from the area would therefore be catastrophic for the Danish fleet which also utilises all the main sandbanks in the North Sea so – in a displacement scenario – there is no slack in the system in the sense of untapped fishing opportunities; displacement from Dogger can only increase pressure elsewhere.

## 2) Norwegian sandeel fishery

Catches/value of sandeel on the Dogger Bank by 30 Norwegian vessels were:

Year	Catch (tonnes)	Value (NOK)	Value (£ - 2010 exchange rate)
2008	60,000	70 million	7,700,000
2009	27,500	42 million	4,620,000
2010	27,500	55 million	5,000,000

Most sandeels were landed in Norway but some in Denmark.

There are also Norwegian catches of plaice from Area IVb in which the Dogger Bank lies Dogger Bank (unfortunately no statistics were available for Dogger Bank specifically), the vast majority caught with trawls but some also with gill-nets and even less with lines. Almost 100% of Norway's plaice is caught on Dogger Bank. Landings are not only in Norway – much is landed in the Netherlands:

### PLAICE (all gears)

Year	Location	Catch tonnes	Value (NOK)	Value (£-2010 exchange rate)
2006	ICES IVb	1280	19,684	2165
2009	North Sea (all)	1690	17,173	1889

### FLATFISH AND OTHER DEMERSAL FISH\*

Year	Location	Catch tonnes	Value (NOK)	Value (£-2010 exchange rate)
2008	ICES IVb	1156	16,685	1835
2009	ICES IVb	1199	15,156	1667

[\* most of these catches are apparently plaice from Dogger Bank]

The 2009 catches of flatfish and other demersal species from Area IVb represented 2.36% by weight and 3.05% by value of the total landings (50,843t) and value (NOK 547,634) that year of these species by Norwegian vessels from all fishing grounds.

### 3) Netherlands fisheries

For the past forty years, the Dogger Bank (especially the southern part of the UK area) is a key fishing ground (more valuable in monetary terms than the Dutch side of Dogger) for the Dutch fishing fleet and so-called 'Dutch flag vessels', i.e. Dutch-owned but sailing under the UK flag. The area is especially important for the beam trawl fleet (total 16 vessels approx) drawn from Texel, Den Helder, Urk and Scheveningen.

Based on extrapolations (by the Dutch Fisheries Organisation) to the UK Dogger Bank area from a study of Dutch Natura 2000 sites (Oostenbrugge et al, 2010. LEI-report 2010-066), catches/values for the Dutch fleet on Dogger were:

Year	Catch (kg/km <sup>2</sup> )	Value (EUR/km <sup>2</sup> )
2007	100-600	250-2000
2008	50-400*	126-1000

\* Catches lower in 2008 due to e.g. lack of days at sea

### Costs and benefits of designation (IA, pp. 37 – 53)

#### Maximum scenario

Under the "Maximum" scenario assessed, a ban is envisaged on 'all forms of towed, demersal fishing over the whole site', equivalent to a £656.4 k per annum change in costs, assuming loss of total net profit (at 30% of the £2.188m worth of landings from UK vessels).

Apart from the economic hardship it would impose, the NSRAC unequivocally rejects this scenario on the grounds that it is indiscriminate and disproportionate to the fisheries impacts assumed: we have already pointed out that: (a) there is a wide diversity of towed gears used in the pSAC area, with varying environmental footprints, some having minimal impact on the benthos; (b) significant research and trials are currently underway to mitigate impacts on the benthos of beam-trawling.

For example, recent estimates (see ICES. 2007. Report of the ICES Advisory Committee on Fishery Management, Advisory Committee on the Marine Environment and Advisory Committee on Ecosystems, 2007. ICES Advice. Book 6, 249 pp., which see for references) 'suggest that beam trawling in the southern and central North Sea beam trawl fleets removes 39% of standing crop biomass on an annual basis and reduces benthic production by 15% relative to the unfished state). In the northern North Sea the impact of otter trawling is less severe, with an estimate of the benthic invertebrate annual mortality due to fishing representing approximately 25% of the standing-crop biomass'. Although no trawling methods are impact-free on the benthos, Danish seines and otter trawling for sandeels have

less impact than this.

#### Minimum scenario

The “Minimum” scenario envisages ‘*Experimental closures of ecologically representative areas of sandbanks. Closures may be to all activity and some to a selection (e.g. just towed gear). Closures should be sufficiently large, and kept in place for adequate time, to be able to clearly demonstrate effects of such closures*’. Such closure of up to 15% of the site to towed demersal fishing is equivalent to a £98.5k per annum change in costs, assuming loss of 15% total net profit (at 30% of the £2,188m worth of landings from UK vessels).

