Marine Stewardship Council (MSC) 1st Surveillance Audit Report – Principle 1

Joint demersal fisheries in the North Sea and adjacent waters

On behalf of

On behalf of Danmarks Fisheriforening Producent Organisation (DFPO), Sveriges Fiskares Producent Organisation (SFPO), Erzeugergemeinschaft-nordsee (EZG) and Coöperatieve Visserij Organisatie (CVO)

Prepared by

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Glossary

Acronym	Definition
ACOM	Advisory Committee
ASAP	Age Structured Assessment Program
B	Biomass
BLIM	Limit reference point for Spawning Stock Biomass
BMSY	Spawning stock Biomass that results from fishing at FMSY
BPA	Precautionary approach biomass
Btrigger	Value of spawning stock biomass (SSB) that triggers a specific management action
BLE	German fisheries authorities
BMS	Below minimum landing size
BSAC	Baltic Sea Advisory Committee (?)
CFP	Common Fisheries Policy
CL	Carapace Length
CPUE	Catch Per Unit Effort
CVO	Cooperatieve Visserij Organisatie (Cooperative Fisheries Organisation)
DCF	Data Collection Framework
DFPO	Danmarks Fisheriforening Producent Organisation (Danish Fishermen's Producers Organisation)
DTU	Danmarks Tekniske Universitet (Technical University of Denmark)
EC	European Council
EP	European Parliament
EZG	Erzeugergemeinschaft (German fisheries producer group)
F	Fishing mortality
FLIM	Limit reference point for fishing mortality (mean over defined age range)
FMSY	Fishing mortality consistent with achieving maximum sustainable yield
FPA	Precautionary reference point for fishing mortality (mean over defined age range)
FAO	Food and Agriculture Organisation
FCR(G)	(MSC) Fisheries Certification Requirements (and Guidance)
FU	Functional Unit
HCR	Harvest Control Rule
IBTS	International Bottom Trawl Survey
ICES	International Council for the Exploration of the Seas
JDF	Joint demersal fisheries in the North Sea and adjacent waters
LC	Length at first capture
Linf	Asymptotic maximum length (VB growth equation)
LBI	Length-based Indicator (analysis of stock status)

Acronym	Definition
LO	Landing Obligation
LPUE	Landings Per Unit Effort
LTL	Low Trophic Level
LTMS	Long Term Management Strategy
M	Natural mortality
MAP	EU Multiannual Plan
MCS	Minimum Conservation Size
MCRS	Minimum Conservation Reference Size
MLS	Minimum Landing Size
MSC	Marine Stewardship Council
MSE	Management Strategy Evaluation
MSY	Maximum Sustainable Yield
NAFO	Northwest Atlantic Fisheries Organisation
NEA	North East Atlantic
NEA(F)C	North East Atlantic (Fisheries) Commission
NIPAG	NAFO/ICES Pandalus Assessment Group
NSAC	North Sea Advisory Council
NS MAP	North Sea Multi Annual Management Plan
NWWAC	North Western Waters Advisory Council
PA	Precautionary Approach
PRI	Point of Recruitment Impairment
RTC	Real Time Closures
SAM	Age-based state-space stock assessment model
SFPO	Sveriges Fiskares Producent Organisation (Swedish Fishermen's Producers Organisation)
SLU	Sveriges lantbruksuniversitet (Swedish University of Agricultural Sciences)
SSB	Spawning Stock Biomass
STECF	Scientific, Technical and Economic Committee for Fisheries
TAC	Total Allowable Catch

1 Executive Summary

This report is one of four reports, which detail the 1st year surveillance audit of the Joint Demersal Fisheries in the North Sea and adjacent waters on behalf of Danmarks Fisheriforening Producent Organisation (DFPO), Sveriges Fiskares Producent Organisation (SFPO), Erzeugergemeinschaft-nordsee (EZG) and Coöperatieve Visserij Organisatie (CVO). The four reports are separated into this general background report and a separate report for each Principle. This report covers the MSC year 1 audit of Principle 1 of the Joint demersal fisheries in the North Sea and adjacent waters. Given the scale of the assessment, the evaluation has been split into four reports; a general background section and a separate report for each Principle. This report focuses on describing the Principle 1 stocks certified for this fishery. It evaluates client group progress against existing conditions, reviews the current stock status and management system and provides relevant background information and the evaluation outcome for each stock. Further details on the assessment team, the assessment process, and the overall outcome of the assessment are given in the Background Report.

Highlights of this report are:

- All the certified stocks continued to meet the requirements of the MSC standard. There were significant changes in the fishery management system (Brexit, North Sea Multi-annual Plans etc) which resulted in rescores across Harvest Strategies and Harvest Control Rule Performance Indicators (PI). Along with changes to the Harvest Strategies and Harvest Control Rule PIs, changes in stock status for some stocks resulted in changes to PI1.1.1.
- Following changes to the PI scores some stock were issued with new conditions where required. Some existing conditions were also closed on account of the changes management structure or stock improvement.
- The North Sea whiting stock underwent interbenchmark in 2021 resulting in changes in the perception of the stock against new reference points. This led to a rescore of the outcome PI which allows the reinstatement of the stock into the MSC program following its suspension at the point of certification in 2019.
- Following the MSC derogation 6 all existing management and Information performance Indicators (PIs 1.2.1 -4) conditions receive a 12 months extension to their milestones and deadlines. As a result all annual milestones and the deadline for the conditions needed adjustment accordingly. The milestone for year 1 of this year is moved to year 2. Further, for a number of the existing conditions, the derogation 6 extends deadlines beyond the current certificate period and as per the MSC interpretation on the derogation this has been extended to Year 1 of any potential reassessment. All this is accounted for in the conditions section.

Following this audit CU UK recommend that all UoAs should maintain their MSC certification against Principle 1 of the standard and the suspension on North Sea whiting should be lifted.

2 Principle 1

The target species and stocks under the JDF certification are presented below.

Species		Description of stock (ICES Subareas and Divisions – see Appendix 6 for a map)	Code
Common name	**Scientific name**		
Atlantic cod	*Gadus morhua*	3aN, 4, 7d	NS COD
Haddock	*Melanogrammus aeglefinus*	3a, 4, 6a	NS HAD
		7b-k	EC HAD
Hake	*Merluccius merluccius*	Northern stock	HKE
Ling	*Molva molva*	3a, 4a etc. (other areas)	LIN
Megrim	*Lepidorhombus whiffiagonis*	4a, 6a	NS MEG
Plaice	*Pleuronectes platessa*	Subdivisions 21–23 (Kattegat, Belt Sea, Sound)	21-23 PLE
		3aN, 4	NS PLE
		7d	EC PLE
Saithe	*Pollachius virens*	3a, 4, 6	POK
Dover sole	*Solea solea*	3a, 22-24	3A SOL
		4	NS SOL
Tusk	*Brosme brosme*	Northeast Atlantic	USK
Whiting	*Merlangius merlangus*	4, 7d	NS WHG
Norway lobster	*Nephrops norvegicus*	FU7 Fladen Ground	FU7 NEP
		FU32 Norway Deep	FU32 NEP
		3a (Kattegat and Skagerrak)	3A NEP
Northern prawn	*Pandalus borealis*	3a, 4a East (Skagerrak, Norwegian Deep)	PRA

2.1 Stock management changes since Certification

There have been considerable changes to the management of North Sea fisheries since 2017. These changes are mainly related to: a) the agreement of EU Multiannual Management Plans (North Sea – NSMAP in 2018 (EU 2018b), and Western Waters – WWMAP in 2019) (EU 2019); b) the UK leaving the European Union on the 31 January 2020. The UK has since drawn its Fisheries Bill to manage UK fisheries and stocks as an independent coastal state, and has agreed on a Trade and Cooperation Agreement (TCA) with the EU at the end of 2020 (EU 2020).

The fisheries currently exploiting stocks where its management is (now) shared between the UK, EU and Norway (regardless of the percentage of share) may have their P1.1.2 stock rebuilding, P1.2.1 harvest strategy and P1.2.2 HCRs scores impacted. To determine if there are changes to the PIs scores, several aspects of the UK Fisheries Act (UK 2020a), the TCA and the 2021 TACs negotiations need to be considered.

The UK Fisheries Act "*sustainability objective*" is for fish and aquaculture activities to be: *"(i) environmentally sustainable in the long term, and (ii) managed so as to achieve economic, social and employment benefits and contribute to the availability of food supplies; and the fishing capacity of fleets is such that fleets are economically viable but do not overexploit marine stocks*". The "*precautionary objective*" refers that "*exploitation of marine stocks restores and maintains populations of harvested species above biomass levels capable of producing maximum sustainable yield*" (UK 2020a). Therefore in the UK Fisheries Act there is an explicit MSY management objective. However, there is no specific timeframe for the MSY objective to be reached, as exists in the EU Common Fisheries Policy (CFP) (EU 2013). The UK Fisheries Act also refers to future fisheries management plans, but there are no details if these plans will include specific HCRs in line with the Fisheries Act MSY objectives. In addition, significant CFP provisions such as the Landing Obligation (LO) were not taken up in the UK Fisheries Act.

On the TCA agreement reached between the UK and EU, it includes explicit MSY objectives and specific provisions to set fishing opportunities in line with MSY, but again has no specific timeframe for the objectives to be reached. Nevertheless, the TCA constitutes a common harvest strategy for UK-EU shared stocks, and jointly with the new UK MoU with ICES[1], there is also monitoring in place for shared stocks.

For most of the stocks that are jointly managed between the EU, UK and Norway, the TACs are set in the context of annual negotiations. Before 2019, the TACs were decided trough annual negotiation between EU Member States (MS) during the December Fisheries Council, or for shared stocks through bilateral annual agreements between the EU and Norway. In 2018-2019, the EU Multiannual Plans were agreed, and species specified in Art. 1 were considered target species and as such had their TACs set within an HCR: fishing mortality ranges around F_{MSY}. These MAPs are still in effect for EU fisheries. However, Norway has never agreed to the MAPs HCRs provisions, while the UK since leaving the EU has also not officially endorsed them. Presently (2021) the TACs for joint stocks are still set in the context of annual bilateral and trilateral negotiations. The TACs for 2021 were set provisionally to 50% of the 2020 TAC for the first half of the year, but in June the final 2021 TACs were finally agreed between the EU and UK.

[1] https://www.ices.dk/about-ICES/Documents/Cooperation%20agreements/UK/UK_MOU.pdf

Table 1. Summary of the fisheries management regime per Principle 1 stock from 2020.

Management	Stocks
EU only	21-23 PLE, 3A SOL, 3a NEP
Bilaterally EU-UK	EC HAD, HKE, MEG, EC PLE, NS SOL, FU7 NEP
Trilaterally EU-UK-NO	COD, NS HAD, NS PLE, WHG, POK
NEAFC	LIN, USK
Bilaterally EU- NOR	PRA

In summary, there is uncertainty as to whether existing or additional management measures (such as rebuilding timeframes, management plans with MSY based HCRs, Landing Obligation) are to be put in place by the UK beyond 2020, and if the 2021 TACs are set following scientific advice. These considerations must be accounted for in the scoring of Principle 1 for each stock impacted.

2.2 ICES framework for fishing opportunities advice

With the change in management of many North Sea stocks, well-defined HCR are no longer in place and TACs are agreed annually following (or not) scientific advice. In this context, ICES framework to provide advice on fishing opportunities comes under increasing scrutiny. For many stocks, ICES provides advice in accordance with agreed management plans or strategies evaluated to be consistent with the precautionary approach (maintaining the stock above B_{lim} with at least 95% probability). If such plans or strategies are not agreed upon by the relevant management bodies or have been evaluated by ICES as not being precautionary, ICES will give advice on the basis of ICES MSY approach.

The MSY advice rule leads to catch advice corresponding to a fishing mortality of:

1) $F = F_{MSY}$ when SSB is at or above MSY $B_{trigger}$
2) $F = F_{MSY} \times SSB/MSY\ B_{trigger}$ when the stock is below MSY $B_{trigger}$ and above B_{lim}
3) If the F following from applying rule 2 is insufficient to bring the stock above B_{lim} in the short term, ICES advice will be based on bringing the stock above B_{lim} at the end of the projection year. If there is no F that will bring the stock above B_{lim} at the end of the projection year or when the forecast is highly sensitive to assumptions (e.g. incoming recruitment), ICES will advise zero catch based on precautionary considerations until the SSB is above B_{lim} with high probability.

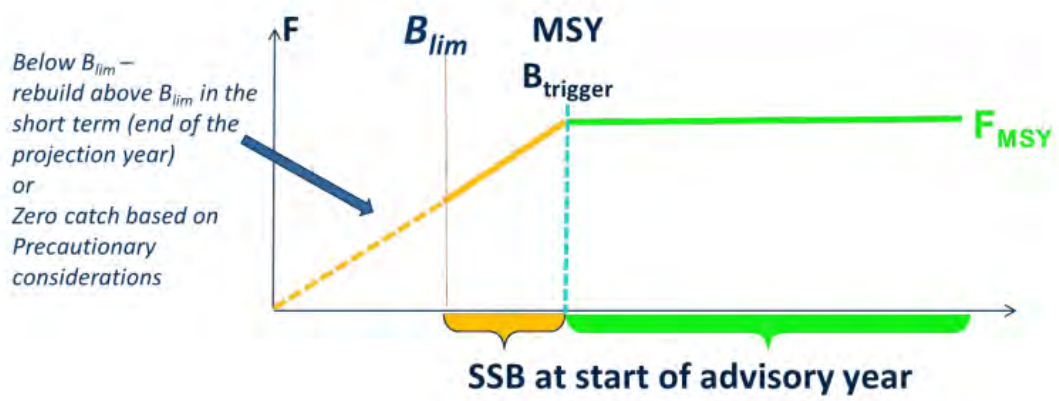


Figure 1 – Illustration of ICES MSY advice rule (ICES 2021)**.**

2.3 NS HAD

2.3.1 Stock status

Stock biomass continues to be variable, following a pattern of recruitment pulses, but continues to be above $MSYB_{trigger}$ (132,000 tonnes) since 2017, being 238,515 tonnes in 2019 (ICES_NSHAD 2020). Fishing mortality also continues to show a variable pattern, although mostly above F_{MSY}. Mortality has nevertheless been decreasing since 2015 and is below F_{MSY} (0.194) in 2019 (0.177) (ICES_NSHAD 2020).

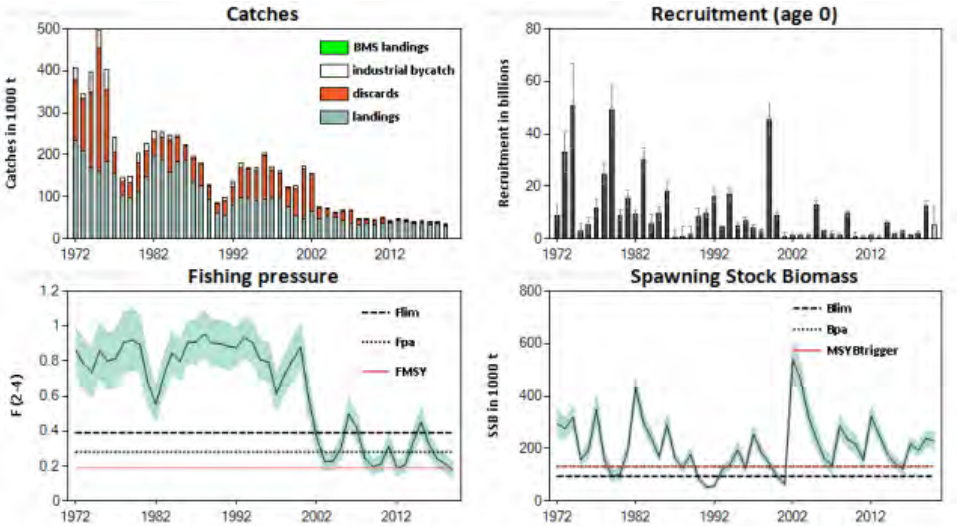


Figure 2 - Haddock in Subarea 4, Division 6a, and Subdivision 20. Summary of the stock assessment. Shaded areas (F, SSB) and error bars (R) indicate 95% confidence intervals. The landings below minimum conservation reference size (BMS) are those officially reported. The unshaded recruitment is forecasted by the assessment model. (ICES_NSHAD 2020)

2.3.2 Stock management

Haddock in the North Sea, West of Scotland and Skagerrak is now managed trilaterally by the EU, UK and Norway. A total TAC has been agreed for 2021 (EU 2021), 2% above wanted catch advised by ICES but 28% below total catch advice. However, discards are still estimated to be 31% of total catch, while the LO has had minimal implementation (EC 2020a).

2.3.3 NS HAD conclusions

There are no changes to: PI 1.1.1 stock status (90) as the stock continues to be above PRI and at MSY levels; PI 1.2.1 harvest strategy (85) because there has been a trilateral agreement on setting a total TAC for the stock, although there is still Brexit related uncertainty; and PI 1.2.2 HCRs (80) because the TAC follows ICES advice through the trilateral agreement and thus a well-defined HCR continues to be in place (EC 2020b).

2.4 EC HAD

2.4.1 Stock status

The stock assessment was benchmarked in 2020. The model was changed to a stochastic state–space assessment model (SAM). Maturity and natural mortality information were updated, catch (landings and discards) time-series were reviewed and updated from 2005 to 2018, and survey indices updated

to a single-modelled time-series. Reference points were also updated, B_{lim} (9,227 tonnes), $MSYB_{trigger}/B_{pa}$ (12,822 tonnes), F_{MSY} (0.353), F_{pa} (0.71) (ICES_ECHAD 2020).

Stock biomass continues to be above any PRI and $MSYB_{trigger}/B_{pa}$, showing a considerable peak in 2011. Fishing mortality continues to be above F_{MSY} being 0.41 in 2019, although it has progressively decreased since its highest (0.75) in 2003-2004 (ICES_ECHAD 2020). Due to the stock assessment benchmark, there is a different perception of the stock for recent years: instead of decreasing biomass reaching $MSYB_{trigger}$ in the last year and fishing mortality increasing over F_{pa}, stock biomass is now estimated to be increasing substantially, being at 66,169 tonnes in 2020, while fishing mortality has been decreasing approaching F_{MSY} (ICES_ECHAD 2020).

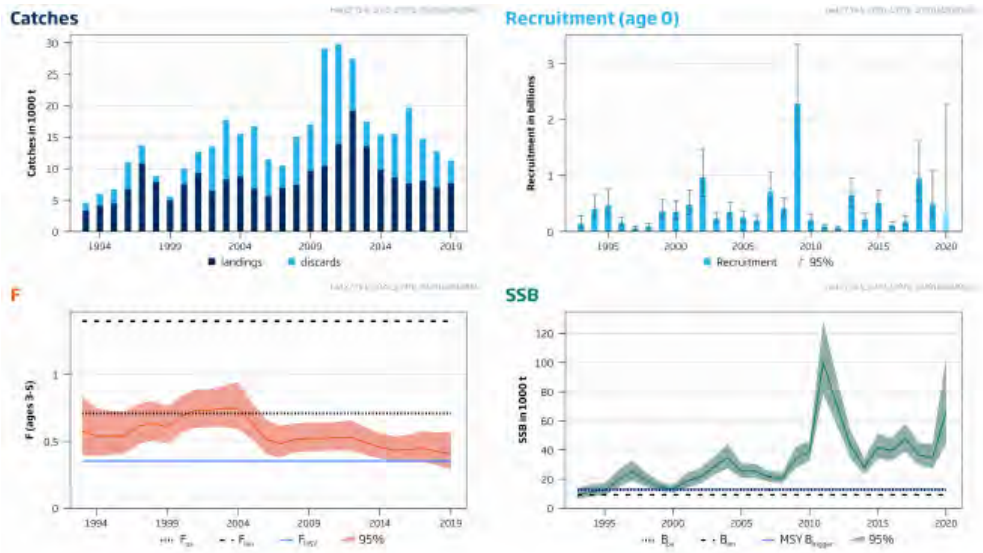


Figure 3 - Haddock in divisions 7b–k. Summary of the stock assessment. Discard estimates are available from 2005; prior to 2005, discard estimates are based on limited sampling. The paler shaded recruitment value is assumed. (ICES_ECHAD 2020)

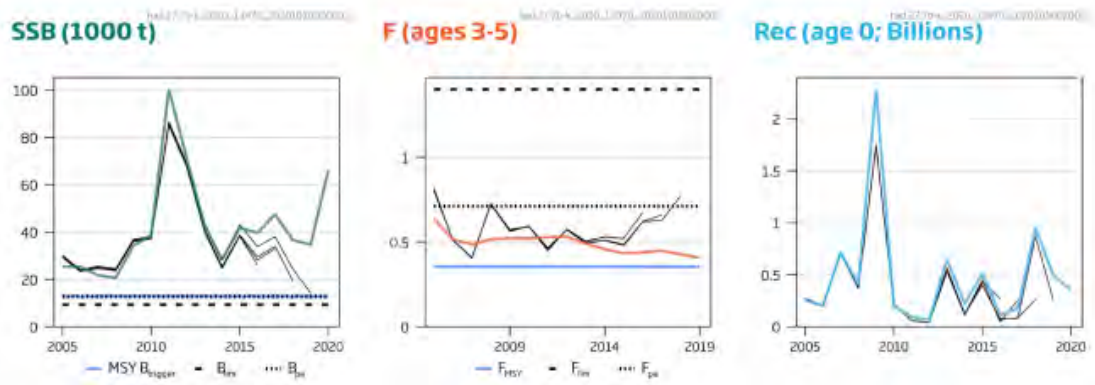


Figure 4 - Haddock in divisions 7b–k. Historical assessment results (final-year recruitment assumptions included). The assessment was benchmarked in 2020. Black lines show the results of the previous assessments of the stock. (ICES_ECHAD 2020)**.**

2.4.2 Stock management

Haddock in the Celtic Sea and English Channel is now managed bilaterally by the EU and UK. The TAC for 2021 has been set following ICES total catch advice.

The 2020 TAC was set 35% above wanted catch advised by ICES but 35% below total catch advice. Due to recent high recruitments, discards are expected to increase in 2020. Discards are estimated to be considerably high at 55% of total catch in 2020, while the LO has had minimal implementation (EC 2020a).

2.4.3 EC HAD conclusions

There are no changes to: PI 1.1.1 stock status (80) as the stock continues to be above PRI and fluctuating at MSY levels but not with a high degree of certainty; PI 1.2.1 harvest strategy (75) as the existence of TCA ensures SIa SG80 is reached, but there is still no strong evidence that the harvest strategy objectives are being met and SIb continues to not reach SG80, PI 1.2.2 HCRs (75) as the 2021 TAC follows ICES advice, and thus a well-defined HCR is in place and SIa reaches SG80.

2.5 HKE

2.5.1 Stock status

Stock biomass continues to be high, well above $MSYB_{trigger}$ and is fluctuating around 260,000 tonnes, after increasing since 2008 to record levels (ICES_HKE 2020). Fishing mortality continues to fluctuate around F_{MSY} (0.26), since decreasing after 2005, and is in 2019 at 0.23 (ICES_HKE 2020).

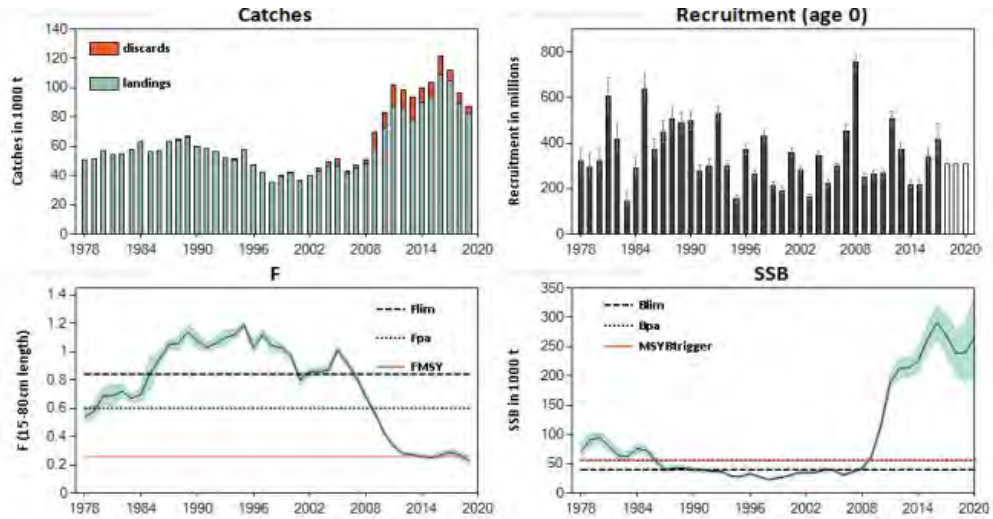


Figure 5 - Hake in subareas 4, 6, and 7, and in divisions 3a, 8a–b, and 8d, Northern stock. Summary of the stock assessment. Complete discard estimates are available only since 2003. Plots show 95% confidence intervals (shaded area). Fishing mortality (F) confidence intervals derived from standard deviations, calculated internally by the model for F-at-age values. Assumed recruitment (R) values are unshaded. (ICES_HKE 2020)**.**

2.5.2 Stock management

Northern hake stock is now managed bilaterally by the EU and UK. The TAC for 2021 has been set following ICES total catch advice. The 2020 TAC was set around 7% above total catch advised by ICES. Discards are estimated to be 6% of total catch in 2020.

2.5.3 HKE conclusions

There are no changes to: PI 1.1.1 stock status (100) as the stock continues to be above PRI and fluctuating around MSY levels; PI 1.2.1 harvest strategy (85) as the existence of TCA ensures SIa SG80 is reached, but the strategy has not been fully evaluated and SIb continues to not reach SG100,PI 1.2.2

HCRs (80) as the TAC for 2021 has been set following scientific advice, and thus a well-defined HCR is in place and SIa reaches SG80. There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.6 LIN

2.6.1 Stock status

The latest stock assessment is from 2019 (ICES_LNG 2019). Biomass continues to be high increasing since 2004, although it has decreased in 2018. Fishing mortality continues to be mostly below F_{MSY}, except in 2008, 2013 and 2014. (ICES_LNG 2019).

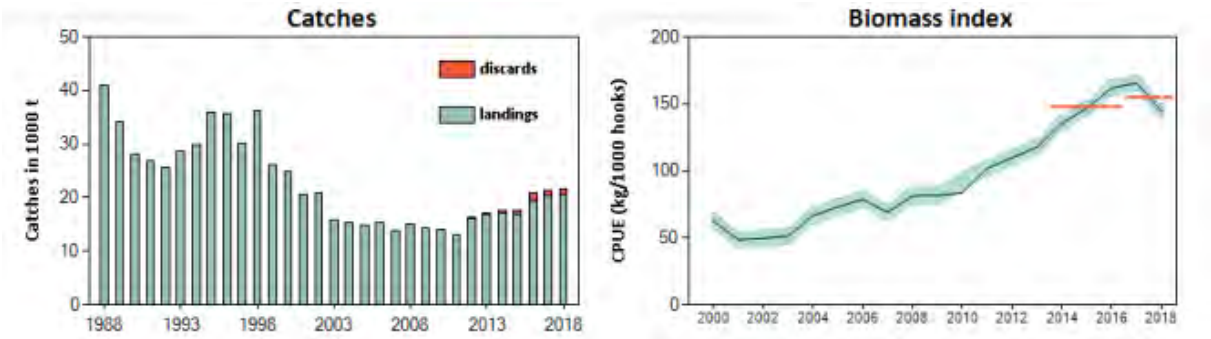


Figure 6 – Ling in subareas 6–9, 12, and 14, and in divisions 3.a and 4.a. Catches (left) and standardized biomass index from the Norwegian longline fleet targeting ling for all areas combined (kg per 1000 hooks; right). The dashed red lines indicate the average of the biomass index for 2014 to 2016 and for 2017 to 2018. The shaded areas on the biomass index plot represent 95% confidence intervals. (ICES_LNG 2019)**.**

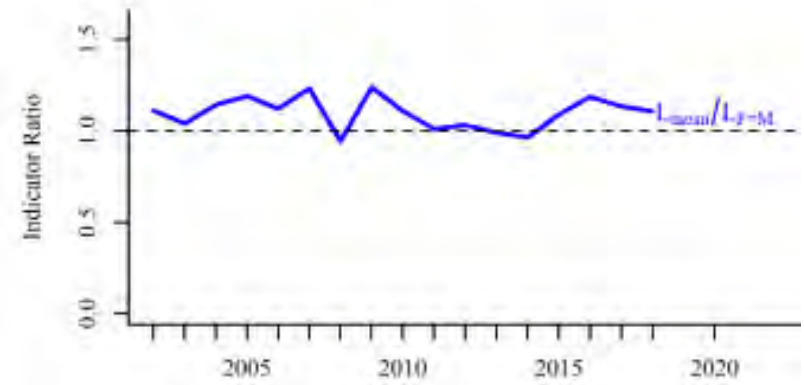


Figure 7 - Ling in subareas 6–9, 12, and 14, and in divisions 3.a and 4.a. Index ratio of the average length relative to the expected length when fishing mortality equals natural mortality (L_{mean}/LF=M) from the length-based indicator method used for the evaluation of the exploitation status. The exploitation status is below the F_{MSY} proxy when the index ratio value is higher than 1. (ICES_LNG 2019)**.**

2.6.2 Stock management

Ling continues to be managed at North East Atlantic Fisheries Commission (NEAFC) level, with the UK now being an independent contracting party. There continues to be three TACs: Subarea 3a and EU waters of subareas b-d; EU waters of area 4; EU and international waters of areas 6, 7, 8, 9, 12, 14. However, none of these TACs are set within a context of explicit harvest control rules and have been set systematically above scientific advice (at least since 2010). The TACs for 2021 continue this trend, and have been set above ICES total catch advice.

2.6.3 LIN conclusions

There are no changes to: PI 1.1.1 stock status (80) as the stock continues to be above PRI but without a high degree of certainty and SIa SG100 is not met, and the stock is at MSY levels but without a high degree of certainty and SIb SG100 is also still not met.

There are no changes to PI 1.2.1 harvest strategy scoring (85) but the reasoning is slightly edited as the existence of the TCA and the UK being part of NEAFC ensures SIa SG80 is reached, but the harvest strategy continues not being designed to achieve stock management objectives, while now has also Brexit uncertainty and SG100 is not reached; the strategy has not been fully tested and SIb continues to not reach SG100, and finally there is no biannual review of alternative measures and SIf SG100 is still not reached.

There are no changes also to PI 1.2.2 HCRs (75) as the TAC for 2021 has been set above scientific advice, thus a well-defined HCR is not in place and SIa continues to only reach SG60.

There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.7 MEG

2.7.1 Stock status

Fishing mortality has decreased since 1997 and continues to be below F_{MSY} since 2002. Biomass continues to never been below $MSYB_{trigger}$ and is increasing since 2005. Biomass is above B_{MSY} since 2006, and is estimated to be 1.46 of B_{MSY} in 2020. Fishing mortality is estimated to be 0.45 of F_{MSY} in 2019 (ICES_MEG 2020).

