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Assessing the sustainability of fisheries catch limits negotiated by the UK for 2020 to 2022

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Explanatory Note

The fisheries sustainability assessment detailed in this report presents different figures than those previously quoted for the UK. A Written Ministerial Statement made on the 29th of April 2020¹ stated that the UK had 67% of TACs (Total Allowable Catches) set at MSY for 2020, whereas this report states that for the same year 34% of TACs were set consistent with ICES scientific advice. This change is not because the UK now judges the outcome of negotiations for 2020 to be less sustainable, but because the assessment in this report asks a fundamentally different question for a far greater number of TACs.

This report and accompanying methodology report (Nash *et al.*, 2022) is the culmination of the commitment, to undertake a forward-looking review of this assessment methodology, which is outlined in the same written Ministerial Statement. This report documents why this new forward-looking or intention-based assessment is more appropriate for reporting on the UK's negotiated outcomes. However, in fisheries management, intentions do not always match outcomes as fishery forecasts of population size and mortality rates are uncertain. Therefore, this assessment should be viewed in connection with outcome-based reporting such as that under the [Marine Strategy](#) and [UK Biodiversity Indicators](#) which retrospectively measures and reports on the status of UK stocks and fishing pressure.

¹ [Written statements - Written questions, answers and statements - UK Parliament](#)

Executive Summary

The [Fisheries Act 2020](#) refers to fisheries objectives, one of which is the precautionary objective: *'that exploitation of marine stocks restores and maintains populations of harvested species above biomass levels capable of producing maximum sustainable yield.'*

The UK, as an independent coastal state, is committed to achieving sustainable fisheries management and increasingly setting fishing opportunities consistent with scientific advice from the International Council for the Exploration of the Sea (ICES) encompassing both their Maximum Sustainable Yield (MSY) and Precautionary Approach (PA) advice.

The fishery management units covered by Total Allowable Catches (TACs) used for many international fisheries rarely align with the ICES' stock assessment units. This mismatch makes assessing the TACs against the scientific advice highly complex and potentially open to interpretation. This report presents the outcome of applying a new, independently peer-reviewed approach to evaluating the sustainability of TAC setting against the scientific advice; specifically, those negotiated in bilateral UK-EU, trilateral UK-EU-Norway, NEAFC and Coastal States negotiations.

The UK's Department for Environment, Food & Rural Affairs (Defra) commissioned a review of the methodology to assess sustainable TAC setting in 2020 for fishing opportunities in 2021 (Nash *et al.*, 2021). This review, overseen by a panel of independent experts, defined the approaches to be used when comparing TACs with ICES' advice produced by their MSY approach.

Subsequently, the findings of the methodology review to assess sustainable TAC setting and the principles agreed to assess consistency with MSY have additionally been extended to evaluate the negotiated catch limits by the UK including all the TACs of interest to the UK for which ICES' advice is available.

This report provides the assessment of negotiated catch limits for 84 TACs agreed for 2021 and 2022 using this new methodology along with a reassessment of TACs agreed for 2020 using the new approach to provide greater context. In order to provide a consistent suite of TACs which can be reported on across these years, a set of 79 "baseline" TACs have been identified.

For 2020, 27 of the 79 baseline TACs were consistent with ICES' advice (34%) (Table 4). Of these 27, 19 out of 43 were evaluated to be consistent with ICES' MSY advice and 8 out of the remaining 36 were evaluated to be consistent with ICES' PA advice.

For 2021, 27 of the 79 baseline TACs were evaluated to be consistent with ICES' advice (34%) (Table 5). Of these 27, 20 out of 43 were evaluated to be consistent with ICES'

MSY advice and 7 out of the remaining 36 were evaluated to be consistent with ICES' PA advice.

For 2022, 28 of the 79 baseline TACs were evaluated to be consistent with ICES' advice (35%) (Table 6). Of these 28, 19 out of 43 were evaluated to be consistent with ICES' MSY advice and 9 out of the remaining 36 were evaluated to be consistent with ICES' PA advice

1. Introduction

As an independent coastal state with a commitment to achieving sustainable fisheries management, the UK's objective is to increasingly set fishing opportunities consistent with scientific advice provided by the International Council for the Exploration of the Sea (ICES), whether based on maximum sustainable yield (MSY) or the Precautionary Approach (PA).

The UK has undertaken an independent review of the methods used to assess whether a catch limit set for a stock will meet the criteria of MSY. This 'MSY methodology review' demonstrates the Ministerial commitment to strengthening sustainable fisheries management for the long-term benefit of our marine environment and fishing industry.

ICES assessment areas and TAC (Total Allowable Catches) management areas are often not aligned, necessitating that ICES advice be interpreted and translated into the TAC management areas. This mismatch makes assessing the TACs against the scientific advice highly complex and potentially open to interpretation.

The findings of the methodology review and the principles agreed to assess consistency with MSY have subsequently been broadened for the purposes of evaluating negotiated outcomes and applied to include all TACs of interest to the UK which relate to either ICES MSY advice, ICES Precautionary Advice or advice relating to agreed Management Plans.

This allows for most TACs listed in the Trade and Cooperation Agreement² ([TCA](#)) to be assessed and evaluated for consistency with ICES' scientific advice, thus providing an opportunity for the UK to set a clear benchmark for the reporting of negotiated catch limits.

² Trade and Cooperation Agreement between the United Kingdom of Great Britain and Northern Ireland, of the one part, and the European Union and the European Atomic Energy Community, of the other part
Brussels and London, 30 December 2020

2. Background to the assessment of MSY and the reporting outcome from the negotiations

2.1. Biological stock versus TAC

Scientists and managers often use the term 'stock' referring to different entities which can cause a degree of confusion. ICES define stocks as a "*part of a fish population usually with a particular migration pattern and specific spawning ground which are part of the same reproductive process*". Such biological stocks are largely self-contained with limited migration of individuals from or to the stock. Managers will often refer to the units of management as a stock (typically a TAC for a species within a specific sea area) However, the area definition for these units often has no scientific or biological basis instead being borne from political processes or simply using ICES areas, sub-areas, divisions, or sub-divisions for convenience. Here we will refer to a stock as the units defined by ICES whilst the area-defined management units along with their ascribed TACs will be referred to as management units. It should be noted that there are some cases where the management units are identical to the biological stock area, i.e., have a direct mapping from stock to management unit but typically, there is some mismatch between the area definitions.

2.2. Advice types

ICES generates catch advice according to an established hierarchy:

Where a Management Plan (MP) has been agreed by all parties and that plan has been evaluated to be precautionary by ICES then the catch advice is derived from the harvest control rules prescribed by the MP. For an MP to be considered precautionary, the maximum probability of dropping below B_{lim} (the limit reference point) must be no more than 5% in any year (see, for example, [ICES 2016](#)). In all other cases, ICES will give catch advice based on the MSY or Precautionary frameworks.

Where a stock has a full analytical assessment and there are estimates of the fishing mortality that provides an MSY (ICES' Category 1 and 2), ICES will give catch advice using their MSY rule. Where the latest stock biomass is at or above the MSY $B_{trigger}$ threshold, the target fishing mortality is their point estimate F_{MSY} . Below this biomass point, the target fishing mortality is reduced in proportion to the difference between the current SSB and MSY $B_{trigger}$. In those cases where B_{lim} cannot be reached at the end of the TAC year then zero catch advice is given.

For those stocks where the available data are not sufficient for a full analytical assessment, or the stock status in relation to reference points is not known, then ICES uses its Precautionary Approach Framework. In this framework, catch advice for the following year(s) is based on recent advice modified by trends in available stock indicators (ICES Category 3) or uses a time-series of catch to approximate MSY (ICES Category 4) or relies on data borrowing from neighbouring areas (ICES Category 4 sedentary species). The response to changes in indicators is capped to $\pm 20\%$ (their so-called Uncertainty Cap) as a method of avoiding exceptionally large fluctuations in advice created by uncertainty in the assessment method. In some cases, MSY proxies have been developed which may give an indication of fishing pressure in relation to MSY. Where there are no stock abundance proxies or other biological information available, catch advice is based on recent advice or landings. When stock status in relation to candidate reference points is unknown or there is concern over the direction of stock trajectory, a further -20% advice reduction is applied on a periodic basis (their so-called Precautionary Buffer) to help ensure that the advice is not set above sustainable levels.

