DPPO
Danmarks Pelagiske Producentorganisation

This document sets out to summarize argument used by by the MSC auditing team in connection the 2017 MSC certification of the Sandeel and Norway pout fishery. The documents have a focus on the response from the Auditing team to comments from NGO's given during the public hearing process.

Both two fisheries in question have been through a MSC certification process with a positive outcome. Based upon this, the fisheries were granted the MSC certification in 2017.

The "*values of sandeels and Norway pout to the marine ecosystem*" was, during the MSC certification process, evaluated under Principle 2 : *Ecosystem impacts: Fishing operations need to be managed to maintain the structure, productivity, function and diversity of the ecosystem upon which the fishery depends, including other species and habitats.* With respect to this principle, sandeel and Norway pout both scored 82.3 points, which is above the required threshold of 80.

In order not to repeat the arguments provided in the certification rapport by the independent MSC reviewers, we refer to the MSC certification rapport "MSC Final Report and Determination for DFPO and DPPO North Sea, Skagerrak and Kattegat Sandeel, Norway Pout, and Sprat fisheries" for the scientific justification for the positive evaluation of sandeel and Norway pout when it comes the Ecosystem Impacts.

However, given the public nature of present "Call for evidence" we would like to draw specific attention to Annex 3 in which responses to submitted stakeholder comments to the certification, are addressed. With respect to the certification of sandeel and Norway pout, written submissions was received from Birdlife International and Whale and Dolphin Conservation.

Below is a summary of the concerns raised and the responses from the MSC reviewers. For details we refer to the rapport. Important is that none of the comments made by neither Birdlife international nor Whale and Dolphin Conservation triggered any re-scoring of the MSC assessment.

**Comments and responses to Birdslife international and Whale and Dolphin conservation:**
Below is a summary of the essence of the comments made and the response delivered.

1. Birdlife international comment: "*…is of concern to us that other sandeel-dependent seabirds (Razorbill, Common Guillemot, Arctic and Common Terns, Arctic skua) are not taken into account anywhere in the assessment, in spite of the globally important populations found around the North Sea. We query how the CAB (or MSC, if the issue lies in the certification requirements) is able to truly assess impacts when relevant, potentially-impacted species are not factored in.*".

1. MSC certification team answer: "*In the present assessment, the food needs of sea birds in general (i.e. not ETP species) is covered in Ecosystem Impacts 2.5. They are accounted for*



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*in the setting of escapements in the TACs. Because they are not bycatch or retained species in the fishery and also not ETP species, the only place to assess indirect impacts such as competition for prey is in component 2.5 and we are confident that this has been done appropriately and thoroughly. No change to the score or rationale has been made.*"

2. Birdlife international comment: *"It is stated (2.3.1c, p. 87) that "Even though Dogger bank is at the edge of the commonly accepted foraging range for Kittiwakes (50 km), tagging data show that some individuals go that far, likely to forage (Birdlife 2015)." In our view, this statement does not accurately capture the state of knowledge around kittiwake foraging ranges or the importance of the area to birds from eastern England, and for the following reasons:"*

2. MSC certification team answer: "*We acknowledge that the previous statement of a 50 km foraging range was inaccurate and lacked explicit references to documentation. In particular, the statement did not reflect the ability of kittiwakes to forage much further. The statement also failed to acknowledge that kittiwakes' mean foraging radius is much smaller. We have clarified that statement:…*"

3. Birdlife international comment: "*Cook et al. (2014) note that "the breeding failure indicators and kittiwake breeding success indicator showed consistent negative relationships with fisheries pressure, represented by the interaction between sandeel population size and the proportion of the population harvested". This paper was referenced in the initial BirdLife submission (June 2015), but is conspicuously absent in the PCDR.*"