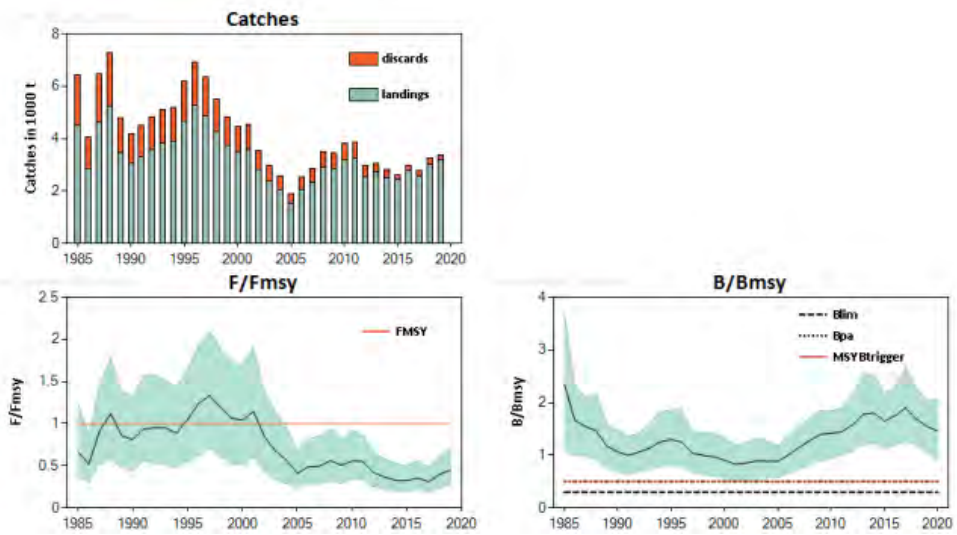


Figure 8 - Megrim in divisions 4a and 6a. Summary of the stock assessment. Landings and discards are in thousands of tonnes. Discard estimates are available from 2013; discard estimates prior to 2013 are approximated, based on limited sampling information. Fishing pressure (F) is relative to F_{MSY} (bottom left panel) and biomass (SSB) relative to B_{MSY} (bottom right panel). The shaded areas in the F/F_{MSY} and B/B_{MSY} plots represent 95% confidence intervals. (ICES_MEG 2020)**.**

2.7.2 Stock management

Megrim in the North Sea and West of Scotland is now managed bilaterally by the EU and UK. The TAC for 2021 has been set following ICES total catch advice. Discards are estimated to be 7% of total catch in 2020.

2.7.3 MEG conclusions

There are to changes to: PI 1.1.1 stock status (100) as the stock continues to be above PRI and fluctuating around MSY levels; PI 1.2.2 HCRs (80) as the 2021 TAC has been set following catch advice and thus a well-defined HCR is in place and SIa continues to reach SG80.

There are however changes to: PI 1.2.1 harvest strategy score (90) this is reduced (85) as the existence of TCA ensures SIa SG80 is reached, but due to Brexit uncertainty SG100 is not reached; and the strategy has not been fully evaluated and SIb continues to not reach SG100.

There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.8 21-23 PLE

2.8.1 Stock status

Fishing mortality has decreased since the beginning of the time series but, contrary to previous years, has yet to reach F_{MSY} (0.31) (ICES_21-23_PLE 2020). Fishing mortality in 2019 is 0.38. There is a considerable retrospective bias in the assessment, where fishing mortality tends to be underestimated and biomass overestimated. Biomass is increasing since 2009 and is above MSY $B_{trigger}$ since 2012. Biomass in 2020 was estimated to be 13,050 tonnes (ICES_21-23_PLE 2020).

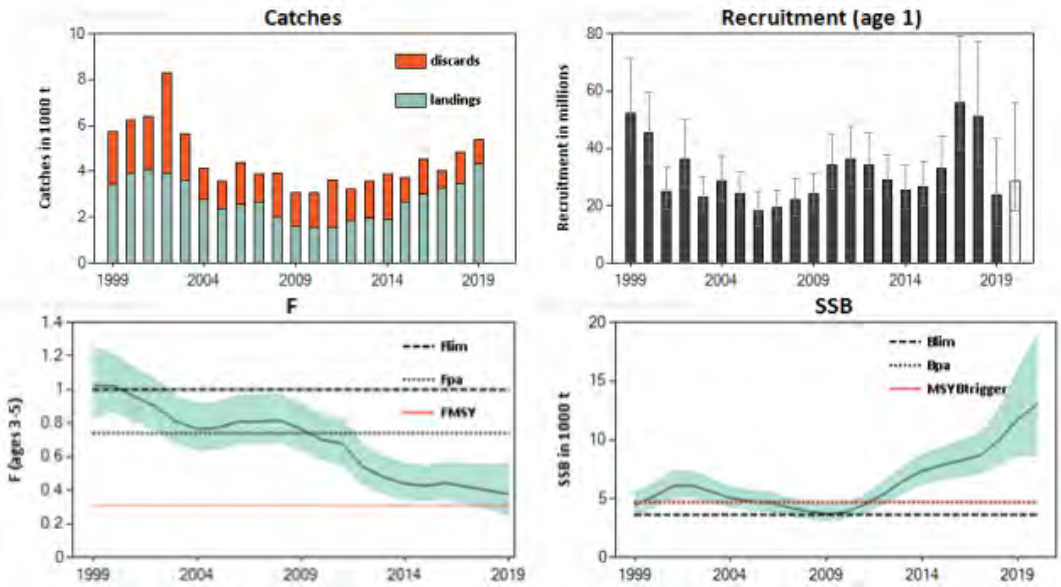


Figure 9 - Plaice in subdivisions 21–23. Summary of the stock assessment. Weights in thousand tonnes. Recruitment, F, and SSB show confidence intervals (95%) in the plot. Assumed recruitment is unshaded. (ICES_21-23_PLE 2020)

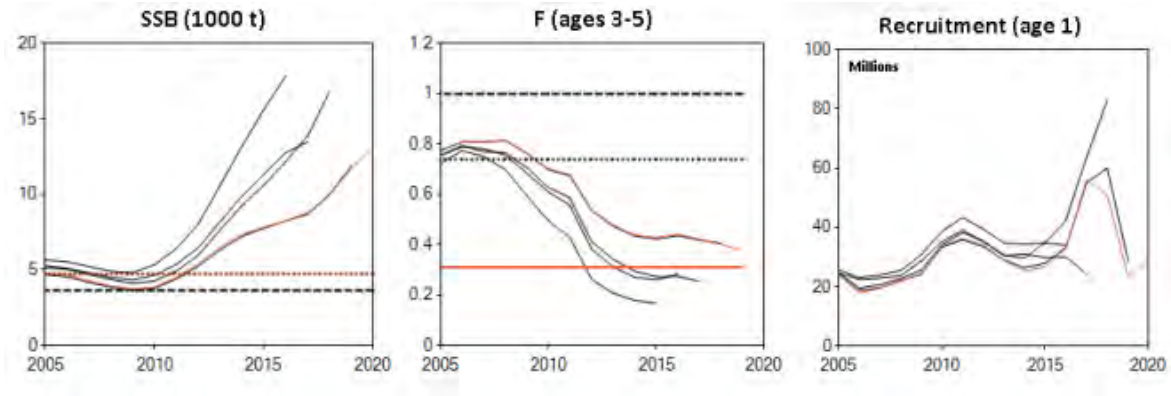


Figure 10 - Plaice in subdivisions 21–23. Historical assessment results. The final recruitment estimate in 2020 is the median of the time-series. This stock assessment procedure was revised in 2019. (ICES_21-23_PLE 2020)

2.8.2 Stock management

There has been no change to the formal management of plaice in subdivisions 21-23 assessment unit. The BS MAP (EU 2016b) continues to list this species as a bycatch species, and thus only remedial measures are contemplated. However, in 2020 ICES provided its advice for 2021 according to the MSY approach, and not according to the PA approach as requested by the EC in 2019.

The TACs set for this stock in Kattegat and in the eastern Baltic Sea have also followed ICES scientific advice for total catch in 2021. Discards are still estimated to be 22% of total catch in 2020, while the LO has had minimal implementation (EC 2020a).

2.8.3 21-23 PLE conclusions

There are no changes to: PI 1.1.1 stock status (90) as the stock continues to be above PRI and fluctuating at MSY levels; There are also no changes to PI 1.2.1 harvest strategy score (90) as the strategy has not been fully evaluated and SIb continues to not reach SG100.

There are however changes to the following PIs. For PI 1.2.2 HCR the score of 75 remains unchanged but the reasoning behind the score has changed and SIs now score differently: the TACs set for this stock in Kattegat and in the eastern Baltic Sea have followed ICES scientific advice based on the MSY approach, and thus a well-defined HCR is in place and SIa reaches SG80, which is an increase in score. However, since fishing mortality is now estimated to be above F_{MSY} and the TAC is set to total catches while discards (22%) are not being landed, the tools in use are not appropriate and effective in achieving the exploitation levels required under the HCRs and SIc SG80 is not met which is a scoring decrease.

There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.9 NS PLE

2.9.1 Stock status

The stock continues to be at very high level above $MSYB_{trigger}$ (564,599 tonnes) increasing since 2002. In 2019 stock biomass reached 908571 tonnes. Fishing mortality continues to be mostly below F_{MSY} (0.21) since 2008, and is in 2019 0.167 (ICES_NS_PLE 2021).

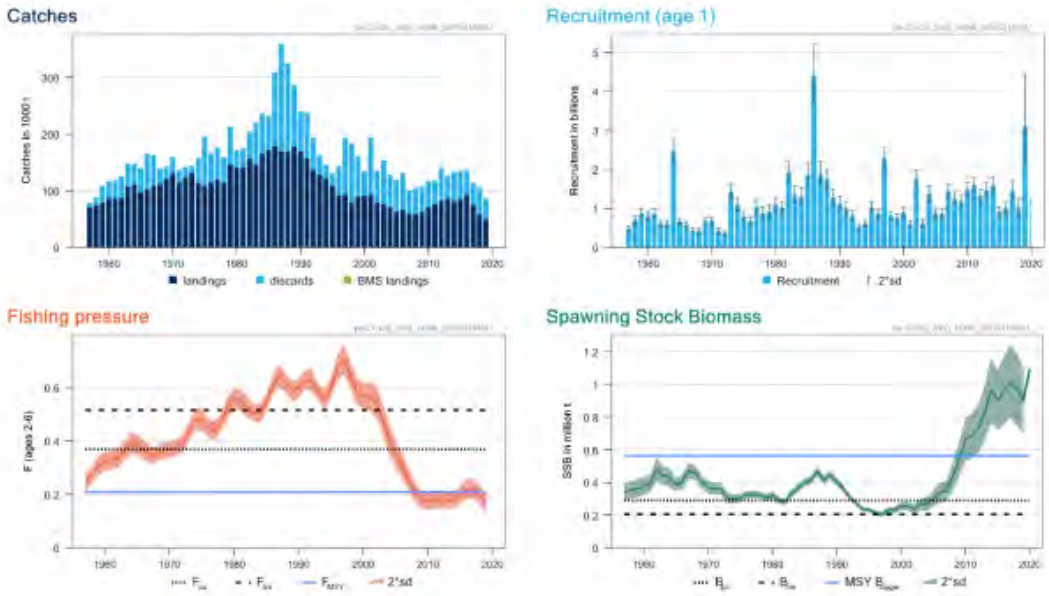


Figure 11 - Plaice in Subarea 4 and Subdivision 20. Summary of the stock assessment. Plots show the relevant confidence intervals. The assumed recruitment value for 2020 is shaded in a lighter colour. Landings below minimum conservation reference size (BMS) as officially reported. (ICES_NS_PLE 2021)**.**

2.9.2 Stock management

Plaice in the North Sea and Skagerrak is now managed trilaterally by the EU, UK and Norway. A total TAC has been agreed for 2021, following total catch advised by ICES (EU 2021). However, discards are still estimated to be 49% of total catch, while the LO has had minimal implementation (EC 2020a)

2.9.3 NS PLE conclusions

There are no changes to PI 1.1.1 stock status (100) as the stock continues to be above PRI and fluctuating around MSY levels.

However, there are changes to the PI 1.2.1 harvest strategy score (90) is reduced (85) as the existence of an agreed 2021 TAC ensures SIa SG80 is reached, but due to Brexit uncertainty SG100 is not reached; and the strategy has not been fully evaluated and SIb continues to not reach SG100.

On the contrary for PI 1.2.2 HCRs the previous score (75) is increased (85) because the TAC follows ICES total catch advice based on ICES MSY approach and thus a well-defined HCR is now in place, and is expected to keep the stock fluctuating at or above a target level consistent with MSY, and SIa SG100 is reached. SIb and SIc still do not meet SG100 as the ICES MSY approach does not take the ecological role of the stock into consideration and F has been above F_{MSY} in 2016-2017 so there is no clear evidence that the tools in use are effective in achieving the exploitation levels required under the HCRs, respectively.

There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.10 EC PLE

2.10.1 Stock status

Stock biomass continues to be high although above $MSYB_{trigger}$ (25,826 tonnes) since 2012, but has been decreasing since 2016, reaching 38,830 tonnes in 2020 (ICES_EC_PLE 2020). Fishing mortality has been below F_{MSY} (0.25) since 2009, but has increased since 2014 and is in 2020 above F_{MSY} at 0.3 (ICES_EC_PLE 2020).

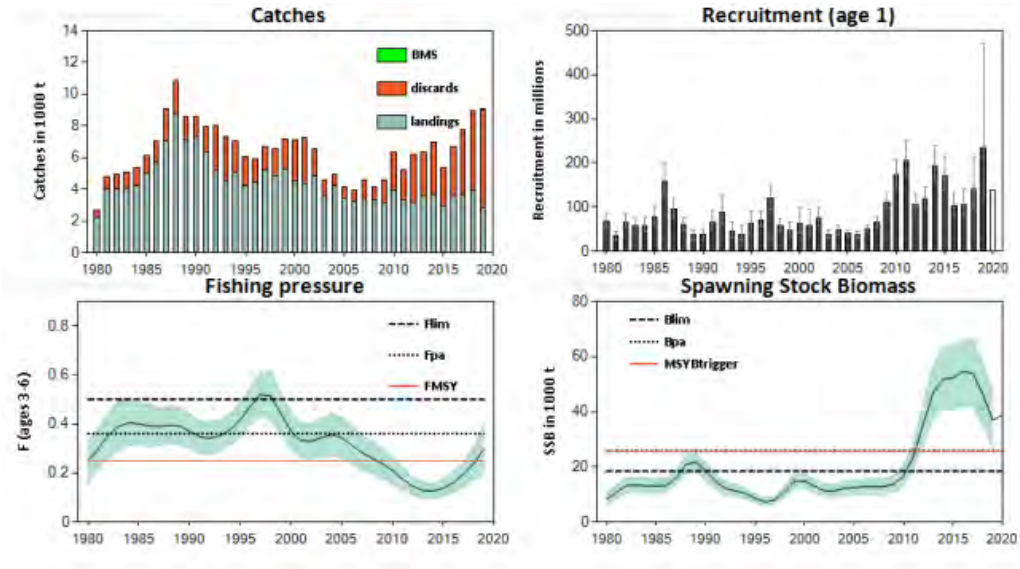


Figure 12 - Plaice in Division 7d. Summary of the stock assessment. Predicted values of recruitment are not shaded. Shaded areas (F, SSB) and error bars (R) indicate ±2 standard errors (approximately 95% confidence intervals). The assumed recruitment is unshaded. Discard data are only available from 2006; values prior to that are model estimates. Landings below minimum conservation reference size (BMS) are those officially reported in logbooks. (ICES_EC_PLE 2020)

2.10.2 Stock management

Plaice in the eastern English Channel is now managed bilaterally by the EU and UK. The TAC for 2021 has been set following ICES total catch advice. However, the 2020 TAC was set 26% above wanted catch advised by ICES but 30% below total catch advice for both stocks in the English Channel. Discards are estimated to be considerably high at 49% of total catch in 2020, while the LO has had minimal implementation (EC 2020a).

2.10.3 EC PLE conclusions

There are no changes to: PI 1.1.1 stock status (90) as the stock continues to be above PRI with a high degree of certainty and fluctuating at MSY levels; PI 1.2.2 HCRs (80) as the 2021 TAC has been set following catch advice and thus a well-defined HCR is in place and SIa continues to reach SG80.

There are changes though for: PI 1.2.1 harvest strategy score (75) is not changed but the rationale is changed and the existence of TCA ensures SIa SG80 is reached, but due to Brexit uncertainty SG100 is not reached; there continues to be evidence that the harvest strategy objectives are being met (at least for biomass) but the strategy has not been fully tested and SIb SG100 continues to not being met; but plaice in the Eastern Channel is now under the LO with specific survival exemptions and thus SIf SG80 is now met, but there is no biannual review of alternative measures and SG100 is not met.

2.11 POK

2.11.1 Stock status

Stock biomass has been variable above B_{pa}/$MSYB_{trigger}$ (149,098 tonnes) since 1996, but has been reducing since 2017 reaching 166,726 tonnes in 2020 (ICES_POK 2020). Fishing mortality has been above F_{MSY} (0.363) since 1971, and only at F_{MSY} between 2014-2016, increasing to be 0.46 in 2019 (ICES_POK 2020).

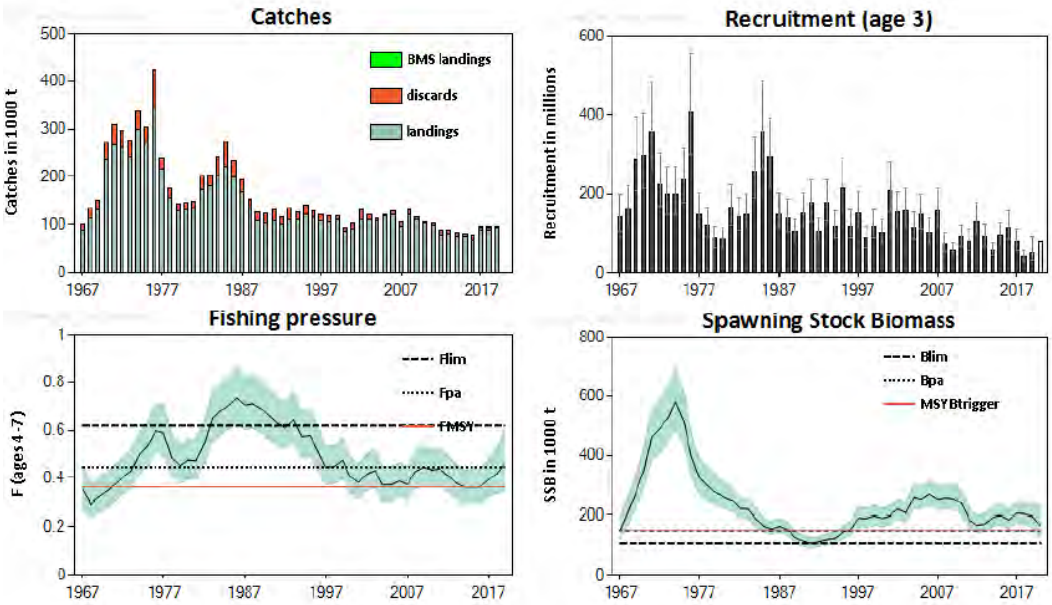


Figure 13 - Saithe in subareas 4 and 6, and in division 3a. Summary of the stock assessment. Assumed recruitment value is unshaded. Shaded areas (F, SSB) and error bars (R) indicate 95% confidence intervals. Landings and discards are for ages 3–10+ only, as used in the assessment. Landings below minimum conservation reference size (BMS) are those officially reported. (ICES_POK 2020)

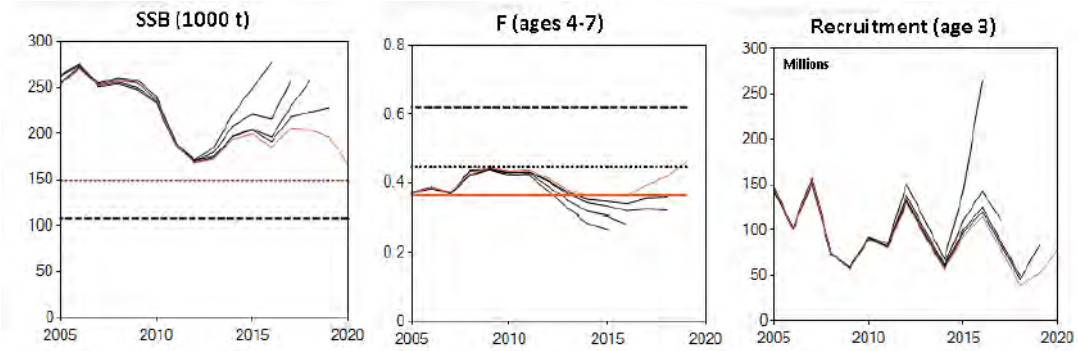


Figure 14 - Saithe in subareas 4 and 6, and in division 3a. Historical assessment results (final-year recruitment included for each line, corresponding to the forecast recruitment in the interim year. (ICES_POK 2020)

2.11.2 Stock management

Saithe in the North Sea, Rockall and West of Scotland, Skagerrak and Kattegat is now managed trilaterally by the EU, UK and Norway. A total TAC has been agreed for 2021 (EU 2021), following total catch advised by ICES. Discards are still estimated to be 6% of total catch in 2020.

2.11.3 POK conclusions

There are changes to the following PIs:

PI 1.1.1 stock status (90) was reduced (70) as the stock continues to be above PRI with a high degree of certainty and SIa SG100 is still reached, but the stock is no longer at MSY levels SIb is not met.

PI 1.1.2. is scored to 90 as the stock has been fluctuating above $MSYB_{trigger}$ for several years, and biomass is predicted to increase in 2022. Considering saithe generation time of 10 years (1/0.2 + 5 years; (ICES_POK 2020), stock biomass is predicted to increase in the coming years, likely reaching MSY levels in 10 years if F is maintained below F_{MSY} and considering present recruitment levels, and SIa SG 60 and 100 are both met. There is monitoring in place and the stock is predicted to increase and thus SIb SG60 and SG80 are both met but considering the uncertainties in the stock assessment and its strong retrospective bias, is not highly likely that the rebuilding strategy will be able to rebuild the stock within the specified timeframe and SG100 is not met.

PI 1.2.1 harvest strategy score (95) is reduced (75) as the existence of an agreed 2021 TAC (EU 2021) ensures SIa SG80 is reached, but due to Brexit uncertainty SG100 is not reached; and since stock biomass and fishing mortality have decreased in the past but are not at MSY levels, the strategy is not reaching its objectives and SIb SG80 is not reached.

PI 1.2.2 HCRs score (95) is reduced (75) because the TAC follows ICES total catch advice based on ICES MSY approach and thus a well-defined HCR is still in place. SIb and SIc SG100 continues to not being reached as the ICES MSY approach does not take the ecological role of the stock into consideration and F has been above F_{MSY} since 2016-2017 so there is no clear evidence that the tools in use are effective in achieving the exploitation levels required under the HCRs, respectively.

2.12 3a SOL

2.12.1 Stock status

Fishing mortality has decreased since 2005 and is at or below F_{MSY} (0.23) since 2010, with the exception of 2017 (ICES_20_24_SOL 2019). Biomass shows a variable pattern, but since 2008 has been increasing and is now above $MSYB_{trigger}$ (2,600 tonnes). Biomass in 2020 was estimated to be 3,136 tonnes, between 2,310 and 4,305 95% Confidence Interval. F_{2019} is estimated to be 0.2 (between 0.147 and 0.28) (ICES_20_24_SOL 2019).

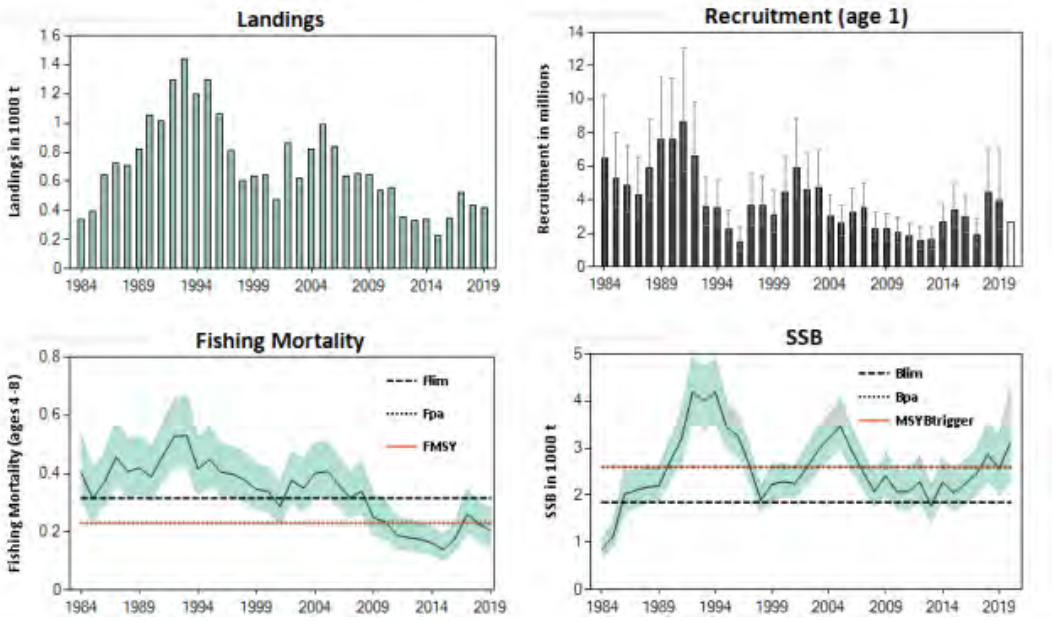


Figure 15 - Sole in subdivisions 20–24. Summary of the stock assessment (weights in thousand tonnes). Recruitment, fishing mortality, and spawning-stock biomass (SSB) are indicated with 95% confidence limits. Assumed recruitment value is unshaded. (ICES_20_24_SOL 2019)**.**

2.12.2 Stock management

There has been no change to the formal management of sole in subdivisions 20-24. The NS MAP (EU 2016a) continues to apply to this stock as targeted and therefore the TAC is set following the MAPs HCR within ranges of F_{MSY}. The TAC set for this stock has followed ICES scientific advice for total catch in 2021. Discards are estimated to be 3 % of total catch in 2020.

2.12.3 3a SOL conclusions

There is no change in scoring to: PI 1.1.1 stock status (70) the stock is above PRI with a high degree of certainty (stock biomass is above B_{pa}) and SIa SG100 is met but continues to be below MSY levels and SIb is not met; PI 1.2.1 harvest strategy (90) as the strategy has not been fully evaluated and SIb continues to not reach SG100; PI 1.2.2 HCRs (80) as SIc SG100 is not met as F has been above F_{MSY} in 2017 so there continues to be no clear evidence that the tools in use are effective in achieving the exploitation levels required under the HCRs.

Scoring on PI 1.1.2 stock rebuilding (80) is increased (90) as stock biomass is likely to continue to increase in the upcoming years, likely reaching MSY levels in 12 years (one generation time) and SIa SG100 is met, while there is evidence that the rebuilding strategy is able to rebuild the stock and SIb SG80, but because F has increased above F_{MSY} in 2017, there isn't strong evidence and SG100 is not reached.

2.13 NS SOL

2.13.1 Stock status

The stock assessment was benchmarked in 2020 (ICES 2020) and a new stock perception was estimated, significantly different from the one provided previously. The benchmark utilized additional survey data, covering an important area of the stock distribution, which led to a downward revision of recent biomass estimates and an upward revision of fishing mortality (ICES 2020).

Stock biomass is now estimated to be fluctuating around B_{lim} (30,828 tonnes) since 2003, and below $MSYB_{trigger}$ (42,838 tonnes) since 1999 (ICES_NS_SOL 2020). However, stock biomass is estimated to be 34,569 tonnes in 2020 and 88,012 tonnes in 2021. Fishing mortality has declined since 1999 but has never been below F_{MSY} (0.207) and is in 2019 0.27. Recruitment in 2019 however is estimated to be the highest since the start of the series in 1957 (ICES_NS_SOL 2020).

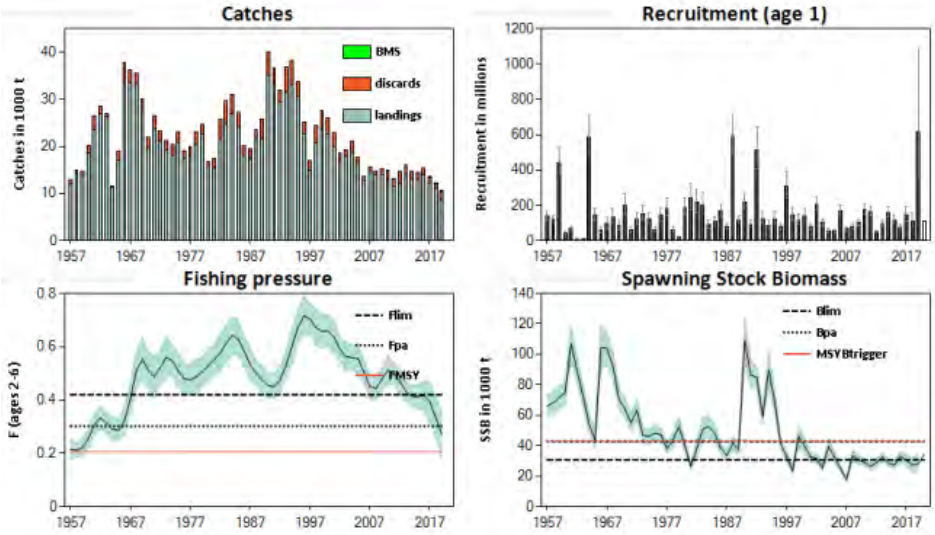


Figure 16 - Sole in Subarea 4. Summary of the stock assessment. Estimates of discards are only available from 2002. Shaded areas (F, SSB) and error bars (R) indicate approximately 95% confidence intervals. Landings below minimum conservation reference size (BMS) are those officially reported. (ICES_NS_SOL 2020)

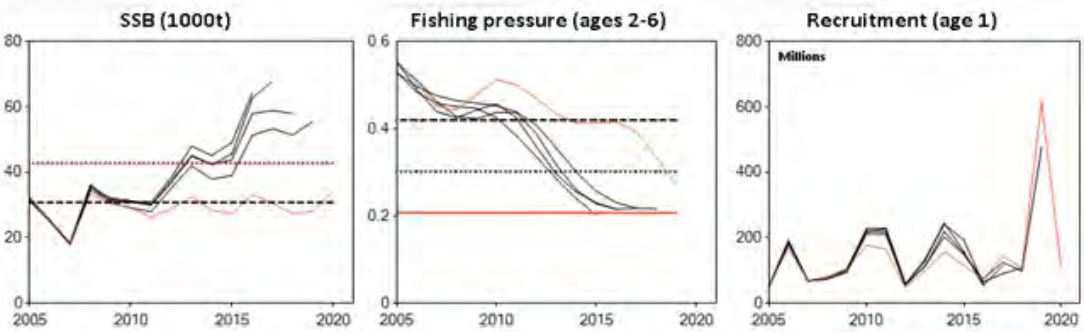


Figure 17 - Sole in Subarea 4. Historical assessment results (final-year recruitment included for each line, corresponding to the forecast recruitment in the interim year). (ICES_NS_SOL 2020)

2.13.2 Stock management

Sole in the North Sea is now managed bilaterally by the EU and UK. The TAC for 2021 has been set following ICES total catch advice. Discards are estimated to be 16% of total catch in 2020.

2.13.3 NS SOL conclusions

There are changes to: PI 1.1.1 stock status score (70) is reduced (60) as the stock is likely to be above PRI, considering that in 2019 the highest recruitment since 1957 was recorded and stock biomass in 2021 is estimated to be double $B_{pa}/MSYB_{trigger}$, but not highly likely and thus only SIa SG60 is reached; and continues not to be at MSY levels and SIb is not met.

PI 1.1.2 stock rebuilding score (80) is increased (90): the UK Fisheries Act has no explicit rebuilding timeframe (UK 2020a). However, due to the highest recorded recruitment since 1957, stock projections with current F_{2021} (0.26), to account for the HCR implementation error, places the stock almost double B_{pa}/$MSYB_{trigger}$ in 2022. Therefore, stock biomass is highly likely to reach MSY levels in less than 12 years (one generation time) and thus SG60 and SG100 are reached. Monitoring is in place to determine if the rebuilding strategy is effective and there is evidence that the stock is rebuilding and SIb SG60 and SG80 are met. However, as F has never been below F_{MSY} SG100 is not met.

PI 1.2.1 harvest strategy score (90) is reduced (85) as the existence of TCA ensures SIa SG80 is reached, but due to Brexit uncertainty SG100 is not reached; and there continues to be evidence that the harvest strategy objectives are being met as biomass in 2021 is double B_{pa}/$MSYB_{trigger}$ and SIb SG80 is met.

There are no changes to PI 1.2.2 HCRs (75) as the TAC for 2021 has been set following scientific advice, and thus a well-defined HCR is in place and SIa continues to reach SG80. But there is no evidence that the tools in use are effective in controlling exploitation as F has never reached F_{MSY} and SIc SG80 is not met.