For further details on the ICES advisory process see the 2020 [ICES guide to advice](#), and the 2012 [ICES guidance for data limited stocks](#)

2.3. Outcome versus intention reporting

One of the primary objectives of fishery management in the UK is to prevent the collapse of stocks and the management framework with its reference points is designed to achieve this objective. It is entirely appropriate that the effectiveness of fishery management should therefore be measured in terms of how well these targets and objectives are met. This scoring of **outcomes** is retrospective but if we operated in a world of certainty then management actions would naturally achieve these objectives. In reality, fishery management operates in an uncertain paradigm where environmental variation, complex biological interactions, human decisions, and observation error combine meaning that management actions may not necessarily result in the desired outcome. Ideally, a management framework should be designed to be robust to these fluctuations and uncertainties but not everything can be foreseen, and outcomes may not be as intended. Historical outcome evaluation may vary as the understanding of stock development evolves. It is therefore also desirable to report on whether managers have acted on the best available evidence, i.e., whether the **intention** of the management decision was consistent with the scientific understanding at that time.

In the longer term, chronic systematic differences between the intention and outcomes may indicate that the management framework needs to be modified to cope with these differences. Both types of reporting (outcomes and intention) are therefore important tools for monitoring management performance. Outcome scoring is undertaken as part of the UK reporting on the [Marine Strategy](#) and reports the number of stocks where the

spawning biomass is at or above the target reference point and the exploitation rate is at or below the target reference point. In contrast, the scoring of negotiation decisions (intention scoring) is based on TAC decisions, so direct comparisons between these two scoring approaches cannot be made due to the mismatches of stock and TAC definitions.

2.4. History of negotiation outcome evaluation

Cefas has been advising Defra in the calculation of post-negotiation reporting since 2017; previously providing reporting with respect to safe biological limits (SBLs). The nature of the reporting has evolved over this period as the question posed by Defra has moved from outcome to intention reporting.

In 2017 and 2018, the question considered for these two years was 'How many TACs came from stocks at MSY?' for a pre-defined number of TACs. The process then was to map the TACs back to their parent stock(s) and score each TAC based on whether the most recent estimates of stock status from ICES were at or above MSY $B_{trigger}$. This necessitated some interpretation and expert judgement with the mapping, particularly where a TAC spanned multiple stocks, not all of which had an MSY-based assessment.

In 2019, the question considered was 'How many TACs were in line with MSY advice?' and was only applied to decisions made at the EU December Council (i.e. excluding decisions made at Coastal States). The range of TACs that could be scored under this question was slightly reduced as only those stocks where an MSY forecast was given by ICES were included. Where a TAC merged MSY and PA stock advice, where the tonnage was predominantly formed of fish from the MSY forecast, these were included in the analysis.

In 2020, with the reporting of December Council, the question considered was 'How many TAC are in line with scientific advice for stocks with an MSY assessment?'. Due to developments in the ICES' advisory process, a number of stocks with PA based advice had assessments of historical biomass and exploitation rate in relation to MSY *proxies*. This change in question therefore allowed these stocks to be considered; however, it necessitated a further blending of intention and outcome reporting, in that a TAC from one of these stocks was only considered to be in line with MSY if the stock status from the last 3 years had been consistently at or below MSY.

The evolving questions and resulting changes in the scoring of the negotiation outcomes was causing communication difficulties. Hence Defra commissioned a review of the TAC assessment process to include both the question being asked and the technical approach to answering it. The review focussed on the scoring of TACs against MSY assessments and is termed the 'MSY methodology review' in this report.

In 2021, following the 'MSY methodology review' process and the transition to an independent Coastal State, the question was simplified to be 'How many TACs were set consistent with Scientific Advice?' and covered UK-EU, UK-EU-Norway, and Coastal States negotiations. This had the advantage of being purely an Intention score and considerably broadened the range of TACs considered but precluded direct comparison with previous years' reported scores.

3. MSY methodology review

3.1. Context of the MSY methodology review

In 2020, Defra commissioned a methodology review to assess whether quotas (TACs) were set at sustainable levels, involving an expert panel.

The terms of reference for the expert panel were summarised as '*To provide an agreed methodology which enables fisheries managers to determine whether a quota (TAC) was set at **a sustainable level** and communicate this information effectively*'.

The methodology review took place outside the negotiations process, and the principles and approach agreed with the expert panel to assess sustainable quota setting were later adapted to assess the UK negotiated catch limits (as described above in Sections 2.3 and 2.4).

3.2. MSY methodology review approach and considerations

The general approach to assess MSY consistency when setting TACs were discussed with the expert panel in October 2020.

The methodology review proposed an approach and method to assess the MSY consistency of TACs based on the comparison of ICES' advice and stock assessment areas, and the TAC management areas. Six categories of TACs were identified reflecting the increasing complexity of the mapping issues, examples of these can be found in sections 4.1-4.6 of the methodology review report (Nash *et al.* 2021).

1. Direct match: management area is the same as the stock assessment area
2. Wide: management area wider than stock area but does not overlap with other defined stocks. These are effectively treated as a direct match.
3. Pooled: multiple stocks pooled into a single TAC, areas definitions matching.
4. Subset: Single stock split into multiple TAC units.

5. Subset pooled: Multiple stocks fished across multiple TAC units.
6. Fragmented: Stocks or multiple stocks fished across multiple TAC units and where substantial portions of catches are taken outside the jurisdiction of the relevant negotiation forum (bilateral UK-EU, trilateral UK-EU-Norway, or Coastal States negotiations).

Note that mapping classification may change through time, particularly in the case of the fragmented class where the introduction of a sharing arrangement could see the classification elevated.

The methodology review agreed on an approach with the expert panel that is based on whether catch limits do not exceed the best available ICES' scientific advice for stocks (biological areas or units) that are relevant to the management areas (or TAC units).

The agreed principles and considerations are shown in **Table 1** and **2** and full details can be found in the methodological review report (Nash *et al.* 2021).

Table 1. General principles of the methodology review to assess sustainable quota setting, extract from Nash et al. 2021.

General principles of the methodology review to assess sustainable quota setting (Nash et al. 2021)

- *The method to assess MSY consistency needs to consider how the scientific advice from assessment areas (stocks units) match the management areas or the Total Allowable Catch (TAC) units, including the type of ICES' advice, existence of multi-annual plans and sharing agreements.*
- *Catch limits should not exceed the best currently available scientific advice provided by ICES, both for stocks with advice based on the ICES Maximum Sustainable Yield (MSY) approach and for stocks with advice based on the ICES data-limited Precautionary Approach (PA).*
- *Catch limits should not exceed the limits specified by the ICES' headline advice, such as the ICES advice F_{MSY} point estimate value with its associated Harvest Control Rule, or the limits from the ICES data-limited Precautionary Approach advice with the associated Harvest Control Rule.*
- *If the ICES advice is zero catch for any element of the TAC, any catch above zero is not consistent with MSY, unless sufficient safeguards are put in place for the management unit with zero TAC advice.*
- *Where stocks are assessed with data-limited approaches and ICES' advice provides stock status with proxy reference points, TACs are considered to be set consistent with MSY provided that the Precautionary Approach advice is adhered to.*
- *For stocks where ICES' advice is given for catches, it is the catch TAC before any landing obligation exemption deductions are made that should be assessed for MSY consistency. If the only published record of a TAC is where deductions have already been made for any landing obligation exemptions, then the implied full catch must be back calculated to assess the TAC for MSY consistency.*
- *Where a TAC comprises a mix of MSY-assessed and PA-assessed stocks*, the MSY consistency needs to be evaluated on a case-by-case basis.*

** (there are instances of a single TAC comprising different stocks of the same species different stocks of sympatric species and different stocks of different genera)*

Table 2. Principles considering management aspects of the methodology review to assess sustainable quotas setting, extract from Nash *et al.* 2021.