3. MSC certification team answer: "*The paper by Cook et al (2014) is indeed not referenced in the assessment. This was because we did not find correspondence between the conclusions in the text and the data presented in the paper. Further, it is unclear from the paper which data of abundance and fishing mortality was used for the sandeel – the paper refer to the entire North Sea, but the relevant part of the stock in this context would be the Dogger bank. Nevertheless, let's assume that the status of the entire North Sea stock is indicative of the Dogger bank stock. The paper show a small correlation between sandeel population size and breeding success indicators, which is not significantly different from zero. It shows a significant negative correlation between fishing mortality and breeding success. The R2 of both correlations is between 0.12 and 0.18, which is very small. As it is the population density which matters for feeding by Kittiwakes, the analysis could be used as evidence for the absence of a relation between sandeel density and Kittiwake breeding success. However, given the uncertainty over the relevance of the sandeel data for Dogger bank and the low R2 of the relation meant that we did not find it a strong evidence to put forward.*"

4. Birdlife international comment: "*In addition to this peer-reviewed evidence of impact, in June 2015 BirdLife provided preliminary work (now submitted for publication (Carroll et al.*



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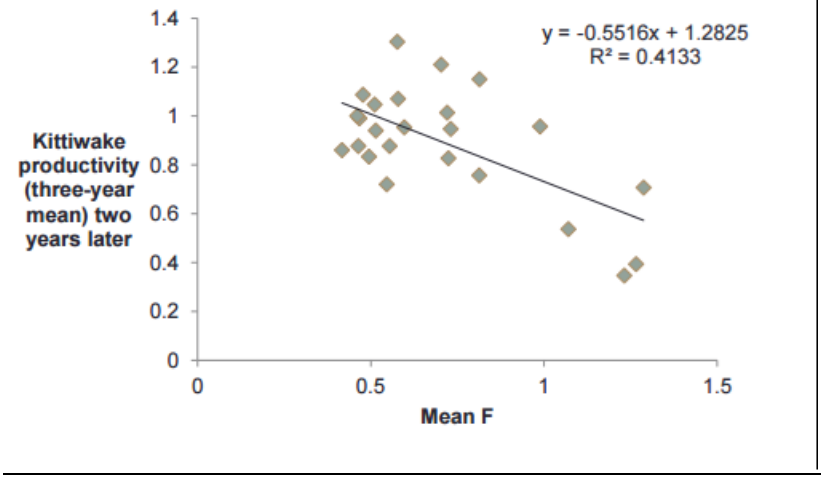
*in review)) to the CAB in the stakeholder consultation phase. While the assessment acknowledges that we have raised concerns, the CAB has misrepresented our submission by selecting portions of text, with context removed, to support a >80 score under scoring issue (a) and (c). Our original text stated:*

*Why there is such a strong signal from fishing mortality with a two year lag is unclear. We would assume that the relationship acts in some way through spawning stock biomass, although the relationship between breeding success and SSB is relatively weak (Kittiwake breeding success increases with SSB but the relationship is strongly influenced by one year of high SSB, and when the trends over time in SSB and breeding success are removed, the relationship is no longer significant: Matthew Carroll, RSPB)".*

4. MSC certification team answer: "*The key evidence presented by the BirdLife report is the correlation between lagged productivity and sandeel fishing mortality. It is reproduced below:*




*Clearly, in the years where the stock is overfished and F>1 (blue line) there is a negative impact. These points correspond to the years before 2004. Indeed, had the MSC assessment been performed in that period, the scoring would have been very different. However, in the recent decade F < 0.7. For those exploitation rates the evidence presented by BirdLife shows no relation between fishing mortality and kittiwake productivity. However the uncertainty about the evidence has to be acknowledged, which is why an SG80 is appropriate rather than 100. To avoid the misrepresentation of the BirdLife report we have removed the following citation from the report text and scoring table altogether.*
*The conclusion in 2.3.1c is indeed bizarre when read out of context. The statement is simply a repetition of the MSC criteria for the guidepost as given in the headings of the table, and meant to distinguish between the certainty required at the SG80 (highly unlikely) vs SG100 level (high degree of confidence). No changes to the scoring have been made."*