There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.14 USK

2.14.1 Stock status

Fishing mortality has decreased markedly since 2002 and is below F_{MSY} since at least 2005 while biomass is increasing since 2003 and above B_{MSY} since 2008 (ICES_USK 2019). In 2019 biomass is above 1.5 times B_{MSY}, and fishing mortality is below 0.3 of F_{MSY}.

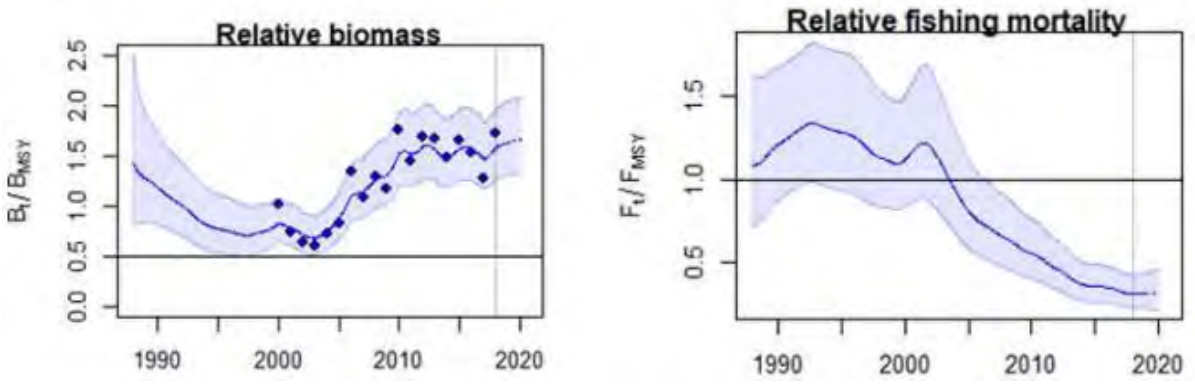


Figure 18 - Tusk in subareas 4 and 7–9, and in divisions 3.a, 5.b, 6.a, and 12.b. SPiCT model results used for the evaluation of the stock and exploitation status. The horizontal lines indicate the reference points MSY $B_{triggerproxy}$ and $F_{MSYproxy}$. (ICES_USK 2019).

2.14.2 Stock management

Tusk continues to be managed at NEAFC level, with the UK now being an independent contracting party. There continues to be three TACs: EU waters of Subarea 3a (31 tonnes since 2018); EU and Norwegian waters of area 4 (251 tonnes); EU and Norwegian waters of areas 5, 6, 7 (4 130 tonnes), where 98% of the landings come from. However, none of these TACs are set within a context of explicit harvest control rules, and have been fixed at the same levels of the 2018 TACs, while the total catch

advice has decreased (2020 TAC is 5/6% above advice). The TACs for 2021 have also been set above ICES total catch advice.

2.14.3 USK conclusions

There are no changes to: PI 1.1.1 stock status (90) as the stock continues to be above PRI with a high degree of certainty and SIa SG100 is met, and the stock is fluctuating at MSY levels but without a high degree of certainty and SIb SG100 is still not met.

There are no changes to PI 1.2.1 harvest strategy (85) but the reasoning is slightly edited as the existence of the TCA and the UK being part of NEAFC ensures SIa SG80 is reached, but the harvest strategy continues not being designed to achieve stock management objectives for all countries involved in the fishery, while now has also Brexit uncertainty and SG100 is not reached; the strategy has not been fully tested and SIb continues to not reach SG100, and finally there is no biannual review of alternative measures and SIf SG100 is still not reached.

There are no changes also to PI 1.2.2 HCRs (75) as the TACs for 2021 have been set above scientific advice. Thus a well-defined HCR is not in place and SIa continues to only reach SG60.

There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.1 WHG

2.1.1 Stock status

In the 2020 ICES advice the stock biomass was shown to be variable between B_{lim} (119,970 tonnes) and B_{pa}/$MSYB_{trigger}$ (166,708 tonnes) since the mid-90s, increasing since and in 2020 is 169,979 tonnes (between 121,095 tonnes and 238,596 tonnes) (ICES_WHG 2020). Fishing mortality was shown to be decreasing since the late 80s, and below F_{pa} (0.33) since 2002, but has never been below F_{MSY} (0.172). In 2019 fishing mortality was 0.21 (between 0.142 and 0.32).

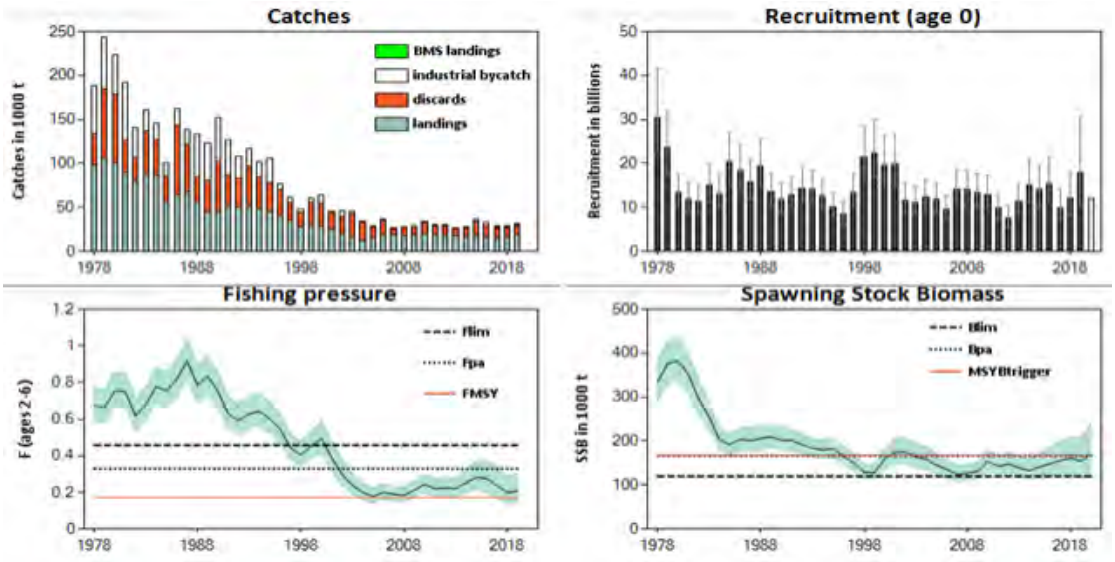


Figure 19 - Whiting in Subarea 4 and Division 7d. Summary of the stock assessment. Shaded areas (Fishing pressure [F], Spawning- stock biomass [B]) and error bars (Recruitment) indicate 95% confidence intervals. Assumed recruitment is unshaded. Landings below minimum conservation reference size (BMS) as officially reported (ICES_WHG 2020)**.**

In 2021 ICES undertook an interbenchmark of the stock and natural mortality values have been updated by ICES slightly higher than previously considered, particularly at age 0 (ICES_WHG 2021). The 2020 assessment was re-assessed and the impact of these higher values of M did not have a strong effect in the assessment estimates of fishing mortality, biomass and recruitment. However, reference points were re-calculated, and this resulted in lower biomass reference point (e.g., MSY Btrigger decreased from 167,000 t to 144,000 t) and a substantial increase in F_{MSY} (from 0.172 to 0.371). Considering this assessment as the most recent evaluation of stock status, which is very likely to be accepted by ICES as the formal evaluation to provide advice on stock status, these results were the ones considered to score stock status. Interbenchmark's are subject to peer review as part of the ICES process. Under the new reference points fishing mortality has been below FMSY since 2002 and stock biomass has never been below B_{lim} (103,560 t) and is above B_{pa}/MSY$B_{trigger}$ (143,905 t) since 2016.

2.1.2 Stock management

Whiting in the North Sea and eastern English Channel is now managed trilaterally by the EU, UK and Norway. A total TAC has been agreed for 2021 (EU 2021), following total catch advised by ICES. However, discards are still estimated to be 35% of total catch, while the LO has had minimal implementation (EC 2020a)

2.1.3 WHG conclusions

There are no changes to: PI 1.2.1 harvest strategy score (75) as the existence of an agreed 2021 TAC ensures SIa SG80 is reached, but due to Brexit uncertainty SG100 is not reached; and the strategy has actually been tested not to be precautionary and SIb continues to not reach SG80.

However, there are changes to the following scores: PI 1.1.1 stock status score (90) as the stock is above PRI with a high degree of certainty as the stock is above B_{pa}/MSY $B_{trigger}$ so SIa reaches SG100, and is at MSY levels as fishing mortality has been below F_{MSY} for more than 15 years. Considering the stock GT anywhere between 2-4 years, SIb reaches 80, but as biomass is not double B_{pa}/MSY $B_{trigger}$ and has only been above B_{pa}/MSY $B_{trigger}$ for 5 years SG100 is not met.

For PI 1.2.2 the HCRs score (65) is increased (75) because the TAC follows ICES total catch advice based on ICES MSY approach and thus a well-defined HCR is now in place and SIa SG80 is reached. SIb SG100 and SIc SG80 continues to not being reached as the ICES MSY approach does not take the ecological role of the stock into consideration and F has never been below F_{MSY} so there is no clear evidence that the tools in use are effective in achieving the exploitation levels required under the HCRs, respectively.

There are no changes to the information base for the stock assessment (PI1.2.3) or the appropriateness of stock assessment itself (PI1.2.4).

2.2 FU7 NEP

2.2.1 Stock status

Nephrops abundance estimated from the annual underwater TV survey (UWTV) in FU7, Fladen Ground, which acts as a proxy for spawning stock biomass (SSB), was 4,589 million individuals in 2020 and continues to be well above MSY $B_{TRIGGER}$ (2,767 million individuals) although abundance has declined since the recent peak observed in 2017 (Figure 20). Catch increased significantly in 2019 with the result that the percentage harvest rate (total catch/stock abundance) in 2019 was 5.6%, which was much higher than in recent years, but still well below the F_{MSY} proxy value of 7.5% ((ICES_NEP_FU7 2020); Figure 20).

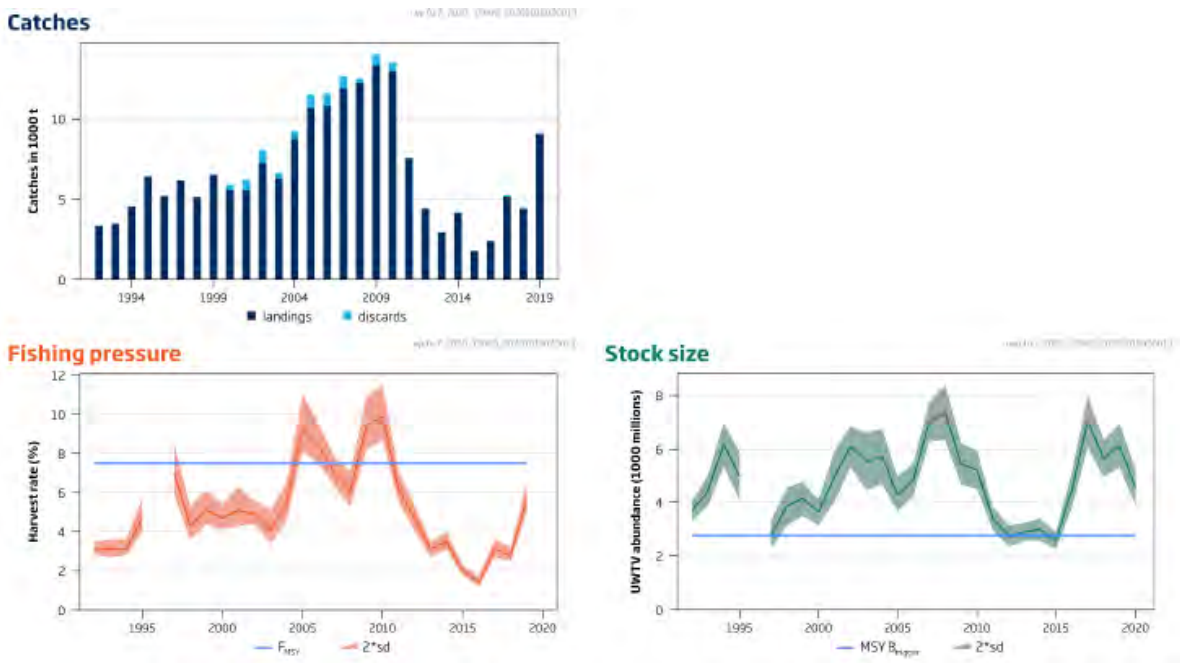


Figure 20. Norway lobster (*Nephrops norvegicus*) in Division 4.a, Functional Unit (FU) 7. Summary of the stock assessment. Long-term trends in catches, harvest rate, and underwater TV survey (UWTV) abundance (for Nephrops greater than 17 mm carapace length) – used as fishing pressure (F) and spawning-stock biomass (SSB) proxies. Discard data have only been included since 2000. Blue lines show proxies for MSY $B_{trigger}$ and F_{MSY}. Shaded areas for fishing pressure and abundance are 95% confidence intervals. Harvest rates before 2006 may be unreliable because of underreporting of landings. (ICES_NEP_FU7 2020)**.**

2.2.2 Stock management changes since certification

Nephrops in the North Sea is now managed bilaterally by the EU and UK. ICES advises that when the EU multiannual plan (MAP) for the North Sea is applied, catches in 2021 for FU7 that correspond to the F ranges in the MAP (6.6% and 7.5% harvest rate) are between 8430 tonnes and 9579 tonnes, assuming that discard rates are equivalent to rates observed in 2017-2019 (ICES_NEP_FU7 2020). The change in the advice (−33%) from November 2019 is mainly a result of the decrease in the abundance observed between the 2019 and 2020 UWTV surveys, as well as the update of mean weights and discard rates. An exemption from the Landing Obligation based on an estimated high survivability (75%) has been granted for this fishery by the European Commission, although ICES continues to use a precautionary discard survival rate of 25%. Recent observations from the fishery indicate that discarding above the minimum conservation reference size (MCRS) continues, and ICES consequently provides advice assuming recent observed average discard rates. However the observed discard rates have been only 3.2% by number and therefore ICES catch advice is very similar whether or not the Landings Obligation is implemented (ICES_NEP_FU7 2020).

It should be noted that ICES provides catch advice at the scale of Functional Unit (FU), whereas EU/UK management sets TACs at the much wider scale of the whole North Sea (except the Norwegian Deep, FU32). For all FUs within the wider North Sea area, ICES advises that to ensure that the stock in each FU is exploited sustainably, management should be implemented at the FU level. Whilst the catch in FU7 has been significantly lower than the ICES maximum catch advice for the last 10 years and therefore the harvest strategy is achieving stock management objectives for FU7, if unused catch is transferred to other FUs in the North Sea, this could result in non-precautionary exploitation of those other FUs (ICES_NEP_FU7 2020).

2.2.3 FU7 NEP conclusions

There are no changes to the scores for any of the Principle 1 Performance Indicators (PIs). Stock status (PI 1.1.1) is unchanged since the certification of the fishery. All harvest strategy PIs (1.2.1 to 1.2.4) scored at least 80 and with no changes to the harvest strategy since certification, there is no reason to change these scores.

2.3 3A NEP

2.3.1 Stock status

Nephrops abundance estimated from the annual underwater TV survey (UWTV) in Division 3a, Functional Units (FUs) 3 and 4 (Skagerrak and Kattegat) was 4,502 million individuals in 2019 (Figure 21) (ICES_NEP_FU3&4 2020). Whilst estimates of Nephrops abundance from UWTV surveys can be considered to be a proxy for spawning stock biomass (SSB) as in other FUs, there are no defined biomass reference points for the Nephrops stock in FUs 3 and 4. The area of the Nephrops grounds surveyed has changed over time, with a 27% increase in the area surveyed by UWTV between 2016 and 2017 which implies that abundance was underestimated before 2017, and therefore Figure 21 shows the time series of abundance estimates from 2017 onwards only. Catches were significantly higher in 2018 and 2019 than in previous years. The percentage harvest rate (total catch/stock abundance) in 2019 was 3.7%, well below the F_{MSY} proxy value of 7.9% (ICES_NEP_FU3&4 2020; Figure 21). As noted previously, there was a 27% increase in the area surveyed by UWTV between 2016 and 2017 which implies that before 2017 the harvest rate was overestimated.

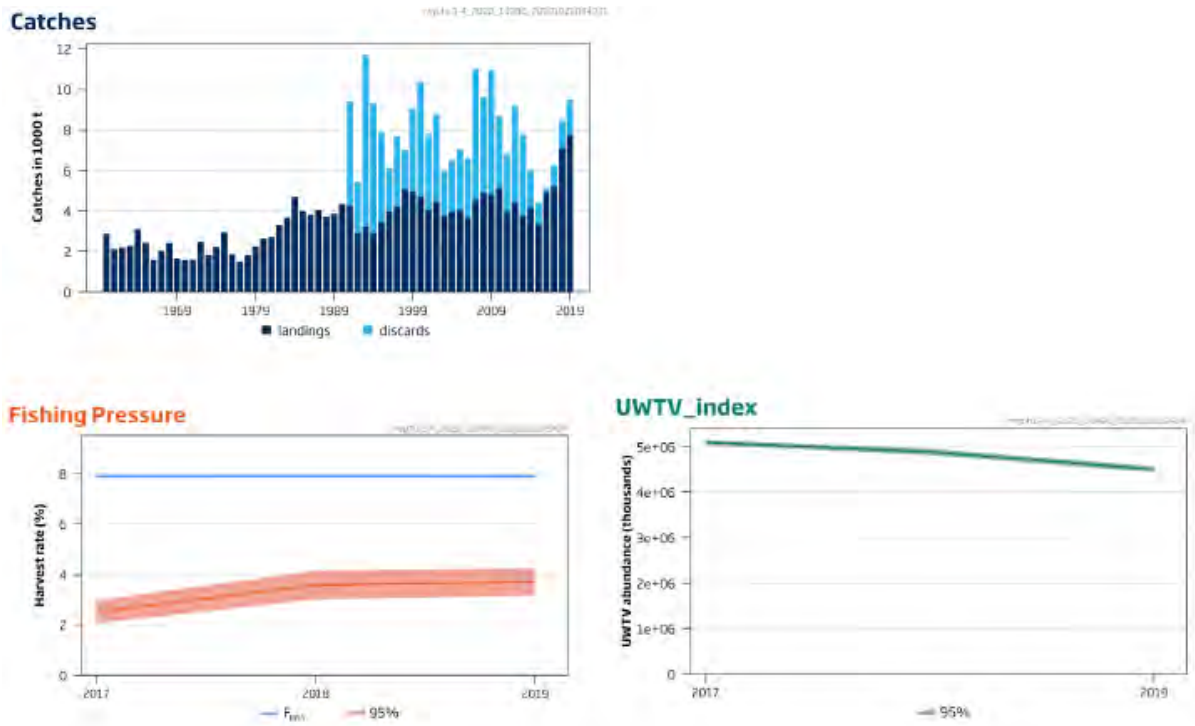


Figure 21. Norway lobster (*Nephrops norvegicus*) in Division 3a, Functional Units 3 and 4. Summary of the stock assessment. Long-term trends in landings (1960–2019) and catches (1991–2019), harvest rate, and underwater TV survey (UWTV) abundance (for animals greater than 17 mm carapace length). The blue line indicates F_{MSY}. Shaded areas indicate 95% confidence intervals. (ICES_NEP_FU3&4 2020).

2.3.2 Stock management changes since Certification

Nephrops in the Skagerrak and Kattegat continues to be managed by the EU. ICES advises that when the EU multiannual plan (MAP) for the North Sea is applied, catches in 2021 for FUs 3 and 4 that correspond to the F ranges in the MAP (5.6% and 7.9% harvest rate) are between 12,465 tonnes and 17,585 tonnes, assuming that discard rates are equivalent to rates observed in 2017-2019 (ICES_NEP_FU3&4 2020). The change in the advice (−11.7%) from November 2019 is mainly a result of the decrease in the abundance observed between the 2019 and 2020 UWTV surveys, as well as the update of mean weights and discard rates. An exemption from the Landing Obligation based on an estimated high survivability (75%) has been granted for this fishery by the European Commission, although ICES continues to use a precautionary discard survival rate of 25%. Recent observations from the fishery indicate that discarding above the minimum conservation reference size (MCRS) continues, and ICES consequently provides advice assuming recent observed average discard rates of 26% by number (ICES_NEP_FU3&4 2020). (Note that ICES provided updated 2021 catch advice in May 2021. Revised maximum catches were slightly lower following updated figures for discard rates.)

2.3.3 3A NEP conclusions

There are no changes to the scores for any of the Principle 1 Performance Indicators (PIs). Stock status (PI 1.1.1) is unchanged since the certification of the fishery. All harvest strategy PIs (1.2.1 to 1.2.4) scored at least 80 with the exception of PI 1.2.2 against which a condition was raised due to the lack of well-defined harvest control rules. There have been no significant changes to the harvest strategy since certification, and so there is no reason to change scores for the harvest strategy PIs, and the condition on PI 1.2.2 remains open.

2.4 PRA

2.4.1 Stock status

Spawning stock biomass (SSB) for the *Pandalus borealis* fishery in Skagerrak and Kattegat and northern North Sea in the Norwegian Deep is estimated from the fitting of a quarterly length-based analytical stock assessment model (Stock Synthesis 3) to length–frequency distributions from commercial catches and stock surveys. SSB in 2021 was estimated to be 7581 tonnes (Figure 22) and therefore has remained below MSY $B_{TRIGGER}$ (9900 tonnes) but above B_{LIM} (6300 tonnes) since 2016 (ICES_PRA 2021). Fishing mortality has been fluctuating in recent years around F_{MSY} (0.60) and F_{MGT} (0.59) and was estimated at 0.59 in 2020 (ICES_PRA 2021). Catches in 2020 were slightly higher than in 2019 but at average levels observed over the last 10 years. Discards constituted only 3% of the total catch in 2020 which reflects the development of a market for the smallest shrimps. Recruitment in 2020 was relatively good in comparison with recent years, but there has been no large year-class since 2013 (Figure 22).

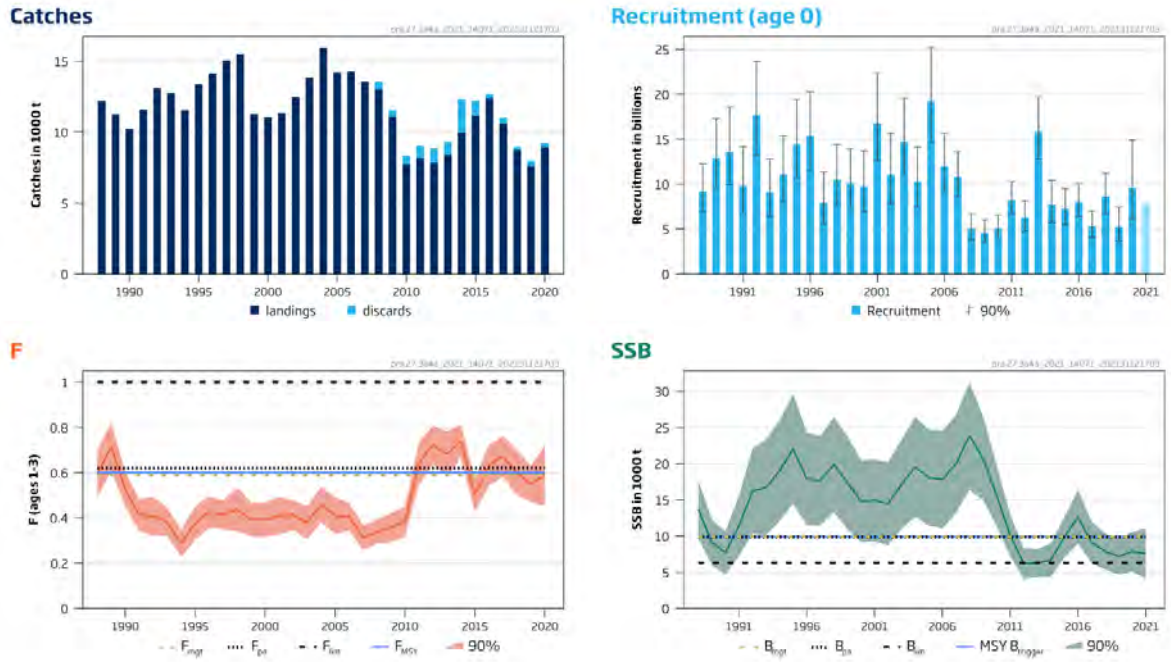


Figure 22. Northern shrimp (*Pandalus borealis*) in ICES Divisions 3a and 4a East. Summary of the stock assessment – trends in catches including estimated discards, recruitment age 0 (assumed recruitment in 2021 is shown in a lighter shade of blue), and fishing mortality and SSB in relation to reference points. [Note: B_{MGT} = B_{PA} = MSY $B_{TRIGGER}$]. (ICES_PRA 2021)**.**

2.4.2 Stock management changes since Certification

The *Pandalus borealis* fishery in ICES Divisions 3a and 4a East continues to be managed under the EU-Norway consultations. The EU and Norway long-term management strategy (LTMS) (EU-NOR 2021) requires that catch advice is based upon a reduced exploitation rate when the stock is below MSY $B_{TRIGGER}$ as follows:

$F = F_{MGT} \times (SSB_{2021} / MSY\ B_{TRIGGER})$

For 2021 this should result in a value of F of 0.45, well below both F_{MSY} and F_{MGT} (ICES_PRA 2021).

ICES advises that when the LTMS is applied, catches in 2021 should be no more than 7,166 tonnes and catches for the first six months of 2022 should be no more than 5,554 tonnes (ICES_PRA 2021).ICES advice is issued each year in March following the annual fishery-independent stock survey undertaken in January and February. As described above, catch advice is given for the current year and for the first six months of the following year. The initial advice for the following year is therefore provided before the annual stock survey is completed and before catch data for the full current year are available, and therefore revisions of catch advice will be necessary when the new survey and catch data become available. Following the 2021 stock survey and the full realised catch data for 2020, there was a reduction in advised catch of 18% for 2021 on that advised initially (ICES_PRA 2021).This change is partly explained by the realised catches in 2020 (9,226 tonnes) being higher than the advised catches (8736 tonnes) as national quota management does not take account of the loss in landed weight compared to live weight due to on-board boiling and any estimate of discards. The preliminary advised catch for 2022 is 52% larger than the advised catch for 2021 mainly because the 2020 and 2021 year classes are estimated to be higher than the 2019 year class which results in a higher stock biomass and higher advised fishing mortality for 2022 (ICES_PRA 2021).

If total catches (landings + discards) are maintained at the ICES advised catch levels in 2021 and 2022, the stock assessment forecasts that SSB should increase to 9,819 tonnes just below MSY $B_{TRIGGER}$ of 9900 tonnes by 1 January 2023 (ICES_PRA 2021).

2.4.3 PRA conclusions

Stock status has changed since the certification report when the estimate of stock biomass was likely (but not highly likely) to be above the point where recruitment would be impaired (SIa meets the SG60), and that the stock was below a level consistent with MSY, and therefore the overall score for PI 1.1.1 was 60. Recent Guidance on the MSC Interpretations Page for scoring stock status for ICES stocks states that the SG80 for PI 1.1.1a is met when the stock is estimated above 1/2 of the distance between B_{LIM} and B_{PA} (identical to MSY $B_{TRIGGER}$). In the 2020 stock assessment, the model estimated that spawning stock biomass (SSB) at the beginning of 2020 was 8319 tonnes which is above 1/2 of the distance between B_{LIM} (6300 tonnes) and MSY $B_{TRIGGER}$ (9900 tonnes), i.e. 8100 tonnes. In addition to the general MSC Guidance on scoring of PI 1.1.1a, the ICES advice for 2020 (ICES_PRA 2020) provides confidence intervals for the estimate of SSB, from which it can be calculated that the probability that the estimate of SSB in 2020 being above B_{LIM} was 0.823, confirming that the SG80 is met for PI 1.1.1a. Following the 2020 stock assessment (NAFO/ICES 2020) and the subsequent ICES advice (ICES_PRA 2020), Condition PRA -1 on PI 1.1.1 could be closed (see section 3.4.14) and the PI rescored at 70 (see section 3.4.14**Error! Reference source not found.**). (Note that this rescoring was completed as part of harmonisation activities in 2020-21 between CU UK and DNV-GL but no report was published in relation to this fishery as no report was due at the time.)

However during the course of this surveillance audit, as described above, a new stock assessment was undertaken by the NAFO ICES Pandalus Assessment Group (NIPAG) which estimated SSB to be 7581 tonnes in 2021 (Figure 22). This estimate of SSB in 2021 is now below the halfway point of 8100 tonnes, and based on the confidence intervals of the SSB estimate given in the 2021 ICES advice (ICES_PRA 2021), the probability that the estimate of SSB in 2021 being above B_{LIM} is now 0.726, confirming that the SG80 is no longer met for PI 1.1.1a. The condition on PI 1.1.1 has now had to be raised again (see section 3.5.3.4), and the overall score for PI 1.1.1a reduced to 60 (see section 3.4.14).

A revised rationale has been provided for PI 1.1.2 (Stock Rebuilding) in section 3.4.14, but there has been no change to the score for this PI. The condition on PI 1.2.1 remains open (section 3.5.2.6).

3 Results

3.1 Summary of existing conditions for Principle 1

Note at the PCR (Sieben et al. 2019) non-binding conditions were set against stocks which failed to reach the MSC standard. These conditions have been removed from this audit report as these stocks no longer form part of the certificate.

Table 2. Summary of existing conditions. * these stocks are suspended under the MSC and as per the MSC interpretation are not assessed as part of this audit.

NOTE: conditions which have extended timelines under the Derogation 6 are shown with a grey background

Condition number and stock	Condition	Performance Indicator (PI)	Status	PI original score	PI revised score
1 – COD*	Within 4 years provide evidence that it is highly likely that the stock is above the point at which recruitment would be impaired (PRI)	1.1.1	Non-binding	60	'Not revised'.
1 - EC HAD	Evidence should be provided that the harvest strategy and the harvest control rules in place are achieving their objectives in reducing fishing mortality to below FMSY.	1.2.1	On target	75	75
2 - EC HAD	Evidence should be provided that the harvest strategy and the harvest control rules in place are achieving their objectives in reducing fishing mortality to below FMSY.	1.2.2	On target	75	75
1 – LIN	As a key element of the HCR, the TAC for this stock should be set in accordance with ICES advice so that exploitation rates are reduced as the PRI is approached, and keep the stock fluctuating around a target level consistent with (or above) MSY.	1.2.2	On target	75	75
1 - 21-23 PLE	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. The HCR should be contained within a management plan.	1.2.2	Closed Year 1	75	75 (a new condition is raised on a SIc (21-23 PLE – 2)
1 – NS PLE	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. The HCR should be contained within a new management plan.	1.2.2	Closed Year 1	75	80

Condition number and stock	Condition	Performance Indicator (PI)	Status	PI original score	PI revised score
1 – EC PLE	There needs to be a regular review of the potential effectiveness and practicality of alternative measures to minimize unwanted catch of plaice.	1.2.1	Closed Year 1	75	80
1 – NS SOL	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. The HCR should be contained within a management plan.	1.2.2	Closed	75	75 (a new condition is raised on a SIc (NS SOL – 2)
1 – USK	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy an that ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY.	1.2.2	On target	75	75
1 – WHG	Evidence should be provided that the harvest strategy is consistent with the precautionary approach and achieves its objective of reducing fishing mortality as the projected biomass drops below relevant reference points.	1.2.1	On target	75	75
2 – WHG	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. The HCR should be contained within a management plan. Evidence should be provided that the management plan is effective in achieving its objectives.	1.2.2	On target	65	75 (partially closed on one SI)
1 – 3A NEP	Provide evidence that well-defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached , and that are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. In addition provide evidence that the HCRs are likely to be robust to the main uncertainties.	1.2.2	On target	65	65
1 - PRA	Provide evidence that it is highly likely that the stock is above the point at which recruitment would be impaired (PRI)	1.1.1	Closed Year 1 but new condition issued.	65	60 (a new condition is raised on a SIa (PRA - 3)

Condition number and stock	Condition	Performance Indicator (PI)	Status	PI original score	PI revised score
2 - PRA	Provide evidence that the harvest strategy is achieving its objectives.	1.2.1	On target	75	75

3.2 New Principle 1 conditions raised at this audit

Table 3. Summary of new conditions.