Principles and considerations related to management aspects of the methodology review to assess sustainable quota setting (Nash *et al.* 2021)

- *For TACs in the pooled, subset pooled and fragmented classifications, where management approaches and/or TAC setting rationales have not changed substantially, between recent years, then historic stock assessments (exploitation rate) may be used to infer whether the management proposal is likely to deliver MSY for each stock component. Where timescales are too short for quantitative analysis, then expert judgement will be used to determine whether the new regime is sufficiently different from the old regime to deliver F_{MSY} .*
- *Where a sharing agreement has been established and the TAC is set at or below ICES MSY advice, then the TAC is classified as MSY consistent (for pooled and subset pooled cases, additional criteria must be met).*
- *Where there is no sharing agreement for an internationally shared stock, the assessment of MSY consistency for a TAC will consider the sum of the unilaterally declared quotas compared to the sum of ICES' advice for the contributing stocks. Conditional tests may apply to ensure all recognised components of the stock(s) involved are appropriately protected.*
- *Where a sharing agreement has not been established, recent historic TACs have exceeded MSY advice, and subsequently the stock is assessed to be fished above MSY (F_{MSY}) (retrospective view of management in the most recent years), then the TAC is not considered to be MSY consistent. However, if the stock assessment shows the stock to be fished consistently below F_{MSY} , the TACs on these stocks could be classified as consistent with MSY approach as quotas are set in good faith that the system will continue to deliver MSY (F_{MSY}).*

4. Application of MSY method review principles to the assessment of all negotiation outcomes

4.1. Basic methodology

Following the conclusion of negotiations for TACs in 2021, Cefas was requested to report on the number of TACs that had been set consistent with the scientific advice, covering not only the UK-EU negotiations but the trilateral negotiations (UK, EU & Norway) and Coastal States negotiations. This represented a new departure from the UK's past negotiation reporting which had focussed on the outcomes of the annual EU December Agriculture/Fisheries Council of Ministers. It also necessitated consideration of TACs from stocks with Precautionary Advice as well as consideration of how to apportion advice across different management areas and how to apportion advice when the stock is fished by 3rd countries not bound by the TAC negotiations.

Assessment of the TACs from stocks with Precautionary Advice used the principles defined by the methodology review. This included both the absolute level of TAC and the additional considerations as described earlier in section 3 and in the methodology review report (Nash *et al.* 2021).

4.2. 3rd country catches

One issue that emerged during the MSY methodology review process was the need to consider catches from ICES' stocks by countries not encompassed by the UK-EU, UK-EU-Norway or Coastal States TAC setting process (termed 3rd country catches). In an ideal situation, international agreements on **all** fishing opportunities for **all** stocks would be achieved, but in the absence of such agreements **one science-based approach** to this issue would be to quantify the portion of the ICES' advised tonnage that is expected to be caught by the vessels of 3rd countries before determining what would be a sustainable level for the UK-EU/UK-EU-Norway/Coastal States TACs. This could either be some projection of absolute tonnage, or an assumption that the proportion of 3rd country catches recorded over some recent historic period will continue into the future. Another alternative could be directly requesting that each third country provides their own estimates. A scientific exercise was undertaken to explore what the potential implications for UK-EU/UK-EU-Norway/Coastal States TAC setting might be when considering the effects of 3rd country catches. This scientific exercise requires further exploration to determine the most reliable approach to forecasting 3rd country catches and would be undertaken independently from negotiations around TACs or future sharing arrangements. Table 3 contains a notation as to which TACs we currently believe this issue affects.

4.3. Consultative elements

A number of TACs listed in the *Trade and Cooperation Agreement (TCA)* are classed as ‘consultative’. This is where one party has a historical fishing interest, but the body of water referred to lies entirely (or to all practical extent entirely) in the jurisdiction of the other party. In these instances, the TACs will be set unilaterally by the party with jurisdiction. Several of these consultative TACs are linked to subset or pooled-subset TACs of interest to the UK and therefore potentially affect the scoring of alignment with the ICES’ advice for TACs that form part of the baseline set. The process of scoring TACs resulting from the MSY methodology review process demands that we look at the totality of all TACs that draw on the stocks; however the publication of consultative elements is typically many weeks after conclusion of negotiations and it was therefore necessary to devise an approach that only used the published TACs. In these instances, the maximum advice-compliant TAC for the management unit of interest was defined as the advice multiplied by the proportion implied by the [2020 EU TAC and Quota Regulation \(TQR\)](#). The 2020 TACs for a number of species already included a deduction for fleet sectors that had exemptions from the Landing Obligation. In these instances, the implied total catches for those TACs in 2020 were back calculated using the deduction calculations published by the EU Commission.

4.4. Pass stages

Assessment of alignment of TAC with the ICES’ advice was performed in two stages. Stage 1 looked purely at the TAC alignment with advice, i.e., before the ‘additional considerations’ were made for the pooled and pooled-subset categories. TACs, where the ICES’ advice assessment area matched with management area and had been set at or below the scientific advice were given a stage 1 pass and an automatic stage 2 pass (i.e., no further considerations were made).

For TACs where the ICES advice assessment area did not match with the management area, those that passed stage 1 were then subject to additional considerations (stage 2), in particular an investigation into whether the total international catches had exceeded the ICES advice two or more times in the previous three years for which data were available. Where catches had habitually exceeded the advice, unless remedial measures to prevent this were included in the written records of the Negotiation Agreements, the TAC was considered to have failed at stage 2.

In the summary of evaluations that follow, only those TACs which pass stage 2 are considered to have been set in line with the advice and awarded a “pass”.

4.5. Determining the baseline suite of TACs.

The Trade and Cooperation Agreement lists 123 quotas which link to stocks in which both the UK and EU have an interest. The UK has access to 104 of these TACs. Only those TACs negotiated in bilateral UK-EU, trilateral UK-EU-Norway, Coastal States or NEAFC forums are considered in scope for this report.

Two of the TACs listed in the Trade and Cooperation Agreement³ are not included in the scoring. TCA number 19, Deep-sea Sharks (DWS/56789-) is not included because these are a prohibited species (i.e. landing them is illegal). TCA 39, Porcupine Bank *Nephrops* (NEP/*07U16) is excluded because this is a sub-clause of the main area 7 *Nephrops* TAC (NEP/07.) and would otherwise be double-counting.

The trilateral UK-EU-Norway agree four TACs for North Sea herring of which only the “A-fleet” (the main human consumption fleet) and “B-fleet” (bycatches) are relevant to the UK. The UK-EU portion of the A-fleet TAC is then split into two TCA quotas (TCA #80 and 81). As the negotiated agreement is at the A-fleet level, and ICES gives advice for the A-fleet, a single scoring is applied to the trilateral agreement and not the two TCA numbers. This same rationale of a single scoring applies to the TAC for North-East Atlantic Mackerel which is agreed at the Coastal States meetings with the UK-EU portion then split into two TACs (TCA # 85 & 86).

In order to facilitate direct comparison between the outcomes of different years it is desirable to have a consistent number of TACs. However, it is inevitable that some changes may occur through time as management units evolve and this has occurred over the period considered in this report (2020-2022).

The conclusion of negotiations for 2021 TACs was such that the in-year setting of the North Sea Sandeel quota had been completed, however at the time of compiling this report (January 2022) the sandeel quota had yet to be established for 2022 and this is expected to be the normal pattern for the reporting of negotiated outcomes. This TAC is therefore not included in the baseline scoring.

During the negotiations for 2022 TACs it was agreed to move the setting of the SPR/7DE TAC (Sprat in the English Channel) to in-year to better align with the biology of the species. Although it is possible to generate a score for the alignment of this TAC with ICES’ advice for the period 2020-2022, the inability to do this in the future (due to the timing change) means that this TAC is also not included in the baseline scoring.

³ Trade and Cooperation Agreement between the United Kingdom of Great Britain and Northern Ireland, of the one part, and the European Union and the European Atomic Energy Community, of the other part Brussels and London, 30 December 2020

The result of addressing the above issues means that there are 83 TACs that are considered, only 79 of which are included in the baseline due to four having no scientific advice at the time of this publication. The summary of evaluations is given as the % of passes determined as the number of stage 2 passes divided by the number of TACs linked to scientific advice (79).

Table 3 lists the TACs that are evaluated along with their advice basis, mapping category, negotiation forum and inclusion in baseline applicable at the time of publication.

5. Assessment of negotiated outcomes

This evaluation of the negotiated outcomes using the new methodology marks a new benchmark for sustainability reporting and means that the evaluation of TACs for 2021 and 2022 is not comparable to those published in previous years. In order to put the assessments for 2021 and 2022 into context, a retrospective assessment of the negotiated outcomes for 2020 using the new methodology was also undertaken.

Within each year and TAC, we have compared the negotiated quota against the understanding of the tonnage consistent with advice at the time of negotiation. In a small number of cases there have been updates to the ICES' advice as well as some amendments to the interpretation processes. **However, as the purpose of the evaluation is to determine how closely the negotiated outcome followed the scientific advice of the day, these amendments are not applied retrospectively.**

Table 4, Table 5 and Table 6 give the evaluations by stage and year, TACs outside the baseline are at the bottom of each table. * outside baseline suite of TACs.

(**) Assessment uses the internationally agreed TAC from the Written Record of the tri-lateral negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

(***) Assessment uses the internationally agreed TAC from the Written Record of the Coastal States negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

Table 7 gives the final evaluation per year for the suite of baseline TACs.

5.1. TACs for 2020

For 2020 TACs were agreed in the EU Council negotiations, bilateral negotiations between the EU and Norway, and Coastal States negotiations. In total, 85 TACs were agreed (Table 4).