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5. Birdlife international comment: "*So while it is right for the CAB to note that fishing mortality has dropped below 0.66 in recent years, it is apparent from the evidence presented in the PCDR that this is not the consequence of the needs of seabirds and marine mammals being considered in TAC setting;*"

5. MSC certification team answer: "*The motivation of a management action is not important, what matters is the outcome for PI 2.3.1. (although in 2.3.2 the purposefulness of management measures is part of defining measures vs partial strategy vs strategy). The management of the sandeel stock according to MSY results in low fishing mortalities. This benefits the fisheries yield as well as the dependent predators. Should future management not respect MSY, this will be monitored and would prompt reevaluation of the fishery during surveillance audits and reassessment with respect to impact on the sustainability of the stock and impact on dependant pretators. No change to the score or rationale has been made.*"

6. Birdlife international comment: "*from Section 3.4.4 of the report, on ICES' multi-species model: "The modelling procedure and incorporation of M2s into single-species fish stock assessments is likely to ensure that MRAG Americas Sandeel, sprat and Norway pout Final Report and Determination page 374 depleted dependent fish predators are allowed sufficient food to not impede recovery.* ***For other dependent species, such as birds and mammals, such calculations are not performed****" (our emphasis). This highlights that rather than actively lowered fishing mortality in response to seabird declines, the TAC has been coincidentally low in recent years, and provides no guarantee that fishing mortality will not rise to problematic levels again, as seabird and marine mammal depredation of the stock are not considered. This issue is discussed greater detail under our response to the 2.3.2 scores.*"

6. MSC certification team answer: "*In the report the highlighted statement is followed by: "The assessment team has dealt with this by also examining the population status of dependent predator species and the likelihood of fishery impeding recovery of threatened species.", which explains how other dependent species are assessed. Nevertheless, the highlighted statement is inaccurate. The consumption of non-fish predators are actually incorporated in the M2 calculations. We have therefore corrected the sentences to: "For other dependent species, such as ETP birds and mammals, the assessment team has additionally examined the population status and the likelihood of fishery impeding the recovery of depleted species." No changes to scoring have been made.*"

7. Birdlife international comment: "*It is stated in the Justification (p. 209) that 'The measures to avoid indirect impacts is [sic] a closure of the fishery if negative impacts are documented, e.g. failure of breeding success due to lack of food from forage fish. An example is the closure of the sandeel fishery at the Firth of Forth. This measure applies mainly to the bird species (no closed areas have been proposed to protect skates and rays).' We contest the*



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*implication here of a systematic, responsive ETP-based strategy for closure of a fishery when negative impacts on seabird breeding success are documented. In the case of the Firth of Forth closure, this was enforced after prolonged advocacy in the 1990s linking the sandeel fishery offshore of that area to the chronic decline in breeding success and numbers of kittiwakes on the coast. In 1999, ICES accordingly recommended closure of ca 20,000km2 of the North Sea off the East coast of Scotland (south to Northumberland) as a precautionary measure. Breeding success criteria to trigger opening and closing of the area were proposed by ICES but never formally adopted. However ICES' closure recommendation was proposed by the European Commission's to the Council of Ministers in Dec 1999, was approved, implemented in 2000, and has remained in place since.*"

7. MSC certification team answer: "*The view of the team is that the issue here is not the way the closure came into place and remained in place. The fact is, the closure did indeed happen, based on a rationale specific to bird species, and it has set a precedent for future management actions.*"

8. Birdlife international comment: "*The related text on p. 80 states that 'The assessment team has deal [sic] with this by also examining the population status of dependent predator species and the likelihood of fishery impeding recovery of threatened species.' No detailed explanation is given of what this statement means. What evidence has been sourced to examine the population status of dependent predators to a potential fishery impact?*"