Condition number	Condition	Performance Indicator (PI)	Status	PI original score (PCR)	PI revised score (Year 1)
21-23 PLE - 2	By year 4 evidence should be provided that the harvest control rule tools are appropriate and effective in achieving the exploitation levels required under the HCRs e.g. that the TAC is limiting catches and discards are being accounted for.	1.2.2	New (open)	75	75
POK – 1	By the 1st year of reassessment evidence should be provided that the harvest strategy is achieving its objectives of maintaining stocks above MSY levels.	1.2.1	New (open)	95	75
POK – 2	By year 4 evidence should be provided that the harvest control rule tools are appropriate and effective in achieving the exploitation levels required under the HCRs e.g. F is below FMSY	1.2.2	New (open)	95	75
NS SOL – 2	By the 1st year of reassessment evidence should be provided that the harvest control rules (principally the annual negotiations on the HCR tool – TAC) are achieving their objectives in reducing fishing mortality to below FMSY.	1.2.2	New (open)	75	75
PRA – 3	By the Year 4 surveillance audit evidence should be provided that it is highly likely that the stock is above the point at which recruitment would be impaired (PRI).	1.1.1	New (open)	65	60

3.3 Recommendations

None

3.4 Rescoring Performance Indicators

The following section shows the rescored rationale for all Performance Indicators resultant from this year 1 surveillance audit. Where old rationale have been updated they are presented in grey text and the new rationale (current rationales) presented in black. Revised scores and Scoring Guideposts are shown with strikethrough text and new scores. Where SIs have not been amended the original text is presented in black. New conditions raised by the scoring changes are presented in section 0.

3.4.1 NS HAD

None

3.4.2 EC HAD

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (EC HAD)

PI 1.2.2		**There are well defined and effective harvest control rules (HCRs) in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	Y	N
	Justification	Advice provided by ICES is based on standard HCR that reduces fishing mortality when the SSB falls below B_{pa}. The rule assumes F=0.4 is the maximum fishing mortality rate. The rule is well defined and would be expected to keep the SSB above B_{pa}, hence SG80 is met. Although in principle the HCR should keep the stock in proximity to MSY, the recent values of F have consistently been above F_{MSY} (but well below F_{pa}) so SG100 is not met. **Score rationale changed no change in score**:		

		Advice provided by ICES is based on a standard well-defined HCR that reduces fishing mortality when the SSB falls below Bpa and Blim, and is expected to keep the stock around MSY (ICES 2021) (Figure 1). In 2020 the TAC has been set according to ICES advice and therefore as per GSA2.5: HCRs in 2021 can be considered to be generally understood and in place SG60 is met. The TAC for 2021 has been set following ICES total catch advised, as the EU-UK have reached an agreement, and thus a well-defined HCR is in place in 2021. **Therefore SIa reaches SG60 and SG80**. **SG100 is not reached** because the HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY.		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	Uncertainties in the assessment and advice implementation error are considered in the HCR evaluation, hence SG80 is met. Haddock are in the higher trophic level and their ecological role is not explicitly considered and is not therefore a major source of uncertainty. While the assessment is considered robust in identifying stock trends it is understood to be fairly uncertain due to the quality of earlier data and hence there is no evidence that the HCR is robust to this issue and SG100 is not met.		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	N	N
	Justification	The main tools for controlling exploitation are catch limits and restrictions on fleet capacity. In addition there are minimum mesh sizes for the principal fleets (TR1) of 120mm. The tools have had some success in reducing F and SSB has tended to increase. Although F has declined, in the most recent years it has stabilised above F_{MSY} and SG80 is not met.		
References		(ICES 2017a), (ICES 2016e), (ICES 2012c) (ICES_ECHAD 2020; UK 2020a) (EC 2021), (ICES 2021) (EC 2021)		
OVERALL PERFORMANCE INDICATOR SCORE:				**75**

CONDITION NUMBER (if relevant):	EC HAD – 2 (existing)

3.4.3 HKE

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (HKE)

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	Y	N
	Justification	A recovery plan (EU, 2004) has been in place for some time and has been used to set fishing mortality rates in response to the size of the stock. The plan had a target F=0.25 (less than F_{MSY}) and a built-in decision rule to increase the SSB (EU, 2004) based on the current stock size. The stock has recovered both in terms of SSB and F. The harvest rule now followed by ICES is to give advice is based on F_{MSY} as the maximum F. This is reduced linearly when the biomass falls below MSY $B_{trigger}$ and is zero below B_{lim} . The rule is well defined and consistent with the Precautionary and MSY Approaches. In recent years the agreed TAC has usually followed the ICES MSY HCR advice:		

Year	ICES advice	Agreed TAC
2014	81846	81846
2015	78457	90849
2016	109592	108764

		2017 | 123777 | 119765 2018 | 115335 | 104190 2019 | 142240 | 142240 Since 2016 managers have followed ICES advice, including the TAC for 2019, so SG80 is met. **Rationale amended, score remains the same**: Advice provided by ICES is based on a standard well-defined HCR that reduces fishing mortality when the SSB falls below Bpa and Blim, and is expected to keep the stock around MSY (ICES 2021) (Figure 1). Since 2017, with the exception for 2020, TACs have been set according to ICES advice and therefore as per GSA2.5: HCRs in 2021 can be considered to be generally understood and in place SG60 is met. The TAC for 2021 has been set following ICES total catch advised, since there is an agreement between the EU-UK, a well-defined HCR is in place in 2021. **Therefore SIa reaches SG60 and SG80**. For SG100 the HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY and taking into account the ecological role of the stock.		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	As there is a detailed stock assessment using both fishery-dependent and fishery independent data the generally understood HCR is likely to be robust to the main uncertainties and SG80 is met. An HCR has been developed and tested, and is used for advice. It takes into account a wide range of uncertainties including assessment error and implementation error. As it has not been formally adopted by managers there is uncertainty about the implementation of the rule and SG100 is not met		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	Y	N

	Justification	The principal tool used to implement HCRs is a Total Allowable Catch. This has been effective during the recovery plan and current F and SSB satisfy MSY reference points, hence SG80 is met. Although no formal HCR has been adopted ICES provides advice using a standard HCR which has been followed by managers in recent years. However, the procedure of topping up the TAC to allow compliance with the Landing Obligation may undermine the control of catches unless there is adequate enforcement of the Landing Obligation. At present it is unclear whether compliance with the LO is effective and SG100 is not met.
References		(EU 2004), (ICES 2016a), (UK 2020a; EC 2021)(EU 2013) https://mscportal.force.com/interpret/s/article/What-are-the-MSC-requirements-on-Harvest-Control-Rules-HCRs-including-generally-understood-and-available-multiple-questions-PI-1-2-2-1527262011680
OVERALL PERFORMANCE INDICATOR SCORE:		**80**
CONDITION NUMBER (if relevant):		**N/A**

3.4.4 LIN

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (LIN)

PI 1.2.2		**There are well defined and effective harvest control rules (HCRs) in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	N	N

	Justification	The HCR used for advice is based on the Precautionary Approach as applied by ICES and is intended to maintain a sustainable stock. The HCR is a simple decision rule to set TACs based on recent catches and the annual change in a biomass index. Details of the approach are given in (ICES 2012a). The advice is therefore responsive to the state of the stock as catch limits will reduce if the biomass index declines. An allowance is made for uncertainty to cap any increase in the advised catch at no more than 20%. A precautionary buffer may be applied in the event of the decrease in the index. The HCR is well defined but is not designed with a specific PRI as there is not sufficient data to define such a reference point. Applying the rule would be expected to avoid significant stock decline and therefore should manage the stock away from any PRI. The mean size F_{MSY} proxy suggests the current rule is able to keep the stock below F_{MSY} indicating that SG60 is met. However, recent TACs have been set above advised values (2017 total TACs = 23.977 tonnes, ICES catches ≤ 14.746 tonnes) so the HCR is not being fully implemented and SG80 is not met. **Rationale amended, score remains the same**: The HCR used for advice is based on the Precautionary Approach as applied by ICES and is intended to maintain a sustainable stock. The HCR is a simple decision rule to set TACs based on recent catches and the annual change in a biomass index. Details of the approach are given in (ICES 2012a). The advice is therefore responsive to the state of the stock as catch limits will reduce if the biomass index declines. An allowance is made for uncertainty to cap any increase in the advised catch at no more than 20%. A precautionary buffer may be applied in the event of the decrease in the index. The HCR is well defined but is not designed with a specific PRI as there is not sufficient data to define such a reference point. Applying the rule would be expected to avoid significant stock decline and therefore should manage the stock away from any PRI. The mean size F_{MSY} proxy suggests the current rule is able to keep the stock below F_{MSY} indicating that **SG60 is met**. However, the TAC for 2021 has been set not following ICES total catch advised, since an agreement between the EU-UK has been reached, and thus a well-defined HCR is not in place and **SIa only reaches SG60**.		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	The HCR takes uncertainty in the index into account by applying a cap to avoid large changes in the advised catch driven by noise in the data. In addition, a precautionary buffer is applied if the index declines. Hence SG80 is met. However, there is insufficient information to show that the HCR is robust to these uncertainties and SG100 is not met.		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.

	Met?	Y	Y	N
	Justification	TACs are the main tool used to moderate exploitation. However, many fleets have shown declining effort as a result of measures to limit exploitation on other target species such as cod, especially the Norwegian longline fishery. As a result it is not possible to make a clear link between catch controls and the status of the stock. It is clear however that the biomass index is increasing and the exploitation levels implied by the harvest strategy are likely being achieved. Hence the tools appear to be effective and SG80 is met. There is insufficient information to make a determination for SG100 as no full evaluation of the HCR for ling has been undertaken.		
References		(ICES 2015c), (ICES 2012a) (EU 2021; UK 2020a) (UK 2020a; EC 2021), (EU 2013), (EC 2021).		
OVERALL PERFORMANCE INDICATOR SCORE:				**75**
CONDITION NUMBER (if relevant):				**LIN – 1 (existing condition amended to include new text)**

3.4.5 MEG

Evaluation Table for PI 1.2.1 – Harvest strategy (MEG)

PI 1.2.1		**There is a robust and precautionary harvest strategy in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	Harvest strategy design			
	Guidepost	The harvest strategy is **expected** to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy **work together** towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is **designed** to achieve stock management objectives reflected in PI 1.1.1 SG80.
	Met?	Y	Y	~~Y~~ N
	Justification	In EU waters, where this stock is mainly distributed, megrim is managed under the CFP where MSY objectives are specified to be reached for all stocks, namely being exploited above MSY levels and specifically at F_{MSY} by 2015, and no later than 2020. A licensing scheme exists, a set of specific management measures can be adopted (including TACs, closed areas and gear specifications) and monitoring minimum requirements need to be		

		reached. There are specific TACs set in EU waters, effort limitations, minimum mesh sizes and minimum conservation sizes. Therefore, the assessment team concludes that the harvest strategy is responsive to the state of the stock and is designed to achieve management objectives reflected in PI 1.1.1 and SG100 is reached. **Score reduced**: In EU waters, where this stock is mainly distributed, megrim is managed under the CFP where MSY objectives are specified to be reached for all stocks, namely being exploited above MSY levels and specifically at F_{MSY} by 2015, and no later than 2020. A licensing scheme exists, a set of specific management measures can be adopted (including TACs, closed areas and gear specifications) and monitoring minimum requirements need to be reached. There are specific TACs set in EU waters, effort limitations, minimum mesh sizes and minimum conservation sizes. In addition, the existance of the TCA between the EU-UK with specifc MSY objectives and the new UK MoU with ICES ensures that **SG60 and SG80 are met** (EU 2020; UK 2020b). However, due to Brexit uncertainty, namely as to whether existing or additional management measures (such as rebuilding timeframes, management plans with MSY based HCRs, Landing Obligation) are to be put in place by the UK beyond 2020 reflects that there is no design (forward thinking) in the harvest strategy, **SG100 is not reached.**		
b	Harvest strategy evaluation			
	Guidepost	The harvest strategy is **likely** to work based on prior experience or plausible argument.	The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Y	Y	N
	Justification	The harvest strategy is likely to have decreased the harvest rate estimated and, although the stock has never been below limit reference points, the stock has increased since then. The stock is assessed to be above B_{MSY} in recent years and fishing mortality below F_{MSY}. Therefore evidence exists that the harvest strategy is achieving its objectives and SG80 has been reached. However, since the harvest strategy has not been fully tested SG100 is not met.		
C	Harvest strategy monitoring			
	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		

	Justification	There is a monitoring scheme in place for the stock and the fisheries. There are several sampling programmes and fishery independent surveys under the EU Data Collection Framework. There is a port sampling scheme in all countries involved, at-sea observers programmes to collect biological information on catches (length, sex, maturity and otoliths). Despite low sampling levels in some years, these data are used to inform the stock assessment on stock status, which allows for an evaluation of the harvest strategy and therefore SG60 is reached.		
D	Harvest strategy review			
	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y
	Justification	The CFP is reviewed periodically every 10 years and improvements are made if deemed necessary, which has always been the case. The EU Data Collection Framework is also periodically reviewed, as well as each Member States sampling programmes. Finally ICES stock assessments are also reviewed bi-annually and benchmarked regularly. Therefore all components of the harvest strategy, namely the management system and its ability to control fishing mortality and respond to stock status, the stock assessment and monitoring systems are periodically reviewed so SG100 is met.		
E	Shark finning			
	Guidepost	It is **likely** that shark finning is not taking place.	It is **highly likely** that shark finning is not taking place.	There is a **high degree of certainty** that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	The target species is not a shark – not relevant.		
F	**Review of alternative measures**			
	Guidepost	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a **regular** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a **biannual** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	Met?	Y	Y	N

	Justification	Discards of this stock by all fleets are estimated to be low at 6.1%, corresponding to 171 tonnes. Discards have been reduced considerably and retention length has increased significantly with the increase in mesh size in 2000 and 2009 in 4a and 6a, respectively. Some of the fisheries exploiting megrim are already under the Landing Obligation, while the UoA will also be fully under the discard ban by 2019. Until then, unwanted catch estimations show that discards are low and thus UoA-related mortality of unwanted catch is also minimal, while discards are regularly monitored. Furthermore, possible measures can be adopted through discard plans that are in place and reviewed after 3 years. According to the discard plans, the measures evaluated relate to their prohibitive (or not) cost among other options (*de minimis*) and also to minimise unwanted catch and as such SG80 is reached. However, there is no specific biannual procedure in place to review alternative measures if unwanted catches were to increase and thus SG100 is not attained.
References		(EU 2015), (ICES 2017b; ICES 2017h; ICES 2018a) (EU 2021; UK 2020a; EC 2020a) (EC 2021)
OVERALL PERFORMANCE INDICATOR SCORE:		**~~90~~ 85**
CONDITION NUMBER (if relevant):		**N/a**

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (MEG)

PI 1.2.2		**There are well defined and effective harvest control rules (HCRs) in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	Y	N
	Justification	Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks, and to specifically reach F_{MSY} by 2015, and not later than 2020. Furthermore, the TACs have increased following the ICES advice of the last four years and thus intrinsically follow the ICES MSY		

		approach for fishing opportunities. Thus well defined HCRs (ICES MSY approach) are in place because advice is followed in setting the TAC. As such SG60 and SG80 are met. However, the HCR does not likely keep the stock above a target level consistent with MSY and as such SG100 is not met. **Rationale revised, scoring maintained**: Advice provided by ICES is based on a standard well-defined HCR that reduces fishing mortality when the SSB falls below Bpa and Blim, and is expected to keep the stock around MSY (ICES 2021) (Figure 1). In the recent past (the years up to 2020) TACs have been set according to ICES advice and therefore as per GSA2.5 (where HCRs have been shown to be applied in the recent past) the HCRs in 2021 can be considered to be generally understood and in place SG60 is met. The TAC for 2021 has been set following ICES total catch advised, since an agreement between the EU-UK has been reached, and thus a well-defined HCR is in place in 2021. **Therefore SIa reaches SG60 and SG80**. The HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY and take into account the ecological role of the stock, therefore **SG100 is not met**.		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	ICES' MSY approach to provide advice on fishing opportunities has been tested and is robust to the main uncertainties. ICES provides stock projections and catch options assuming a number of uncertainties in the data but also on the stock dynamics (catch data, age readings, stock-recruit relationships, etc.). So considering ICES' MSY approach as a HCR, since the TAC have followed advice, there is evidence that the HCR are robust to main uncertainties. However, the HCR does not take account of the ecological role of the stock and for this reason SG100 is not met.		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	Y	N
	Justification	Harvest rate has been steadily decreasing and the stock has never been below MSY $B_{trigger}$ and has increased since 2005. The stock is above B_{MSY} and fishing mortality is below F_{MSY}. Therefore the available evidence regarding stock status shows that the tools in use are appropriate in achieving the exploitation levels required under the HCRs and SG80 has been reached. However, since the TACs have not limited catches, but instead it was		

		additional management measures associated to other stocks that have limited and decreased harvest rates, one cannot state that the evidence clearly shows that the HCR is effective and SG100 is not met.
References		(EU 2015) (ICES 2017b; ICES 2017h; ICES 2018a) (UK 2020a; EC 2021)(EU 2013)
OVERALL PERFORMANCE INDICATOR SCORE:		**80**
CONDITION NUMBER (if relevant):		**N/A**

3.4.6 PLE 21-23

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (21-23 PLE)

PI 1.2.2		**There are well defined and effective harvest control rules (HCRs) in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	~~N~~ Y	N
	Justification	Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks. The TACs in Kattegat and in the eastern Baltic Sea have followed ICES scientific advice and its MSY Advisory Rule since 2015 and 2016, respectively, and thus intrinsically follow the ICES MSY approach for fishing opportunities (2017 total TACs without top-up= 9.926 tonnes, ICES landings advice ≤ 9.927 tonnes). Although SG60 is met, the Baltic Sea multiannual plan considers plaice as only a bycatch species and thus only remedial measures are contemplated, and these do not constitute well-defined HCRs that ensure that the exploitation rate is reduced as the PRI is approached. ICES MSY approach is not explicitly detailed in the multiannual plan. Therefore SG80 is not met. **Rational amended, Scoring increased**: Although this stock continues to be considered a bycatch stock and ICES MSY approach is still not explicitly detailed in the Baltic multiannual plan (EU 2016b), the fact is that the TACs set have continued to follow ICES scientific advice based on the MSY approach which is specified to reduce exploitation as PRI is approached and manitain a stock at MSY (ICES 2021). Furthermore, in 2020 ICES provided its advice for 2021 fishing oportunities according to the MSY approach, and not according to the Precuationary Approach as requested by the EC in 2019 (ICES 2019). In response the 2021 TAC followed ICES MSY approach based advice (EC 2021). It is therefore the team opinion that a well-defined HCR is now in place and **SIa reaches both SG60 and SG80**. The HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY and take into account the ecological role of the stock, therefore **SG100 is not met**.		
	HCRs robustness to uncertainty			

b	**Guidepost**		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	ICES' MSY approach to provide advice on fishing opportunities has been tested and is robust to the main uncertainties. ICES provides stock projections and catch options assuming a number of uncertainties in the data but also on the stock dynamics (catch data, age readings, stock-recruit relationships, etc.). So considering the ICES advisory rule under the MSY approach as a HCR, since the TAC have followed advice in recent years, there is evidence that the HCR are robust to main uncertainties. However, the HCR does not take account of the ecological role of the stock and for this reason SG100 is not met.		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	~~Y~~ N	N
	Justification	The harvest rate has been steadily decreasing and the stock has never been below B_{lim} and has increased since 2009. The stock is above MSY $B_{trigger}$ and fishing mortality is below F_{MSY}. Therefore the available evidence regarding stock status shows that the tools in use are appropriate in achieving the exploitation levels required under the HCRs and SG80 has been reached. However, since the TACs have not limited catches, but instead it was additional management measures associated to other stocks that have likely limited and decreased harvest rates, one cannot state that the evidence clearly shows that the HCR is effective and SG100 is not met. **Raionale amended, Score reduced**. The harvest rate has been steadily decreasing and the stock has never been below B_{lim}, has increased since 2009 and is now above MSY $B_{trigger}$. Therefore there is some evidence that the tools used are effective in controlling exploitation and SG60 is met. However, fishing mortality is now estimated to still be above F_{MSY} while the TAC is set to total catches and discards (22%) are not being landed. Therefore in the team's view the HCRs tools (e.g. the TAC) in use are not appropriate and effective in achieving the exploitation levels required under the HCRs and SIc **SG80 is now not met**.		
References	(ICES 2017f; EU 2016b), (ICES_21-23_PLE 2020), (EC 2020a)			
OVERALL PERFORMANCE INDICATOR SCORE:				**75**

CONDITION NUMBER (if relevant):	**21-23 PLE - 1 (closed at this audit)** **21-23 PLE – 2 (raised at this audit)**

3.4.7 NS PLE

Evaluation Table for PI 1.2.1 – Harvest strategy (NS PLE)

PI 1.2.1		**There is a robust and precautionary harvest strategy in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	Harvest strategy design			
	Guidepost	The harvest strategy is **expected** to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy **work together** towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is **designed** to achieve stock management objectives reflected in PI 1.1.1 SG80.
	Met?	Y	Y	~~Y~~ N
	Justification	Plaice in subarea 4 and subdivision 20 is managed jointly by the EU and Norway. In the EU MSY objectives are specified to be reached for all stocks and monitoring minimum requirements need to be reached. In both Norway and the EU a licensing scheme exists, and a set of specific management measures can be adopted (including TACs, effort limitations, closed areas and gear specifications). Therefore, the assessment team concludes that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 and SG 80 is reached. There has also been a management plan designed to achieve stock management objectives in place (with HCRs agreed by both EU and Norway) and a new multiannual plan is now agreed in the EU. Finally, the TAC share between the North Sea and Skagerrak has also been agreed between Norway and EU in 2016. Therefore SG100 is also met. **Rationale amended, Scoring reduced**. Plaice in subarea 4 and subdivision 20 is now managed jointly by the EU, UK and Norway (EU 2021). In the EU MSY objectives are specified to be reached for all stocks and monitoring minimum requirements need to be reached (e.g. the CFP). In the UK, Norway and the EU a licensing scheme exists, and a set of specific management measures can be adopted (including TACs, effort limitations, closed areas and gear specifications). In addition, the TCA between the EU-UK has specific MSY objectives and the UK has a new MoU with ICES (EU 2020; UK 2020b). Therefore, the assessment team concludes that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together		

		towards achieving stock management objectives reflected in PI 1.1.1 and SG60 and SG 80 are reached. However, due to Brexit uncertainty, namely as to whether existing or additional management measures (such as rebuilding timeframes, management plans with MSY based HCRs, Landing Obligation) are to be put in place by the UK beyond 2020 the harvest strategy is not considered to have been designed and **SG100 is no longer met**.		
b	Harvest strategy evaluation			
	Guidepost	The harvest strategy is **likely** to work based on prior experience or plausible argument.	The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Y	Y	N
	Justification	The harvest strategy is likely to have played a key role in decreasing F to its current level below F_{MSY}. This in turn has lead to an increase in biomass since 2004 – biomass is estimated to have been above MSY $B_{trigger}$ since 2011. Therefore evidence exists that the harvest strategy is achieving its objectives and SG80 has been reached. The harvest strategy, namely the long-term management plan, has been evaluated in the past to be in accordance with the precautionary approach and has and will reach desired objectives. However, since the old plan has not been used to set the TAC and while the agreed NS MAP has not been tested, SG100 is not met.		
c	Harvest strategy monitoring			
	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	There is a monitoring scheme in place for the stock and the fisheries. There are several sampling programmes and two fishery independent surveys under the EU Data Collection Framework. There is a port sampling scheme in all countries involved, at-sea observers programmes to collect biological information on catches (length, sex, maturity and otoliths) for the EU. All these data collected are used to inform the stock assessment on stock status, which allows for an evaluation of the harvest strategy and therefore SG60 is reached.		
d	Harvest strategy review			
	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.

	Met?			Y
	Justification	The EU and Norway in their annual negotiation review the harvest strategy and improve it as deemed necessary. The CFP is also reviewed periodically every 10 years and improvements are made if deemed necessary, which has always been the case. The EU Data Collection Framework is also periodically reviewed, as well as each Member State's sampling programmes. Finally ICES stock assessments are also reviewed bi-annually and benchmarked regularly. Therefore all components of the harvest strategy, namely the management system and its ability to control fishing mortality and respond to stock status, the stock assessment and monitoring systems are periodically reviewed so SG100 is met.		
e	Shark finning			
	Guidepost	It is **likely** that shark finning is not taking place.	It is **highly likely** that shark finning is not taking place.	There is a **high degree of certainty** that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	The target species is not a shark – not relevant.		
f	**Review of alternative measures**			
	Guidepost	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a **regular** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a **biannual** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	Met?	Y	Y	N
	Justification	Discard rates of plaice in subarea 4 and subdivision 20 are high, historical average discard rates are 45%, decreasing to around 30% since 2005 while in 2016 discards were in the order of 33% corresponding to 44,205 tonnes. Nevertheless, several measures already taken by the UoAs have tried to reduce the capture of plaice and/or minimize mortality (for example by changing gear deployment and fishing grounds to some extent). This is incentivized by the landing obligation coming into force for plaice from 1 January 2016, where plaice can significantly limit fisheries for higher commercial value species such as sole. Survival studies have also been carried out in order to justify a survival exemption under the landings obligation, but have shown significant variability in plaice survival. Studies have shown significant variability in plaice survival between gears, trammel nets with 70% survival, otter trawl between 40-60% and beam trawl between 5-15%. Many of these studies in selectivity and survival continue. All these potential measures are likely to be reviewed regularly under the annual requirements to report on the implementation of the Landing		

		Obligation. Furthermore, possible measures can be adopted through discard plans that are in place and reviewed after 3 years. In the specific case of plaice in the North Sea a survival exemption has been granted to all gears, to be reviewed annually and associated to a bycatch reduction plan. SG 80 is therefore reached. However, there is no specific biannual procedure in place and thus SG100 is not attained.
References		(EU 2013), (EU 2007), (Catchpole et al. 2015), (Morfin et al. 2017), (Uhlmann et al. 2016), (Zimmerman 2015), (Revill et al. 2013)

OVERALL PERFORMANCE INDICATOR SCORE:	**~~90~~ 85**
CONDITION NUMBER (if relevant):	**N/a**

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (NS PLE)

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	~~N~~ Y	N
	Justification	Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks and to specifically reach F_{MSY} by 2015, and not later than 2020. Thus SG60 is met. Considering the HCR detailed in the old management plan and the HCR included in the agreed NS MAP one can conclude that well defined HCRs exist. Furthermore, Norway and the EU have agreed on a TAC share between the North Sea and Skagerrak in 2016. However, except for the TAC share, these HCRs are not in place. Not only is the old management plan not applicable anymore to the stock boundaries, the 2018 TAC has not been set in accordance with ICES advice in 2017 and the NS MAP HCR, to be applicable to the 2019 TAC, has not been agreed by Norway. In the absence of information that the 2019 TAC will be set in accordance with the NS MAP HCR, the assessment team concludes that SG80 is not met. **Rationale amended, Scoring Increased**: Advice provided by ICES is based on standard well defined HCR (ICES MSY approach) that reduces fishing mortality when the SSB falls below B_{pa} and B_{lim}, and is expected to keep the stock around MSY (ICES 2021). In 2019 and 2020 the TACs have been set according to ICES advice and therefore as per GSA2.5: HCRs in 2021 can be considered to be generally understood and in place SG60 is met. The TAC for 2021 (EU 2021) follows ICES total catch advice based on the ICES MSY approach and thus a well-defined HCR is now in place and **SG80 is met**, but is not expected to keep the stock fluctuating at or above a target level consistent with MSY or does it take into account the stocks ecological role, and therefore SIa **SG100 is not reached**.		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the

				stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	The HCR specified in the old management plan was robust to main uncertainties and was evaluated by ICES twice to be in accordance with the precautionary approach. In addition the ICES MSY approach, which is the basis for the NS MAP HCR, has been also tested at length in many stocks and has also been shown to be robust to uncertainties (catch data, age readings, stock-recruit relationships, etc.) and thus SG80 is met. However, the ICES MSY approach does not necessarily take the ecological role of the stock into account and thus SG100 is not met.		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	Y	N
	Justification	Historically stock biomass has increased to be above MSY level and F has steadily decreased to be at F_{MSY}. So there is clear evidence that indicates that the management tools in use are appropriate and effective and SG80 is reached. While the introduction of the LO, and adjustments to the TACs with the LO not being complied with, may somewhat compromise the effectiveness of the HCR, these are yet to be assessed considering the high stock biomass. Furthermore, the previous HCR and the tools used were effective for the North Sea. It is yet to be determined if they are effective to the new stock area, i.e. also to the Skagerrak. For this reason SG100 is not met.		
References	(EU 2007), (EU 2013), (ICES 2017d)			
OVERALL PERFORMANCE INDICATOR SCORE:				**~~75~~ 80**
CONDITION NUMBER (if relevant):				**NS PLE – 1 (closed)**

3.4.8 EC PLE

Evaluation Table for PI 1.2.1 – Harvest strategy (EC PLE)

PI 1.2.1	**There is a robust and precautionary harvest strategy in place**

Scoring Issue		SG 60	SG 80	SG 100
a	Harvest strategy design			
	Guidepost	The harvest strategy is **expected** to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy **work together** towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is **designed** to achieve stock management objectives reflected in PI 1.1.1 SG80.
	Met?	Y	Y	N
	Justification	Plaice in Division 7d is managed under the CFP where MSY objectives are specified to be reached for all stocks, a licensing scheme exists, a set of specific management measures can be adopted (including TACs, effort limitations, closed areas and gear specifications) and monitoring minimum requirements need to be reached. Therefore, the assessment team concludes that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 and SG80 is reached. However, there is no strategy designed to achieve stock management objectives and thus SG100 is not met. **Rationale amended but no change in scoring**: Plaice in Division 7d is now managed between EU and UK, where the EU CFP has MSY objectives are specified to be reached for all stocks, a licensing scheme exists, a set of specific management measures can be adopted (including TACs, effort limitations, closed areas and gear specifications) and monitoring minimum requirements need to be reached. In addition, the TCA between the EU-UK has specific MSY objectives and the UK has a new MoU with ICES (EU 2020; UK 2020a; UK 2020b). Therefore, the assessment team concludes that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 and **SG60 and SG 80 are met**. However, due to Brexit uncertainty, namely as to whether existing or additional management measures (such as rebuilding timeframes, management plans with MSY based HCRs, Landing Obligation) are to be put in place by the UK beyond 2020, **SG100 is not reached**.		
b	Harvest strategy evaluation			
	Guidepost	The harvest strategy is **likely** to work based on prior experience or plausible argument.	The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Y	Y	N

	Justification	The harvest strategy is likely to have decreased F to below F_{MSY} which in turn lead to an increase in biomass since 1996 and which has been above MSY $B_{trigger}$ since 2012. Therefore evidence exists that the harvest strategy is achieving its objectives and SG80 has been reached. The harvest strategy however has not been fully tested and thus SG100 is not met.		
c	Harvest strategy monitoring			
	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	There is a monitoring scheme in place for the stock and the fisheries. There are several sampling programmes and two fishery independent surveys under the EU Data Collection Framework. There is a port sampling scheme in all countries involved, at-sea observers programmes to collect biological information on catches (length, sex, maturity and otoliths). All these data collected are used to inform the stock assessment on stock status, which allows for an evaluation of the harvest strategy and therefore SG60 is reached.		
d	Harvest strategy review			
	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y
	Justification	The CFP is reviewed periodically every 10 years and improvements are made if deemed necessary, which has always been the case. The EU Data Collection Framework is also periodically reviewed, as well as each Member States' sampling programmes. Finally ICES stock assessments are also reviewed bi-annually and benchmarked regularly. Therefore all components of the harvest strategy, namely the management system and its ability to control fishing mortality and respond to stock status, the stock assessment and monitoring systems are periodically reviewed so SG 100 is met.		
e	Shark finning			
	Guidepost	It is **likely** that shark finning is not taking place.	It is **highly likely** that shark finning is not taking place.	There is a **high degree of certainty** that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant

