Recommendations to the UK on the setting of fishing opportunities for 2025

12 September 2024

On behalf of Angling Trust, Bass Angling Conservation, Blue Marine Foundation, ClientEarth, Marine Conservation Society, Northern Ireland Marine Task Force, Oceana UK, Open Seas, Royal Society for the Protection of Birds, Shark Trust, Whale and Dolphin Conservation, Wildlife and Countryside Link and WWF-UK, we wish to present our recommendations on the setting of fishing opportunities for Northeast Atlantic stocks for 2025. Our intent is to assist the new UK Government and devolved administrations in making decisions on fishing opportunities that:

- Finally end overfishing,
- Significantly contribute to restoring and/or maintaining all fish stocks above healthy levels and to minimising levels of incidental catches, and
- Safeguard marine ecosystem functioning and resilience, also in light of increasing effects of climate change.

Rebuilding its own fish populations is also imperative to strengthen the UK´s food sovereignty and reduce its dependence on imports from sources that are uncooperative, yet competitive, or have a high risk of Illegal, Unreported and Unregulated (IUU) fishing.

1. Overfishing and UK ambitions as a sovereign coastal state

Many UK fish populations remain in a worrying state, reflecting the long-standing habit of the previous UK Government and devolved administrations to set fishing limits above scientific advice, failing to prioritise stock recovery and safeguarding ecosystem health. Progress made since Brexit has been limited, with the UK Government's own reports concluding that not even half of the assessed Total Allowable Catches (TACs) negotiated by the UK for 2024 followed scientific advice from the International Council for the Exploration of the Sea (ICES),[1] up from around a third in 2020, 2021 and 2022,[2] and 40% in 2023.[3]

[1] Centre for Environment Fisheries and Aquaculture Science (Cefas) (2024). Assessing the sustainability of fisheries catch limits negotiated by the UK for 2024. 10 April 2024. https://www.gov.uk/government/publications/assessing-the-sustainability-of-fisheries-catch-limits-negotiated-by-the-uk-for-2024/assessing-the-sustainability-of-fisheries-catch-limits-negotiated-by-the-uk-for-2024.

[2] Bell, E, Nash, R, Garnacho, E, De Oliveira, J, O'Brien, C (2022). Assessing the sustainability of fisheries catch limits negotiated by the UK for 2020 to 2022. Cefas. 38 pp. 2 January 2022.

[3] Bell ED, Nash RMD, Garnacho E, De Oliveira J, Hanin M, Gilmour F, O'Brien CM (2023). Assessing the sustainability of negotiated fisheries catch limits by the UK for 2023. Cefas project report for Defra. 30pp.

The previous UK Government stated its commitment to become a world leader in fisheries management by "*setting a gold standard*" following its departure from the EU,[4] as well as continuing to uphold the vision of "*clean, healthy, safe, productive, and biologically diverse seas*" set out in the UK's Marine Strategy.[5] The 2020 UK Fisheries Act[6] and the UK-EU Trade and Cooperation Agreement[7] (TCA) commit to ensure that fishing activities are environmentally sustainable and contribute to restoring and maintaining fish stocks above scientifically defined maximum sustainable yield (MSY) biomass reference points.

It is vital that governments across the UK finally deliver on these commitments to achieve sustainable fisheries, promote healthy and resilient marine ecosystems, and thereby meet the objectives of the Fisheries Act 2020 and the UK Marine Strategy Regulations 2010 requirement to achieve Good Environmental Status (GES). However, the independent assessment by the Office for Environmental Protection published last year concluded that the "*Government's progress on delivery of its 25 year plan to improve the environment has 'fallen far short'*",[8] with 14 of 23 assessed environmental targets found to be "*off track, in some cases significantly so*".[9] This includes a failure so far to achieve or maintain marine GES by 31 December 2020,[10] with commercial fishing having previously been identified as one of the "*predominant human pressures preventing GES being achieved*".[11]

Decisive action by the new UK Government and the devolved administrations is essential if the UK is to support prosperous and sustainable domestic commercial and recreational fishing and coastal communities and meet its commitments and obligations under international law such as the United Nations Convention on the Law of the Sea (UNCLOS),[12] the United Nations Fish Stocks Agreement (UNFSA),[13] the Convention on Biological Diversity (CBD) and the United Nations Sustainable Development Goal (SDG) 14.[14]

Despite these national and international commitments, overfishing persists in UK waters, affecting both UK and shared stocks, as well as the ecosystems they depend on. As highlighted in Box 1, many stocks remain overfished, some of them in a dire state without any effective recovery efforts to date, and the UK and its negotiating partners, most notably the EU, have continued to set Total Allowable Catches (TACs) above the best available scientific advice provided by the International Council for the Exploration of the Sea (ICES).

[4] Department for Environment, Food and Rural Affairs (DEFRA) (2018). Fisheries white paper: Sustainable fisheries for future generations. 25 October 2018.
[5] Department for Environment, Food and Rural Affairs (DEFRA) (2019). Marine Strategy Part One: UK updated assessment and Good Environmental Status. October 2019.
[6] UK Fisheries Act (2020).
[7] Trade and Cooperation Agreement between the European Union and the European Atomic Energy Community, of the one part, and the United Kingdom of Great Britain and Northern Ireland of the other part (2020).
[8] Office for Environmental Protection (2023). Progress in improving the natural environment in England, 2021/2022. 19 January 2023. https://www.theoep.org.uk/report/progress-improving-natural-environment-england-20212022. Full report available here.
[9] *Ibid*., p. 10.
[10] *Ibid*., p. 31.
[11] Department for Environment, Food and Rural Affairs (2019). Marine Strategy Part One: UK updated assessment and Good Environmental Status. October 2019.
[12] UNCLOS (1982). United Nations Convention on the Law of the Sea.
[13] UN, Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.
[14] https://sustainabledevelopment.un.org/sdg14.

Box 1. The *status quo*: overfishing continues and TACs exceed scientific advice

The first comprehensive audit of the state of the UK's fish stocks concluded that in 2020, the deadline year for ending overfishing under SDG 14, only around 38% of fished stocks were sustainably exploited, a far reach from the 100% goal.[15] An update of this audit by Oceana published last year shows a small improvement with 45% of the 104 fish populations analysed now sustainably fished, but 34% still overfished, while another 21% could not be assessed due to lack of data.[16] Less than half (41%) of the populations analysed were deemed to be of a healthy stock size, and 25% were in a critical condition, with 34% still data-limited and at greater risk of overfishing.