8. MSC certification team answer: "*The statement is a sweeping reference to the assessment of all ETP predators in 2.3 and other dependent predators in 2.5. The references and details are provided in those sections.A statement to this effect has been added to the text (now page 83).*"

9. Birdlife international comment: "*In this regard we would point out that, notwithstanding JNCC's Seabird Monitoring Programme (SMP), there has been no comprehensive national census of the UK's breeding seabirds, including on the North Sea coast relevant to this fishery assessment, since 1998-2002.*"

9. MSC certification team answer: "*This is indeed a relevant point that we have overlooked. Breeding abundance is continuously monitored and publicly available as part of the SMP. This information clearly indicates that many ETP bird species are declining in abundance. Currently, this information is sufficient and we have not changed the scoring. Nevertheless, it is important that the censuses are also updated on a regular basis. We have added a recommendation to this end, similar to how we recommend an update of the stomach data information for the multi-species modelling.*"

10. Birdlife international comment:" *On p. 209, we find at best over-simplistic, at worst misleading the statement: 'A further measure is the setting on [sic] limits on harvest rates informed by the food requirements of dependent predators, including ETPs, informed by*



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*multi-species modelling.' We acknowledge that the estimate of the quantity of sandeels consumed by dependent predators is used to estimate M2s, in turn to estimate sandeel stocks. However, this does not involve any assessment of the actual food requirements of dependent predators: seabirds need a much larger biomass of sandeels in the sea than the amount they actually eat - they can't be expected to find every sandeel in the sea, rather they need a certain threshold density to permit energetically viable foraging (Furness (2007): "minimum densities of food required … are orders of magnitude more than the consumption by seabird populations"). Hence, as the estimation of M in the assessment model does not correspond to the actual sandeel stocks required by dependent predators, predator needs are not used in setting sandeel harvest.*"

10. MSC certification team answer: "*It is indeed correct that the pertinent issue is the population density of sandeel, and not the mortality that kittiwakes inflict. Further, the needed population densities is not explicitly accounted for in the procedure used in the calculation of escapements. We have reformulated the sentence to: "A further measure is the harvest limits, which are determined on the basis of the food consumption by dependent predators, including ETPs." No change to the score has resulted.*

*The annual consumption of sandeel by all birds species is 100-200 kT, while the consumption by other dependent predators is at least an order of magnitude larger. The escapements are therefore at least an order of magnitude higher than what would account for the consumption by birds alone. However, for a specific colony of e.g. kittiwakes, it is the local and not the average density of prey which matters. As per the answers above we do not find it substantiated that the population density of sandeel and the fishery on Dogger bank negatively affects the coastal colonies of kittiwakes, when the sandeel is harvested according to MSY. No change to the score has been made.*"

11. Birdlife international comment: "*Our concern that the sandeel harvest may not be sufficiently precautionary in terms of escapement levels for seabirds is heightened by the 2016 ICES benchmark assessment (Bergen, 31 Oct – 4 Nov). The relevant part of an advanced draft of the executive summary of the ICES Benchmark Report (publication imminent) is as follows:…*"

11. MSC certification team answer: "*We did not have the draft 2016 benchmark assessment available at the time we were evaluating this fishery. In addition, it is generally not good practice in MSC assessments to draw conclusions from draft documents. This benchmark assessment will be accounted for in the first surveillance audit for this fishery. Nevertheless, it is the view of the assessment team that the analysis in the draft report confirms the status and credibility of the multispecies modelling approach rather than discrediting it. First, the concern is about the variances, a second-order measure, and not about the means. The focus on variances implies that the mean values of the predictions are accepted as credible. Second, the text documents that there is indeed focus on obtaining the best possible*



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*estimates of predation mortality to incorporate proper escapements in the TACs. The multispecies calculations are not just a show but are considered and are continuously evaluated and refined as an integral part of the advice and management procedure.*