	Justification	The target species is not a shark – not relevant.		
f	**Review of alternative measures**			
	Guidepost	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a **regular** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a **biannual** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	Met?	Y	~~N~~ Y	N
	Justification	Discard rates of plaice in Division 7d are high and in 2016 discards were in the order of 46%, corresponding to 3,090 tonnes. There has been a review of possible measures to reduce unwanted catch of plaice in the sole fishery, particularly considering that the landing obligation will come at the latest into force for plaice in 7d from 1 January 2019, where plaice can significantly limit fisheries for higher commercial value species such as sole. Survival studies have also been carried out in other areas in order to justify a survival exemption under the landings obligation, but have shown significant variability in plaice survival. However, this review has yet to be done regularly for plaice in Division 7d and therefore SG80 is not attained. **Score increase**: Plaice in Divison 7d is now under the EU Landing obligation with specific survival exemptions specified in the North-Western demersal fisheries discard plan (Regulation (EU) 2018/2034) for 2019-2021 (EU 2018a). This is re-evaluated every three years and thus SG60 and SG80 are now met, but there is no biannual review of alternative measures and SG100 is not met.		
References	(Zimmerman 2015) (ICES 2017e; EU 2013; Catchpole et al. 2015; Morfin et al. 2017) (Uhlmann et al. 2016; Revill et al. 2013) (EU 2018a), (EU 2020; UK 2020a; UK 2020b)			
OVERALL PERFORMANCE INDICATOR SCORE:				**~~75~~ 80**
CONDITION NUMBER (if relevant):				**EC PLE – 1 closed**

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (EC PLE)

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	Y	N
	Justification	Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks, and to specifically reach F_{MSY} by 2015, and not later than 2020. Thus SG60 is met. Considering that the TAC has been set in accordance with ICES advice, and its MSY advisory rule, the assessment team concludes that a well-defined HCR is indeed in place and SG80 is met. However, the ICES MSY approach does not necessarily take the ecological role of the stock into account and thus SG100 is not met. **Score maintained but rationale amended**: Advice provided by ICES is based on a standard well-defined HCR that reduces fishing mortality when the SSB falls below Bpa and Blim, and is expected to keep the stock around MSY (ICES 2021) (Figure 1). In the recent past (the years up to 2020) TACs have been set according to ICES advice and therefore as per GSA2.5: HCRs in 2021 can be considered to be generally understood and in place SG60 is met. However, the TAC for 2021 has been set following ICES total catch advised, since an agreement between the EU-UK has been reached, and thus a well-defined HCR is in place in 2021. Therefore SIa reaches SG60 and SG80. For SG100 the HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY.		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N

	Justification	ICES MSY approach has been tested at length in many stocks and has also been shown to be robust to uncertainties (catch data, age readings, stock-recruit relationships, etc.) and thus SG80 is met. However, the HCR does not take a wide range of uncertainties, including the ecological role of the stock and for this reason SG100 is not met.		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	Y	N
	Justification	Historically stock biomass has increased to be at MSY level and F has steadily decreased to be below F_{MSY}. So there is clear evidence that indicates that the management tools in use are effective and both SG60 and SG80 are reached. However, while the TAC has been effective in controlling mortality in place in 7d, it is a joint TAC with plaice stock in 7e. If the relative abundance of these two stocks change for plaice in 7d to be the less abundant, this will compromise the effectiveness of the HCR and thus SG100 is not met.		
References	(ICES 2017c; EU 2013), (ICES_EC_PLE 2020; EC 2021)			
OVERALL PERFORMANCE INDICATOR SCORE:				**80**
CONDITION NUMBER (if relevant):				**N/A**

3.4.9 POK

Evaluation Table for PI 1.1.1 – Stock status (POK)

PI 1.1.1		**The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing**		
Scoring Issue		SG 60	SG 80	SG 100
a	Stock status relative to recruitment impairment			
	Guidepost	It is **likely** that the stock is above the point where recruitment would be impaired (PRI).	It is **highly likely** that the stock is above the PRI.	There is a **high degree of certainty** that the stock is above the PRI.
	Met?	Y	Y	Y
	Justification	The current SSB (2017) is 257,329 tonnes which is well above the B_{pa} value of 150,000 tonnes. It has been above this value since 1996. The lower bound of the 2017 SSB estimate is above B_{lim}. The stock recruitment plot shows no clear relationship but the largest year classes have occurred at SSB values in the region of 250,000 tonnes which is smaller than the current SSB. The stock is 2.6 times the B_{lim} value that is considered a proxy for the PRI, hence SG100 is met. **Rationale amended, but no change in scoring**: For saithe in subareas 4 and 6, the lower 2.5% confidence limit for the 2020 estimate of the SSB is 121,412 t which is above the Blim of 107,297 t (ICES_POK 2020). SSB has been above Blim since 1991 and it is presently (2020) estimated to be above Blim, Bpa and MSYBtrigger. If the stock is above Bpa the stock is by definition above Blim with more than 5% probability. Thus, the assessment team considers that there is a high degree of certainty that the stock is above the PRI (i.e. Blim) and therefore **SG60, SG80 and SG 100 are met**.		
b	Stock status in relation to achievement of MSY			
	Guidepost		The stock is at or fluctuating around a level consistent with MSY.	There is a **high degree of certainty** that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.
	Met?		~~Y~~ N	N
	Justification	There is no specific target SSB but the EU-Norway management plan sets a floor of 200,000 tonnes based on the old Bpa. Since 1996 the stock has been above this value for 14 out of 22 years. It has been above the new MSY Btrigger of 150,000 tonnes continuously since 1996 and is currently		

		increasing. F has been below the estimated FMSY since 2013, hence SG80 is met. Since F has on been below FMSY for 4 years and the generation time is 10 years there is not a high degree of certainty and SG100 is not met. Rationale amended, score is reduced: Stock biomass has been variable above Bpa/MSYBtrigger (149,098 tonnes) since 1996, but has been reducing since 2017 reaching 166,726 tonnes in 2020. Thus stock biomass is almost at Bpa/MSYBtrigger. Furthermore, fishing mortality has been above FMSY (0.363) since 1971, and only at FMSY between 2014-2016, increasing to be 0.46 in 2019. Therefore the stock is not at a level consistent with MSY and **SG80 is not reached**.
References	(ICES 2017j), (ICES_POK 2020).	

Stock Status relative to Reference Points			
	Type of reference point	**Value of reference point**	**Current stock status relative to reference point**
Reference point used in scoring stock relative to PRI (SIa)	MSY $B_{TRIGGER}$ (=B_{PA}) F_{MSY}	149 098 t 0.363	166276/ B_{PA} = 1.11 0.46/ F_{MSY} = 1.26
Reference point used in scoring stock relative to MSY (SIb)	B_{LIM} F_{LIM}	107,297 t 0.620	166,276/ $B_{LIM=}$ 1.55 0.46/ F_{LIM} = 0.74

OVERALL PERFORMANCE INDICATOR SCORE:	**~~90~~ 70**
CONDITION NUMBER (if relevant):	**PI 1.1.2 scored**

Evaluation Table for PI 1.1.2 – Stock rebuilding (POK) – not scored at the PCR stage therefore all rationale are new at this audit.

PI 1.1.2		**Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Rebuilding timeframes**			
	Guidepost	A rebuilding timeframe is specified for the stock that is **the shorter of 20 years or 2 times its generation time**. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest practicable rebuilding timeframe is specified which does not exceed **one generation time** for the stock.
	Met?	Y		Y
	Justification	The stock has been fluctuating above MSYBtrigger for several years, and biomass is predicted to increase in 2022. Considering saithe generation time of 10 years (1/0.2 + 5 years), stock biomass is predicted to increase in the coming years, likely reaching MSY levels in 10 years if fishing mortality is maintained below FMSY and considering present recruitment levels, and SG 60 and 100 are both met.		
b	Rebuilding evaluation			
	Guidepost	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is evidence that the rebuilding strategies are rebuilding stocks, **or it is likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.	There is **strong** evidence that the rebuilding strategies are rebuilding stocks, **or it is highly likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.
	Met?	Y	Y	N
	Justification	There is monitoring in place and the stock is predicted to increase and thus SIb SG60 and SG80 are both met but considering the uncertainties in the stock assessment and its strong retrospective bias, is not highly likely that the rebuilding strategy will be able to rebuild the stock within the specified timeframe and SG100 is not met.		
References		(ICES_POK 2020)		

OVERALL PERFORMANCE INDICATOR SCORE:	**90**
CONDITION NUMBER (if relevant):	**N/a**

Evaluation Table for PI 1.2.1 – Harvest strategy (POK)

PI 1.2.1		**There is a robust and precautionary harvest strategy in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	Harvest strategy design			
	Guidepost	The harvest strategy is **expected** to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy **work together** towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is **designed** to achieve stock management objectives reflected in PI 1.1.1 SG80.
	Met?	Y	Y	~~Y~~ N
	Justification	The strategy is to harvest the stock in a manner consistent with MSY. This is achieved through a variety of management tools that include TACs, minimum mesh size regulations, restrictions on discarding and measures to limit fleet capacity through licensing systems. When the biomass falls below SSB = 200,000 tonnes F is reduced from its target value of 0.3 and hence is responsive to the state of the stock. ICES has evaluated the strategy to be consistent with the Precautionary Approach. An MSY strategy has been evaluated which calculated an F_{MSY} value of 0.36 which is above the management plan value and implies the current plan is consistent with MSY and that the biomass should fluctuate above B_{MSY}. Hence SG100 is met. ICES has, however, advised that the Plan be re-evaluated in the light of new assessments and reference points. **Rationale Amended, Scoring reduced**: Saithe in the North Sea, Rockall and West of Scotland, Skagerrak and Kattegat is now managed trilaterally by the EU, UK and Norway (EU 2021).The strategy is to harvest the stock in a manner consistent with MSY based on the EU CFP, the TCA between the EU-UK and the EU-UK-Norway negotiations. This is achieved through a variety of management tools that include TACs, minimum mesh size regulations, restrictions on discarding and measures to limit fleet capacity through licensing systems. When the biomass falls below SSB = 200,000 tonnes F is reduced from its target value of 0.3 and hence is responsive to the state of the stock. In addition, the new **UK MoU with ICES also ensures that SG60 and SG80 are reached**. However, due to Brexit uncertainty, namely as to whether existing or additional management measures (such as rebuilding timeframes, management plans with MSY based HCRs, Landing Obligation) are to be put in place by the UK beyond 2020 the harvest startegy is not considered to be 'designed', **SG100 is not reached**.		

b	Harvest strategy evaluation			
	Guidepost	The harvest strategy is **likely** to work based on prior experience or plausible argument.	The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Y	~~Y~~ N	N
	Justification	An MSY strategy has been evaluated which calculated an F_{MSY} value of 0.36 which is above the management plan value of 0.3 and implies the current plan is consistent with MSY and that the biomass should fluctuate above B_{MSY}. Current SSB is above the B_{pa}/MSY $B_{trigger}$ value of 150,000 tonnes and has been increasing in recent years. Current F is below both the management plan value and F_{MSY}. Hence SG100 is met. **Rationale amended, Scoring reduced**: Prior to 2019, stock assessments indicated that the biomass was fluctuating around a value consistent with MSY and that F was below F_{MSY} consistent with the argument that the harvest startegy was working and SG60 is met. However, revised assessments (2019 onwards) now suggest that SSB is not at MSY levels while F is increasing in recent years above F_{MSY} (ICES_POK 2020). Although stock biomass increased and fishing mortality have decreased in the past they are not presently at MSY levels, and thus the harvest strategy is not reaching its objectives and **SG80 is not reached**.		
C	Harvest strategy monitoring			
	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	Annual stock assessments are undertaken by ICES that provide estimates of current F and SSB which are used to determine stock status (e.g. (ICES 2017n).		
d	Harvest strategy review			
	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y

	Justification	The harvest strategy was reviewed in 2012 following a joint to ICES request from EU-Norway. It was decided to keep the existing plan. ICES has recommended that the strategy be reviewed again within 4 years. The MSY strategy was evaluated in 2016.		
E	Shark finning			
	Guidepost	It is **likely** that shark finning is not taking place.	It is **highly likely** that shark finning is not taking place.	There is a **high degree of certainty** that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	The target species is not a stock – not relevant.		
F	**Review of alternative measures**			
	Guidepost	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a **regular** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a **biannual** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	Met?	Y	Y	N
	Justification	Discards are the main source of unwanted catch and arise both from capture of undersized fish and quota limits. Discards are typically a low percentage of the total catch. Saithe discards are typically found in mixed demersal fisheries including the UoA. Minimum mesh sizes have progressively increased in these fisheries (TR1, for example) to 120 mm. Discard estimates were lowest for the period when the saithe trawler fleet changed its exploitation pattern (2009–2011). The recently introduced EU Landing Obligation which requires all fish catch to be retained and landed, applies to some fleets in the fishery. The effectiveness and practicality of these measures have been and are to be reviewed regularly under the annual requirements to report on the implementation of the Landings Obligation, while discards continue to be monitored and thus SG80 is met. However as there is no systematic biannual review, SG100 is not met.		
References	(ICES 2012b), (ICES 2016b), (ICES 2017j), (ICES 2017i)			
OVERALL PERFORMANCE INDICATOR SCORE:				**~~95~~ 75**
CONDITION NUMBER (if relevant):				**POK - 1**

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (POK)

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	Y	Y
	Justification	The EU-Norway agreement sets a maximum F=0.3 and minimum SSB=200,000 tonnes. If the biomass falls below 200,000 tonnes F is reduced. ICES has developed a generic HCR for MSY which reduces F linearly when F falls below B_{pa} and has evaluated this for saithe. The EU-Norway plan has more conservative limit reference points and is therefore consistent with the ICES generic HCR so SG80 is met. Saithe occupy a high trophic level and are not a critical food source for other predators which suggests MSY is an appropriate level. Recent assessments show that the stock is fluctuating consistently with MSY and SG100 is met.		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	The HCR is based on a generic rule that reduces F in response to the SSB falling below B_{pa}. B_{pa} is an estimate of the B_{loss} taking into account measurement error. F_{MSY} takes into account recruitment variability, low productivity and the probability of falling below B_{pa} when accounting for assessment and		

		advice error. Hence a wide range of sources of uncertainty are considered and SG80 is met. However, the ecological role of the stock is not explicitly considered so SG100 is not met.

c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	~~Y~~ N	N
	Justification	The principal tool for implementing the HCR is a limit on total catches. In more recent years TACs have been set in line with advice and landings have been close to these limits (see table below). SSB has increased since the lowest values in the mid 1990s and has typically been above B_{pa}=150,000 tonnes. Fishing mortality tended to be higher than the F=0.3 target value until 2014 but is now at 0.28 following a steady decline from 0.44 in 2009, hence SG100 is met.		

Year	Agreed TAC	Official landings	ICES landings
2005	15000	8700	6456
2006	13000	9420	9474
2007	13000	6690	6602
2008	14000	6010	6712
2009	13000	6170	6294
2010	11000	6220	6263
2011	10000	7310	6917
2012	8000	7560	7549
2013	9464	8470	8653
2014	8045	6842	7020
2015	6848	7577	7534
2016	6816	5849	7458

Rationale amended, Scoring reduced:

		Stock biomass has increased and fishing mortality has decreased in the past, therefore there is some evidence that the HCR was effective in controlling exploitation previously, therefore **SG60 can be met**. However, fishing mortality has been above F_{MSY} since 2016-2017 so there is no clear evidence that the tools in use are presently effective in achieving the exploitation levels required under the HCRs and thus **SG80 is not met**.
References		(ICES_POK 2020) (EU 2020) (EU 2021)
OVERALL PERFORMANCE INDICATOR SCORE:		**~~95~~ 75**
CONDITION NUMBER (if relevant):		**POK - 2**

3.4.10 3a SOL

Evaluation Table for PI 1.1.2 – Stock rebuilding (3A SOL)

PI 1.1.2		**Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe**		
Scoring Issue		SG 60	SG 80	SG 100
a	**Rebuilding timeframes**			
	Guidepost	A rebuilding timeframe is specified for the stock that is **the shorter of 20 years or 2 times its generation time**. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest practicable rebuilding timeframe is specified which does not exceed **one generation time** for the stock.
	Met?	Y		~~N~~ Y
	Justification	There are indications that the stock is starting to rebuild with biomass projected to increase in 2018 (2,693 tonnes) to above MSY $B_{trigger}$ while F has decreased since 2005, being below F_{MSY} since 2008. However, F is increasing since 2015 and in 2017 is above F_{MSY}. Biomass is predicted to continue to increase to above MSY $B_{trigger}$ in 2020 with a TAC set in line with NS MAP F ranges. Considering that sole reproduces on average at 2 years of age, and considering a natural mortality of around 0.1 yr^{-1} an approximated generation time of 12 years is estimated. Therefore stock biomass is likely to continue to increase in the upcoming years, likely reaching MSY levels in 20 years and thus SG60 is reached. However, since the NS MAP is new and F has increased in the most recent years, SG100 is not met. **Rationale amended, scoring increased:**		

		There are indications that the stock is starting to rebuild with biomass projected to increase in 2018 (2,693 tonnes) to above MSY Btrigger while F has decreased since 2005, being below F_{MSY} since 2008. However, F is increasing since 2015 and in 2017 is above FMSY. Biomass is predicted to continue to increase to above MSY Btrigger in 2020 with a TAC set in line with NS MAP F ranges. Considering that sole reproduces on average at 2 years of age and considering a natural mortality of around 0.1 yr^{-1} an approximated generation time of 12 years is estimated. Therefore stock biomass is likely to continue to increase in the upcoming years, likely reaching MSY levels in 20 years and thus **SG60 is reached**. Stock biomass is likely to continue to increase in the upcoming years, likely reaching MSY levels in 12 years (one generation time) and **SIa SG100 is also met**.		
b	Rebuilding evaluation			
	Guidepost	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is evidence that the rebuilding strategies are rebuilding stocks, **or it is likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.	There is **strong** evidence that the rebuilding strategies are rebuilding stocks, **or it is highly likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.
	Met?	Y	Y	N
	Justification	The stock has been variable within the range between B_{lim} and MSY $B_{trigger}$ since 2008 but is increasing since 2015 and is predicted to be above MSY $B_{trigger}$ in 2019. Fishing mortality F has decreased since 2005, being below F_{MSY} since 2008. However, F is increasing since 2015 and in 2017 is above F_{MSY}. Nevertheless, a new NS MAP is in place to set the TAC which will allow the stock to continue grow, while recruitment seems stable. Therefore it is likely that the rebuilding strategies will be able to rebuild the stock, and so SG80 is reached. However, since F has increased in recent years and is above F_{MSY} in 2017 it is not highly likely that the rebuilding strategy be able to rebuild the stock within the specified timeframe and thusSG100 is not reached.		
References	(ICES 2017g; ICES 2017k) , (ICES_20_24_SOL 2019).			
OVERALL PERFORMANCE INDICATOR SCORE:				**~~80~~ 90**
CONDITION NUMBER (if relevant):				**N/a**

3.4.11 NS SOL

Evaluation Table for PI 1.1.1 – Stock status (NS SOL)

PI 1.1.1		**The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing**		
Scoring Issue		SG 60	SG 80	SG 100
a	Stock status relative to recruitment impairment			
	Guidepost	It is **likely** that the stock is above the point where recruitment would be impaired (PRI).	It is **highly likely** that the stock is above the PRI.	There is a **high degree of certainty** that the stock is above the PRI.
	Met?	Y	~~Y~~ N	~~Y~~ N
	Justification	Catches have peaked twice in 1967 and 1990, at around 35,000 tonnes, but decreased to a level at around 15,000 tonnes in the last decade. Biomass shows two historical peaks, one in the beginning of the time series (1961 and 1966-1967) and another in 1990. Since the most recent peak, biomass has been variable between B_{lim} and MSY $B_{trigger}$, but since 2013 biomass is increasing and above MSY $B_{trigger}$ and around 2.2 of B_{lim}. The 95% confidence intervals around biomass estimates also do not include MSY $B_{trigger}$ in the most recent years. Therefore there is a high degree of certainty that the stock is above PRI and SG100 is met. **Rationale amended, scoring reduced**: The stock assessment was benchmarked in 2020 and a downward revision of recent biomass estimates and an upward revision of fishing mortality was estimated, providing a significantly different stock perception from the one provided previously (ICES_NS_SOL 2020). Stock biomass is now estimated to be fluctuating around Blim (30,828 tonnes) since 2003, and below MSYBtrigger (42,838 tonnes) since 1999. However, stock biomass is estimated to be 34,569 tonnes in 2020 and 88,012 tonnes in 2021 because recruitment in 2019 is estimated to be the highest since the start of the series in 1957. The stock is therefore likely to be above PRI (blim), considering that stock biomass in 2021 is estimated to be double Bpa/MSYBtrigger, but not highly likely and thus **only SG60 is met**.		
b	Stock status in relation to achievement of MSY			
	Guidepost		The stock is at or fluctuating around a level consistent with MSY.	There is a **high degree of certainty** that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.
	Met?		N	N

	Justification	Stock biomass in 2016 is estimated to be 1.6 times MSY $B_{trigger}$. Stock biomass has also been increasing and above MSY $B_{trigger}$ since 2013, while the 95% confidence intervals around biomass estimates do not include MSY $B_{trigger}$. On the other hand, the MSY $B_{trigger}$ estimate is equal to B_{pa} and F_{pa} is more than double F_{MSY}. Furthermore, although F has been reducing since its peak in 1998 and is in 2016 close to F_{MSY} (0.2), it has never been below F_{MSY}. For these reasons, the assessment team concludes that SG80 is not met, and the stock is not at or fluctuating around a level consistent with MSY.
References	(ICES_NS_SOL 2020)	

Stock Status relative to Reference Points

	Type of reference point	**Value of reference point**	**Current stock status relative to reference point**
Reference point used in scoring stock relative to PRI (SIa)	B_{lim} F_{lim}	26,300 tonnes 0.62	Around 2.24 SSB_{2017} = 58,895 tonnes
Reference point used in scoring stock relative to MSY (SIb)	$MSYB_{trigger} = B_{pa}$ F_{MSY} F_{pa}	42,838 tonnes 0.207 0.302	Around 1.30 F_{2019} = 0.27

OVERALL PERFORMANCE INDICATOR SCORE:	**~~70~~ 60**
CONDITION NUMBER (if relevant):	**N/a – 1.1.2 triggered**

Evaluation Table for PI 1.1.2 – Stock rebuilding

PI 1.1.2		Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe		
Scoring Issue		SG 60	SG 80	SG 100
a	Rebuilding timeframes			
	Guidepost	A rebuilding timeframe is specified for the stock that is **the shorter of 20 years or 2 times its generation time**. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest practicable rebuilding timeframe is specified which does not exceed **one generation time** for the stock.
	Met?	Y		~~N~~ Y
	Justification	There are indications that the stock is rebuilding with stock biomass increasing and above MSY $B_{trigger}$ since 2013 and in 2016 to be estimated at 1.6 times MSY $B_{trigger}$. Biomass is nevertheless predicted to decrease slightly in 2020 but only by 1.13% and is still above MSY $B_{trigger}$ with a TAC set in line with NS MAP F_{MSY}. F has decreased since its peak in 1998 and is in 2016 close to F_{MSY}. Considering that sole reproduces on average at 2 years of age, and considering a natural mortality of around 0.1 yr^{-1} an approximated generation time of 12 years is estimated. Therefore stock biomass is likely to continue to increase in the coming years, likely reaching MSY levels in 20 years and thus SG60 is reached. However, since the NS MAP is new and F has yet to be brought below F_{MSY}, SG100 is not met. **Rationale amended, scoring increased:** Sole in the North Sea is now managed bilaterally by the EU and UK. The EU CFP has an objective of reaching MSY levels for all stocks by 2020. The UK Fisheries Act has no explicit rebuilding timeframe (UK 2020a). However, due to the current (2019) highest recorded recruitment since 1957, stock projections with current F2021 (0.26), to account for the HCR implementation error, places the stock almost double Bpa/MSYBtrigger in 2022. Therefore, stock biomass is highly likely to reach MSY levels in less than 12 years (one generation time) and thus both **SG60 and SG100 are met**.		
	Rebuilding evaluation			

b	**Guidepost**	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is evidence that the rebuilding strategies are rebuilding stocks, **or it is likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.	There is **strong** evidence that the rebuilding strategies are rebuilding stocks, **or it is highly likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.
	Met?	Y	Y	N
	Justification	Stock biomass is increasing and above MSY $B_{trigger}$ since 2013 and in 2016 is estimated at 1.6 times MSY $B_{trigger}$. F has decreased since its peak in 1998 and is in 2016 close to F_{MSY}. Although F hs never been below F_{MSY}, the fact that it has steadily decreased since 1997 to be almost at F_{MSY} and that biomass is increasing since 2007 is evidence that the rebuilding strategies are rebuilding the stock. A new NS MAP is in place to set the TAC which will allow the stock to continue to grow, even with average recruitment. Therefore it is likely that the rebuilding strategies will be able to rebuild the stock, and so SG80 is reached. However, since F has yet to be below F_{MSY} it is not highly likely that the rebuilding strategy will be able to rebuild the stock within the specified timeframe and thus SG100 is not reached.		
References	~~(ICES 2014; ICES 2015b; ICES 2017l; ICES 2015a)~~, (ICES_NS_SOL 2020; UK 2020a)			
OVERALL PERFORMANCE INDICATOR SCORE:				**~~80~~ 90**
CONDITION NUMBER (if relevant):				**N/a**

Evaluation Table for PI 1.2.1 – Harvest strategy (NS SOL)

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Harvest strategy design			
	Guidepost	The harvest strategy is **expected** to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy **work together** towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is **designed** to achieve stock management objectives reflected in PI 1.1.1 SG80.
	Met?	Y	Y	~~Y~~ N
	Justification	Sole in the North Sea is managed under the CFP where MSY objectives are specified to be reached for all stocks, a licensing scheme exists, a set of specific management measures can be adopted (including TACs, effort limits, closed areas and gear specifications) and monitoring minimum requirements need to be reached. Therefore, the assessment team concludes that the harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 and SG80 is reached. There has also been a management plan designed to achieve stock management objectives in place and a new multiannual plan is also agreed. Therefore SG100 is met. **Rationale amended, scoring reduced**: Sole in the North Sea is now managed bilaterally by the EU and UK. In EU waters, sole is managed under the CFP where MSY objectives are specified to be reached for all stocks, a licensing scheme exists, a set of specific management measures can be adopted (including TACs, effort limits, closed areas and gear specifications) and monitoring minimum requirements need to be reached. In addition, the existance of the TCA between the EU-UK with specifc MSY objectives and the the new UK MoU with ICES ensures that **SG60 and SG80 is reached** (EU 2020; UK 2020a; UK 2020b). However, due to Brexit uncertainty, namely as to whether existing or additional management measures (such as rebuilding timeframes, management plans with MSY based HCRs, Landing Obligation) are to be put in place by the UK beyond 2020 the harvest startegy is not considered to have been 'designed'and **SG100 is not reached**.		
b	Harvest strategy evaluation			
	Guidepost	The harvest strategy is **likely** to work based on prior experience or plausible argument.	The harvest strategy may not have been fully **tested** but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been **fully evaluated** and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.

	Met?	Y	Y	N
	Justification	The harvest strategy is likely to have decreased F since its peak in 1998 to be now close to F_{MSY}, and although biomass has since decreased to below B_{lim}, it is above MSY $B_{trigger}$ since 2013 and is expected to increase in 2017. Therefore evidence exists that the harvest strategy is achieving its objectives and SG80 has been reached. The harvest strategy, namely the long-term management plan, has been evaluated in the past to be in accordance with the precautionary approach and has and will reach desired objectives. However, since the old plan has not been used to set the TAC, while the agreed NS MAP has not been tested, SG100 is not met.		
c	Harvest strategy monitoring			
	Guidepost	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Y		
	Justification	There is a monitoring scheme in place for the stock and the fisheries. There are several sampling programmes and fishery-independent surveys under the EU Data Collection Framework. There is a port sampling scheme in all countries involved, at-sea observers programmes to collect biological information on catches (length, sex, maturity and otoliths). All these data collected are used to inform the stock assessment on stock status, which allows for an evaluation of the harvest strategy and therefore SG60 is reached.		
d	Harvest strategy review			
	Guidepost			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Y
	Justification	The CFP is reviewed periodically every 10 years and improvements are made if deemed necessary, which has always been the case. The old management plan has been reviewed and improved, while a new plan has been proposed. The EU Data Collection Framework is also periodically reviewed, as well as each Member States sampling programmes. Finally ICES stock assessments are also reviewed bi-annually and benchmarked regularly. Therefore all components of the harvest strategy, namely the management system and its ability to control fishing mortality and respond to stock status, the stock assessment and monitoring systems are periodically reviewed so SG100 is met.		
	Shark finning			

e	**Guidepost**	It is **likely** that shark finning is not taking place.	It is **highly likely** that shark finning is not taking place.	There is a **high degree of certainty** that shark finning is not taking place.
	Met?	Not relevant	Not relevant	Not relevant
	Justification	The target species is not a shark – not relevant.		
f	**Review of alternative measures**			
	Guidepost	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a **regular** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a **biannual** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	Met?	Y	Y	N
	Justification	Overall catch discards are low at around 8%, corresponding to 1,223 tonnes. These are mainly on undersize sole which will have to be reported and landed from 2016 under the LO, creating another incentive to reduce further this percentage. Although undersize landings and reporting has been minimal in 2016, these are likely to increase if the compliance with the LO improves with time. The beam trawl fleet has an 80 mm mesh size to be in accordance with sole minimum size. Several fleets, including beam trawl, prawn trawls, and set nets have *de minimis* exemptions for sole, while smaller boats (<10 m) with otter trawls operating in coastal water (<6 nm) have a survival exemption. All of these exemptions are reviewed regularly at each discard plan renewal and under the annual requirements to report on the implementation of the Landings Obligation. However, there is no specific biannual procedure in place and thus SG100 is not attained.		
References	(EU 2015; EC 2016; ICES 2017l), (UK 2020a; EC 2021)			

OVERALL PERFORMANCE INDICATOR SCORE:	**~~90~~ 85**
CONDITION NUMBER (if relevant):	**N/a**

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (NS SOL)

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	~~N~~ Y	N
	Justification	Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks by 2020 at the latest and measures are expected to be taken to reduce exploitation if the stock approaches B_{lim}. Thus SG60 is met. However, there are no well-defined HCRs in place. Although ICES has provided advice on fishing opportunities based on the new management plan, the TAC has not been set in accordance with ICES advice since 2015 (2017 TACs without top-up = 15,040 tonnes, ICES wanted catch ≤ 14,187 tonnes) while the new agreed management plan has yet to be used to set the 2019 TAC. Therefore SG80 is not met. **Rationale amended, scoring increased**: Advice provided by ICES is based on a standard well-defined HCR that reduces fishing mortality when the SSB falls below Bpa and Blim, and is expected to keep the stock around MSY (ICES 2021) (Figure 1). Since 2018 TACs have been set according to ICES advice and therefore as per GSA2.5: HCRs in 2021 can be considered to be generally understood and in place SG60 is met. The TAC for 2021 has been set following ICES total catch advised, since an agreement between the EU-UK has been reached, and thus a well-defined HCR is in place in 2021. **Therefore SIa reaches SG60 and SG80**. The HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY or does it ccount for the stocks ecological role and **SG100 is not met.**		
b	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.