Scientific advice on catch opportunities provided by ICES related to 81 of these 85 TACs. The remaining 4 TACs came from combinations of species and TAC areas for which there was no scientific advice.

Of the full list of 81 TACs, 28 were considered to be set in line with the scientific advice (35%), 2 could not be scored and 51 failed (63%). Breaking this down to the advice type (MSY or PA), 19 out of 44 TACs (43%) based on MSY advice were set in line with the advice with 9 out of 37 TACs (24%) based on PA advice being set in line with the advice.

Of the baseline list of 79 TACs, 27 were considered to be set in line with the scientific advice (34%), 2 could not be scored and 50 failed (63%). Of these 27 passes, 19 out of 43 (44%) TACs were derived from MSY advice and 8 out of 36 (22%) were derived from PA advice.

5.2. TACs for 2021

For 2021 TACs were agreed in the UK-EU negotiations, trilateral negotiations between the UK, EU and Norway, and Coastal States negotiations. In total, 85 TACs were agreed (Table 5).

Scientific advice on catch opportunities provided by ICES related to 81 of these 85 TACs. The remaining 4 TACs came from combinations of species and TAC areas for which there was no scientific advice.

Of the full list of 81 TACs, 29 were considered to be set in line with the scientific advice (36%), 2 could not be scored and 50 failed (62%). Breaking this down to the advice type (MSY or PA), 21 out of 46 TACs (46%) based on MSY advice were set in line with the advice with 8 out of 35 TACs (23%) based on PA advice being set in line with the advice.

Of the baseline list of 79 TACs, 27 were considered to be set in line with the scientific advice (34%), 2 could not be scored and 50 failed (63%). Of these 27 passes, 20 out of 43 (47%) TACs were derived from MSY advice and 7 out of 36 (19%) were derived from PA advice.

5.3. TACs for 2022

For 2022 TACs were agreed in the UK-EU negotiations, trilateral negotiations between the UK, EU and Norway, and Coastal States negotiations. In total, 84 TACs were agreed. The sandeel TAC was not agreed at the time of reporting (Table 6).

Scientific advice on catch opportunities provided by the ICES related to 80 of these 84 TACs. The remaining 4 TACs came from combinations of species and TAC areas for which there was no scientific advice.

Of the full list of 80 TACs, 29 were considered to be set in line with the scientific advice (36%), 2 could not be scored and 49 failed (61%). Breaking this down to the advice type (MSY or PA), 20 out of 44 TACs (45%) based on MSY advice were set in line with the advice with 9 out of 36 TACs (25%) based on PA advice being set in line with the advice.

Of the baseline list of 79 TACs, 28 were considered to be set in line with the scientific advice (35%), 2 could not be scored and 49 failed (62%). Of these 28 passes, 19 out of 43 (44%) TACs were derived from MSY advice and 9 out of 36 (25%) were derived from PA advice.

Table 3. TACs included in the scoring.

#TCA	TAC code	TAC stock name	Advice type	Mapping category*	Included in Baseline suite of TACS?	Negotiation forum
1 ^{TCC}	ALF/3X14-	Alfonsinos (3,4,5,6,7,8,9,10,12,14)	PA	2	Yes	UK-EU
2	ANF/07.	Anglerfish (7)	MSY	5	Yes	UK-EU
3	ANF/2AC4-C	Anglerfish (North Sea)	PA	5	Yes	UK-EU
4	ANF/56-14	Anglerfish (West of Scotland)	PA	6	Yes	UK-EU
5 ^{TCC}	ARU/1/2.	Greater silver smelt 1,2	PA	4	Yes	UK-EU
6 ^{TCC}	ARU/3A4-C	Greater silver smelt North Sea	PA	4	Yes	UK-EU
7 ^{TCC}	ARU/567.	Greater Silver Smelt (Western)	PA	6	Yes	UK-EU
8	BLI/12INT-	Blue Ling (International 12)	PA	6	Yes	UK-EU
9	BLI/24-	Blue Ling (North Sea)	PA	6	Yes	UK-EU
10 ^{TCC}	BLI/5B67-	Blue Ling (Western)	MSY	6	Yes	UK-EU
11	BOR/678-	Boarfish (Western)	PA	1	Yes	UK-EU
12	BSF/56712-	Black Scabbardfish (Western)	PA	1	Yes	UK-EU
13	COD/07A.	Cod (Irish Sea)	PA	1	Yes	UK-EU
15	COD/5BE6A	Cod (West of Scotland)	MSY	4	Yes	UK-EU
16 ^{TCC}	COD/5W6-14	Rockall Cod	PA	6	Yes	UK-EU
17	COD/7XAD34	Cod (Celtic Sea)	MSY	1	Yes	UK-EU
18	DGS/15X14	Spurdog (Western)	PA	2	Yes	UK-EU
20	HAD/07A.	Haddock (Irish Sea)	MSY	1	Yes	UK-EU
22 ^{TCC}	HAD/6B1214	Haddock (Rockall)	MSY	6	Yes	UK-EU
23	HAD/7X7A34	Haddock (Celtic Sea)	MSY	2	Yes	UK-EU
24	HER/07A/MM	Herring (Irish Sea)	MSY	1	Yes	UK-EU
25	HER/5B6ANB	Herring (West of Scotland)	PA	4	Yes	UK-EU
27	HER/7G-K.	Herring (Celtic Sea)	MSY	1	Yes	UK-EU
28 ^{TCC}	HKE/2AC4-C	Hake (North Sea)	MSY	4	Yes	UK-EU
29 ^{TCC}	HKE/571214	Hake (Western)	MSY	4	Yes	UK-EU
30 ^{TCC}	JAX/2A-14	Horse Mackerel (Western)	MSY	6	Yes	UK-EU
31	JAX/4BC7D	Horse Mackerel (Southern North Sea and Eastern Channel)	PA	1	Yes	UK-EU
32 ^{TCC}	L/W/2AC4-C	Lemon Sole and Witch (North Sea)	MSY	6	Yes	UK-EU
33	LEZ/07.	Megrims (7)	MSY	5	Yes	UK-EU
34	LEZ/2AC4-C	Megrims (North Sea)	MSY	5	Yes	UK-EU
35	LEZ/56-14	Megrims (West of Scotland)	MSY	5	Yes	UK-EU
36	LIN/03A-C.	Ling 3a	PA	4	Yes	UK-EU
37 ^{TCC}	LIN/04-C.	Ling (North Sea)	PA	4	Yes	UK-EU
38 ^{TCC}	LIN/6X14.	Ling (Western)	PA	4	Yes	UK-EU
40	NEP/07.	Nephrops (7)	MSY	3	Yes	UK-EU
41	NEP/2AC4-C	Nephrops (North Sea)	MSY	3	Yes	UK-EU
42 ^{TCC}	NOP/2A3A4.	Norway Pout (North Sea)	MSY	1	Yes	UK-EU