TAC-setting still falls well short of the UK's sustainability commitments: this year's report by the Centre for Environment, Fisheries and Aquaculture Science (Cefas) concluded that only 46% of the assessed TACs negotiated by the UK for 2024 (covering various TAC-setting processes, including the EU/UK and EU/UK/Norway negotiations) followed scientific advice, with over half still set above scientific advice.[17] While this represents a small improvement from the figures for 2023 presented in the previous report (with 40% of TACs following the advice),[18] it is clearly still inadequate. Progress for data-limited stocks with precautionary advice is particularly lagging behind, with only 33% of the analysed 2024 TACs following this advice, compared to 52% for stocks with MSY advice (i.e. 77% and 48% still above the respective advice). Another recent analysis even indicates that progress since 2016 regarding following precautionary advice was reversed in 2023 for EU/UK shared stocks.[19]

Although progress has been made for commercially important fish populations over the past decade, the UK has failed to attain GES for most stocks and a substantial proportion of stocks are still poorly managed. Justifications presented by UK and EU decision-makers often revolve around a lack of scientific data, the lower economic importance of certain stocks or the risk of "choking" other fisheries if scientific advice for stocks caught primarily as bycatch was followed.[20]

In this context, and recognising that the majority of stocks of UK interest are shared with the EU, it is worth recalling that, in a legal case regarding the missed 2020 MSY deadline of the EU's

[15] UK Fisheries Audit (2021). Report produced by Macalister Elliott and Partners Ltd. for Oceana.
[16] Oceana (2023). Taking Stock: The State of UK Fish Populations 2023. September 2023. https://uk.oceana.org/reports/taking-stock-2023/.
[17] Centre for Environment Fisheries and Aquaculture Science (Cefas) (2024). Assessing the sustainability of fisheries catch limits negotiated by the UK for 2024. 10 April 2024. https://www.gov.uk/government/publications/assessing-the-sustainability-of-fisheries-catch-limits-negotiated-by-the-uk-for-2024.
[18] Bell ED, Nash RMD, Garnacho E, de Oliveira J, O'Brien C (2022). Assessing the sustainability of fisheries catch limits negotiated by the UK for 2020 to 2022. Cefas. 38 pp. 2 January 2022.
[19] ClientEarth (2024). Taking stock 2024 – are TACs set to achieve MSY? This report is currently being finalised and due to be published later this year. ClientEarth's analysis covers those TACs shared between the EU and the UK as well as those set by the EU alone, excluding cases where the TAC and ICES advice do not cover the same area and are thus not directly comparable. The preliminary results presented here are based on the same scope and methodology described in ClientEarth's latest report: ClientEarth (2023). Taking stock 2023 - are TACs set to achieve MSY? November 2023. Note that discrepancies between the results of this analysis and that presented by Cefas are most likely due to differences in scope and parts of the methodology used, but both confirm that many TACs continue to exceed scientific advice and progress has been limited.
[20] The term "choke" refers to a situation where no quota is available for one or more "choke" stocks, even though quotas for other more abundant stocks caught together in the mix have not been fully exhausted yet. Setting and respecting TACs set based on the scientific advice for "choke" stocks (which are often depleted and subject to zero-catch advice) can thus "choke" mixed fisheries that target more abundant stocks while also catching the unwanted "choke" species as bycatch. The term "choking" in this context means that fishers have to stop fishing, even though they still have quota for some of the stocks they are catching.

Common Fisheries Policy (CFP),[21] the Court of Justice of the European Union (CJEU) ruled earlier this year that, while this deadline indeed applies to all target stocks, i.e. overfishing them beyond 2020 is illegal under EU law, the Council has some margin of discretion for "bycatch" stocks under certain conditions, in relation to situations where following the scientific advice would lead to a premature closure of a fishery due to the "choke" situation".[22] This part of the CJEU ruling overturned last year's Opinion by Advocate General Ćapeta,[23] that the CFP's 2020 MSY deadline applies to all stocks without exception, i.e. including stocks primarily caught as bycatch.[24]

Importantly, the failure so far to prioritise the rapid recovery of depleted and struggling fish populations only perpetuates their dire state and traps fisheries in an undesirable situation that is eternally overshadowed by "choke" risks. This approach fuels a vicious cycle of overfishing already depleted stocks to avoid short-term quota cuts or closures, preventing stock recovery and gambling away ocean health and a productive future for fisheries in the long-term.

It is therefore crucial to recall that, regardless of the CJEU ruling on the Council's discretion in relation to the CFP's 2020 MSY deadline (regarding fishing pressure), this ruling in no way removed or loosened the **unambiguous obligation of the CFP's MSY objective to maintain or restore all stocks (without distinction between target and bycatch) above biomass levels capable of producing the MSY, which is also included in the legally binding precautionary objective of the UK's Fisheries Act**. It therefore remains the responsibility of both the UK and the EU to deliver on this objective.

Given insufficient progress in recent years, it is therefore essential that ending overfishing and finally rebuilding fish populations and safeguarding ecosystem health is given the highest priority by the UK Government and devolved administrations. This will give marine ecosystems the chance to rebound and build resilience to large-scale threats such as climate change.

As an independent coastal state, the UK has the opportunity and responsibility to lead the way in achieving sustainable fisheries, in line with the UK Fisheries Act and international agreements.[25] We expect the UK to fulfil its ambition to be a global champion of sustainable fisheries and a healthy wider marine environment by setting fishing opportunities for 2025 in line with exploitation levels that are not just sustainable from a single-stock perspective, but also future-proof fisheries by promoting ecosystem health.

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[21] The requirement that "*the maximum sustainable yield exploitation rate shall be achieved […] at the latest by 2020 for all stocks*" in Article 2(2) of the CFP Basic Regulation, Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy.

[22] Judgement of 11 January 2024, Case C–330/22 Friends of the Irish Environment v. The Minister for Agriculture, Food and Marine, Ireland and the Attorney General, ECLI:EU:C:2024:19. https://curia.europa.eu/juris/document/document.jsf;jsessionid=58598DC1806FA841C9D4919E16C0D233?text=&docid=281144&pageIndex=0&doclang=en&mode=req&dir=&occ=first&part=1&cid=8601409. See for example paragraph 75.