	Met?		Y	N
	Justification	The HCR specified in the new management plan is robust to the main uncertainties as it is based on ICES' MSY approach and therefore SG80 is met.		
c	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	~~Y~~ N	N
	Justification	Historically stock biomass has increased to be at MSY level and F has steadily decreased to be close to F_{MSY}. So there is evidence that indicates that the management tools in use are appropriate and effective and SG80 is reached. However, the TACs have also not limited catches to some degree (7%) in recent years, and with the introduction of the LO and adjustments to the TACs while the LO is not complied with, this tendency is likely to increase. Therefore clear evidence is lacking and SG100 is not achieved. **Rationale amended, scoring reduced**: Historically fishing mortality has steadily decreased to be close to FMSY. So there is some evidence that indicates that the management tools in use were appropriate and effective and SG60 is reached. However, as F has never reached FMSY (the exploitation level required) **SG80 is not met**		
References	(ICES_NS_SOL 2020; UK 2020a; EC 2021)			

OVERALL PERFORMANCE INDICATOR SCORE:	**~~75~~ 75**
CONDITION NUMBER (if relevant):	**NS SOL – 1 (existing condition closed)** **NS SOL – 2 new condition at this audit**

3.4.12 USK

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (USK)

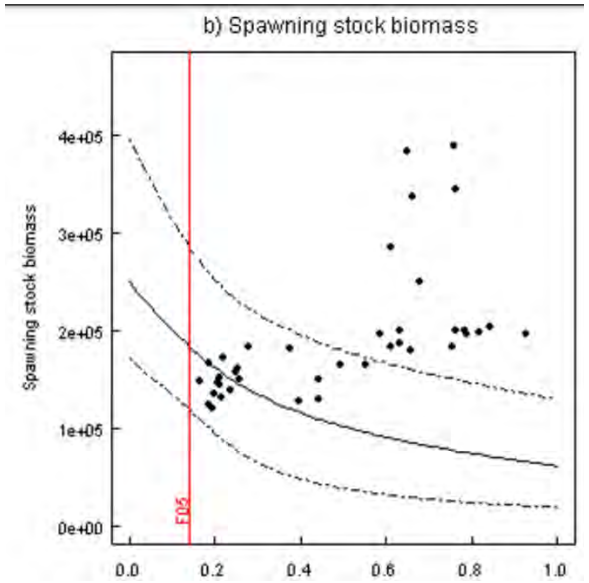
PI 1.2.2		**There are well defined and effective harvest control rules (HCRs) in place**		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	N	N
	Justification	Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks, and specifically for F to be below F_{MSY} by 2015, and not later than 2020. Furthermore, the TACs have been set in accordance with ICES advice for the last 3 years and thus intrinsically follow the ICES precautionary approach for fishing opportunities – this is designed to prevent the stock reaching the PRI. In Division 5b there are also effort limitations designed to limit catches and maintain the stock above PRI. Thus SG60 is met. In Division 3a and Subarea 4, TACs are fixed at the same levels of 2015 TACs until the end of 2018, unless the perception of the status of these stocks changes significantly. Nevertheless, the scientific advice on fishing opportunities for 2019 has only slightly changed so it is likely the advice would be followed to set the 2019 TAC if set at the 2015 TAC level. Therefore there is a well-defined HCR in place in Division 3a and Subarea 4. Division 5b, the Faroe Islands, accounts for around 50% of the total catches. The Faroese management measures in place, such as the effort system, are not established and reviewed within a well defined HCR. Scientific advice on the effort levels has not been followed and thus SG80 is not met. The Faroese are now considering the introduction of management plans with associated TACs to be introduced by 2019, at which point SG80 may be reached. **Rationale amended, no change to scoring**: Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks, and specifically for F to be below FMSY by 2015, and not later than 2020. Furthermore, the TACs have been set in accordance with ICES advice since 2013 (with the exception of 2020 and 2021) and thus intrinsically follow the ICES precautionary approach for fishing opportunities – this is designed to prevent the stock reaching the PRI, and therefore as per GSA2.5: HCRs in 2021 can be considered to be generally understood and in place. In Division 5b there are also effort limitations designed to limit catches and maintain the stock above PRI. **Thus SG60 is met**.		

		In Division 3a and Subarea 4, the TAC for 2021 has not been set following ICES total catch advised, since an agreement between the EU-UK has been reached, and thus a well-defined HCR is not in place in 2021. **Therefore Sia only reaches SG60 and SG80 is not met**. Division 5b, the Faroe Islands, accounts for around 50% of the total catches. The Faroese management measures in place, such as the effort system, are not established and reviewed within a well defined HCR. Scientific advice on the effort levels has not been followed and thus **SG80 is not met**.		
B	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N
	Justification	ICES' precautionary approach to provide advice on fishing opportunities has been tested for several stocks and is robust to main uncertainties (on catch data, age readings, stock-recruit relationships, etc.). The HCR has been extensively tested, reviewed and endorsed by the ICES Working Group WKMSYCat34. However, ICES' precautionary approach does not necessarily take the ecological role of the stock into account and thus SG100 is not met.		
C	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	Y	Y
	Justification	The high fishing mortalities observed before 2002 have decreased since then and the stock has increased. The stock is well above B_{MSY} and fishing mortality is well below F_{MSY} for the last 10 years. Therefore the available evidence regarding stock status clearly shows that the tools in use are effective in achieving the exploitation levels required under the HCRs and SG100 has been reached.		
References		https://www.neafc.org/system/files/press-release-final.pdf (EU 2015; ICES 2017m; European Union 2015; Hoydal 2018)		
OVERALL PERFORMANCE INDICATOR SCORE:				**75**

CONDITION NUMBER (if relevant):	USK – 1 existing condition updated

3.4.13 WHG

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Stock status relative to recruitment impairment			
	Guidepost	It is **likely** that the stock is above the point where recruitment would be impaired (PRI).	It is **highly likely** that the stock is above the PRI.	There is a **high degree of certainty** that the stock is above the PRI.
	Met?	Y	Y	Y
	Justification	The stock assessment covers the period from 1978 onwards. With this time series there is little or no evidence that recruitment is related to SSB or that there is a systematic time trend in recruitment. The current SSB is above Blim and MSY Btrigger so SG60 is met. The lower 5% bound for the estimate of the 2018 SSB (133,290 t) is above Blim (119,970 t) which may be considered a proxy for the point of recruitment impairment (PRI) and there is no indication of recruitment impairment for the wide range of SSB and recruitment values since 1978 (figure 1 below) so SG100 is met. **Rational amended, no change to scoring**: The SSB is estimated to be around 160,000 t and is above B_{pa}/MSY $B_{trigger}$ (144,000 t). The lower bound of SSB in 2020 is 116,000 t compared to the Blim value (PRI proxy) of 103,560 t and hence there is a high degree of certianty of being above the PRI. On that basis the **SG60, SG80 and SG100 are all met.**		
b	Stock status in relation to achievement of MSY			
	Guidepost		The stock is at or fluctuating around a level consistent with MSY.	There is a **high degree of certainty** that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.
	Met?		Y ~~N~~	N

	Justification	The stock shows an overall increase in SSB since the lowest value in 2007. ICES considers the stock to be harvested sustainably as F is below Fpa, and that the SSB is at full reproductive potential since the SSB is above MSY Btrigger. ICES considers fishing at the FMSY value to have a probability of exceeding Blim greater than 0.05. It therefore set a maximum reference value of F for the HCR at a value that has a 5 % probability of SSB falling below Blim, i.e. Fp05 = 0.172 . Although the SSBcurrent (184,350) is above Bpa and above BMSY (approx. 170000t, see Figure), this is only in the most recent year. Hence the team applied the MSC's interpretation on ICES stocks (MSC, 2018) which states that in order to reach SG80, F should have been at or below FMSY for at least 1 Generation Time (GT) from a starting point close to Bpa or Btrigger. Although F has declined since the late 1990s, it has been at or above FMSY for the last 10 years. SG80 is therefore not met. **Rationale amened, Scoring increased**: Based on the interbenchmark of 2021 fishing mortality has been below FMSY for more than 15 years. Considering the stock generation time (GT) between 2-4 years, **SIb meets SG80** based on SA2.2.4 and MSC interpretation for ICES stocks. As biomass is not double Bpa/MSY Btrigger and has only been above Bpa/MSY Btrigger for 5 years **SG100 is not met**.  **Figure 23. Reference point calculation for whiting from ICES** (2021) **The red line show F05 which is set as FMSY. Black points show the historical F and SSB values in relation to the estimated equilibrium. The solid black line is the median equilibrium SSB and the dashed lines the 95%tiles of the SSB distribution.**

References	(ICES_WHG 2021)		
Stock Status relative to Reference Points			
	Type of reference point	**Value of reference point**	**Current stock status relative to reference point**
Reference point used in scoring stock relative to PRI (SIa)	MSY $B_{TRIGGER}$ (=B_{PA}) Blim	144,000 t 103,560 t	160,397 (SSB)/ B_{PA} = 1.11 160,397 (SSB)/ $B_{LIM=}$ 1.54
Reference point used in scoring stock relative to MSY (SIb)	B_{lim} Fl_{im} F_{MSY}	103,560 t 0.718 0.371	(F) 0.234/ F_{MSY} = 0.63 (F) 0.234/ F_{LIM} = 0.326
OVERALL PERFORMANCE INDICATOR SCORE:			**90 ~~70~~**
CONDITION NUMBER (if relevant):			**N/A**

Evaluation Table for PI 1.2.2 – Harvest control rules and tools (WHG)

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guidepost	**Generally understood** HCRs are in place **or available** that are **expected** to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	**Well defined** HCRs are **in place** that **ensure** that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock **fluctuating around** a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock **fluctuating at or above** a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, **most** of the time.
	Met?	Y	~~N~~ Y	N
	Justification	Advice provided by ICES is based on standard HCR that reduces fishing mortality when the SSB falls below B_{pa}. The rule assumes F=0.15 is the maximum fishing mortality rate. Hence SG60 is met. The EU-Norway management plan uses the same F but does not reduce F when biomass falls below B_{pa}. Following a revision of the M values used in the assessment ICES evaluated the plan as not consistent with the Precautionary Approach. Hence SG80 is not met. **Rationale amended, scoring increased**: Advice provided by ICES is based on a standard well-defined HCR that reduces fishing mortality when the SSB falls below Bpa and Blim. The 2021 TAC follows the ICES total catch advice based on ICES MSY approach and thus a well-defined HCR is in place and **SG60 and SG80 are met**. The HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY in the long term or does it account for ecological role and **SG100 is not met.**		
B	HCRs robustness to uncertainty			
	Guidepost		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a **wide** range of uncertainties including the ecological role of the stock, and there is **evidence** that the HCRs are robust to the main uncertainties.
	Met?		Y	N

	Justification	The HCR used for advice is based on a generic rule that reduces F in response to the SSB falling below B_{pa}. B_{pa} is an estimate of the lowest observed SSB taking into account measurement error. F_{MSY} takes into account recruitment variability, and the probability of falling below B_{pa} when accounting for assessment and advice error, hence **SG80 is met**. Although a wide range of sources of uncertainty are considered there is uncertainty about the implementation of the HCR in relation to the Precautionary Approach and **SG100 is therefore not met.**		
C	**HCRs evaluation**			
	Guidepost	There is **some evidence** that tools used **or available** to implement HCRs are appropriate and effective in controlling exploitation.	**Available evidence indicates** that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	**Evidence clearly shows** that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Y	N	N
	Justification	The main tools for controlling exploitation are catch limits and restrictions on fleet capacity. In addition there are minimum mesh sizes for the principal fleets (TR1) of 120mm. During the period when the EU-Norway management plan was in operation the fishing mortality was reduced from 0.69 to approximately 0.2. This shows the tools had some success during that period. In the most recent years the management plan has been made obsolete by the revision of the natural mortality values and reference points so there is insufficient evidence available to evaluate SG80 or SG100 until further stock assessments have been carried out.		
References	(ICES 2016d)			
OVERALL PERFORMANCE INDICATOR SCORE:				**~~65~~ 75**
CONDITION NUMBER (if relevant):				**WHG – 2 (condition partially closed see section 3.5.2.4**

3.4.14 PRA

Evaluation Table for PI 1.1.1 – Stock status (PRA)

PI 1.1.1	**The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing**		
Scoring Issue	SG 60	SG 80	SG 100
	Stock status relative to recruitment impairment		

a	**Guidepost**	It is **likely** that the stock is above the point where recruitment would be impaired (PRI).	It is **highly likely** that the stock is above the PRI.	There is a **high degree of certainty** that the stock is above the PRI.
	Met?	Y	N	N
	Justification	The NAFO/ICES Pandalus Assessment Group (NIPAG) assesses the status of the Pandalus stock using a length-based stock assessment model developed in Stock Synthesis (SS3) which was selected as the most appropriate model at the ICES benchmark in 2016. This model replaced a Bayesian stock production model used previously which in 2016 had estimated stock biomass to be above B_{MSY}. The trajectories of biomass and fishing mortality up to 2016 estimated by the new length-based model were similar to those from the stock production model with biomass declining between 2008 and 2012 and then showing an increase until 2016. However the reference points derived for the length-based model resulted in an evaluation of stock status in relation to reference points that was much less favourable than the stock status evaluated previously by the stock production model. Since 2016, estimates of stock biomass from the length-based model have declined below MSY $B_{trigger}$, and F has been above F_{MSY} since 2011 except for 2015. Although stock biomass is low in comparison with the 1990s and 2000s, it is still above B_{lim} and is therefore likely to be above PRI, and throughout the history of the fishery, F has been below F_{lim}, defined as the fishing mortality that leads to 50% probability that SSB is less than B_{lim}. Recruitment indices (abundance of age 0 prawns estimated from the model and subsequently abundance of 1 year old prawns derived from Norwegian research surveys, which provide comprehensive spatial coverage of the stock) showed a significant decline from 2007 to 2010, modest increases from 2011 to 2012, but the recruitment index of age 0 *Pandalus* for 2013 was the highest observed in the time series. However the abundance of recruits of age 0 in 2014 and 2015 returned to levels seen in recent years, but estimates of abundance of age 1 *Pandalus* in 2017 and 2018 are around the average for the last ten years. Current levels of stock biomass and fishing mortality and recent recruitment levels suggest therefore that the stock is above the point where recruitment would be impaired. SG60 is met. Recent Guidance on the MSC Interpretations Page for scoring stock status for ICES stocks states that the SG80 is met when the stock is estimated above 1/2 of the distance between B_{lim} and B_{pa} (identical to MSY $B_{trigger}$). In the most recent assessment, the model estimated that stock biomass would be 7844 tonnes at the beginning of 2018. As B_{lim} and MSY $B_{trigger}$ are defined as 6,300 and 9,900 tonnes respectively, the midpoint of these two stock levels is 8,100 tonnes. The current (2018) stock estimate is therefore below the point ½ way between the two reference points and therefore SG80 is not met. **Rationale amended based on 2020 PRA advice, scoring increased** Note the scoring below was completed as part of harmonisation activities in 2020-21 between CU UK and DNV-GL but no report was published in relation to this fishery as no surveillance report was due at the time and no expedited audit (FCP2.2 – 7.29) was required. Evidence is available in the report of the harmonised fishery - Norway Skagerrak and the Norwegian Deep cold water prawn fishery year 4 surveillance report (Addison & Bekkevold 2021). This rescore closed the condition PRA – 1 – closed see section 3.5.1.5**Error! Reference source not found.**. The rationale presented in the Norway Skagerrak and the Norwegian Deep cold water prawn fishery year 4 surveillance report (Addison & Bekkevold 2021) is provided below (grey text) and additional information provided for this surveillance audit:		

		The length-based Stock Synthesis (SS3) stock assessment model used by the NAFO/ICES Pandalus Assessment Group (NIPAG) for the shrimp fishery estimated that stock biomass was 8,319 tonnes in 2020 well above B_{LIM} (6,300 tonnes). Recent Guidance on the MSC Interpretations Page for scoring stock status for ICES stocks states that the SG80 is met when the stock is estimated above 1/2 of the distance between B_{LIM} (6300 tonnes) and B_{PA} (identical to MSY $B_{TRIGGER}$) (9,900 tonnes), i.e. 8,100 tonnes. In addition to the general MSC Guidance on scoring of PI 1.1.1a, the ICES advice for 2020 (ICES_PRA 2020) provides confidence intervals for the estimate of SSB, from which it can be calculated that the probability that the estimate of SSB in 2020 being above B_{LIM} was 0.823. The current estimate of SSB is above 8,100 tonnes and there is at least an 80% probability that the true status of the stock is higher than the PRI and therefore SG60 and SG80 are met. Following the publication of the Norway Skagerrak and the Norwegian Deep cold water prawn fishery year 4 surveillance report (Addison & Bekkevold 2021) new ICES advice for PRA in 2021 was published by ICES (ICES_PRA 2021) which was not incorporated in that report but now requires further rescoring of this SI. This new rationale is shown below and is the current score for this SI: **Rationale amended based on 2021 PRA advice – scoring decreased back to score at time of certification:** The length-based Stock Synthesis (SS3) stock assessment model used by the NAFO/ICES Pandalus Assessment Group (NIPAG) for the shrimp fishery estimated that spawning stock biomass was 7581 tonnes in 2021 which is above B_{LIM} (6,300 tonnes). Recent Guidance on the MSC Interpretations Page for scoring stock status for ICES stocks states that the SG80 is met when the stock is estimated above 1/2 of the distance between B_{LIM} (6300 tonnes) and B_{PA} (identical to MSY $B_{TRIGGER}$) (9,900 tonnes), i.e. 8,100 tonnes. In addition to the general MSC Guidance on scoring of PI 1.1.1a, the ICES advice for 2021 (ICES_PRA 2021) provides confidence intervals for the estimate of SSB, from which it can be calculated that the probability that the estimate of SSB in 2021 being above B_{LIM} was 0.726. The current estimate of SSB is below 8,100 tonnes and there is at least a 70% probability (but less than 80% probability) that the true status of the stock is higher than the PRI. **SG60 is met, but SG80 is not met**. (ICES_PRA 2021)		
b	Stock status in relation to achievement of MSY			
	Guidepost		The stock is at or fluctuating around a level consistent with MSY.	There is a **high degree of certainty** that the stock has been fluctuating around a level consistent with MSY or has been above this level over recent years.
	Met?		N	N
	Justification	Management advice for the stock is provided by ICES and the key target reference point is F_{MSY}. A specific biomass target reference point has not been defined explicitly for this fishery. However the NAFO/ICES Pandalus Assessment Group (NIPAG) estimates stock biomass in relation to MSY $B_{trigger}$, which is defined as the 5th percentile of the equilibrium distribution of spawning stock biomass when fishing at F_{MSY}, i.e. MSY $B_{trigger}$ is a lower bound of the likely value of B_{MSY}. As the current biomass estimate is below MSY $B_{trigger}$, it cannot be concluded that the stock is currently at or fluctuating around its target reference point. SG80 is not met therefore.		
References		(ICES 2016c; ICES 2018b; NAFO/ICES 2017; Søvik & Thangstad 2014; NAFO/ICES 2015; NAFO/ICES 2016), (ICES_PRA 2020; ICES_PRA 2021)		

Stock Status relative to Reference Points			
	Type of reference point	**Value of reference point**	**Current stock status relative to reference point**
Reference point used in scoring stock relative to PRI (SIa)	B_{LIM} (B_{LOSS} = the lowest observed SSB) F_{LIM}	B_{LIM} = 6300 tonnes F_{LIM}= 1.00	$Biomass_{2021}$ = 7,581 tonnes = 1.20 x B_{lim} F_{2020} = 0.59 x F_{LIM}
Reference point used in scoring stock relative to MSY (SIb)	F_{MSY}; F_{MGT} No specific biomass target reference point has been defined for the fishery, although B_{MSY} can be considered to be an implicit TRP, and MSY $B_{TRIGGER}$ is the lower bound of the range in which B_{MSY} lies	F_{MSY} = 0.60; F_{MGT} = 0.59 MSY $B_{TRIGGER}$ = 9,900 tonnes	F_{2020} = 0.98 x F_{MSY} ; F_{2020} = 1.0 x F_{MGT} $Biomass_{2021}$ = 7,581 tonnes = 0.77 x MSY $B_{TRIGGER}$
OVERALL PERFORMANCE INDICATOR SCORE:			**60**
CONDITION NUMBER (if relevant):			**PRA – 1 – closed see section 3.5.1.5** **PRA – 3 - new see section 3.5.3.4**

Evaluation Table for PI 1.1.2 – Stock rebuilding (PRA)

PI 1.1.2	**Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe**		
Scoring Issue	SG 60	SG 80	SG 100
	Rebuilding timeframes		

a	**Guidepost**	A rebuilding timeframe is specified for the stock that is **the shorter of 20 years or 2 times its generation time**. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest practicable rebuilding timeframe is specified which does not exceed **one generation time** for the stock.
	Met?	Y		N
	Justification	The rebuilding strategy requires that TACs are set in line with F being maintained at or below F_{MSY}, which should ensure that stock biomass is rebuilt towards B_{MSY}. However the most recent assessment shows that F has exceeded F_{MSY} in most recent years, suggesting that the TAC has been set too high. This has probably occurred because previous stock assessments have used a stock-production model which gave a more optimistic outlook on stock status than the newly-implemented length-based model. The rebuilding strategy has now been brought into line with the new stock assessment methodology, and F should not in future exceed F_{MSY}. As biomass has dropped below MSY $B_{trigger}$ in the last two years, the rebuilding strategy under the MSY framework requires that the target fishing mortality must be set at a lower level than F_{MSY}. The TAC has therefore been set in line with a reduced F as follows: $F = F_{MSY} \times (SSB_{2018} / \text{MSY } B_{trigger})$ This rebuilding strategy has been formally adopted within the new Long Term Management Strategy (LTMS) agreed within the EU Norway consultations. Setting the TAC for 2018 based on this rebuilding strategy should result in an increase in 18.4% of stock biomass by the start of 2019, which is just below MSY $B_{trigger}$. In two years under the rebuilding strategy, stock biomass is predicted to be above MSY $B_{trigger}$, following which fishing at F_{MSY} should ensure that the stock increases towards B_{MSY}.Male *Pandalus borealis* change sex to female in age group 2 in the relatively warm waters of the Skagerrak, then mate and spawn that autumn and release larvae the following spring. The size at 50% maturity of *Pandalus borealis* in the Skagerrak area is around 2-3 years and with natural mortality rates considered to be around 0.75-0.9, this translates into a generation time (as defined by MSC GSA2.2.4) of 3-4 years.Two generations are equivalent therefore to approximately 6-8 years. Based on the model predictions above, the rebuilding strategy of fishing at or below F_{MSY} should ensure that the stock is rebuilt within 6-8 years. The SG60 is met. The ICES advice for 2018 provides a range of management options, some of which will rebuild the stock in a shorter time than that proposed within the MSY framework specified in the LTMS. SG100 is not met. **Rationale amended, no change to scoring:** The rebuilding strategy requires that TACs are set in line with F being maintained at or below F_{MSY}, which should ensure that stock biomass is rebuilt towards B_{MSY}. Whilst F has exceed F_{MSY} is some previous years, the rebuilding strategy has now been brought into line with the new stock assessment		

		methodology, and F should not in future exceed F_{MSY}. As biomass has been below MSY $B_{TRIGGER}$ in the last few years, the rebuilding strategy under the MSY framework requires that the target fishing mortality must be set at a lower level than F_{MSY} or F_{TARGET}. The TAC has therefore been set in line with a reduced F as follows: $F = F_{TARGET} \times (SSB_{2021} / MSY\ B_{TRIGGER})$ This rebuilding strategy has been formally adopted within the new Long Term Management Strategy (LTMS) agreed within the EU Norway consultations. Setting the TAC for 2021 based on this rebuilding strategy should result in an increase in 19.3% of spawning stock biomass by the start of 2022, which is just below MSY $B_{TRIGGER}$, following which fishing at F_{MSY} should ensure that the stock increases towards B_{MSY}. Male *Pandalus borealis* change sex to female in age group 2 in the relatively warm waters of the Skagerrak, then mate and spawn that autumn and release larvae the following spring. The size at 50% maturity of *Pandalus borealis* in the Skagerrak area is around 2-3 years and with natural mortality rates considered to be around 0.75-0.9, this translates into a generation time (as defined by MSC GSA2.2.4) of 3-4 years. Two generations are equivalent therefore to approximately 6-8 years. Based on the model predictions above, the rebuilding strategy of fishing at or below F_{MSY} should ensure that the stock is rebuilt within 6-8 years. The **SG60 is met**. The ICES advice for 2021 and 2022 provides a range of management options, some of which will rebuild the stock in a shorter time than that proposed within the MSY framework specified in the LTMS. **SG100 is not met**.		
b	Rebuilding evaluation			
	Guidepost	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is evidence that the rebuilding strategies are rebuilding stocks, **or it is likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.	There is **strong** evidence that the rebuilding strategies are rebuilding stocks, **or it is highly likely** based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe.
	Met?	Y	Y	Y
	Justification	Annual monitoring of stock biomass and fishing mortality through stock assessments within NIPAG allows determination of whether the rebuilding strategy is effective. Until 2017 there was evidence that the strategy of maintaining fishing mortality at or below F_{MSY} was working as the stock had continued to increase from 2013 onwards. The decline in stock biomass observed in 2017 and 2018 is highly likely to be due to an over-optimistic evaluation of stock status provided by the previous assessment model, which resulted in TACs being set too high. In addition recent observations of the discard rate in the Norwegian fleet suggested that the discard rate assumed within the stock assessment for the whole fishery had been a		

		significant underestimate. The setting of TACs is now based on the new stock assessment model and revised discard rates. Whilst the stocks have not been rebuilt in the last two years, modelling shows that this year's level of fishing mortality should return the stock to close to MSY $B_{trigger}$, and although it is difficult to estimate exactly when the stock will return to B_{MSY} because *Pandalus* is a short-lived species and it is not possible to predict annual recruitment, based on the assumption of annual recruitment being the geometric mean of recent years' recruitments, there is strong evidence from modelling studies and past experience that the stock will be rebuilt within two generations. SG100 is met. **Rationale amended, no change to scoring:** Annual monitoring of stock biomass and fishing mortality through stock assessments within NIPAG allows determination of whether the rebuilding strategy is effective. **SG60 is met**. Until 2017 there was evidence that the strategy of maintaining fishing mortality at or below F_{MSY} was working as the stock had continued to increase from 2013 onwards. The decline in stock biomass observed from 2017 to 2019 is highly likely to be due to an over-optimistic evaluation of stock status provided by the previous assessment model, which resulted in TACs being set too high and potentially due to carry over of unused TACs to the next fishing season. The setting of TACs is now based on the more appropriate length-based stock assessment model and under the LTMS carry over of unused TACs is not permitted if the stock biomass is below $MSYB_{TRIGGER}$. Stock biomass has increased in 2020 and modelling shows that this year's level of fishing mortality should return the stock to close to MSY $B_{TRIGGER}$ relatively quickly. Although it is difficult to estimate exactly when the stock will return to B_{MSY} because stock dynamics of *Pandalus* are driven by highly unpredictable patterns in annual recruitment, based on the assumption of annual recruitment being the geometric mean of recent years' recruitments, there is strong evidence from modelling studies and past experience that the stock will be rebuilt within two generations. **SG80 and SG100 are met**.
References		(MSC 2014; EU/Norway 2018; ICES 2018c; NAFO/ICES 2017; ICES_PRA 2020; ICES_PRA 2021)

OVERALL PERFORMANCE INDICATOR SCORE:	**90**
CONDITION NUMBER (if relevant):	**N/a**

3.5 Conditions

3.5.1 Closed Conditions

3.5.1.1 21-23 PLE

Table 4. Condition 21-23 PLE 1

Performance Indicator	1.2.2
Score	75
Justification	Scoring issue 1.2.2a (SG80) Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks. The TACs in Kattegat and in the eastern Baltic Sea have followed ICES scientific advice and its Advisory Rule since 2015 and 2016, respectively, and thus intrinsically follow the ICES MSY approach for fishing opportunities. Thus SG60 is met. However, in the Baltic Sea multiannual plan plaice is considered a bycatch species and thus only remedial measures are contemplated, and these do not constitute well-defined HCRs that ensure that the exploitation rate is reduced as the PRI is approached. ICES MSY approach is not explicitly detailed in the multiannual plan. Therefore SG80 is not met.
Condition	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY.
Condition Start	PCR
Condition Deadline	Year 4 audit
Milestones	Year 2-3: Promote the adoption of well-defined harvest control rules which are consistent with the harvest strategy and ensure that the exploitation is reduced as limit reference points are approached while keeping the stock fluctuating around a target level consistent with (or above) MSY. Score: 75 Year 4: Evidence shall be presented that a harvest control rule is being implemented that is consistent with the harvest strategy (i.e. the objective of attaining MSY specified in the EU Common Fisheries Policy or equivalent international agreements) and that would ensure that the exploitation rate is reduced as limit reference points are approached. Score: 80

Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is no milestone for this Year 1 audit. Nonetheless, the client identified to the team that the ICES advice has been changed from precautionary approach to the MSY approach to ensure that the stock is managed in accordance with the MSY approach laid out in the CFP. Advised catches were reduced from 10,636 tons to 5,176 tons in 2020. The clients also noted that from the fisheries' point of view this has ensured that the stock is now assessed against an appropriate MSY Btrigger reference point and that the adoption of the CFP objective should be evident from this change in advice category with the TAC reduction, despite SSB being above MSY Btrigger. In addition, the assessment team found that the TACs set for this stock in Kattegat and in the eastern Baltic Sea have followed ICES scientific advice based on the MSY approach, and thus a well-defined HCR could be considered in place and SIa was rescored as a result (section 0).
Progress Status	Closed. Please see the rescore for this SI in section 0.	
Remedial Action	N/A	
Additional information	Note a new condition on this PI for scoring issue c was raised at the year 1 surveillance audit this rescore is also found in section 0	

3.5.1.2 NS PLE

Table 5. Condition NS PLE 1. NOTE: While for DFPO and CVO this is a continuing condition, it is new for the other client groups. EZG chose, on a voluntary basis, to apply the shortened milestones of DFPO and CVO but SFPO will make use of the full time period that is available to fulfil the condition.

Performance Indicator	1.2.2
Score	75
Justification	Scoring issue 1.2.2a (SG80) Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs. Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks by the latest 2020 and measures are expected to be taken to reduce exploitation if the stock approached Blim. Thus SG60 is met. Considering the HCR detailed in the old management plan and ICES MSY rule to provide advice one can conclude that well defined HCRs exist. Furthermore, Norway and the EU have agreed on a TAC share between the North Sea and Skagerrak in 2016. However, except for the TAC share, these HCRs are not in place. Not only is the old management

	plan not applicable anymore to the stock boundaries, the TAC has not been set in accordance with ICES advice in 2017. In addition, the new proposed management plan has yet to be agreed by the European Institutions. Therefore SG80 is not met.
Condition	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY.
Condition Start	PCR
Condition Deadline	Year 4 audit as the condition was raised at PCR but also see existing condition status's for DFPO and CVO below.
Milestones	This is an existing condition for the DFPO and CVO fisheries which was raised in March 2018 at the Year 6 and 5 surveillances respectively (Andrews and Millner, 2018c; Gaudian et al., 2018b; Keus et al., 2018). The condition milestones are as follows: Year 1 (2018): the client will present the CAB with evidence that there is a plan in place to ensure consideration of changes to the LTMP by management to specify how fishing mortality will be reduced as SSB approaches SSBLIM. Resulting score: 75 Year 2 (2019): the client will present the CAB with evidence to show that progress has been made against the plan presented at the first audit, including evidence that changes to the LTMP to specify how fishing mortality will be reduced as SSB approaches SSBLIM have been agreed to in principle by management. Resulting score: 75 Year 4 (2020): the client will present the CAB with evidence to show that changes to the LTMP have been adopted which specify how fishing mortality will be reduced as SSB approaches SSBLIM. Resulting score: 80. The new condition is a continuation of the existing DFPO/CVO condition. Milestones have therefore been aligned and the existing Year 2 becomes the new Year 1 milestone. Year 1: Provide evidence that the proposed long-term management plan is agreed and include safeguards on how fishing mortality will be reduced as the PRI is approached while keeping the stock fluctuating around a target level consistent with (or above) MSY. Score: 75. Year 2: Provide evidence that the new proposed management plan is implemented. Score: 80. EZG have indicated they will be adopting the DFPO/CVO milestones outlined above. For SFPO, the original three milestones are maintained as follows :

	Year 1: Provide evidence that there is a plan in place to ensure consideration of changes to the LTMP by management to specify how fishing mortality will be reduced as SSB approaches SSBLIM while keeping the stock fluctuating around a target level consistent with (or above) MSY. Resulting score: 75 Year 2: Provide evidence to show that progress has been made against the plan presented at the first audit, including evidence that changes to the LTMP to specify how fishing mortality will be reduced as SSB approaches SSBLIM while keeping the stock fluctuating around a target level consistent with (or above) MSY have been agreed to in principle by management. Resulting score: 75 Year 3: Provide evidence to show that changes to the LTMP have been adopted which specify how fishing mortality will be reduced as SSB approaches SSBLIM while keeping the stock fluctuating around a target level consistent with (or above) MSY. Resulting score: 80.	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. Nonetheless the client notes that since certification, the NS MAP has been implemented for plaice in subarea 4 (North Sea). The HCR for the stock is clear, and the NS MAP include both safeguards (article 7) and specific conservation measures (article 8) should the SSB fall below MSYBtrigger to ensure that exploitations rates are reduced appropriately. The assessment team found that because the TAC has followed ICES total catch advice based on ICES MSY approach a well-defined HCR can be considered now in place and is expected to keep the stock fluctuating at or above a target level consistent with MSY. As a result, this SI was rescored at this surveillance audit. See section 3.4.7
Progress Status	Closed see section 3.4.7	
Remedial Action	N/A	
Additional information	N/A	

3.5.1.3 EC PLE

Table 6. Condition EC PLE 1.