#TCA	TAC code	TAC stock name	Advice type	Mapping category*	Included in Baseline suite of TACS?	Negotiation forum
43	PLE/07A.	Plaice (Irish Sea)	MSY	1	Yes	UK-EU
45	PLE/7DE.	Plaice (English Channel)	MSY	3	Yes	UK-EU
46	PLE/7FG.	Plaice (7fg)	PA	1	Yes	UK-EU
47	PLE/7HJK.	Plaice (7hjk)	PA	1	Yes	UK-EU
50	POL/07.	Pollack (7)	PA	4	Yes	UK-EU
51	POL/56-14	Pollack (West of Scotland)	PA	4	Yes	UK-EU
52	PRA/2AC4-C	Northern Prawn (North Sea)	PA	5	Yes	UK-EU
53	RJE/7FG.	Small-eyed Ray (7fg)	PA	1	Yes	UK-EU
54	RJU/7DE.	Undulate Ray (English Channel)	PA	1	Yes	UK-EU
55 ^{TCC}	RNG/5B67-	Roundnose Grenadier (Western)	PA	1	Yes	UK-EU
56	RNG/8X14-	Roundnose Grenadier (8,9,10,12,14)	PA	5	Yes	UK-EU
58	SBR/678-	Red Seabream (Western)	PA	1	Yes	UK-EU
59	SOL/07A.	Sole (Irish Sea)	MSY	1	Yes	UK-EU
60	SOL/07D.	Sole (Eastern Channel)	PA	1	Yes	UK-EU
61	SOL/07E.	Sole (Western Channel)	MSY	1	Yes	UK-EU
62	SOL/24-C.	Sole (North Sea)	MSY	2	Yes	UK-EU
63	SOL/56-14	Sole (West of Scotland)	n/a		No	UK-EU
64	SOL/7FG.	Sole (7fg)	MSY	1	Yes	UK-EU
65	SOL/7HJK.	Sole (7hjk)	PA	1	Yes	UK-EU
68	SRX/07D.	Skates and Rays (Eastern Channel)	PA	5	Yes	UK-EU
69	SRX/2AC4-C	Skates and Rays (North Sea)	PA	5	Yes	UK-EU
70	SRX/67AKXD	Skates and Rays (Western)	PA	5	Yes	UK-EU
71	T/B/2AC4-C	Turbot and Brill (North Sea)	MSY	6	Yes	UK-EU
72	USK/04-C.	Tusk (North Sea)	MSY	6	Yes	UK-EU
73	USK/567EI.	Tusk (Western)	MSY	6	Yes	UK-EU
74	WHG/07A.	Whiting (Irish Sea)	MSY	1	Yes	UK-EU
75	WHG/56-14	Whiting (West of Scotland)	MSY	1	Yes	UK-EU
76	WHG/7X7A-C	Whiting (Celtic Sea)	MSY	5	Yes	UK-EU
14 (**)	COD/07D.	Cod (Eastern Channel)	MSY	4	Yes	UK-EU-NO
21 (**)	HAD/5BC6A	Haddock (West of Scotland)	MSY	4	Yes	UK-EU-NO
48 (**)	POK/56-14	Saithe (West of Scotland)	MSY	4	Yes	UK-EU-NO
77 (**)	COD/2A3AX4	Cod (North Sea)	MSY	4	Yes	UK-EU-NO
78 (**)	HAD/2AC4.	Haddock (North Sea)	MSY	4	Yes	UK-EU-NO
79 (**)	North Sea Herring (B-Fleet) : HER/2A47DX	Herring (North Sea bycatch)	MSY	4	Yes	UK-EU-NO
80 & 81 (**)	North Sea Herring (A-Fleet) : HER/4AB. & HER/4CXB7D	A-fleet Herring (North Sea, Southern North Sea and Eastern Channel)	MSY	4	Yes	UK-EU-NO
82 (**)	PLE/2A3AX4	Plaice (North Sea)	MSY	4	Yes	UK-EU-NO
83 (**)	POK/2C3A4	Saithe (North Sea)	MSY	4	Yes	UK-EU-NO

#TCA	TAC code	TAC stock name	Advice type	Mapping category*	Included in Baseline suite of TACS?	Negotiation forum
84 (**)	WHG/2AC4.	Whiting (North Sea)	MSY	4	Yes	UK-EU-NO
85 & 86 (***)	Coastal States North-East Atlantic Mackerel: MAC/2A34. & MAC/2CX14-	Mackerel (North Sea & Western)	MSY	6	Yes	Coastal states
87 (***)	Coastal States North-East Atlantic Blue Whiting : WHB/1X14	Blue Whiting (Northern)	MSY	6	Yes	Coastal states
96 (***)	Coastal States Atlanto-Scandian Herring : HER/1/2-	Herring (ASH)	MSY	6	Yes	Coastal states
100	RED/51214D	Redfish [Deep Pelagic] (5,12,14)	MSY	6	Yes	NEAFC
101	RED/51214S	Redfish [Shallow Pelagic] (5,12,14)	PA	6	Yes	NEAFC
26	HER/7EF.	Herring (Western Channel and Bristol Channel)	n/a	n/a	No	UK-EU
39	NEP/07U16	Nephrops (Porcupine Bank)			No	UK-EU
44	PLE/56-14	Plaice (West of Scotland)	n/a		No	UK-EU
49	POK/7/3411	Saithe (Celtic Sea)	n/a	n/a	No	UK-EU
57	SAN/2A3A4.	Sandeels	MSY	3	No	UK-EU
63	SOL/56-14	Sole (West of Scotland)	n/a		No	UK-EU
67	SPR/7DE.	Sprat (English Channel)	PA	1	No	UK-EU

(*) TAC mapping classification in 2021. 1= direct match, 2=wide, 3=pooled, 4=subset, 5= subset pooled, 6=fragmented. See section 3.2 for description.

(**) Assessment uses the internationally agreed TAC from the Written Record of the tri-lateral negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

(***) Assessment uses the internationally agreed TAC from the Written Record of the Coastal States negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

TCC Denotes TACs where catches by third countries are not always considered in the TAC setting process.

Table 4. Retrospective evaluation of the 2020 negotiated TACs using the new assessment methodology

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
1	ALF/3X14-	Alfonsinos (3,4,5,6,7,8,9,10,12,14)	fail		fail
2	ANF/07.	Anglerfish (7)	pass	pass	pass
3	ANF/2AC4-C	Anglerfish (North Sea)	pass	pass	pass
4	ANF/56-14	Anglerfish (West of Scotland)	pass	pass	pass
5	ARU/1/2.	Greater silver smelt 1,2	fail		fail
6	ARU/3A4-C	Greater silver smelt North sea	fail		fail
7	ARU/567.	Greater Silver Smelt (Western)	fail		fail
8	BLI/12INT-	Blue Ling (International 12)	fail		fail
9	BLI/24-	Blue Ling (North Sea)	fail		fail
10	BLI/5B67-	Blue Ling (Western)	fail		fail
11	BOR/678-	Boarfish (Western)	pass	pass	pass
12	BSF/56712-	Black Scabbardfish (Western)	fail		fail
13	COD/07A.	Cod (Irish Sea)	fail		fail
15	COD/5BE6A	Cod (West of Scotland)	fail		fail
16	COD/5W6-14	Rockall Cod	fail		fail
17	COD/7XAD34	Cod (Celtic Sea)	fail		fail
18	DGS/15X14	Spurdog (Western)	fail		fail
20	HAD/07A.	Haddock (Irish Sea)	pass	pass	pass
22	HAD/6B1214	Haddock (Rockall)	pass	pass	pass
23	HAD/7X7A34	Haddock (Celtic Sea)	pass	pass	pass
24	HER/07A/MM	Herring (Irish Sea)	fail		fail
25	HER/5B6ANB	Herring (West of Scotland)	fail		fail
27	HER/7G-K.	Herring (Celtic Sea)	fail		fail
28	HKE/2AC4-C	Hake (North Sea)	pass	pass	pass
29	HKE/571214	Hake (Western)	pass	pass	pass
30	JAX/2A-14	Horse Mackerel (Western)	pass	pass	pass
31	JAX/4BC7D	Horse Mackerel (Southern North Sea and Eastern Channel)	pass	pass	pass
32	L/W/2AC4-C	Lemon Sole and Witch (North Sea)	fail		fail
33	LEZ/07.	Megrims (7)	pass	pass	pass
34	LEZ/2AC4-C	Megrims (North Sea)	pass	fail	fail
35	LEZ/56-14	Megrims (West of Scotland)	pass	fail	fail
36	LIN/03A-C.	Ling 3a	fail		fail
37	LIN/04-C.	Ling (North Sea)	fail		fail
38	LIN/6X14.	Ling (Western)	fail		fail
40	NEP/07.	Nephrops (7)	pass	fail	fail
41	NEP/2AC4-C	Nephrops (North Sea)	pass	fail	fail
42	NOP/2A3A4.	Norway Pout (North Sea)	fail		fail
43	PLE/07A.	Plaice (Irish Sea)	pass	pass	pass
45	PLE/7DE.	Plaice (English Channel)	pass	pass	pass
46	PLE/7FG.	Plaice (7fg)	pass	pass	pass
47	PLE/7HJK.	Plaice (7hjk)	fail		fail