The NSRAC accepts that such a trial, adaptive approach to management measures may be necessary but that the NSRAC should be consulted on any proposals before they are forwarded to the Commission for consideration. Factors that would need to be taken into account include:

(a) the potential for unintended consequences of displacement of effort to areas outside the pSAC (or even elsewhere inside it), including knock-on adverse impacts on associated downstream economies onshore;

(b) the trade-off between determining the efficacy of any closure per se, and the impacts of other human or environmental drivers such as any arising from CFP reform (and particularly changes associated with moves towards MSY) and climate change (e.g. the lifespan of the ‘plaice box’ has undergone so many extraneous changes that the impact of excluding specific fishing effort is now impossible to disaggregate.)

(c) precise determination of baselines backed up by the capacity for/commitment to elaborate monitoring and assessment.

(d) potential benefits to shellfish longevity and productivity would be much easier to detect than potential benefits to finfish; the suggestion that such controls, by protecting the spawning and nursery grounds of plaice within the pSAC, might result in an increase in this (or any other) fish stock (§4.3: Benefits of designating the site, also Table 4.6) would be particularly challenging to prove. We would concur with the score of ‘moderate’ confidence in Table 4.6, namely that it is ‘*Possible that taking same catch level outside site is not neutral on stocks overall*’.

#### **IA, p. 45:**

The IA states that ‘*It is assumed that this process [of implanting closures, even if undertaken unilaterally by the UK] may take a minimum of a year to carry out and therefore that closures would not be in place until 2011. Although it may take longer than this to actually put measures in place, by using the minimum timeframe it ensures that the costs are not underestimated*’. The NSRAC considers it highly optimistic that any closures or other measures could be in place as early as 2011, and would urge that full and searching coordination on measures with the Netherlands to Germany should not be compromised for achieving unrealistically premature measures for the UK SAC.

#### **IA, p. 49, Table 4.6 (Potential significance of ecosystem services improvements for Dogger Bank SAC)**

Column 2 of the Table states that the site is a ‘Spawning and nursery ground for commercially significant fish species, including North Sea plaice.’ While we support that the Dogger Bank is a *spawning* ground for flatfish, we question the area’s function as a *nursery* for flatfish, due to the highly dynamic nature of the sandbanks and lack of sheltering areas.

IA5) Can you provide any information to improve the assessment of benefits of selecting the Dogger Bank?

In order to minimise loss of fishing opportunities in relation to compliance with qualifying features of the site, this initiative has the potential to promote uptake of low impact gears such as gill/tangle netting, longlines, pots or alternative configurations of mobile gears.

The NSRAC has pointed (SAC 4, above) to ongoing efforts to lighten the impact on the seabed by gear adaptation in the UK and Dutch beam-trawl fleets, incentivised by the need to reduce discards and fuel costs. Any area closures or restrictions – or even the prospect of them - in designating the Dogger Bank may hasten the development of low impact gears. This in turn, will drive a reduction in CO2 emissions by fishing vessels, and contribute to mitigating climate change. Such a potential benefit should be factored into the assessment.

IA6) In assessing the benefits, we do not take account of the role of the feature (i.e. habitat type) in supporting the wider ecosystem. Can you provide information on the importance of any of the features in supporting the wider ecosystem?

No

IA7) How much time do you think a business might typically take to familiarise themselves with the implications of offshore SAC designation if implemented? (If you represent a particular sector, please make your answer specific to that sector)

Impossible to be prescriptive - the implications will depend on the subsequent management measures applied. Certain businesses are more adaptable than others but individual operators will make assessments based on their perceived risk of their activities being displaced or otherwise compromised.

IA8) Are there significant unintended consequences associated with the Options (Baseline: do nothing or Option 1: designate the site) that have not been identified in the IAs?

Contrary to the claim that the pSAC could contribute to sustainable management of certain fish stocks (IA p47) at the site, it might well do the opposite as many of the stocks will migrate beyond the bounds of the pSAC.

Moreover, there is no evidence to suggest that:

- overall pressure on the stocks would be reduced (IA p47), rather the reverse could be the case. This is recognised as an unintended consequence (p53) but in any case is a contradiction.
- the non-use value to biodiversity would be achieved at the wider scale beyond the site.

IA9) Do you agree with the assessments of impacts on small businesses and can you provide any further information?

No, but only because we don't see any detail on impacts on small fisheries businesses in the documentation. Certainly such an assessment should have been undertaken and we can only think there was a mismatch between this proforma set of questions and the IA process for the Dogger bank pSAC.

IA10) Are there any other aspects of the IA on which you would like to comment or where you are able to provide further information?

The IA Conclusions (p. 54) state that the maximum management scenario 'also brings moderate expected benefits in relation to, inter alia, *'non-use values of the environment, such as in relation to charismatic marine mammals (e.g. cetaceans)'*. This is somewhat ironic given that harbour porpoise has been excluded as a feature of interest for this pSAC.