Performance Indicator	1.2.1
Score	75

Justification	Scoring issue 1.2.1f (SG80) There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate. Discard rates of plaice in Division 7d are high and in 2016 discards were in the order of 46%, corresponding to 3,090 tonnes. There has been a review of possible measures to reduce unwanted catch of plaice in the sole fishery, particularly considering that the landing obligation will come at the latest into force for plaice in 7d from 1 January 2019, where plaice can significantly limit fisheries for higher commercial value species such as sole. Survival studies have also been carried out in other areas in order to justify a survival exemption under the landings obligation, but have shown significant variability in plaice survival. However, this review has yet to be done regularly for plaice in Division 7d and therefore SG80 is not attained.	
Condition	There needs to be a regular review of the potential effectiveness and practicality of alternative measures to minimise unwanted catch of plaice in the plaice fishery.	
Condition Start	PCR	
Condition Deadline	Year 1 of reassessment	
Milestones	Year 2: Evidence that the client is working with the relevant scientific and national authorities, and the EU to assess survivorship of plaice in 7d. Score: 75 Year 3 and 4: Evidence that the practicality of alternative measures (survivorship) is being developed and tested. Score: 75 Year 5: Evidence that a review of the research into alternative measures has been implemented. Likely resulting PI score SG 80.	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. The audit team found that the 2020 TAC was set 26% above wanted catch advised by ICES but 30% below total catch advice for both stocks in the English Channel. Discards were estimated to be considerably high at 49% of total catch in 2020. Plaice in Divison 7d is now under the EU Landing Obligation with specific survival exemptions specified in the North-Western demersal fisheries discard plan (Regulation (EU) 2018/2034) for 2019-2021 (EU 2018a). This is re-evaluated every three years and thus SG60 and SG80 are now met. This has been rescored under section 3.4.8.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A

Progress Status	Closed and rescored under section 3.4.8.
Remedial Action	N/A
Additional information	N/A

3.5.1.4 NS SOL- 1

Table 7. Condition NS SOL 1.

NOTE this condition has been edited resultant of the new scoring in Year 1S given in section 3.4.11. The edited condition and milestones are shown with the condition by strikethrough text and underscore where applicable.

Performance Indicator	1.2.2
Score	~~75~~ 65
Justification	Scoring issue 1.2.2a (SG80) Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks by 2020 at the latest and measures are expected to be taken to reduce exploitation if the stock approaches Blim. Thus, SG60 is met. However, there are no well-defined HCRs in place. Although ICES continues to provide advice on fishing opportunities based on the old management plan, the TAC has not been set in accordance with ICES advice since 2015. In addition, the new proposed management plan has yet to be agreed by the European Institutions. Therefore, SG80 is not met.
Condition	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY.
Condition Start	PCR
Condition Deadline	Year 4

Milestones	These have been amended to include the requirements of SIa and SIc which was rescored at Year 1. Meeting this condition will require the client to encourage the EU and the UK to obtain advice from ICES on an appropriate harvest strategy and control rule. Managers will need to agree a management plan based on this advice. The anticipated milestones are set out below: Year 2: Evidence that the client is working with ICES, the UK authorities, and the EU to obtain relevant scientific advice on which to base a management plan. Score: 75 Year 3: Evidence that a new management plan has been developed and tested. Score: 75 Year 4: Evidence that the plan has been implemented. Score: 75 Year 1 of reassessment: Evidence that the fishing mortality has been brought to FMSY level. Likely resulting PI score SG 80.	
Progress on Condition	Year 1	Advice provided by ICES is based on a standard well-defined HCR that reduces fishing mortality when the SSB falls below Bpa and Blim, and is expected to keep the stock around MSY (ICES 2021) (Figure 1). Since 2018 TACs have been set according to ICES advice and therefore as per GSA2.5: HCRs in 2021 can be considered to be generally understood and in place SG60 is met. The TAC for 2021 has been set following ICES total catch advised, since an agreement between the EU-UK has been reached, and thus a well-defined HCR is in place in 2021. Therefore, SIa reaches SG60 and SG80. The HCR is not expected to keep the stock fluctuating at or above a target level consistent with MSY and SG100 is not met.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	Closed see rescore in section 3.4.11	
Remedial Action	n/a	
Additional information	N/A	

3.5.1.5 PRA

Table 8. Condition PRA 1.

Performance Indicator	1.1.1
Score	60
Justification	Scoring issue a (SG80): It is highly likely that the stock is above the PRI. The NAFO/ICES Pandalus Assessment Group (NIPAG) assesses the status of the Pandalus stock using a length-based stock assessment model developed in Stock Synthesis (SS3) which was selected as the most appropriate model at the ICES benchmark in 2016. This model replaced a Bayesian stock production model used previously which in 2016 had estimated stock biomass to be above BMSY. The trajectories of biomass and fishing mortality up to 2016 estimated by the new length-based model were similar to those from the stock production model with biomass declining between 2008 and 2012 and then showing an increase until 2016. However the reference points derived for the length-based model resulted in an evaluation of stock status in relation to reference points that was much less favourable than the stock status evaluated previously by the stock production model. Since 2016, estimates of stock biomass from the length-based model have declined below MSY Btrigger, and F has been above FMSY since 2011 except for 2015. Although stock biomass is low in comparison with the 1990s and 2000s, it is still above Blim and is therefore likely to be above PRI, and throughout the history of the fishery, F has been below Flim, defined as the fishing mortality that leads to 50% probability that SSB is less than Blim. Recruitment indices (abundance of age 0 prawns estimated from the model and subsequently abundance of 1 year old prawns derived from Norwegian research surveys which provide comprehensive spatial coverage of the stock) showed a significant decline from 2007 to 2010, modest increases from 2011 to 2012, but the recruitment index of age 0 Pandalus for 2013 was the highest observed in the time series. However the abundance of recruits of age 0 in 2014 and 2015 returned to levels seen in recent years, but estimates of abundance of age 1 Pandalus in 2017 and 2018 are around the average for the last ten years. Current levels of stock biomass and fishing mortality and recent recruitment levels suggest therefore that the stock is above the point where recruitment would be impaired. SG60 is met. Recent Guidance on the MSC Interpretations Page for scoring stock status for ICES stocks states that the SG80 is met when the stock is estimated above 1/2 of the distance between Blim and Bpa (identical to MSY Btrigger). In the most recent assessment, the model estimated that stock biomass would be 7844 tonnes at the beginning of 2018. As Blim and MSY Btrigger are defined as 6,300 and 9,900 tonnes respectively, the midpoint of these two stock levels is 8,100 tonnes. The current (2018) stock estimate is therefore below the point ½ way between the two reference points and therefore SG80 is not met. Note: scoring issue b also scored less than 80; however for this scoring issue, PI 1.1.2 was triggered.
Condition	Provide evidence that it is highly likely that the stock is above the point at which recruitment would be impaired (PRI)

Condition Start	PCR	
Condition Deadline	Year 1 of reassessment	
Milestones	This is an existing condition for the DFPO fishery which was raised during the Year 2 surveillance audit in August 2018 (Addison and Bekkevold, 2018c). The condition milestones are as follows: Year 3 (2019): Evidence that the client is working with ICES, the relevant national authorities, and the EU on identifying measures required to rebuild the stock to a level that is highly likely to be above the PRI. Year 4 (2020): Evidence that the measures have been implemented and that the stock is rebuilding to a level that is highly likely to be above the PRI. Annual surveillance 1 of recertification: Evidence that the stock has rebuilt to a level that is highly likely to be above the PRI. The new condition is a continuation of the existing DFPO condition. Milestones have therefore been aligned and the existing Year 3 becomes the new Year 1 milestone. These milestones also apply to the SFPO fishery. Year 1: Evidence that the client is working with ICES, the relevant national authorities, and the EU on identifying measures required to rebuild the stock to a level that is highly likely to be above the PRI. Score: 60 Year 2: Evidence that the measures have been implemented and that the stock is rebuilding to a level that is highly likely to be above the PRI. Score 60. Year 3: Evidence that the stock has rebuilt to a level that is highly likely to be above the PRI. Score 70.	
Progress on Condition	Year 1	The length-based Stock Synthesis (SS3) stock assessment model used by the NAFO/ICES Pandalus Assessment Group (NIPAG) for the shrimp fishery estimated that stock biomass was 8,319 tonnes in 2020 well above B_{LIM} (6,300 tonnes). Recent Guidance on the MSC Interpretations Page for scoring stock status for ICES stocks states that the SG80 is met when the stock is estimated above 1/2 of the distance between B_{LIM} (6300 tonnes) and B_{PA} (identical to MSY $B_{TRIGGER}$) (9,900 tonnes), i.e. 8,100 tonnes. In addition to the general MSC Guidance on scoring of PI 1.1.1a, the ICES advice for 2020 (ICES_PRA 2020) provides confidence intervals for the estimate of SSB, from which it can be calculated that the probability that the estimate of SSB in 2020 being above B_{LIM} was 0.823. The current estimate of SSB is above 8,100 tonnes and there is at least an 80% probability that the true status of the stock is higher than the PRI and therefore SG60 and SG80 are now met for SIa, and the condition can be closed.
	Year 2	N/A

	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit and therefore the first milestone is in Year 2 this condition is on target.	
Remedial Action	N/A	
Additional information	Please note the harmonization requirements and justification for closing this condition which are provided in this report. This condition was closed as part of harmonisation activities in 2020-21 between CU UK and DNV-GL but no report was published in relation to this fishery as no report was due at the time. Evidence is available in the report of the harmonised fishery - Norway Skagerrak and the Norwegian Deep cold water prawn fishery year 4 surveillance report (Addison & Bekkevold 2021). This rescore closed the condition PRA – 1. New Advice for PRA in 2021 was published by ICES (ICES_PRA 2021) which now requires further rescoring of this SI and resulted in a harmonized score requiring a new condition. See condition PRA – 3.	

3.5.2 Progress against Conditions

Following the MSC derogation 6 (here) all management and Information performance Indicators (PIs 1.2.1 -4) with existing conditions receive 12 months extension to their milestones and deadlines. Annual milestones and the deadline for the conditions need adjustment accordingly. In respect to this fishery all the tables for the existing conditions below now show the amended timelines and deadlines based on the derogation (e.g. they have been adjusted forwards by 12 months). For a number of the existing conditions, the derogation 6 extends deadlines beyond the current certificate period and as per the MSC interpretation on the derogation this has been extended to Year 1 of the reassessment.

3.5.2.1 EC HAD

Table 9. Condition EC HAD 1.

Performance Indicator	1.2.1
Score	75
Justification	Scoring issue 1.2.1b (SG80) The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives. The stock has fluctuated above MSY Btrigger since 1996 and F has reduced from a peak of 1.25 in 2002 to 0.67 in 2016. F has tended to fluctuate with little trend in recent years and remains above FMSY. This shows that the harvest strategy has been effective in reaching sustainable exploitation and SG60 is met. However, there is not strong evidence that the strategy is meeting its F objectives and SG80 is not met.
Condition	Evidence should be provided that the harvest strategy and the harvest control rules in place are achieving their objectives in reducing fishing mortality to below F_{MSY}.
Condition Start	PCR
Condition Deadline	Year 4 audit
Milestones	Meeting this condition will require the client to encourage the EU to obtain advice from ICES on an appropriate harvest strategy and control rule to reduce F. Managers will need to agree a management plan based on this advice. The anticipated milestones are set out below: Year 2: Evidence that the client is working with ICES, the national authorities and the EU to obtain relevant scientific advice on which to base a management plan. Score: 75

	Year 3: Evidence that a new management plan has been developed and tested. Score: 75 Year 4: Evidence that the plan has been implemented. Likely resulting PI score SG 80.	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. Despite the lack of milestone the client reported that, since the time of the assessment the WW-MAP had been finalised and become official (https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32019R0422). The client notes that EC haddock in the relevant areas is included and that the WW-MAP is explicitly in accordance with the objectives of the CFP [e.g. manage / rebuild the stocks to MSY]. The implementation of the WW-MAP is evidence that there is a harvest strategy in place and species specified in Art. 1 (including the stock here) are considered target species and as such their TACs are set within an HCR: fishing mortality ranges around FMSY. These MAPs are still in effect for EU fisheries, however, the adoption of the WW-MAP is now of less relevance to this stock as the management plan is underpinned by the TCA agreement (TCA 2021) and the proposed EU-UK bilateral meeting each year which effectively supersedes the WW-MAP in terms of HCR tool setting (TAC). The lack of agreement in 2021 between the UK and EU is concerning and results in a new condition under PI1.2.2a. Better news is present for this stock and this condition with respect to the new perception of the stock. Following a ICES benchmark the latest stock status shows that stock biomass is now estimated to be increasing substantially, being at 66,169 tonnes in 2020, while fishing mortality has been decreasing approaching FMSY (ICES_ECHAD 2020).
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is no milestone for this Year 1 audit and therefore the first milestone is in Year 2, As such this condition is on target. The new Year 2 milestone remains relevant, although the client action plan may require amendment in light of the changed management landscape following Brexit. Please see section 3.6	
Remedial Action	Milestones are revised above in accordance with the MSC derogation 6. A new action plan is required due mirror these changed milestones please see section 3.6 for this.	
Additional information	Revised action Plan from PCR A management plan is currently under development addressing the management of 37 fish stocks in Western Waters, and the scope includes haddock in 7d. The plan is expected to be agreed in 2019. Year 2 ~~1~~: The clients will provide evidence that they are working with ICES, national authorities and/or the EU to develop a WW-MAP with a harvest strategy and harvest control rules in accordance with the objectives of the CFP. Year 3- 4 ~~2-3~~: The clients will provide evidence that the WW-MAP is implemented.	

Table 10. Condition EC HAD 2.

NOTE this condition has been edited resultant of the new scoring in Year 1S given in section 3.4.2. The edited condition and milestones are shown with the condition by strikethrough text and underscore where applicable.

Performance Indicator	1.2.2
Score	~~75~~ 65
Justification	Scoring issue 1.2.2c (SG80) Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs. The main tools for controlling exploitation are catch limits and restrictions on fleet capacity. In addition there are minimum mesh sizes for the principal fleets (TR1) of 120mm. The tools have had some success in reducing F and SSB has tended to increase. Although F has declined, in the most recent years it has stabilised above FMSY and SG80 is not met.
Condition	Evidence should be provided that the harvest strategy and the harvest control rules in place are achieving their objectives in reducing fishing mortality to below F_{MSY}.
Condition Start	PCR – revised at Year 1
Condition Deadline	Year 1 of reassessment
Milestones	Meeting this condition will require the client to encourage the EU and Norway to obtain advice from ICES on an appropriate harvest strategy and control rule for the revised reference points. Managers will need to agree a management plan based on this advice. The anticipated milestones are set out below: Year 2: Evidence that the client is working with ICES, the UK authorities, and the EU to obtain relevant scientific advice on which to base a management plan. Score: 75 Year 3: Evidence that a new management plan has been developed and tested. Score: 75 Year 4: Evidence that the plan has been implemented. Score: 75 Year 1 of reassessment: Evidence that the fishing mortality has been brought to FMSY level and meets. Likely resulting PI score SG 80.

Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. Despite this the client reported that since the time of the assessment the WW-MAP had been finalised and become official. They note that EC haddock in the relevant areas is included and that the WW-MAP is explicitly in accordance with the objectives of the CFP [e.g. manage / rebuild the stocks to MSY]. The implementation of the WW-MAP is evidence that a harvest strategy is in place and species specified in Art. 1 (including the stock here) are considered target species and as such had their TACs set within an HCR: fishing mortality ranges around FMSY. The 2020 TAC was set 35% above wanted catch advised by ICES but 35% below total catch advice, suggestive that the tools were effective in achieving the exploitation levels required under the HCRs. In 2021 these MAPs are still in effect for EU fisheries, however, the adoption of the WW-MAP is now of less relevance to this stock as the HS is underpinned by the TCA agreement (TCA 2021) and the EU-UK bilateral meeting each year which effectively supersedes the WW-MAP in terms of HCR tool setting (TAC). Due to recent high recruitments, discards are expected to increase in 2020. Discards are estimated to be considerably high at 55% of total catch in 2020, while the LO has had minimal implementation (EC 2020a).
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is no milestone for this Year 1 audit and therefore the first milestone is in Year 2 as such this condition is on target. The new Year 2 milestone remains relevant, although the client action plan may require amendment in light of the changed management landscape following Brexit. Please see section 3.6	
Remedial Action	Milestones are revised above in accordance with the MSC derogation 6. A new action plan is required due mirror these changed milestones please see section 3.6 for this.	
Additional information	Revised action Plan from PCR A management plan is currently under development addressing the management of 37 fish stocks in Western Waters, and the scope includes haddock in 7.d. The plan is expected to be agreed in 2019. Year 2 ~~1~~: The clients will provide evidence that they are working with ICES, national authorities and/or the EU to develop a WW-MAP with a harvest strategy and harvest control rules in accordance with the objectives of the CFP. Year 3-4 ~~2-3~~: The clients will provide evidence that the WW-MAP is implemented. Year 1 Reassessment ~~4~~: The clients will provide evidence that the fishing mortality has been brought to FMSY level.	

3.5.2.2 LIN

Table 11. Condition LIN 1. NOTE this condition has been edited resultant of new rationale in Year 1S given in section 3.4.4. The edited condition and milestones are shown with the condition by strikethrough text and underscore where applicable.

Performance Indicator	1.2.2
Score	75
Justification	Scoring issue 1.2.2a (SG80)~~—Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs~~ ~~The HCR used for advice is based on the Precautionary Approach as applied by ICES and is intended to maintain a sustainable stock. The HCR is a simple decision rule to set TACs based on recent catches and the annual change in a biomass index. Details of the approach are given in (ICES, 2012c). The advice is therefore responsive to the state of the stock as catch limits will reduce if the biomass index declines. An allowance is made for uncertainty to cap any increase in the advised catch at no more than 20%. A precautionary buffer may be applied in the event of the decrease in the index. The HCR is well defined but is not designed with a specific PRI as there is not sufficient data to define such a reference point. Applying the rule would be expected to avoid significant stock decline and therefore should manage the stock away from any PRI. The mean size FMSY proxy suggests the current rule is able to keep the stock below FMSY indicating that SG60 is met. However, recent TACs have been set above advised values so the HCR is not being fully implemented and SG80 is not met~~. **New Rationale (year 1 surveillance):** The HCR used for advice is based on the Precautionary Approach as applied by ICES and is intended to maintain a sustainable stock. The HCR is a simple decision rule to set TACs based on recent catches and the annual change in a biomass index. Details of the approach are given in (ICES 2012a). The advice is therefore responsive to the state of the stock as catch limits will reduce if the biomass index declines. An allowance is made for uncertainty to cap any increase in the advised catch at no more than 20%. A precautionary buffer may be applied in the event of the decrease in the index. The HCR is well defined but is not designed with a specific PRI as there is not sufficient data to define such a reference point. Applying the rule would be expected to avoid significant stock decline and therefore should manage the stock away from any PRI. The mean size F_{MSY} proxy suggests the current rule is able to keep the stock below F_{MSY} indicating that SG60 is met. However, the TAC for 2021 has been set not following ICES total catch advised, since an agreement between the EU-UK has been reached, and thus a well-defined HCR is not in place and SIa only reaches SG60.
Condition	The client shall encourage the development and implementation of a well-defined HCR. A well-defined HCR should ensure that the exploitation rate is reduced as the PRI is approached and is expected to keep the stock fluctuating around a target level consistent with (or above) MSY.
Condition Start	PCR

Condition Deadline	Year 1 of reassessment	
Milestones	Years 2-3: Support the adoption of well-defined harvest control rules which are consistent with the harvest strategy and ensure that the exploitation rates are reduced as limit reference points are approached while keeping the stock fluctuating around a target level consistent with (or above) MSY. Resulting score: 75 Year 4: Evidence shall be presented that a harvest control rule is being implemented that is consistent with the harvest strategy (i.e. the objective of attaining MSY specified in the EU Common Fisheries Policy or equivalent international agreements) and that would ensure that the exploitation rate is reduced as limit reference points are approached. Resulting score: 75 Year 1 of reassessment: Evidence that the HCR has been implemented. Resulting score: 80	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. Notwithstanding this the client showed the assessment team that the latest ling advice maintain the stock in good health. There continues to be three TACs with ling across the stock area, however, none of these TACs are set within a context of explicit harvest control rules and have been set systematically above scientific advice (at least since 2010). Furthermore, the TACs for 2021 set by the UK and EU agreement continue this trend.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit and therefore the first milestone is in Year 2 this condition is on target.	
Remedial Action	Milestones are revised above in accordance with the MSC derogation 6. A new action plan is required due mirror these changed milestones please see section 3.6 for this.	
Additional information	Revised action plan from PCR Year 2 ~~1~~: The clients will engage with ICES, relevant national authorities and/or EU to evaluate the current status and potential progress towards implementing a HCR with appropriate reference points. Year 3 ~~2~~: The clients will evaluate potential options for an HCR/reference points and urge authorities and/or EU to implement them if appropriate. Year 4 ~~3~~: The clients will support and assist an implementation process by the management authorities as appropriate.	

	Year 1 Reassessment-4: The clients will provide evidence, if successful, that the HCR with reference points is implemented

3.5.2.3 USK

Table 12. Condition USK 1.

Performance Indicator	1.2.2
Score	75
Justification	Scoring issue 1.2.2a (SG80) Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks. Furthermore, the TACs have been set in accordance with ICES advice for the last 3 years and thus intrinsically follow the ICES precautionary approach for fishing opportunities - this is designed to prevent the stock reaching the PRI. In Division 5b there are also effort limitations designed to limit catches and maintain the stock above PRI. Thus SG60 is met. In Division 3a and Subarea 4, TACs are fixed at the same levels of 2015 TACs until the end of 2018, unless the perception of the status of these stocks changes significantly. Nevertheless, the scientific advice on fishing opportunities for 2019 has only slightly changed so it is likely the advice would be followed to set the 2019 TAC at the 2015 TAC level. Therefore there is a well-defined HCR in place in Division 3a and Subarea 4. Division 5b, the Faroe Islands, accounts for around 50% of the total catches. The Faroese management measures in place, such as the effort system, are not established and reviewed within a well-defined HCR. Scientific advice on the effort levels has not been followed and thus SG80 is not met. The Faroese are now considering the introduction of management plans with associated TACs to be introduced by 2019, at which point SG80 may be reached. **Rationale Yr1 Surveillance:** Generally understood HCRs are in place. The CFP obliges MSY objectives to be reached by all stocks, and specifically for F to be below FMSY by 2015, and not later than 2020. Furthermore, the TACs have been set in accordance with ICES advice for the last 3 years and thus intrinsically follow the ICES precautionary approach for fishing opportunities - this is designed to prevent the stock reaching the PRI. In Division 5b there are also effort limitations designed to limit catches and maintain the stock above PRI. Thus SG60 is met. In Division 3a and Subarea 4, the TAC for 2021 has been set provisionally to 50% of the 2020 TAC for the first half of the year, while the EU-UK negotiations continue. Although the provisionally TAC is within ICES total catch advised, without an agreement between the EU-UK it is unclear if the final 2021 TAC will follow scientific advice, and thus if a well-defined HCR is in place and SIa only reaches SG60. Division 5b, the Faroe Islands, accounts for around 50% of the total catches. The Faroese management measures in place, such as the effort system, are not established

	and reviewed within a well defined HCR. Scientific advice on the effort levels has not been followed and thus SG80 is not met. The Faroese are now considering the introduction of management plans with associated TACs to be introduced by 2019, at which point SG80 may be reached.	
Condition	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and that ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY.	
Condition Start	PCR	
Condition Deadline	Year 1 of reassessment	
Milestones	Year 2-4: Promote the adoption of well-defined harvest control rules which are consistent with the harvest strategy and ensure that the exploitation is reduced as limit reference points are approached while keeping the stock fluctuating around a target level consistent with (or above) MSY. Score: 75 Year 1 of reassessment: Evidence shall be presented that a harvest control rule is being implemented that is consistent with the harvest strategy (i.e. the objective of attaining MSY specified in the EU Common Fisheries Policy or equivalent international agreements) and that would ensure that the exploitation rate is reduced as limit reference points are approached. Score: 80	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. As described in section 2.14.2 tusk is managed at NEAFC level, with the UK now being an independent contracting party. There continues to be three TACs but none of these TACs are set within a context of explicit harvest control rules and have been fixed at the same levels of the 2018 TACs, while the total catch advice has decreased the 2020 TAC was 5/6% above this advice. The TACs for 2021 have been set provisionally to 50% of the 2020 TACs for the first half of the year (EC 2021), and bilateral EU-UK negotiations for the remaining of the year are ongoing. As a result of the change in the UK with it leaving the EU rationales presented for this PI were updated (section 0). The condition remains the same however with the amended timelines for the milestones as above.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit and therefore the first milestone is in Year 2 this condition is on target.	
Remedial Action	Milestones are revised above in accordance with the MSC derogation 6. A new action plan is required due to the changes caused by Brexit please see section 3.6 for this.	

Additional information	Revised action Plan from PCR The clients will participate in meetings relevant to ensure that management is appropriate. Year 2-4 ~~1-3~~: The clients will provide evidence of continued engagement with management and other relevant parties to promote the adoption of the CFP objectives. This should ensure appropriate TAC setting that will keep the stock fluctuating around a target level consistent with (or above) MSY. Additionally, the the clients will continue to act through relevant forums such as the NSAC, where the clients are important industry representatives to ensure that management of the stock is appropriate throughout. Year 1 Reassessment ~~4~~: The clients will provide evidence that appropriate TACs have been set that will keep the stock fluctuating around a target level consistent with (or above) MSY. Further to this, there should be evidence that management plans with associated TACs by the Faroe Islands have been introduced for the species.

3.5.2.4 WHG

Table 13. Condition WHG 1.

Performance Indicator	1.2.1
Score	75
Justification	Scoring issue 1.2.1b (SG80) The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives. The EU-Norway agreement aims to fish the stock at or below F=0.15. F has reduced from 0.69 in 1990 and fluctuated around 0.2 since 2002 showing that the strategy is likely to work and SG60 is met. ICES revised its estimates of natural mortality and this has changed reference points. ICES evaluated the EU-Norway plan with the revised M values as not consistent with the Precautionary Approach unless the plan reduced F when the projected biomass fell below Bpa and therefore SG80 is not met. ICES advise that further management strategies should be evaluated in view of the uncertainties surrounding the assessment.
Condition	Evidence should be provided that the harvest strategy is consistent with the precautionary approach and achieves its objective of reducing fishing mortality as the projected biomass drops below relevant reference points.
Condition Start	PCR
Condition Deadline	Year 4

Milestones	Meeting this condition will require the client to encourage the EU and Norway to obtain advice from ICES on an appropriate harvest strategy and control rule for the revised reference points. Managers will need to agree a management plan based on this advice. The anticipated milestones are set out below: Year 2: Evidence that the client is working with ICES, the national authorities and the EU to obtain relevant scientific advice on which to base a management plan. Score: 75 Year 3: Evidence that a new management plan has been developed and tested. Score: 75 Year 4: Evidence that the plan has been implemented. Likely resulting PI score SG 80.	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is no milestone for this Year 1 audit. Notwithstanding this the follow information was recorded at the site visit: The client group noted that since certification, the NS MAP was implemented for whiting in subarea 4 (North Sea) and division 7d (Eastern English Channel). They note that the HCR within the NS MAP for the stock is clear, and the NS MAP include both safeguards (article 7) and specific conservation measures (article 8) should the SSB fall below MSY Btrigger to ensure that exploitations rates are reduced appropriately. The client group also noted that a report on evaluation of the long-term strategies, was available: http://ices.dk/sites/pub/Publication%20Reports/Advice/2019/Special_Requests/eu-norway.2019.06.pdf . In response the assessment team note that whilst the NS MAPs are still in effect for EU fisheries, its effectiveness within the management system is decreased for this stock as the principal HCR tool (TAC) is set at EU-NOR (pre-2021) and EU-NOR-UK (2021) trilateral agreements. A total TAC has been agreed for 2021 (EU 2021), following total catch advised by ICES. This is a favourable outlook for the management of the stock however, F remains above FMSY and therefore at present the principal objectives are still not being met.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is no milestone for this Year 1 audit and therefore the first milestone is in Year 2 this condition is on target.	
Remedial Action	Milestones are revised above in accordance with the MSC derogation 6. A new action plan is required due to the changes caused by Brexit please see section 3.6 for this.	
Additional information	Revised action plan from PCR	

	In the consultations between EU and Norway in London 6-7 June 2018, it was agreed to send a request to ICES to evaluate long-term management strategies for cod, haddock, saithe and whiting. However, North Sea whiting is part of the North Sea multiannual plan (NS-MAP) recently decided by the EU. This addresses a reduction in F as the SSB approaches SSBLIM (PRI) and was passed by the EU Parliament on May 29th and by the Council on June 18th 2018. The NS MAP should be in effect by the TAC setting for 2019. One key objective of the NS MAP is contribute to the achievement of the objectives of the CFP, and it shall aim to ensure that exploitation of living marine biological resources restores and maintains population stocks above levels which can produce MSY. Year 2 ~~1~~: The clients will provide evidence that they are working with ICES, national authorities and/or the EU to obtain the relevant scientific advice on the long-term management strategies for whiting. Year 3-4 ~~2-3~~: The clients will provide evidence that the NS-MAP by the EU is implemented and that the work on a management strategy between EU and Norway is considered and possibly implemented.

Table 14. Condition WHG 2.

Performance Indicator	1.2.2
Score	~~65~~ 75
Justification	Scoring issue 1.2.2a (SG80) Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs Advice provided by ICES is based on standard HCR that reduces fishing mortality when the SSB falls below Bpa. The rule assumes F=0.15 is the maximum fishing mortality rate. Hence SG60 is met. The EU-Norway management plan uses the same F but does not reduce F when biomass falls below Bpa. Following a revision of the M values used in the assessment ICES evaluated the plan as not consistent with the Precautionary Approach. Hence SG80 is not met. Scoring issue 1.2.2c (SG80) Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs. The main tools for controlling exploitation are catch limits and restrictions on fleet capacity. In addition there are minimum mesh sizes for the principal fleets (TR1) of 120mm. During the period when the EU-Norway management plan was in operation the fishing mortality was reduced from 0.69 to approximately 0.2. This shows the tools had some success during that period. In the most recent years the management plan has been made obsolete by the revision of the natural mortality values and reference points so there is insufficient evidence available to evaluate SG80 or SG100 until further stock assessments have been carried out.