[23] Case C-330/220 Friends of the Irish Environment CLG v Minister for Agriculture, Food and the Marine, Ireland, Attorney General EU:C:2023:487. https://curia.europa.eu/juris/documents.jsf?num=C-330/22. OPINION OF ADVOCATE GENERAL ĆAPETA delivered on 15 June 2023.

[24] Ibid., paragraphs 30, 31 and 42. She considered that "by setting a fixed deadline, the EU legislature aimed to prevent the Council from putting short-term economic interests before the overarching long-term goal of progressively restoring and maintaining populations of fish stock above biomass levels capable of producing MSY". She further argued that "Article 2(2) of the CFP Basic Regulation binds the Council in two ways. First, the MSY goal cannot be circumvented after the year 2020 (a). Second, that goal concerns all stocks, without distinction, whether or not in certain fishing operations they are referred to as 'target stock' or as 'by-catch' (b)", and ultimately concluded that "the CFP Basic Regulation did not leave any discretion to the Council to depart from the MSY obligation in relation to by-catch when setting fishing opportunities in mixed fisheries".

[25] Such as the United Nations Convention on the Law of the Sea (UNCLOS), United Nations Fish Stock Agreement (UNFSA) or the Sustainable Development Goals on life under water (SDG14).

2. Key recommendations on setting fishing opportunities

Persistent political decisions to set fishing opportunities above scientifically advised levels and with little regard to ecosystem impacts perpetuate overfishing of Northeast Atlantic fish populations, including vulnerable deep-sea species, and are a substantial roadblock in sustainable fisheries management. Notably, the UK Fisheries Act contains the fundamental "precautionary objective", that "*(a) the precautionary approach to fisheries management is applied, and (b) exploitation of marine stocks restores and maintains populations of harvested species above biomass levels capable of producing maximum sustainable yield*". We therefore call on the UK Government and devolved administrations to stop repeating past management errors and to show political leadership in negotiations in order to fulfil its domestic management commitments and international agreements related to the setting of fishing opportunities.

In light of the current biodiversity and climate crises, it is imperative to rebuild all stocks well above sustainable and productive levels in order to enable them to cope with and mitigate mounting pressures. **We therefore strongly recommend investing in the resilience of stocks and ecosystems by fishing well below the maximum catch level advised by ICES in the single-stock advice**, rather than setting TACs precisely at this level as a default (also see section 4 for further details). There are plenty of reasons for this approach, also to deliver on the fisheries objectives in the Fisheries Act, such as the need to

(a) maximise stock and ecosystem health and resilience in the face of climate change and other challenges,[26] such as a projected increasing frequency of marine heatwaves;

(b) maximise the potential of fish populations to contribute to effective oceanic carbon sequestration to mitigate against climate change;[27]

(c) factor in the risk of illegal discarding;[28]

(d) minimise and where possible reverse the impacts of fishing on ecosystems, e.g. by fully accounting for predator needs and other ecosystem dynamics;[29]

(e) safeguard and rebuild depleted or vulnerable fish populations in mixed fisheries;[30]

(f) provide a buffer in case of unexpected changes in the perception of the stock and/or the ICES advice and its underlying assessment;[31] and

(g) facilitate long-term market stability and predictability by avoiding large fluctuations in TACs and corresponding catches between years.

A recent study published in Science last month found, based on an investigation of 230 fisheries around the world, that "*populations of many overfished species are in far worse condition than has been reported*",[32] showing that "*[c]urrent stock assessment models overestimate productivity*

[26] See section and Box 4. Also see Sumaila, UR, de Fontaubert, C, Palomares, MLD (2023). Editorial: How overfishing handicaps resilience of marine resources under climate change. Front. Mar. Sci., 15 August 2023. Sec. Marine Fisheries, Aquaculture and Living Resources. Volume 10. 2023.
[27] Saba GK, Burd AB, Dunne JP, Hernández-León S, Martin AH, Rose KA, Salisbury J, Steinberg DK, Trueman CN, Wilson, RW, Wilson, SE (2021). Toward a better understanding of fish-based contribution to ocean carbon flux. Limnology and Oceanography, Volume 66, Issue 5, pp.1639-1664.
[28] See section 5 and Box 5.
[29] See section 4 and Box 4.
[30] *Ibid.*
[31] West of Scotland whiting could serve as a positive example, for which the increase in catch advice from zero catch to 4114 t in 2022 was not immediately fully exhausted. Fishing mortality for this stock currently remains low whereas the stock is below MSY $B_{trigger}$ and projected to decrease. ICES (2024). Whiting (Merlangius merlangus) in Division 6.a (West of Scotland). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.25019723.v1, Table 6, p. 4 and Figure 1, p. 1.
[32] Edgar, G (2024). Investigation reveals global fisheries are in far worse shape than we thought – and many have already collapsed. 23 August 2024. https://theconversation.com/investigation-reveals-global-fisheries-are-in-far-worse-shape-than-we-thought-and-many-have-already-collapsed-237306.

and recovery trajectory", particularly for overfished stocks.[33] This further supports our recommendation to set fishing limits below scientific advice to mitigate the risk that the underlying stock assessments may in hindsight turn out to have been too optimistic about the state and recovery of fish populations. While this approach of setting TACs below the advice may require a decrease in certain TACs in the short-term, it is a key way of future-proofing UK fisheries and maximising their potential to be sustainable and ultimately more productive and profitable in the long-term. Sustainable, ecosystem-based TAC-setting must also be underpinned by robust and comprehensive monitoring and enforcement to ensure that catches are fully documented and accounted for. The swift roll-out of remote electronic monitoring (REM) with cameras is essential in this context.

Importantly, as already explained in the NGO Baltic TAC recommendations,[34] **while the current ICES advisory framework indeed reflects the CFP's and Fisheries Act's requirement to exploit fish populations at or below the MSY exploitation rate, it for example does not yet explicitly incorporate key requirements under the Marine Strategy Regulations regarding population health and food web integrity**. This means that the current ICES headline advice is neither geared towards ensuring that stocks exhibit "*a population age and size distribution that is indicative of a healthy stock*" (MSFD Descriptor 3), nor that "*all elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity*" (MSFD Descriptor 4).