*The team therefore maintains that there is sufficient understanding of the multispecies aspects of the North Sea ecosystem and that the ecosystem models are sufficiently credible to be used for setting reference points and escapements. This is consistent with MSC requirements for setting reference points for key low-trophic-level species (although they apply in PI 1.1.2 rather than in Principle 2) because CB2.3.20 and subclauses are met (MSC CR v1.3 Page C153). No change to the scoring has been made.*"

12. Birdlife international comment: "*Regarding 2.3.2c, we take issue with the Justification statement: 'There is concern about the possible indirect impact on kittiwakes from the fishery on Dogger Bank. They are not recovering, which could argue for a closure for the fishery on Dogger Bank. The evidence for the detrimental effect however shows that current fishing practice is not likely to blame (see 2.3.1a).'*
*We make two points:*
*1) BirdLife is not necessarily arguing for a closure of the fishery. In our evidence (June 2015) we called for: (a) a more precautionary approach to sandeel fishing effort, and (b) the need for seabird (and especially Kittiwake) productivity in nearby colonies to be used systematically as an indicator to inform future management of the fishery. In order to allow the fishery to meet SG80, a condition should be raised to ensure a more precautionary approach to fishing effort in the short-term, while the needs of seabirds and other dependent predators are built into the TAC-setting process.*
*2) We cannot support the statement that 'The evidence for the detrimental effect however shows that current fishing practice is not likely to blame'. We acknowledge that the lowest productivity of kittiwakes is associated with the high peak in fishing mortality in the late 1990s to early 2000s, and that in recent years fishing mortality has been lower. However, in 2006, 2009 and 2011, fishing mortality was around or greater than 0.6; this is close to the level at which the breeding success-mortality relationship indicates kittiwake breeding success would fall below the long-term mean (which itself is likely to be depressed by the occurrence of years with very low productivity). Moreover, if the long-term reduction in sandeel SSB, and lack of subsequent recovery, is linked to fishing practices, the lack of recovery in seabird breeding success may indeed have been influenced by fishery practices (see above). Hence, whilst we welcome reduced fishing mortality in recent years, whether this is sufficiently low to accommodate the needs of dependent predators is not clear and requires further exploration (i.e. as per the condition we suggest in (1) above).*"

12 MSC certification team answer: "*The needs of dependent predators are already accounted for as part of the TAC setting process which has been described in great detail throughout the report. That procedure is constantly being refined. Clearly, kittiwake breeding success suffers when sandeel populations are overfished and depleted. However, the assessment team do not find that sufficient evidence has been presented to link kittiwake breeding*



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*success (or another indicator of population size and health) to sandeel abundance on Dogger bank or fishing mortality when sandeel is sustainably harvested. Therefore incorporating kittiwakes directly as an indicator under the current management regime is not justified. There has been no change to any score given.*"

13. Birdlife international comment: "*Regarding 2.3.2d (p. 211), we note the statement 'Kittiwakes and Roseate terns are declining, however, not due to direct impacts of the fishery.' In the context of the PCDR, the issue is not whether the fishery is directly impacting on the kittiwake productivity and population numbers but whether it is an aggravating factor which calls for further mitigatory regulation.*"

*13* MSC certification team answer: "*We assume the stakeholders are referring to the MSC CR, rather than the PCDR here, and the requirement for the evaluation of indirect impacts to ETP species (in 2.3.1d). The term 'direct impacts' as used by the team in 2.3.2d is indeed confusing because it's not meant in the way that direct vs indirect impacts are distinguished within the MSC requirements. We have rephrased this for clarity.*
*As per previous answers, we do not find that sufficient new information has been presented to substantiate that the current level of sandeel or sprat fishing is an aggravating factor on kittiwake populations. No change to the score has resulted.*"