Condition	Develop and adopt well-defined harvest control rules that are consistent with the harvest strategy and ensure that exploitation rates are reduced as the PRI is approached, and are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. The HCR should be contained within a management plan. Evidence should be provided that the management plan is effective in achieving its objectives.	
Condition Start	PCR	
Condition Deadline	Year 1 Reassessment	
Milestones	Meeting this condition will require that Condition 1 (WHG) is achieved and that there is progress towards reducing F towards this strategy. The anticipated milestones are set out below: Year 4: Evidence that the plan in Condition 1 (WHG) has been implemented. Likely resulting PI score: 65 Year 1 of reassessment: Evidence from stock assessment that F is at or below the FMSY reference point. Likely resulting PI score: 80	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. The assessment team note that whilst the NS MAPs are in effect for EU fisheries since 2019, its effectiveness within the management system is decreased for this stock as the principal HCR tool (TAC) is set at EU-NOR (pre-2021) and EU-NOR-UK (2021) trilateral agreements. A total TAC has been agreed for 2021 (EU 2021), and following total catch advised by ICES. This is a favourable outlook for the management of the stock and because the TAC now follows ICES total catch advice based on the ICES MSY approach a well-defined HCR can now be considered in place for SI1.2.2a SG80 is reached. This is rescored under section 3.4.13. With regard to SI c however, F remains above FMSY and therefore at present there is no evidence tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	For SIa –condition closed for this SI and rescored in section 3.4.13. For SIc as per the MSC derogation 6 (here) there is no milestone for this Year 1 audit and given the progress on the HCR being in place can be considered ahead of target. The rescore for this PI is now 75	
Remedial Action	Milestones are revised above in accordance with the MSC derogation 6. A new action plan may be required due to the changes caused by Brexit please see section 3.6 for this.	
Additional information	Revised action Plan from PCR	

	Year 4 ~~3~~: The clients will provide evidence that the NS-MAP has been implemented and that the work on a management strategy between EU and Norway is considered and possibly implemented. Year 1 reassessment ~~4~~: The clients will present the latest stock assessment, which hopefully show that F is at or below FMSY reference point

3.5.2.5 NEP 3A

Table 15. Condition NEP 3A 1.

Performance Indicator	1.2.2
Score	65
Justification	Scoring issue 1.2.2a (SG80) Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs. The key harvest control rule is that the TAC is adjusted annually based on the stock biomass estimate derived from the annual underwater TV surveys and the target harvest ratio equivalent to the FMSY proxy (Fmax) estimated from the yield-per-recruit model. The FMSY proxy framework adopted by the ICES WGNSSK would implicitly reduce the exploitation rate by using a lower target harvest ratio if the burrow density estimate from the UWTV survey dropped below 0.3 burrows m-2, By maintaining the TAC at a level equivalent to fishing at FMSY, the harvest control rule is designed to ensure that the stock fluctuates around BMSY which is well above the level at which recruitment would be impaired. SG60 is met. However. there is no formally defined limit reference point (Blim) for this fishery below which recruitment is likely to be impaired, and there is no defined value of MSY Btrigger as used in harvest control rules in other ICES-assessed fisheries. It is not clear therefore what management action would be taken to reduce the exploitation rate if the stock biomass estimated from the UWTV survey fell significantly towards or below an implicit limit reference point. . On implementation of the agreed EU multi-annual plan (MAP) for the North Sea (including Skagerrak & Kattegat), the FMSY (proxy) management already being used for Nephrops will be formalised – and once ICES is able to provide a value for MSY Btrigger, it will serve to underpin the MAP harvest control rule. Within the MAP there are safeguard rules for situations where stock biomass falls below MSY Btrigger (fishing mortality will be reduced below FMSY) and if stock biomass falls below Blim (fishing mortality will be limited to bycatch only or similar measures). Without any defined biomass reference points, it is not clear when such actions to reduce fishing mortality will be taken, and so the HCR cannot be considered at present to be well defined. SG80 is not met. Scoring issue 1.2.2b (SG80) The HCRs are likely to be robust to the main uncertainties.

	The main uncertainties underlying the harvest control rules have been identified. The stock biomass estimated from the UWTV survey incorporates a cumulative bias correction factor, which takes account of uncertainties such as edge effects within the burrow counting process. However, there is significant uncertainty around the choice of FMSY proxy and the values of the target harvest ratio equivalent to the various FMSY proxies. Fmax is chosen as a conservative proxy for FMSY for this fishery, but the whole approach to estimating FMSY proxies adopted by WGNSSK can be considered as still very much "work in progress", and further development and evaluation of the methodology is required. Fmax was originally chosen as the preferred FMSY proxy for this fishery because of the high discard rates observed in the fishery. However, the effective reduction in minimum landing size has reduced the discard rate to a very low level in comparison with previous years, yet the assessment is still using Fmax as the FMSY proxy. The change in size distribution of landings may have an impact on the output of the yield-per-recruit model used to derive FMSY proxies, and there are new estimates of discard survival rate which have not yet been incorporated into the stock assessment. These issues were reviewed at the most recent ICES benchmark on Nephrops 3a in 2016, but no firm conclusions were drawn about the importance of these uncertainties in relation to stock dynamics. In addition to revised estimates of discard survival, there are uncertainties underlying growth parameter estimates. The HCR also assumes that the stock biomass at the beginning of the year is the same as the stock biomass estimated from the TV survey in the previous year, and in a declining stock this would overestimate the stock biomass and thus deliver a positively-biased TAC. In conclusion the harvest control rules do not take into account the main uncertainties. SG80 is not met.
Condition	Provide evidence that well-defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached , and that are expected to keep the stock fluctuating around a target level consistent with (or above) MSY. In addition, provide evidence that the HCRs are likely to be robust to the main uncertainties.
Condition Start	PCR
Condition Deadline	Year 2 audit
Milestones	This is an existing condition for the DFPO and SFPO fisheries which were certified in January 2015 (Cappell, 2015a, 2015b). The condition milestones are as follows: Year 2 (2017): Show written evidence of consultation with the relevant authorities to consider options for controlling exploitation rate if limit reference points are approached including taking the main uncertainties into account and for keeping the stock fluctuating around a target level consistent with (or above) MSY. Year 3 (2018): Provide evidence that a mechanism for controlling exploitation rate if limit reference points are approached, that take the main uncertainties into account and that are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, has been agreed through consultation with the relevant authorities.

	Year 4 (2019): Implementation of well-defined harvest control rules that take the main uncertainties into account and that ensure that the exploitation rate is reduced as the PRI is approached , while expecting to keep the stock fluctuating around a target level consistent with (or above) MSY through consultation with the relevant authorities. The new condition is a continuation of the existing DFPO/SFPO condition. Milestones have therefore been aligned and the existing Year 4 becomes the new Year ~~1~~2 milestone, once the covid derogation is applied Year ~~1~~2: Provide evidence of implementation of well-defined harvest control rules that take the main uncertainties into account and that ensure that the exploitation rate is reduced as the PRI is approached , while expecting to keep the stock fluctuating around a target level consistent with (or above) MSY through consultation with the relevant authorities	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. The implementation of the EU MAP has provided the basis for developing well-defined harvest control rules, but in the absence of defined values for MSY BTRIGGER and BLIM, and the need to resolve the uncertainties underlying the choice of FMSY proxy, further work is required before this condition can be closed.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit and therefore the first milestone is in Year 2 this condition is on target.	
Remedial Action	N/A	
Additional information	Revised action plan from PCR The NS MAP was agreed in July of 2018 (https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0973&from=EN). One key objective of the NS MAP is contribute to the achievement of the objectives of the CFP, and it specifically outline establishing target fishing mortality that corresponds to the objective of reaching and maintaining MSY as ranges of values which are consistent with achieving MSY (FMSY). Additionally, it addresses MSY Btrigger points for all concerned stocks including nephrop units (for nephrops: abundance reference points). Hence, an underlining aim of the NS MAP is to ensure that, for the nephrops units, abundance reference points are provided in the best available scientific advice by ICES, so appropriate management actions can be taken, should stocks fall below these trigger points. Year ~~1~~2: The clients will show evidence that a MSY trigger (or equivalent) reference point and methods for taking the main uncertainties in the estimation of the target harvest ratio into account have been implemented in the ICES advisory framework for this Nephrops unit. If abundance	

	reference points are not yet established, the clients will provide evidence that the HCR specified in the NS MAP is followed to ensure that the target fishing mortality is set at or below FMSY to ensure that the stock is fluctuating at MSY.

3.5.2.6 PRA

Table 16. Condition PRA 2.

Performance Indicator	1.2.1
Score	60
Justification	75 Scoring issue b (SG80): The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives. The key element of the current harvest strategy is that annual TACs should be set in line with an MSY framework where the TAC is based on fishing at FMSY when the stock biomass is above MSY Btrigger, but setting a TAC based on lower values of F when stock biomass drops below MSY Btrigger. This strategy has been in place since 2014 and was formally incorporated in the Long Term Management Strategy (LTMS) agreed by the EU and Norway in 2018. The LTMS is based upon a Management Strategy Evaluation (MSE) undertaken by ICES to evaluate the combination of fishing mortality and MSY Btrigger that provides the highest yield without exceeding the 5% probability level of the biomass falling below Blim over a 30 year period. The harvest strategy therefore has been evaluated in theory and is therefore likely to work in practice. The SG60 is met. The most recent stock assessment has concluded that after an initial recovery period following the decline observed from 2008 to 2012, stock biomass has now declined to below MSY Btrigger. Previously TACs had not always been set in line with ICES advice, but in the last two to three years the stock has declined despite TACs being set within the MSY framework. The assessment shows that F has exceeded FMSY in most recent years, and therefore it seems likely that the TAC has been set too high. This can be explained by recent changes in the stock assessment methodology. Previous stock assessments have used a stock-production model which gave a more optimistic outlook on stock status than the newly-implemented length-based model, and TACs were set in line with the best available scientific advice at the time. In addition new data on discard rates in the Norwegian fleet suggest that the overall discard rate in the fishery assumed in the assessment in recent years may have been an underestimate of the true level. Although other elements of the harvest strategy such as reducing the discarding of small non-commercial-sized prawns and reducing the incentives for high-grading appear to be working, the key element of setting the TACs within an MSY framework does not appear to have worked in the last 2-3 years, and so SG80 is not met. Following the revised assessment of stock status from the new length-based model and with new

	information on discard rates, the harvest strategy is expected to work in future, but the assessment team notes that the TAC set by the EU-Norway consultations for 2018 was 8,900 tonnes which is 3.8% higher than the TAC advised by ICES, and therefore the current harvest strategy is not being fully adhered to. The TAC for 2019 will be the first to be covered by the new LTMS, so it is expected that in future TACs will not exceed the ICES advice.	
Condition	Provide evidence that the harvest strategy is achieving its objectives.	
Condition Start	PCR	
Condition Deadline	Year 1 of reassessment	
Milestones	This is an existing condition for the DFPO fishery which was raised during the Year 2 surveillance audit in August 2018 (Addison and Bekkevold, 2018c). The condition milestones are as follows: Year 3 (2019): Provide evidence that TACs are being set in line with the LTMS and that observed F is below the FMSY or FTARGET. Year 4 (2020): Provide evidence that TACs continue to be set in line with the LTMS, that observed F continues to be below the FMSY or FTARGET and provide some initial evidence that the harvest strategy is achieving its objectives. Year 5 (2021): Provide evidence that TACs continue to be set in line with the LTMS, that observed F continues to be below the FMSY or FTARGET and provide clear evidence that the harvest strategy is achieving its objectives. The new condition is a continuation of the existing DFPO condition. Milestones have therefore been aligned and the existing Year 3 becomes the new Year 2 milestone. These milestones also apply to the SFPO fishery. Year 2: Evidence that TACs are being set in line with the LTMS and that observed F is below the FMSY or FTARGET. Score: 75 Year 3: Evidence that TACs continue to be set in line with the LTMS, that observed F continues to be below the FMSY or FTARGET and that there is some initial evidence that the harvest strategy is achieving its objectives. Score 75. Year 4: Evidence that TACs continue to be set in line with the LTMS, that observed F continues to be below the FMSY or FTARGET and that there is clear evidence that the harvest strategy is achieving its objectives. Score 80.	
Progress on Condition	Year 1	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit. The audit team notes that there continue to be problems with TACs being regularly exceeded, although F has generally been fluctuating around FMSY and FMGT (FTARGET). Actual catches in 2019 were 29% higher than the advised catches (actual catch of

		7,944 tonnes compared with advised catch of 6,163 tonnes). These higher actual catches in 2019 were due to banking of 768 tonnes from 2018 by the Norwegian and Danish fleets despite stock biomass being low, discarding of 368 tonnes, lack of correction for the loss in weight due to on-board boiling equating to approximately 463 tonnes, and the 2019 TAC being exceeded by approximately 180 tonnes. Actual catches in 2020 were also higher than advised catches, but the overshoot was only 5.6%, not least because the TACs for 2020 and 2021 are the first to be set under the LTMS where carry over of unused TAC (including from 2019 to 2020) is not permitted if stock biomass is below MSY BTRIGGER, and because estimated losses in weight due to on-board boiling of shrimps, which are included in the NIPAG estimates of catches, appear to have been over-estimated following changes in practices recently within the Norwegian fleet. Some progress has been made therefore in relation to meeting this condition.
	Year 2	N/A
	Year 3	N/A
	Year 4	N/A
Progress Status	As per the MSC derogation 6 (here) there is now no milestone for this Year 1 audit and therefore the first milestone is in Year 2 this condition is on target.	
Remedial Action	N/A	
Additional information	Revised action plan from PCR Year 2~~1~~: DFPO and SFPO will work with scientists, ICES and the EU and provide evidence that ICES continues to provide precautionary advice within the MSY framework, and that the TAC for 2019 has been agreed in line with the EU/Norway LTMS such that the stock is being rebuilt to a level that is highly likely to be above the PRI. Year 3~~2~~: DFPO and SFPO will provide evidence that the TACs are being set within the EU/Norway LTMS and show that the stock has started to recover towards MSYBtrigger. Year 4~~3~~: DFPO and SFPO will provide evidence that the stock has rebuilt to a level that is highly likely to be above the PRI.	

3.5.3 New Conditions

3.5.3.1 21-23 PLE

Table 17. Condition 21-23 PLE 2

Performance Indicator	1.2.2
Score	75
Justification	The harvest rate has been steadily decreasing and the stock has never been below B_{lim}, has increased since 2009 and is now above MSY $B_{trigger}$. Therefore there is some evidence that the tools used are effective in controlling exploitation and SG60 is met. However, fishing mortality is now estimated to still be above F_{MSY} while the TAC is set to total catches and discards (22%) are not being landed. Therefore in the team's view the HCRs tools (e.g. the TAC) in use are not appropriate and effective in achieving the exploitation levels required under the HCRs and SIc SG80 is now not met.
Condition	By year 4 evidence should be provided that the harvest control rule tools are appropriate and effective in achieving the exploitation levels required under the HCRs e.g. that the TAC is limiting catches and discards are being accounted for.
Condition Start	Year 1
Condition Deadline	Year 4.
Milestones	Year 2: Evidence that the client is working with relevant authorities and that the requirements of the harvest control rule tools being appropriate and effective in achieving the exploitation levels are being considered. Score: 75. Year 3: Evidence will be shown to the assessment team that a plan to implement HCR tools which are effective in delivering the HCRs has been developed. Score: 75 Year 4: Evidence will be shown to the assessment team that the plan has been implemented and that the HCRs tools in place can be shown to be appropriate and effective in controlling exploitation levels required under the HCRs. Score: 80
Verification with other entities	See section 3.6

Carry over condition	N/A
Remedial Action	N/A

3.5.3.2 POK

Table 18. Condition POK 1

Performance Indicator	1.2.1
Score	75
Justification	Prior to 2019, stock assessments indicated that the biomass was fluctuating around a value consistent with MSY and that F was below FMSY consistent with the argument that the harvest strategy was working and SG60 is met. However, revised assessments (2019 onwards) now suggest that SSB is not at MSY levels while F is increasing in recent years above FMSY (ICES_POK 2020). Although stock biomass increased and fishing mortality have decreased in the past they are not presently at MSY levels, and thus the harvest strategy is not reaching its objectives and SG80 is not reached.
Condition	By the 1st year of reassessment evidence should be provided that the harvest strategy is achieving its objectives of maintaining stocks above MSY levels.
Condition Start	Year 1
Condition Deadline	Year 1 Surveillance of reassessment. FCP2.2 - 7.18.1.6 exceptional circumstances applies and 5 years from this Year 1 audit takes the condition into the next certificate period. The current certificate ends 30-04-2025 but the last audit of the fishery in the current certification will be ~ 30-04-2024 (Year 4 surveillance). Under the TCA agreement between the EU and the UK existing EU quota in UK waters will be transferred to the UK over a 5 ½ year period to 30 June 2026, with specific percentages of annually agreed Total Allowable Catches (TACs) agreed for each fishing stock. The final TACs each year will likely be agreed within annual meetings between EU-NOR-UK but the development of well-defined HCR agreements required for Harvest Strategy objectives are likely to occur after the end of the current certificate cycle therefore justifying the condition deadline in the next certification period.
Milestones	Year 2: Evidence that the client is working with relevant authorities and that the requirements of the objectives of managing the stock to MSY are being considered. Score: 75.

	Year 3 -4: Evidence that the client is working with relevant authorities and that the requirements of the objectives of managing the stock to MSY are being implemented. Score: 75 Year 1 of reassessment: Evidence that the client is working with relevant authorities and that the requirements of the objectives of managing the stock to MSY have been achieved. Resulting PI score SG 80.
Verification with other entities	See section 3.6
Carry over condition	N/A
Remedial Action	N/A

Table 19. Condition POK 2

Performance Indicator	1.2.2
Score	75
Justification	Stock biomass has increased and fishing mortality have decreased in the past therefore there is some evidence that the HCR were effective in controlling exploitation previously and SG60 can be met. However, fishing mortality has been above FMSY since 2016-2017 so there is no clear evidence that the tools in use are presently effective in achieving the exploitation levels required under the HCRs and thus SG80 is not reached.
Condition	By year 4 evidence should be provided that the harvest control rule tools are appropriate and effective in achieving the exploitation levels required under the HCRs e.g. F is below FMSY
Condition Start	Year 1
Condition Deadline	Year 4.
Milestones	Year 2: Evidence that the client is working with relevant authorities and that the requirements of the condition are being considered. Score: 75. Year 3: Evidence that a plan has been developed and tested and includes the requirements of the condition. Score: 75 Year 4: Evidence that the plan has been implemented and that the HCRs being show to be appropriate and effective in controlling exploitation levels. Score: 80
Verification with other entities	See section 3.6
Carry over condition	N/A
Remedial Action	N/A

3.5.3.3 NS SOL - 2

Table 20. Condition NS SOL 3.

Performance Indicator	1.2.2
Score	75
Justification	**1.2.2c** SIc: Historically fishing mortality has steadily decreased to be close to FMSY. So there is some evidence that indicates that the management tools in use were appropriate and effective and SG60 is reached. However, as F has never reached FMSY (the exploitation level required) SG80 is not met
Condition	By the 1st year of reassessment evidence should be provided that the harvest control rules (principally the annual negotiations on the HCR tool – TAC) are achieving their objectives in reducing fishing mortality to below F_{MSY}.
Condition Start	Year 1
Condition Deadline	Year 1 of reassessment
Milestones	Meeting this condition will require the client to encourage the EU and the UK to obtain advice from ICES on an appropriate harvest strategy and control rule. Managers will need to agree a management plan based on this advice. The anticipated milestones are set out below: Year 2: Evidence that the client is working with ICES, the UK authorities, and the EU to obtain relevant scientific advice on which to base a management plan. Score: 75 Year 3: Evidence that a new management plan has been developed and tested and includes the requirements of the condition to reduce F below FMSY. Score: 75 Year 4: Evidence that the plan has been implemented and includes the requirements of the condition to reduce F below FMSY. Score: 75 Year 1 of reassessment: Evidence that the fishing mortality has been brought to FMSY level and meets the requirements of the condition to reduce F below FMSY. Score: 75Likely resulting PI score SG 80.
Verification with other entities	See section 3.6
Carry over condition	N/A

Remedial Action	N/A

3.5.3.4 PRA – 3

Performance Indicator	1.1.1
Score	60
Justification	The length-based Stock Synthesis (SS3) stock assessment model used by the NAFO/ICES Pandalus Assessment Group (NIPAG) for the shrimp fishery estimated that spawning stock biomass was 7581 tonnes in 2021 which is above B_{LIM} (6,300 tonnes). Recent Guidance on the MSC Interpretations Page for scoring stock status for ICES stocks states that the SG80 is met when the stock is estimated above 1/2 of the distance between B_{LIM} (6300 tonnes) and B_{PA} (identical to MSY $B_{TRIGGER}$) (9,900 tonnes), i.e. 8,100 tonnes. In addition to the general MSC Guidance on scoring of PI 1.1.1a, the ICES advice for 2021 (ICES_PRA 2021) provides confidence intervals for the estimate of SSB, from which it can be calculated that the probability that the estimate of SSB in 2021 being above B_{LIM} was 0.726. The current estimate of SSB is below 8,100 tonnes and there is at least a 70% probability (but less than 80% probability) that the true status of the stock is higher than the PRI. SG60 is met, but SG80 is not met. Note: scoring issue b also scored less than 80; however for this scoring issue, PI 1.1.2 was triggered.
Condition	By the Year 4 surveillance audit evidence should be provided that it is highly likely that the stock is above the point at which recruitment would be impaired (PRI).
Condition Start	Year 1
Condition Deadline	Year 4
Milestones	Year 2: Evidence that the client is working with ICES, the relevant national authorities, and the EU on identifying measures required to rebuild the stock to a level that is highly likely to be above the PRI. Score: 60 Year 3: Evidence that the measures have been implemented and that the stock is rebuilding to a level that is highly likely to be above the PRI. Score 60. Year 4: Evidence that the stock has rebuilt to a level that is highly likely to be above the PRI. Score 80* * for SIa

Verification with other entities	The client will need to work with ICES, the relevant national authorities, and the EU on identifying measures required to rebuild the stock to a level that is highly likely to be above the PRI. The LTMP for this stock is in place (EU-NOR 2021) for this which ensures that the requirements of FCP7.19.8 are met.
Carry over condition	N/A
Remedial Action	N/A

3.6 Client action plan

New Conditions		
2 – 21-23 PLE	Year 2: Reviewing the latest advice for the stock, this shows that SSB is well above MSY Btrigger, F is below FMSY and advice on catches was increased. Hence, the clients will provide evidence that the stock is rebuilding from the status of the stock in the ICES advice provided in 2020 and that the MSY approach to manage the stock is followed. If new advice comes in indicating that the exploitation rates should be reduced to ensure rebuilding of the stock, the clients will provide evidence that they have been working with relevant authorities and that the requirements for stock rebuilding/reducing exploitation rates are being considered. Year 3: Should the fishing mortality still be above FMSY, the client will present a plan to implement HCR tools which are effective in achieving exploitation levels required under the CFP. Year 4: Should the fishing mortality still be above FMSY, the client will provide evidence that the plan has been implemented, and that the HCR tools are appropriate and effective in controlling exploitation levels required under the CFP.	1.2.2
1 - POK	After Brexit, the TAC setting for this stock is subject to tri-lateral agreement between EU, Norway and the UK. The TAC setting is, however, still advised by ICES following the MSY approach, and work is underway to agree management strategies for the shared stocks, including saithe. Year 2: The clients will provide evidence of continued engagement with management and other relevant parties to promote the adoption of the CFP objectives. This should ensure appropriate TAC setting that will keep the stock fluctuating around a target level consistent with (or above) MSY. Additionally, the clients will continue to act through relevant forums such as the NSAC, where the clients are important industry representatives to ensure that management of the stock is appropriate throughout. Year 3-4: The clients will provide evidence of continued engagement with management and other relevant parties to promote the adoption of the CFP objectives. This should ensure appropriate TAC setting that will keep the stock fluctuating around a target level consistent with (or above) MSY. Additionally, the clients will continue to act through relevant forums such as the NSAC, where the clients are important industry representatives to ensure that management of the stock is appropriate throughout, this includes implementation of tri-lateral management strategies where appropriate. Year 1 of reassessment: The clients will provide evidence that appropriate TACs have been set that will keep the stock fluctuating around a target level consistent with (or above) MSY.	1.2.1
2 - POK	After Brexit, the TAC setting for this stock is subject to tri-lateral agreement between EU, Norway and the UK. The TAC setting is, however, still advised by ICES following the MSY approach, and work is underway to agree management strategies for the shared stocks, including saithe.	1.2.2

	Year 2: The clients will provide evidence of continued engagement with management and other relevant parties to promote the adoption of the CFP objectives. This should ensure appropriate TAC setting that will keep the stock fluctuating around a target level consistent with (or above) MSY. Additionally, the clients will continue to act through relevant forums such as the NSAC, where the clients are important industry representatives to ensure that management of the stock is appropriate throughout. Year 3 and 4: The clients will provide evidence of continued engagement with management and other relevant parties to promote the adoption of the CFP objectives. This should ensure appropriate TAC setting that will keep the stock fluctuating around a target level consistent with (or above) MSY. Additionally, the clients will continue to act through relevant forums such as the NSAC, where the clients are important industry representatives to ensure that management of the stock is appropriate throughout, this includes implementation of a management strategy for the stock. Year 1 reassessment: The clients will provide evidence that a tri-lateral management strategy has been implemented and that appropriate TACs have been set that will keep the stock fluctuating around a target level consistent with (or above) MSY.	
2 – NS SOL	After Brexit, the TAC setting for this stock is subject to bi-lateral agreement between EU and the UK. The TAC setting is, however, still advised by ICES following the MSY approach, and work is underway to agree management strategies for the shared stocks, where appropriate. Year 2: The clients will provide evidence of continued engagement with management and other relevant parties to promote the adoption of the CFP objectives. This should ensure appropriate TAC setting that will keep the stock fluctuating around a target level consistent with (or above) MSY. Additionally, the clients will continue to act through relevant forums such as the NSAC, where the clients are important industry representatives to ensure that management of the stock is appropriate throughout, this includes joint management strategies. Year 3: The clients will provide evidence that a new management strategy has been developed and tested, and that this includes the requirements of the condition to reduce F below FMSY. Year 4: The clients will provide evidence that a new management strategy has been implemented, and that this includes the requirements of the condition to reduce F below FMSY. Year 1 of reassessment: The clients will provide evidence that the fishing mortality has been brought to FMSY level and meets the requirements of the condition to reduce F below FMSY.	1.2.2
3 – PRA	Year 2: DFPO and SFPO will work with scientists, ICES and the EU and provide evidence that ICES continues to provide precautionary advice within the MSY framework, and that the TAC is agreed in line with the EU/Norway LTMS such that the stock is being rebuilt to a	1.1.1

	level that is highly likely to be above the PRI. This should provide some evidence that the management strategy is effective to ensure rebuilding of the stock. Year 3: DFPO and SFPO will work with scientists, ICES and the EU and provide evidence that ICES continues to provide precautionary advice within the MSY framework, and that the TAC is agreed in line with the EU/Norway LTMS such that the stock is being rebuilt to a level that is highly likely to be above the PRI. This should provide some evidence that the management strategy is effective to ensure rebuilding of the stock. Year 4: DFPO and SFPO will work with scientists, ICES and the EU and provide evidence that ICES continues to provide precautionary advice within the MSY framework, and that the TAC is agreed in line with the EU/Norway LTMS such that the stock has rebuilt to a level that is highly likely to be above the PRI.	

3.6.1 Consultation on conditions

A number of the conditions require client consultation with management entities through existing national working groups. Further there is evidence of the existence of support from management organizations in the existing conditions which were provided in the PCR for this fishery. These include generic acknowledgments of support and willingness to assist the fishery with documentation of catches/discards and guidance / development of management measures under their roles. These consultations continue for the new conditions and the clients will consult with scientists at national research institutes and within the wider ICES community and will continue to work with the relevant national authorities to fulfill the conditions. The client action plans in some cases require lobbying and they note that they will continue to act through relevant forums such as the NSAC, where the clients are important industry representatives, as well as OIGs. Furthermore, the clients will work in relation to the Specialised Fisheries Committee that the UK and the EU has established as part of the Trade and Cooperation Agreement, where we will contribute to continuing sustainable fisheries management in line with the EU MAPs.

Though the UK has left the EU, this does not change the approach to manage European fisheries sustainable, and the principles and objectives of management of stocks of common interest to the Union and third countries are clearly stated in the European MAPs – both for the North Sea (article 14 https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32018R0973) and Western Waters (article 15 EUR-Lex - 32019R0472 - EN - EUR-Lex (europa.eu)). Evidence that the UK has committed to this is through the ICES MoU (UK 2021), TCA and the bilateral/trilateral agreements. Further to this, the clients have supplied the ExCom report from the 27th of May 2021, where the EU Commission participated, and Brexit implications was discussed, thus showing that this management arrangement is in train. The client also supplied an agenda for a meeting with Danish national authorities on cod management and the Swedish client provided links to the SWE cod plan - https://www.havochvatten.se/fiske-och-handel/regler-och-lagar/arter-regler-for-fiske-och-rapportering/torsk---regler-for-yrkesfiskare.html . Additionally, the client made the CAB aware that meetings with both UK and Norwegian fishery organizations to specifically address cod management are planned.

The above provides evidence that supports the close cooperation between client and the managers of the fishery and confirms that no change in: i. Investment of time or money by these entities. ii. Changes to management arrangements or regulations. Or iii. Re-arrangement of research priorities by these entities is required by these entities for the conditions to be met (7.19.8).

3.7 PI scoring

Table 21. Final aggregate Principle 1 Scores by species and stock. * 3aN, 4, 7d cod is currently self-suspended in other MSC certified fisheries. Self-suspension for this stock in this fishery took effect at the Public Certification Report publication, it is not updated in this report.

Species		Description of stock	Stock code	P1 aggregate Score at PCR	P1 Aggregate score at this S1 Audit
Atlantic cod	*Gadus morhua*	3aN, 4, 7d	COD	85.0*	Self-suspended and not evaluated under P1.
Haddock	*Melanogrammus aeglefinus*	3a, 4, 6a	NS HAD	90.8	90.8
		7b-k	EC HAD	85.0	83.3
Hake	*Merluccius merluccius*	Northern stock	HKE	94.2	94.2
Ling	*Molva molva*	3a, 4a etc. (other areas)	LIN	80.0	80
Megrim	*Lepidorhombus whiffiagonis*	4a, 6a	MEG	90.8	90.0
Plaice	*Pleuronectes platessa*	Subdivisions 21–23 (Kattegat, Belt Sea, Sound)	21-23 PLE	90.8	91.7
		3aN, 4	NS PLE	94.2	95.0
		7d	EC PLE	87.5	87.5
Saithe	*Pollachius virens*	3a, 4, 6	POK	95.0	85.0
Dover sole	*Solea solea*	3a, 22-24	3A SOL	83.3	85.0
		4	NS SOL	85.8	85.0
Tusk	*Brosme brosme*	Northeast Atlantic	USK	85.0	85.0
Whiting	*Merlangius merlangus*	4, 7d	WHG	83.3	88.3
Norway lobster (*Nephrops*)	*Nephrops norvegicus*	FU7 Fladen Ground	FU7 NEP	91.7	91.7
		3a (Kattegat and Skagerrak)	3A NEP	90.0	90.0

Species		Description of stock	Stock code	P1 aggregate Score at PCR	P1 Aggregate score at this S1 Audit
Northern prawn (*Pandalus*)	*Pandalus borealis*	3a, 4a East (Skagerrak, Norwegian Deep)	PRA	81.7	81.7

Table 22. Summary of Principle 1 PI scores following this year 1 audit. * not assessed as suspended.

Performance Indicator (PI)		COD*	NS HAD	EC HAD	HKE	LIN	MEG	21-23 PLE	NS PLE	EC PLE	POK	3A SOL	NS SOL	USK	WHG	FU7 NEP	3A NEP	PRA
1.1.1	Stock status	60	90	80	100	80	100	90	100	90	70	70	60	90	90	100	100	60
1.1.2	Stock rebuilding	80	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	90	90	90	N/a	N/a	N/a	N/a	90
1.2.1	Harvest strategy	85	85	75	85	85	85	90	85	80	75	90	85	85	75	80	90	75
1.2.2	Harvest control rules & tools	85	80	65	80	75	80	80	85	75	75	80	75	75	75	80	65	80
1.2.3	Information & monitoring	100	100	100	100	80	80	100	100	90	100	80	100	80	100	90	90	90
1.2.4	Assessment of stock status	100	100	100	100	80	95	100	100	100	100	100	100	90	100	100	95	95

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