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
50	POL/07.	Pollack (7)	fail		fail
51	POL/56-14	Pollack (West of Scotland)	fail		fail
52	PRA/2AC4-C	Northern Prawn (North Sea)	pass	fail	fail
53	RJE/7FG.	Small-eyed Ray (7fg)	pass	pass	pass
54	RJU/7DE.	Undulate Ray (English Channel)	fail		fail
55	RNG/5B67-	Roundnose Grenadier (Western)	fail		fail
56	RNG/8X14-	Roundnose Grenadier (8,9,10,12,14)	fail		fail
58	SBR/678-	Red Seabream (Western)	fail		fail
59	SOL/07A.	Sole (Irish Sea)	pass	pass	pass
60	SOL/07D.	Sole (Eastern Channel)	pass	pass	pass
61	SOL/07E.	Sole (Western Channel)	pass	pass	pass
62	SOL/24-C.	Sole (North Sea)	pass	pass	pass
64	SOL/7FG.	Sole (7fg)	pass	pass	pass
65	SOL/7HJK.	Sole (7hjk)	fail		fail
68	SRX/07D.	Skates and Rays (Eastern Channel)	fail	fail	fail
69	SRX/2AC4-C	Skates and Rays (North Sea)	fail	fail	fail
70	SRX/67AKXD	Skates and Rays (Western)	fail		fail
71	T/B/2AC4-C	Turbot and Brill (North Sea)	fail		fail
72	USK/04-C.	Tusk (North Sea)	no analysis possible		no analysis possible
73	USK/567EI.	Tusk (Western)	no analysis possible		no analysis possible
74	WHG/07A.	Whiting (Irish Sea)	fail		fail
75	WHG/56-14	Whiting (West of Scotland)	fail		fail
76	WHG/7X7A-C	Whiting (Celtic Sea)	fail		fail
14 (**)	COD/07D.	Cod (Eastern Channel)	fail		fail
21 (**)	HAD/5BC6A	Haddock (West of Scotland)	pass	pass	pass
48 (**)	POK/56-14	Saithe (West of Scotland)	pass	pass	pass
77 (**)	COD/2A3AX4	Cod (North Sea)	fail		fail
78 (**)	HAD/2AC4.	Haddock (North Sea)	pass	pass	pass
79 (**)	North Sea Herring (B-Fleet) : HER/2A47DX	Herring (North Sea bycatch)	pass	fail	fail
80 & 81 (**)	North Sea Herring (A-Fleet) : HER/4AB. & HER/4CXB7D	A-fleet Herring (North Sea, Southern North Sea and Eastern Channel)	pass	fail	fail
82 (**)	PLE/2A3AX4	Plaice (North Sea)	pass	pass	pass
83 (**)	POK/2C3A4	Saithe (North Sea)	pass	pass	pass
84 (**)	WHG/2AC4.	Whiting (North Sea)	pass	fail	fail
85 & 86 (***)	Coastal States North-East Atlantic Mackerel: MAC/2A34. & MAC/2CX14-	Mackerel (North Sea & Western)	pass	fail	fail
87 (***)	Coastal States North-East Atlantic	Blue Whiting (Northern)	pass	fail	fail

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
	Blue Whiting : WHB/1X14				
96 (***)	Coastal States Atlanto-Scandian Herring : HER/1/2-	Herring (ASH)	pass	fail	fail
100	RED/51214D	Redfish [Deep Pelagic] (5,12,14)	fail		fail
101	RED/51214S	Redfish [Shallow Pelagic] (5,12,14)	pass	pass	pass
26*	HER/7EF.	Herring (Western Channel and Bristol Channel)	no advice		no advice
44*	PLE/56-14	Plaice (West of Scotland)	no advice		no advice
49*	POK/7/3411	Saithe (Celtic Sea)	no advice		no advice
57*	SAN/2A3A4.	Sandeels	fail		fail
63*	SOL/56-14	Sole (West of Scotland)	no advice		no advice
67*	SPR/7DE.	Sprat (English Channel)	pass	pass	pass

(*) outside baseline suite of TACs.

(**) Assessment uses the internationally agreed TAC from the Written Record of the tri-lateral negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

(***) Assessment uses the internationally agreed TAC from the Written Record of the Coastal States negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

Table 5. Evaluation of the 2021 negotiated TACs

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
1	ALF/3X14-	Alfonsinos (3,4,5,6,7,8,9,10,12,14)	pass	pass	pass
2	ANF/07.	Anglerfish (7)	pass	pass	pass
3	ANF/2AC4-C	Anglerfish (North Sea)	fail		fail
4	ANF/56-14	Anglerfish (West of Scotland)	fail		fail
5	ARU/1/2.	Greater silver smelt 1,2	pass	fail	fail
6	ARU/3A4-C	Greater silver smelt North sea	pass	fail	fail
7	ARU/567.	Greater Silver Smelt (Western)	pass	fail	fail
8	BLI/12INT-	Blue Ling (International 12)	fail		fail
9	BLI/24-	Blue Ling (North Sea)	fail		fail
10	BLI/5B67-	Blue Ling (Western)	pass	pass	pass
11	BOR/678-	Boarfish (Western)	pass	pass	pass
12	BSF/56712-	Black Scabbardfish (Western)	fail		fail
13	COD/07A.	Cod (Irish Sea)	fail		fail
15	COD/5BE6A	Cod (West of Scotland)	fail		fail
16	COD/5W6-14	Rockall Cod	fail		fail
17	COD/7XAD34	Cod (Celtic Sea)	fail		fail
18	DGS/15X14	Spurdog (Western)	fail		fail
20	HAD/07A.	Haddock (Irish Sea)	pass	pass	pass
22	HAD/6B1214	Haddock (Rockall)	fail		fail
23	HAD/7X7A34	Haddock (Celtic Sea)	pass	pass	pass
24	HER/07A/MM	Herring (Irish Sea)	pass	pass	pass
25	HER/5B6ANB	Herring (West of Scotland)	fail		fail
27	HER/7G-K.	Herring (Celtic Sea)	fail		fail
28	HKE/2AC4-C	Hake (North Sea)	pass	pass	pass
29	HKE/571214	Hake (Western)	pass	pass	pass
30	JAX/2A-14	Horse Mackerel (Western)	pass	pass	pass
31	JAX/4BC7D	Horse Mackerel (Southern North Sea and Eastern Channel)	pass	pass	pass
32	L/W/2AC4-C	Lemon Sole and Witch (North Sea)	fail		fail
33	LEZ/07.	Megrim (7)	pass	pass	pass
34	LEZ/2AC4-C	Megrim (North Sea)	pass	fail	fail
35	LEZ/56-14	Megrim (West of Scotland)	pass	fail	fail
36	LIN/03A-C.	Ling 3a	fail		fail
37	LIN/04-C.	Ling (North Sea)	fail		fail
38	LIN/6X14.	Ling (Western)	fail		fail
40	NEP/07.	Nephrops (7)	pass	fail	fail
41	NEP/2AC4-C	Nephrops (North Sea)	pass	fail	fail
42	NOP/2A3A4.	Norway Pout (North Sea)	fail		fail
43	PLE/07A.	Plaice (Irish Sea)	pass	pass	pass
44*	PLE/56-14	Plaice (West of Scotland)	no advice		no advice
45	PLE/7DE.	Plaice (English Channel)	pass	pass	pass

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
46	PLE/7FG.	Plaice (7fg)	pass	pass	pass
47	PLE/7HJK.	Plaice (7hjk)	fail		fail
50	POL/07.	Pollack (7)	fail		fail
51	POL/56-14	Pollack (West of Scotland)	fail		fail
52	PRA/2AC4-C	Northern Prawn (North Sea)	pass	fail	fail
53	RJE/7FG.	Small-eyed Ray (7fg)	pass	pass	pass
54	RJU/7DE.	Undulate Ray (English Channel)	fail		fail
55	RNG/5B67-	Roundnose Grenadier (Western)	fail		fail
56	RNG/8X14-	Roundnose Grenadier (8,9,10,12,14)	pass	fail	fail
58	SBR/678-	Red Seabream (Western)	fail		fail
59	SOL/07A.	Sole (Irish Sea)	pass	pass	pass
60	SOL/07D.	Sole (Eastern Channel)	pass	pass	pass
61	SOL/07E.	Sole (Western Channel)	pass	pass	pass
62	SOL/24-C.	Sole (North Sea)	pass	pass	pass
64	SOL/7FG.	Sole (7fg)	pass	pass	pass
65	SOL/7HJK.	Sole (7hjk)	fail		fail
68	SRX/07D.	Skates and Rays (Eastern Channel)	pass	fail	fail
69	SRX/2AC4-C	Skates and Rays (North Sea)	pass	fail	fail
70	SRX/67AKXD	Skates and Rays (Western)	fail		fail
71	T/B/2AC4-C	Turbot and Brill (North Sea)	fail		fail
72	USK/04-C.	Tusk (North Sea)	no analysis possible		no analysis possible
73	USK/567EI.	Tusk (Western)	no analysis possible		no analysis possible
74	WHG/07A.	Whiting (Irish Sea)	fail		fail
75	WHG/56-14	Whiting (West of Scotland)	fail		fail
76	WHG/7X7A-C	Whiting (Celtic Sea)	fail		fail
14 (**)	COD/07D.	Cod (Eastern Channel)	fail		fail
21 (**)	HAD/5BC6A	Haddock (West of Scotland)	pass	pass	pass
48 (**)	POK/56-14	Saithe (West of Scotland)	pass	pass	pass
77 (**)	COD/2A3AX4	Cod (North Sea)	fail		fail
78 (**)	HAD/2AC4.	Haddock (North Sea)	pass	pass	pass
79 (**)	North Sea Herring (B-Fleet) : HER/2A47DX	Herring (North Sea bycatch)	fail		fail
80 & 81 (**)	North Sea Herring (A-Fleet) : HER/4AB. & HER/4CXB7D	A-fleet Herring (North Sea, Southern North Sea and Eastern Channel)	fail		fail
82 (**)	PLE/2A3AX4	Plaice (North Sea)	pass	pass	pass
83 (**)	POK/2C3A4	Saithe (North Sea)	pass	pass	pass
84 (**)	WHG/2AC4.	Whiting (North Sea)	pass	fail	fail
85 & 86 (***)	Coastal States North-East Atlantic Mackerel: MAC/2A34. & MAC/2CX14-	Mackerel (North Sea & Western)	pass	fail	fail
87 (***)	Coastal States North-East Atlantic Blue Whiting : WHB/1X14	Blue Whiting (Northern)	pass	fail	fail