14 Birdlife international comment: "*Regarding 2.3.3b, we take issue with the Justification statement: 'The indirect effects of fishing through food competition are quantitatively estimated through correlations between SSB of fish stocks and breeding success (birds), and by estimations of predation mortality of ETPs on the fished stocks (all ETP species). This is sufficient to determine whether the fishery is a threat to protection of ETP species (SG80).' Here, we repeat our observation (above) of the text on p. 80 which states that 'The assessment team has deal [sic] with this by also examining the population status of dependent predator species and the likelihood of fishery impeding recovery of threatened species.' No detailed explanation is given of what this statement means. What evidence has been sourced to examine the population status of dependent predators to a potential fishery impact? In this regard we would point out that, notwithstanding JNCC's Seabird Monitoring Programme (SMP), there has been no comprehensive, national census of the UK's breeding seabirds, including on the North Sea coast relevant to this fishery assessment, since 1998-2002.*"

14. MSC certification team answer: "*We acknowledge the lack of sourcing of information. We have added references to suitable examples in the text: "The indirect effects of fishing through food competition are quantitatively estimated through correlations between SSB of fish stocks and breeding success (birds, e.g. Frederiksen et al 2006; Furness, 2007; Cook et al 2014),". No changes to scores have been made.*"

15. Birdlife international comment: "*Further, we are not aware of any systematic, current estimation (at least of any great robustness) of the 'predation mortality of ETPs on the*



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*fished stocks'. Accordingly, we recommend a guidepost score <80 for both 2.3.3b and 2.3.3c.*"

15. MSC certification team answer: "*The predation mortalities by ETPs are assessed on a tri-annual basis by the SMS key runs. As argued above, the assessment team finds that this procedure is robust and no change to the score has been made.*"

16. Whale and Dolphin conservation: "

> It is not correct to state that '*Seals are mainly coastal and therefore not expected to interact directly with the fishery.*' Grey and harbour seals haul out on land, but they are well documented to forage offshore. Grey seals tagged off the east coast of England travelled regularly travelled 230km out to sea from their haul-out site whilst harbour seals in regularly travelled 165km out to sea (e.g., Russell and McConnell, 2014 and references therein).

16. MSC certification team answer: "*Response: With regard to references to seals being mainly coastal, the stakeholder is correct to point out the long ranging foraging behaviour and therefore potential to compete with these offshore fisheries for prey. However, since the populations of these seals are increasing throughout the area, we still conclude that the fishery is not having significant negative effects on population sizes due to competition for prey. We have changed the text in two places as follows, but no scoring changes have resulted:*

*On page 87: "Harbour and grey seals are associated with coastal areas (Søgaard et al 2015), but they can forage far from the coast, for example tagging data show how harbour seals regularly use the Dogger Bank as a feeding area (Debbie and MacConnell)."*

*In the 2.3.1 scoring issue B table (page 208): "Seals forage sufficiently far from shore to compete with the fishery, however they not found to be significant predators on sandeel, sprat or Norway pout by Mackinson and Daskalov (2007). Further, since populations are increasing there are no significant negative effects of the fishery."*

*Regarding monitoring of interactions with other marine mammals, we have described in the Principle 2 background section how these fisheries monitor interactions, both direct and indirect. Though direct intractions are negligible (see full explanation on page 86), the Danish vessels signed up to DFPO all keep voluntary logs of marine mammal and other endangered species interactions. This is not fishery independendent, but this, combined with the other data available on these fisheries with regard to mammal interactions, means that they pass the MSC standard without conditions. The monitoring and management of potential indirect effects is also described on page 86. Although the fishery does pass these PIs unconditionally in relation to indirect effects as well, we did provide a recommendation that stomach contents data be updated in order to better inform the multi-species statistical models and natural mortality estimates. Overall, since the fisheries meet the ETP requirements regarding mammals without need for conditions, it is outside the ability of this*



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*process to mandate other forms of monitoring as described by WDC or any other additional measure. No changes have been made to scoring or rationales.*"



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