Moreover, we are concerned that the current advisory framework and TAC-setting approach are not sufficiently precautionary, nor explicitly geared towards a rapid stock recovery, which is crucial in light of the dire state of many fish populations (see section 6). For example, despite the clear legal requirement to restore and maintain all stocks above biomass levels capable of producing MSY (B_{MSY}), the ICES MSY approach heavily relies on the use of MSY $B_{trigger}$ as a proxy (where B_{MSY} is unknown). This is problematic a) because MSY $B_{trigger}$ can be well below B_{MSY}, and b) in the absence of better estimates it is usually set at the B_{pa} level, below which a stock is outside "safe biological limits" (i.e. there is a higher risk of the stock actually being below B_{lim}, the lowest reference point where recruitment is impaired).[35] Therefore, this approach is from the outset aimed towards a potentially much lower biomass level than the legally required one (i.e. biomass levels above B_{MSY}). Moreover, the ICES advisory framework clearly

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The underlying study is: Stock assessment models overstate sustainability of the world's fisheries. Science, 385(6711), pp. 860-865. https://www.science.org/doi/10.1126/science.adl6282.

[33] Froese, R & Pauly, D (2024). Taking stock of global fisheries. Current stock assessment models overestimate productivity and recovery trajectory. Science, 385(6711), pp. 824-825. https://www.science.org/doi/10.1126/science.adr5487. This article presents a perspective on the above-mentioned paper by Edgar et al. (2024) published in the same Science issue. It highlights that, while *"hindsight historical last biomass estimates were more or less accurate for sustainably fished stocks*", "*[f]or stocks that were overfished, however, historical biomass estimates were substantially overestimated compared with more recent assessments*", and "*rising trends in biomass reported for overfished stocks were often inaccurate, resulting in so-called phantom recoveries for stocks where actual biomass was fluctuating at a low amount or even declining*". The paper concludes that the "*main reason for the overestimation of recent biomass is the tendency of standard models to overestimate productivity at depleted stock levels. That tendency is apparent at the low range of biomass (typically between 20 and 40% of maximum biomass) predicted as sufficient to support maximum sustainable catches*".

[34] Joint NGO recommendations on Baltic Sea fishing opportunities for 2025. 18 June 2025, pp. 6-7. https://www.fishsec.org/2024/06/18/joint-ngo-recommendations-on-baltic-sea-fishing-opportunities-for-2025/.

[35] Also see the explanation of B_{lim} and B_{pa} in the report on Workshop on ICES reference points (WKREF1): "*B_{lim}: A deterministic biomass limit below which a stock is considered to have reduced reproductive capacity. For stocks where quantitative information is available, a reference point B_{lim} may be identified as the stock size below which there is a high risk of reduced recruitment.*" and "*B_{pa}: A precautionary safety margin incorporating the uncertainty in ICES stock estimates leads to a precautionary reference point B_{pa}, which is a biomass reference point designed to have a low probability of being below B_{lim}.*" ICES (2022). Workshop on ICES reference points (WKREF1). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.9822, p. 9.

states that ICES will give catch advice even when a stock is below B_{lim} if the projection is that the Spawning Stock Biomass (SSB) of the stock will be above B_{lim} after the fishing year in question with only 50% probability,[36] i.e. when there is still a 50% risk of the stock actually remaining below B_{lim}. We do not consider this ambitious enough as it risks keeping fish populations in a precarious situation for longer than if their rapid recovery was prioritised. In this context we are also concerned that in some cases, such as West of Scotland whiting[37] and North Sea sole,[38] the ICES headline advice is projected to keep, or allow stocks to fall, below MSY $B_{trigger}$, even though other catch options are available that would allow them to remain at or above this level or at least increase towards it. Setting TACs at (rather than below) such levels would fail to meet the UK Fisheries Act's precautionary objective of recovering and maintaining all stocks above levels capable of producing MSY.

We call on the UK, the EU and other ICES advice clients, to work with ICES to address the above concerns to ensure that future ICES advice fully reflects all relevant ecological policy objectives.[39] In the meantime, in line with the legally required precautionary approach, it is the responsibility of the UK Government and devolved administrations, as well as other Parties that exploit shared stocks like the EU and Norway, to explicitly integrate the necessary precaution into TAC-setting, where the currently available single-stock advice does not yet fully reflect and safeguard ecosystem integrity and dynamics and/or is not geared towards rapid recovery above sustainable population levels with a healthy age/size structure.

With regards to last year's push by some EU Member States for multiannual TACs, we note that currently this only appears to be applied for some EU-only stocks. However, in case a similar approach might be discussed as part of the negotiations on shared stocks, we would already like to register our concern about the impact this might have on sustainable TAC-setting in line with the most up-to-date, best available scientific advice. While the desire for stability and predictability for the industry is understandable, we believe that the best way to achieve this is to allow stocks to recover well enough above sustainable levels to minimise the risk of large fluctuations in stock size between years, and to refrain from fully exhausting every increase in catch advice. **If multiannual TACs are nonetheless pursued, this must be done in a way that does not impede the ability of decision-makers to follow the best available scientific advice, nor result in new information about a potential change in stock status not being requested or used**. This may require setting TACs well enough below the respective ICES headline advice to provide a buffer against unforeseen stock decreases. In any case, safeguards are needed to ensure that TACs are reduced accordingly where new scientific advice indicates the stock status has deteriorated compared to when the multiannual TACs were initially set.

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[36] ICES (2023). Advice on fishing opportunities (2023). General ICES Advice guidelines. Report. https://doi.org/10.17895/ices.advice.22240624.v2, p.6.
[37] ICES (2024). Whiting (Merlangius merlangus) in Division 6.a (West of Scotland). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.25019723.v1. The headline advice of 5116 t is projected to result in a -7% SSB decrease (down from the 2025 SSB estimate of 23982 t), bringing the stock to 22315 t, which is only 87% of the MSY $B_{trigger}$ of 25597 t. Meanwhile, the SSB (2026) = B_{pa} = MSY $B_{trigger}$ scenario of 1469 t would allow the stock to increase to MSY $B_{trigger}$.
[38] ICES (2024). Sole (Solea solea) in Subarea 4 (North Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.25019669.v1. The headline advice of 10196 t is projected to result in a -20% SSB decrease (down from the 2025 SSB estimate of 61320 t), bringing the stock to 48710 t in 2026, which is only 93% of the MSY $B_{trigger}$ of 52532 t. Meanwhile, the SSB (2026) = B_{pa} = MSY $B_{trigger}$ scenario of 5411 t would keep the stock at MSY $B_{trigger}$.
[39] See for example this briefing by the Pew Charitable Trusts (2024): To Improve Fisheries Management and Protect Ecosystems, Decision Makers Must Ask Better Questions. February 2024. https://www.pewtrusts.org/-/media/assets/2024/02/to-improve-fisheries-management-and-protect.pdf.