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
96 (***)	Coastal States Atlanto-Scandian Herring : HER/1/2-	Herring (ASH)	pass	fail	fail
100	RED/51214D	Redfish [Deep Pelagic] (5,12,14)	fail		fail
101	RED/51214S	Redfish [Shallow Pelagic] (5,12,14)	pass		pass
26*	HER/7EF.	Herring (Western Channel and Bristol Channel)	no advice		no advice
44*	PLE/56-14	Plaice (West of Scotland)	no advice		no advice
57*	SAN/2A3A4.	Sandeels	pass	pass	pass
63*	SOL/56-14	Sole (West of Scotland)	no advice		no advice
67*	SPR/7DE.	Sprat (English Channel)	pass	pass	pass

* outside baseline suite of TACs.

(**) Assessment uses the internationally agreed TAC from the Written Record of the tri-lateral negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

(***) Assessment uses the internationally agreed TAC from the Written Record of the Coastal States negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

Table 6. Analysis, evaluation of the 2022 negotiated TACs

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
1	ALF/3X14-	Alfonsinos (3,4,5,6,7,8,9,10,12,14)	pass	pass	pass
2	ANF/07.	Anglerfish (7)	pass	pass	pass
3	ANF/2AC4-C	Anglerfish (North Sea)	fail	fail	fail
4	ANF/56-14	Anglerfish (West of Scotland)	fail	fail	fail
5	ARU/1/2.	Greater silver smelt 1,2	pass	fail	fail
6	ARU/3A4-C	Greater silver smelt North sea	pass	fail	fail
7	ARU/567.	Greater Silver Smelt (Western)	pass	fail	fail
8	BLI/12INT-	Blue Ling (International 12)	fail	fail	fail
9	BLI/24-	Blue Ling (North Sea)	fail	fail	fail
10	BLI/5B67-	Blue Ling (Western)	pass	pass	pass
11	BOR/678-	Boarfish (Western)	pass	pass	pass
12	BSF/56712-	Black Scabbardfish (Western)	fail	fail	fail
13	COD/07A.	Cod (Irish Sea)	fail	fail	fail
15	COD/5BE6A	Cod (West of Scotland)	fail	fail	fail
16	COD/5W6-14	Rockall Cod	fail	fail	fail
17	COD/7XAD34	Cod (Celtic Sea)	fail	fail	fail
18	DGS/15X14	Spurdog (Western)	fail	fail	fail
20	HAD/07A.	Haddock (Irish Sea)	pass	pass	pass
22	HAD/6B1214	Haddock (Rockall)	pass	pass	pass
23	HAD/7X7A34	Haddock (Celtic Sea)	pass	pass	pass
24	HER/07A/MM	Herring (Irish Sea)	pass	pass	pass
25	HER/5B6ANB	Herring (West of Scotland)	fail	fail	fail
27	HER/7G-K.	Herring (Celtic Sea)	fail	fail	fail
28	HKE/2AC4-C	Hake (North Sea)	fail	fail	fail
29	HKE/571214	Hake (Western)	fail	fail	fail
30	JAX/2A-14	Horse Mackerel (Western)	pass	pass	pass
31	JAX/4BC7D	Horse Mackerel (Southern North Sea and Eastern Channel)	pass	pass	pass
32	L/W/2AC4-C	Lemon Sole and Witch (North Sea)	fail	fail	fail
33	LEZ/07.	Megrim (7)	pass	pass	pass
34	LEZ/2AC4-C	Megrim (North Sea)	pass	fail	fail
35	LEZ/56-14	Megrim (West of Scotland)	pass	fail	fail
36	LIN/03A-C.	Ling 3a	fail	fail	fail
37	LIN/04-C.	Ling (North Sea)	fail	fail	fail
38	LIN/6X14.	Ling (Western)	fail	fail	fail
40	NEP/07.	Nephrops (7)	pass	fail	fail
41	NEP/2AC4-C	Nephrops (North Sea)	pass	fail	fail
42	NOP/2A3A4.	Norway Pout (North Sea)	fail	fail	pass
43	PLE/07A.	Plaice (Irish Sea)	pass	pass	pass
45	PLE/7DE.	Plaice (English Channel)	pass	pass	pass
46	PLE/7FG.	Plaice (7fg)	pass	pass	pass

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
47	PLE/7HJK.	Plaice (7hjk)	pass	pass	pass
50	POL/07.	Pollack (7)	fail	fail	fail
51	POL/56-14	Pollack (West of Scotland)	fail	fail	fail
52	PRA/2AC4-C	Northern Prawn (North Sea)	fail	fail	fail
53	RJE/7FG.	Small-eyed Ray (7fg)	pass	pass	pass
54	RJU/7DE.	Undulate Ray (English Channel)	fail	fail	fail
55	RNG/5B67-	Roundnose Grenadier (Western)	fail	fail	fail
56	RNG/8X14-	Roundnose Grenadier (8,9,10,12,14)	pass	fail	fail
58	SBR/678-	Red Seabream (Western)	fail	fail	fail
59	SOL/07A.	Sole (Irish Sea)	pass	pass	pass
60	SOL/07D.	Sole (Eastern Channel)	pass	pass	pass
61	SOL/07E.	Sole (Western Channel)	pass	pass	pass
62	SOL/24-C.	Sole (North Sea)	pass	pass	pass
64	SOL/7FG.	Sole (7fg)	pass	pass	pass
65	SOL/7HJK.	Sole (7hjk)	pass	pass	pass
68	SRX/07D.	Skates and Rays (Eastern Channel)	pass	fail	fail
69	SRX/2AC4-C	Skates and Rays (North Sea)	pass	fail	fail
70	SRX/67AKXD	Skates and Rays (Western)	fail	fail	fail
71	T/B/2AC4-C	Turbot and Brill (North Sea)	fail	fail	fail
72	USK/04-C.	Tusk (North Sea)	no analysis possible	no analysis possible	no analysis possible
73	USK/567EI.	Tusk (Western)	no analysis possible	no analysis possible	no analysis possible
74	WHG/07A.	Whiting (Irish Sea)	fail	fail	fail
75	WHG/56-14	Whiting (West of Scotland)	pass	fail	fail
76	WHG/7X7A-C	Whiting (Celtic Sea)	pass	fail	fail
14 (**)	COD/07D.	Cod (Eastern Channel)	fail	fail	fail
21 (**)	HAD/5BC6A	Haddock (West of Scotland)	pass	pass	pass
48 (**)	POK/56-14	Saithe (West of Scotland)	pass	pass	pass
77 (**)	COD/2A3AX4	Cod (North Sea)	fail	fail	fail
78 (**)	HAD/2AC4.	Haddock (North Sea)	pass	pass	pass
79 (**)	North Sea Herring (B-Fleet) : HER/2A47DX	Herring (North Sea bycatch)	pass	fail	fail
80 & 81 (**)	North Sea Herring (A-Fleet) : HER/4AB. & HER/4CXB7D	A-fleet Herring (North Sea, Southern North Sea and Eastern Channel)	pass	fail	fail
82 (**)	PLE/2A3AX4	Plaice (North Sea)	pass	pass	pass
83 (**)	POK/2C3A4	Saithe (North Sea)	pass	pass	pass
84 (**)	WHG/2AC4.	Whiting (North Sea)	pass	fail	fail
85 & 86 (***)	Coastal States North-East Atlantic Mackerel: MAC/2A34. & MAC/2CX14-	Mackerel (North Sea & Western)	pass	fail	fail
87 (***)	Coastal States North-East Atlantic Blue Whiting : WHB/1X14	Blue Whiting (Northern)	pass	fail	fail

TCA number	TAC code	TAC name	Stage 1	Stage 2	Final
96 (***)	Coastal States Atlanto-Scandian Herring : HER/1/2-	Herring (ASH)	pass	fail	fail
100	RED/51214D	Redfish [Deep Pelagic] (5,12,14)	pass	fail	fail
101	RED/51214S	Redfish [Shallow Pelagic] (5,12,14)	pass	pass	pass
26*	HER/7EF.	Herring (Western Channel and Bristol Channel)	no advice		no advice
44*	PLE/56-14	Plaice (West of Scotland)	no advice		no advice
49*	POK/7/3411	Saithe (Celtic Sea)	no advice		no advice
63*	SOL/56-14	Sole (West of Scotland)	no advice		no advice
67*	SPR/7DE.	Sprat (English Channel)	pass	pass	pass

* outside baseline suite of TACs.