As for data-limited stocks, we welcome the ongoing work within ICES to further develop methods to provide quantitative advice using available information for example on life history traits and exploitation characteristics.[40] **We strongly recommend that remaining data gaps are explicitly identified on a stock-by-stock basis and that concrete roadmaps as to what is needed to effectively address them going forward are developed and implemented as a matter of urgency**. Lifting stocks out of the data-poorest categories, where only landings information is available, is crucial to move on from the current situation where precautionary advice, often criticised by industry for the use of the precautionary buffer, is exceeded on a regular basis. The recent examples of Celtic Sea pollack[41] and Irish Sea cod[42] which both moved from (routinely exceeded) precautionary advice to zero-catch advice based on the MSY approach, confirming their severely depleted state, should serve as a (pre)cautionary tale on the consequences of ignoring precautionary advice.

Box 2 below outlines our main recommendations on the setting of fishing opportunities for 2025.

Box 2. Key recommendations for the setting of fishing opportunities for 2025

- **Set catch limits well below the best available scientific single-stock advice provided by ICES, where this does not yet fully reflect and safeguard ecosystem integrity and dynamics and/or is not explicitly geared towards rapid recovery above sustainable population levels, in order to maximise long-term population and ecosystem health and productivity**. This is necessary both for stocks with advice based on the ICES MSY approach and for stocks with advice based on the ICES precautionary approach for data-limited stocks. Importantly, the ICES headline advice presented at the top of the respective ICES single-stock advice document represents the maximum level of catches not to be exceeded from the single-stock perspective, rather than a target or absolute recommendation aimed at safeguarding ecosystem health and/or ensuring stock recovery. Indeed, TACs need to be set well below this headline advice in order to prioritise rapid rebuilding, safeguard other stocks caught in the same fisheries and/or to factor in additional pressures or ecosystem dynamics (see below and Box 4), where these aspects are not fully reflected in the headline advice. To operationalise this, the UK and the EU could develop options for a quantitative precautionary approach to TAC-setting that can be used as a default in the absence of fully ecosystem-based, recovery-focused ICES advice and that involves setting TACs as follows:

[40] The ICES WKLIFE workshops have been developing quantitative assessment methodologies for data-limited stocks. See for example https://www.ices.dk/community/groups/Pages/WKLIFEX.aspx and https://www.ices.dk/community/groups/Pages/WKLIFEXI.aspx.
[41] ICES (2023). Pollack (Pollachius pollachius) in subareas 6–7 (Celtic Seas and the English Channel). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.21841011.v1. This stock was subject to precautionary advice of 3360 t from 2019 to 2023 which was exceeded substantially in all years (the sum of the two relevant TACs was 12560 t in 2019, 12401 t in 2020, 9610 t in 2021, 8168 t in 2022 and 6535 t in 2023), see Table 6, p. 4. The most recent ICES advice for 2025 confirms that the stock is at the lowest level ever recorded and has been below B_{lim} since 2016. ICES (2024). Pollack (Pollachius pollachius) in subareas 6-7 (Celtic Seas and the English Channel). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.25019477.v1
[42] ICES (2022). Cod (Gadus morhua) in Division 7.a (Irish Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.19447895.v1. The stock was subject to precautionary advice between 2020 and 2022 which has been exceeded (TAC of 257 t versus advice of 116 t in 2020; 206 t vs. 93 t and 74 t in 2021 and 2022, respectively, see Table 6, p. 5). The most recent ICES advice for 2025 confirms that the stock has been below B_{lim} since 2021. ICES (2024). Cod (Gadus morhua) in Division 7.a (Irish Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.25019231.v1.

- *For stocks below MSY $B_{trigger}$ and/or B_{pa} and/or B_{lim}* (also see section 6): at or below levels that aim for recovery within no more than twice the time needed for recovery in the absence of fishing (T_{MAX}/T_{MIN} <= 2, as suggested by ICES WKREBUILD2),[43] and where such bespoke rebuilding-focused advice is not available, a minimum increase in biomass to be defined based on the specific stock situation and available catch options and their corresponding biomass projections.[44] Moreover, the UK Government and devolved administrations (for shared stocks together with international negotiation partners) should urgently develop and implement effective rebuilding plans and remedial measures (reflecting the findings of WKREBUILD2) for all populations below MSY $B_{trigger}$ (see Box 6).

- *For stocks at or above MSY $B_{trigger}$ and/or which are below it but have catch options that allow for an increase above MSY $B_{trigger}$*: at or below levels that allow for population sizes to recover or be maintained at or above a certain percentage above the MSY $B_{trigger}$,[45] to build in a safeguard to buffer against climate change impacts and/or population fluctuations (also see section 4).[46] For example, TAC-setting could be based on aiming for biomass levels of 120%, 150% or 200% of the MSY $B_{trigger}$ or even more, depending on the specific stock situation and available catch options and their corresponding biomass projections.[47]

- *For all stocks*: at a maximum of a certain fraction, such as 80% (or another, lower level, depending on the stock situation), of the ICES single-stock headline advice, to build in a precautionary safeguard in the face of uncertainty around ecosystem needs and dynamics.[48]

[43] ICES (2023). Workshop on guidelines and methods for the design and evaluation of rebuilding plans for category 1-2 stocks (WKREBUILD2). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.24763293.v2.

[44] In the absence of ICES advice that is explicitly geared towards stock rebuilding over a particular timeframe, the UK and EU negotiation teams could review the available catch options in the ICES single-stock advice sheet, and for example base TACs on the scenario corresponding or closest to the mid-point between the biomass increase projected for zero catch and that for $F_{MSY\ lower}$ or $F_{MSY\ lower}$ × SSB 2025/MSY $B_{trigger}$, or set them halfway between the corresponding catch options.

[45] As explained in more detail in the joint NGO recommendations on Baltic Sea fishing opportunities for 2025 and outlined in this section, aiming to restore or maintain fish populations merely at or near MSY $B_{trigger}$ fails to meet the CFP's legally binding MSY Objective of restoring and maintaining all stocks above B_{MSY}. Where B_{MSY} is unknown, a proxy for it should therefore be used rather than defaulting to the use of MSY $B_{trigger}$. For example, a study by Froese et al. (2021), which "*Given that B_{pa} is a proxy for MSY $B_{trigger}$ [...] assumes an approximate relation between B_{pa} and B_{MSY} with B_{pa}= 0.5 B_{MSY}*", suggests that 200% of B_{pa} (or of MSY $B_{trigger}$, as this is often set at B_{pa}) could be used as a proxy for B_{MSY} to aim for in the absence of bespoke B_{MSY} estimates. Froese, R., Tsikliras, A. C., Scarcella, G., Gascuel, D. (2021). Progress towards ending overfishing in the Northeast Atlantic. Marine Policy 125 (2021) 104282. https://fishbase.de/rfroese/MarPol_EU_Fishing_2021.pdf. Similarly, another earlier study by Froese et al. (2014) had also confirmed based on analysis of stocks from other areas outside the Northeast Atlantic that "*twice SSB_{pa} provides a reasonable preliminary estimate*". Froese, R., Coro, G., Kleisener, K., Demirel, N. (2014). Revisiting safe biological limits in fisheries. Fish and Fisheries, Volume 17, Issue 1, p. 193-209. https://doi.org/10.1111/faf.12102.

[46] For example, a study by Kemp *et al.* suggested that "*biomass of fish stocks should be allowed to regenerate to a minimum of 120% of that which will achieve MSY to provide a buffer against the uncertainty in ecological response to climate change*". Kemp, PS, Subbiah, G, Barnes, R, Border, K, O'Leary, BC, Stewart, B, Williams, C (2023). The future of marine fisheries management and conservation in the United Kingdom: Lessons learnt from over 100 years of biased policy. Marine Policy 147 (2023) 105075, https://doi.org/10.1016/j.marpol.2022.105075, p. 1 (abstract). Given that MSY $B_{trigger}$ constitutes only the lower boundary of biomass fluctuation around B_{MSY}, and is usually set at B_{pa} (the boundary between inside and outside safe biological limits), it seems appropriate to aim for a higher percentage than 120% above MSY $B_{trigger}$, where B_{MSY} is unknown. In combination with the potential use of 200% of the B_{pa} (or of the MSY $B_{trigger}$), this would suggest aiming for 1.2 * 200%, i.e. 240% of the B_{pa} (or of the MSY $B_{trigger}$).

[47] The exact percentage above the MSY $B_{trigger}$ which can be achieved in the short-term will depend on the specific stock situation, e.g. how close to or far above MSY $B_{trigger}$ the stock in question is already, and what catch options and corresponding biomass projections are available in the ICES advice. In light of the legally binding obligation under the UK Fisheries Act's precautionary objective to restore and maintain all stocks above B_{MSY}, TACs could be based for example on the scenario corresponding or closest to the mid-point between the biomass increase projected for F_{MSY} and for $F_{MSY\ lower}$ or $F_{MSY\ lower}$ × SSB 2025/MSY $B_{trigger}$, for all stocks that are not yet at or above B_{MSY} or relevant proxies (such as 2 * B_{pa} or 2 * MSY $B_{trigger}$). For stocks already at or above such levels, TACs could be set based on at least keeping the biomass stable.

[48] ICES uses a "precautionary buffer" of 20% as part of its approach to delivering precautionary single-stock advice for data-limited stocks. In the absence of quantitative ecosystem-based advice, the UK and EU could apply a similar percentage (by setting TACs 20% or more below the ICES single-stock headline advice, i.e. at 80% or less of it) where the latter does not demonstrably fully reflect ecosystem needs and dynamics. Other percentages could be applied if underpinned by bespoke stock-specific information.

- **Work with ICES and other ICES advice clients to ensure that future requests for scientific advice on fishing opportunities are explicitly geared towards (1) rapid rebuilding of populations that are below sustainable biomass levels, (2) reaching and maintaining population levels well above B_{MSY} with a healthy age/size structure, and (3) fully accounting for ecosystem needs and dynamics.**[49] These requests must also fully reflect UK, EU and international environmental legislation, including for example ecological objectives regarding GES under the UK's Marine Strategy Regulations 2010 and the EU's MSFD. In the absence of such fully ecosystem-based and recovery-focused scientific advice, ICES advice clients should request sufficiently precautionary alternative catch options that minimise the risks to population and ecosystem health, and in the meantime must build the necessary precaution into TAC-setting themselves by setting fishing limits below the single-stock headline advice (see above and section 4).
- **Fulfil the UK's legal obligation to implement the Fisheries Act objectives, including the precautionary approach** (as defined by the UNFSA and enshrined in the UK Fisheries Act) when setting all TACs, including those for stocks where scientific advice based on the MSY approach is not available and/or where the available advice does not fully reflect ecosystem needs and dynamics. This includes the setting of precautionary fishing limits and additional measures to mitigate the risk of overfishing, as well as enhanced monitoring and data collection to enable the definition of MSY reference points for the stocks concerned. This is also critical for deep-sea stocks since most of these remain subject to precautionary advice. The application of the precautionary approach in the ecosystem context also means that the UK and other Parties exploiting shared stocks such as the EU and Norway must a) explicitly request ICES to provide sufficiently precautionary catch options to account for ecosystem needs and dynamics, where these are not yet fully reflected in the current ICES single-stock advice, and b) build the necessary precaution geared towards minimising risks to population and ecosystem health into TAC-setting, where such ecosystem-based and/or precautionary catch options are not yet available.
- **Fulfil the UK's legal obligation to take an ecosystem-based approach to fisheries management, including for forage fish as well as top predators like sharks**. One fundamental step of fully implementing ecosystem-based fisheries management (EBFM) is to set TACs within ecological limits, i.e. TACs that account not just for the population health of target species but for the effects of fisheries on non-target species and food webs as well as for relevant environmental conditions. This is especially critical for forage fish (including for example Norway pout, sandeel, herring, sardines and sprat) which have an important ecological role in supporting marine wildlife (such as seabirds, marine mammals and commercial fish species). This requires setting their TACs below the advised levels, where ecosystem needs are not already fully factored into the scientific advice the TACs are based on, as well as commissioning the science needed to better account for these needs. See section 4 for details.

[49] Also see this briefing by the Pew Charitable Trusts (2024): To Improve Fisheries Management and Protect Ecosystems, Decision Makers Must Ask Better Questions. February 2024. https://www.pewtrusts.org/-/media/assets/2024/02/to-improve-fisheries-management-and-protect.pdf.