(**) Assessment uses the internationally agreed TAC from the Written Record of the tri-lateral negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

(***) Assessment uses the internationally agreed TAC from the Written Record of the Coastal States negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

Table 7. Comparison of evaluation for the Baseline TACs 2020-2022

#TCA	TAC code	TAC name	2020	2021	2022
1	ALF/3X14-	Alfonsinos (3,4,5,6,7,8,9,10,12,14)	fail	pass	pass
2	ANF/07.	Anglerfish (7)	pass	pass	pass
3	ANF/2AC4-C	Anglerfish (North Sea)	pass	fail	fail
4	ANF/56-14	Anglerfish (West of Scotland)	pass	fail	fail
5	ARU/1/2.	Greater silver smelt 1,2	fail	fail	fail
6	ARU/3A4-C	Greater silver smelt North sea	fail	fail	fail
7	ARU/567.	Greater Silver Smelt (Western)	fail	fail	fail
8	BLI/12INT-	Blue Ling (International 12)	fail	fail	fail
9	BLI/24-	Blue Ling (North Sea)	fail	fail	fail
10	BLI/5B67-	Blue Ling (Western)	fail	pass	pass
11	BOR/678-	Boarfish (Western)	pass	pass	pass
12	BSF/56712-	Black Scabbardfish (Western)	fail	fail	fail
13	COD/07A.	Cod (Irish Sea)	fail	fail	fail
15	COD/5BE6A	Cod (West of Scotland)	fail	fail	fail
16	COD/5W6-14	Rockall Cod	fail	fail	fail
17	COD/7XAD34	Cod (Celtic Sea)	fail	fail	fail
18	DGS/15X14	Spurdog (Western)	fail	fail	fail
20	HAD/07A.	Haddock (Irish Sea)	pass	pass	pass
22	HAD/6B1214	Haddock (Rockall)	pass	fail	pass
23	HAD/7X7A34	Haddock (Celtic Sea)	pass	pass	pass
24	HER/07A/MM	Herring (Irish Sea)	fail	pass	pass
25	HER/5B6ANB	Herring (West of Scotland)	fail	fail	fail
27	HER/7G-K.	Herring (Celtic Sea)	fail	fail	fail
28	HKE/2AC4-C	Hake (North Sea)	pass	pass	fail
29	HKE/571214	Hake (Western)	pass	pass	fail
30	JAX/2A-14	Horse Mackerel (Western)	pass	pass	pass
31	JAX/4BC7D	Horse Mackerel (Southern North Sea and Eastern Channel)	pass	pass	pass
32	L/W/2AC4-C	Lemon Sole and Witch (North Sea)	fail	fail	fail
33	LEZ/07.	Megrims (7)	pass	pass	pass
34	LEZ/2AC4-C	Megrims (North Sea)	fail	fail	fail
35	LEZ/56-14	Megrims (West of Scotland)	fail	fail	fail
36	LIN/03A-C.	Ling 3a	fail	fail	fail
37	LIN/04-C.	Ling (North Sea)	fail	fail	fail
38	LIN/6X14.	Ling (Western)	fail	fail	fail
40	NEP/07.	Nephrops (7)	fail	fail	fail
41	NEP/2AC4-C	Nephrops (North Sea)	fail	fail	fail
42	NOP/2A3A4.	Norway Pout (North Sea)	fail	fail	fail
43	PLE/07A.	Plaice (Irish Sea)	pass	pass	pass
45	PLE/7DE.	Plaice (English Channel)	pass	pass	pass
46	PLE/7FG.	Plaice (7fg)	pass	pass	pass

#TCA	TAC code	TAC name	2020	2021	2022
47	PLE/7HJK.	Plaice (7hjk)	fail	fail	pass
50	POL/07.	Pollack (7)	fail	fail	fail
51	POL/56-14	Pollack (West of Scotland)	fail	fail	fail
52	PRA/2AC4-C	Northern Prawn (North Sea)	fail	fail	fail
53	RJE/7FG.	Small-eyed Ray (7fg)	pass	pass	pass
54	RJU/7DE.	Undulate Ray (English Channel)	fail	fail	fail
55	RNG/5B67-	Roundnose Grenadier (Western)	fail	fail	fail
56	RNG/8X14-	Roundnose Grenadier (8,9,10,12,14)	fail	fail	fail
58	SBR/678-	Red Seabream (Western)	fail	fail	fail
59	SOL/07A.	Sole (Irish Sea)	pass	pass	pass
60	SOL/07D.	Sole (Eastern Channel)	pass	pass	pass
61	SOL/07E.	Sole (Western Channel)	pass	pass	pass
62	SOL/24-C.	Sole (North Sea)	pass	pass	pass
64	SOL/7FG.	Sole (7fg)	pass	pass	pass
65	SOL/7HJK.	Sole (7hjk)	fail	fail	pass
68	SRX/07D.	Skates and Rays (Eastern Channel)	fail	fail	fail
69	SRX/2AC4-C	Skates and Rays (North Sea)	fail	fail	fail
70	SRX/67AKXD	Skates and Rays (Western)	fail	fail	fail
71	T/B/2AC4-C	Turbot and Brill (North Sea)	fail	fail	fail
72	USK/04-C.	Tusk (North Sea)	no analysis possible	no analysis possible	no analysis possible
73	USK/567EI.	Tusk (Western)	no analysis possible	no analysis possible	no analysis possible
74	WHG/07A.	Whiting (Irish Sea)	fail	fail	fail
75	WHG/56-14	Whiting (West of Scotland)	fail	fail	fail
76	WHG/7X7A-C	Whiting (Celtic Sea)	fail	fail	fail
14 (*)	COD/07D.	Cod (Eastern Channel)	fail	fail	fail
21 (*)	HAD/5BC6A	Haddock (West of Scotland)	pass	pass	pass
48 (*)	POK/56-14	Saithe (West of Scotland)	pass	pass	pass
77 (*)	COD/2A3AX4	Cod (North Sea)	fail	fail	fail
78 (*)	HAD/2AC4.	Haddock (North Sea)	pass	pass	pass
79 (*)	North Sea Herring (B-Fleet) : HER/2A47DX	Herring (North Sea bycatch)	fail	fail	fail
80 & 81 (*)	North Sea Herring (A-Fleet) : HER/4AB. & HER/4CXB7D	A-fleet Herring (North Sea, Southern North Sea and Eastern Channel)	fail	fail	fail
82 (*)	PLE/2A3AX4	Plaice (North Sea)	pass	pass	pass
83 (*)	POK/2C3A4	Saithe (North Sea)	pass	pass	pass
84 (*)	WHG/2AC4.	Whiting (North Sea)	fail	fail	fail
85 & 86 (**)	Coastal States North-East Atlantic Mackerel: MAC/2A34. & MAC/2CX14-	Mackerel (North Sea & Western)	fail	fail	fail
87 (**)	Coastal States North-East Atlantic Blue Whiting : WHB/1X14	Blue Whiting (Northern)	fail	fail	fail

#TCA	TAC code	TAC name	2020	2021	2022
96 (**)	Coastal States Atlanto-Scandian Herring : HER/1/2-	Herring (ASH)	fail	fail	fail
100	RED/51214D	Redfish [Deep Pelagic] (5,12,14)	fail	fail	fail
101	RED/51214S	Redfish [Shallow Pelagic] (5,12,14)	pass	pass	pass
Total			27	27	28

(*) Assessment uses the internationally agreed TAC from the Written Record of the tri-lateral negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

(**) Assessment uses the internationally agreed TAC from the Written Record of the Coastal States negotiations. The UK-EU TAC codes listed may only form a subset of the total international TAC.

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