- **Set TACs below the maximum catch advice for species vulnerable to the impacts of climate change and/or marine heatwaves** or subject to other pressures or stressors, to provide a "climate buffer", improve population resilience and invest in larger stocks with a healthy age/size structure and higher long-term productivity. See section 4 for details.
- **For stocks caught and assessed within a mixed fishery, factor in ICES mixed fisheries considerations** to ensure that all stocks are restored and/or maintained above biomass levels capable of producing MSY. This means setting TACs for the more abundant stocks below their single-stock advice, where this is necessary to safeguard the more vulnerable stocks caught in the fishery. See section 4 for further details. The UK and its negotiation partners like the EU should prioritise addressing any remaining concerns about the data or approach used in the current ICES mixed fisheries considerations, in order to support the effective application of the latter in TAC-setting.
- **If multiannual TACs are pursued, ensure that these do not result in a failure to follow the most up-to-date best available scientific advice, or a failure to request such advice.** Safeguards are needed to ensure that TAC-setting remains responsive to stock declines.
- **Factor in the widely recognised poor compliance with the Landing Obligation (LO) by reversing the quota uplifts that were given to avoid choke risks caused by the LO and set TACs below the ICES headline catch advice**, to ensure the agreed TAC does not lead to fishing mortality beyond sustainable levels.[50] If quota adjustments are granted to account for previous discards, the UK and devolved administrations should make them accessible only to vessels which demonstrate full compliance with the LO. See section 5 for details.
- **In the case of stocks with zero catch advice, ensure that 'bycatch TACs' are not granted** unless and until a rebuilding plan has been implemented that effectively (1) reduces bycatch, (2) sets the relevant stocks on a pathway to recovery above levels capable of producing MSY as soon as possible, and (3) is closely monitored and enforced using remote electronic monitoring (REM) with cameras. See section 6 for further details.
- **Do not remove TACs**, as the removal of a direct limit on fishing mortality is not a sustainable management solution. In instances where a TAC has already been removed (e.g. dab and flounder), it should be reinstated. Removing a TAC downgrades the concerned stock from a situation where the catches are capped to limit fishing mortality, to a situation where catches are effectively unlimited. Even if a stock is not directly targeted, removing a TAC could leave a stock exposed to an unsustainably high fishing mortality, such as through high discarding rates.
- **When considering (re)opening fisheries, for example following signs of population increases, apply a gradual, precautionary approach to safeguard population health, particularly for vulnerable species.** For example, the spurdog fishery was reopened with individuals of 100 cm or less being taken off the prohibited species list and

[50] ClientEarth (2020). Setting Total Allowable Catches (TACs) in the context of the Landing Obligation. July 2020.

a TAC which fully exploits the ICES advice. As it has taken over a decade of strict management measures to see tentative recovery, the reopening should have been more cautious, as noted in the UK-EU Written Record,[51] to prevent a boom and bust scenario. We urge caution when considering relaxing any of the current management measures, as the population is already vulnerable to increasing market demand. We note that sections 5.3.5 and 5.3.6 of the Joint Fisheries Statement require regular reviews of sustainability measures for stocks not included in a fisheries management plan and that these reviews must be undertaken before new fisheries are opened or expanded. We are not aware that this approach was adopted for spurdog and highlight that, unfortunately, according to the Cefas assessment spurdog is at risk of being unsustainably managed.[52]

- **Apply a precautionary approach and ensure that robust fisheries management and monitoring measures are in place before considering opening new fisheries or expanding existing fisheries in response to climate change-related changes in fish population distribution**. Importantly, in the context of climate change a growing body of scientific research indicates and/or projects shifts in the distribution of certain species, for example northwards and/or into deeper waters, in response to ocean warming and related factors.[53] This could leave fish populations or parts thereof exposed to fishing in areas where those species previously did not occur and no catch limits or other management measures are in place yet. In addition to promoting timely updates regarding information on population distribution used in stock assessments for scientific catch advice, the UK and any third Parties involved in exploiting shared stocks must minimise the risk of unregulated fishing, by committing to not pursuing emerging fisheries in new areas and/or of new species until sustainable fisheries management measures, including science-based fishing limits and sharing arrangements between all relevant parties, have been put in place. Where such catches occur as part of existing fisheries for other stocks, they need to be reliably monitored and accounted for when setting fishing limits (by deducting the relevant quantities or precautionary estimates where data are limited) to ensure that these catches do not contribute to overfishing.

- **Prioritise and apply environmental criteria for allocation of fishing opportunities**,[54] for example through incentivising use of selective fishing gear and low impact fishing practices (such as avoiding bycatch of non-targeted marine life and damage to the seabed) in line with Section 25(3) of the UK Fisheries Act, and directing quota away from

[51] Written Record of fisheries consultations between the United Kingdom and the European Union for 2023. Section 4 d), p. 8.
[52] CEFAS (2024). Assessing the sustainability of fisheries catch limits negotiated by the UK for 2024. 10 April 2024. See Tables 1 and 3, TAC code DGS/15X14. https://www.gov.uk/government/publications/assessing-the-sustainability-of-fisheries-catch-limits-negotiated-by-the-uk-for-2024/assessing-the-sustainability-of-fisheries-catch-limits-negotiated-by-the-uk-for-2024.
[53] Examples include the following scientific papers referenced in a recent seminar by Cefas on "Fish stocks moving north", chaired by Prof. John K Pinnegar (July 2024): Perry et al. (2005). Climate change and distribution shifts in marine fishes. Science, 308(5730), pp. 1912-1915. https://www.science.org/doi/10.1126/science.1111322. Dulvy et al. (2008). Climate change and deepening of the North Sea fish assemblage: a biotic indicator of warming seas. Journal of Applied Ecology, 45(4), pp. 1029-1039. https://doi.org/10.1111/j.1365-2664.2008.01488.x. Simpson et al. (2011). Continental Shelf-Wide Response of a Fish Assemblage to Rapid Warming of the Sea. Current Biology, 21(18), pp. 1565-1570. https://doi.org/10.1016/j.cub.2011.08.016. Palacios-Abrantes et al. (2022). Timing and magnitude of climate-driven range shifts in transboundary fish stocks challenge their management. Global Change Biology, 28(7), pp. 2312-2326. https://doi.org/10.1111/gcb.16058. van der Jooij et al. (2024). Northward range expansion of Bay of Biscay anchovy into the English Channel. Marine Ecology Progress Series, 741, pp. 217-36. https://doi.org/10.3354/meps14603.
[54] While the allocation of fishing opportunities is not part of the annual fisheries negotiations on the setting of fishing opportunities, sustainable fisheries management requires that fishing opportunities are both (1) set in a sustainable, precautionary and fully ecosystem-based way, and (2) allocated to fishers based on robust and transparent environmental criteria as outlined in this bullet point.

destructive fishing practices and parts of the fleet with a history of non-compliance. The UK Government and devolved administrations should make their allocation criteria public.

- **The UK should increase the transparency of the decision-making process regarding fishing opportunities**, in line with the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention).[55] The improved access for NGOs to certain parts of international negotiations, such as plenary sessions, on the initiative of the UK is a welcome development. We also welcome the publication of the Cefas report on the sustainability of agreed fishing limits on the UK government's website in recent years.[56] These reports clearly demonstrate the insufficient progress so far towards sustainable TAC-setting, and represent a notable improvement in transparency over the final decisions. We urge the UK to properly document and proactively publish the relevant negotiating positions and records of negotiations in order to enable stakeholders to meaningfully follow and contribute to this important process.

3. Fish stocks shared with third parties

Many of the UK's important fish stocks are transboundary and shared with third parties. Following Brexit, this means there are over 100 stocks for which annual catch limits need to be agreed with other parties such as the EU and Norway, or through the Northeast Atlantic Fisheries Commission (NEAFC) Coastal States process. We welcome the fact the UK has become a NEAFC contracting party,[57] and has established bilateral agreements and memoranda of understanding with the main Northeast Atlantic coastal fishing states, including the comprehensive TCA with the EU. While such arrangements provide management and negotiation frameworks, the setting of annual fishing opportunities still depends on annual negotiations between the UK and these third parties.

To date, international agreements for Northeast Atlantic shared stocks have failed to deliver sustainable exploitation of these resources. The frequent lack of agreement on stock shares, for example for mackerel,[58] led some parties to set their own quotas, the sum of which exceeds the agreed TAC and/or the scientific advice, resulting in overfishing.[59] The UK and the third parties with which it shares fish resources must become constructive partners in the fight against overfishing, biodiversity and habitat loss, and climate change. To achieve this, we urge the UK Government and devolved administrations and other coastal states involved in the setting of fishing opportunities for shared stocks to follow the recommendations in Box 3 below.

[55] UNECE. 1998. Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention).
[56] https://www.gov.uk/government/collections/uk-fishing-annual-assessments-of-negotiations.
[57] The Northeast Atlantic Fisheries Commission, 2020. The United Kingdom becomes the 6th Contracting Party to NEAFC.
[58] Note that while some of the relevant Coastal States (UK, Norway, Faroes) reached a partial agreement on mackerel in June 2024, a comprehensive sharing arrangement involving all relevant Coastal States has not been agreed yet. https://www.gov.uk/government/news/uk-agrees-deals-on-mackerel-fishing-with-norway-and-the-faroe-islands.
[59] This situation applies to key commercial stocks to the UK such as Northeast Atlantic mackerel, Atlanto-Scandian herring and blue whiting.

Box 3. Recommendations on fish stocks shared between the UK and third countries

- **Uphold and deliver on the UK's legal and political sustainability commitments in negotiations with third countries**, i.e. ensure that total fishing limits for all exploited fish populations do not exceed the scientifically advised levels. The UK should also reliably demonstrate that its negotiating position was indeed fully aligned with its own domestic requirements and objectives under the UK Fisheries Act. If the resulting overall fishing limits nevertheless exceed scientific advice, despite the UK's best efforts, the UK must not make its share of the overshoot above the advice available to its fishers.
- **Champion ecosystem-based fisheries management, including TAC-setting, in negotiations with third countries**, to boost the health, resilience and productivity of shared fish populations and the ecosystems they live in, and to future-proof fisheries in the face of mounting pressures like climate change (see sections 1 and 4). Larger and more productive fish populations, ultimately allowing for larger overall catches without jeopardising population or ecosystem health, could also help alleviate sharing disputes, as even smaller percentages of the overall catch would correspond to larger absolute quantities than can currently be caught. The UK should therefore exercise its influence in international negotiating fora to push for an explicit investment in larger, healthier shared fish populations, by setting TACs well below the ICES single-stock advice where this does not fully reflect ecosystem needs and dynamics and/or is not geared towards rapid recovery well above sustainable population levels. If the agreed overall fishing limits nevertheless do not fully reflect these aspects, the UK should lead by example and, as has been the case for sandeel in previous years,[60] not make the excessive part of its quota share available to its fishers, to promote population and wider ecosystem health in line with its domestic requirements and international commitments.
- **Implement a genuine precautionary approach (as defined by the UNFSA) in agreements on shared stocks**. When the available data and information are uncertain, unreliable, or inadequate, and/or where the available single-stock advice does not yet fully reflect ecosystem needs and dynamics, decision-makers should engage in more cautious management, as a lack of scientific certainty cannot preclude management action as outlined in the UK Fisheries Act.
- **Include provisions regarding abundance of fish populations, limit reference points for mortality, and precautionary and ecosystem considerations in agreements on shared stocks**. We urgently call upon coastal states to conserve biodiversity, reduce the impact of fishing activity on fish populations, sensitive species and on the whole ecosystem, including the seafloor, and use scientific knowledge to inform management decisions.

[60] Since 2021, the UK Government and devolved administrations have not allocated the UK's share of the bilaterally agreed sandeel TACs with the EU to its fishers, recognising the important function sandeel plays in the ecosystem as a food source for other marine life. Notably, in a judicial review of the Secretary of State's decision not to permit UK-registered vessels to catch any sandeel for commercial purposes in 2022, the Court ruled in favour of this decision on 28 February 2023, concluding that it "*may properly be regarded as a modest but meaningful contribution to valuable maritime conservation and ecological goals*" (paragraph 45). This sets a key precedent that shows the UK may under certain circumstances choose to withhold (part of) its quota share to achieve environmental benefits and is not by default obliged to fully allocate it to UK fishers (*Petition of Sunbeam Fishing Limited* [2023] CSOH 16, https://www.casemine.com/judgement/uk/63ffa022831a7b3248443116.

- **Avoid unilateral processes leading to catches above scientific advice**. Talks on joint management should be comprehensive, including all relevant cooperative coastal states and stakeholders. Where one or more of the relevant coastal states are not part of the relevant discussions, as has recently been the case for Russia, quotas set and catches nevertheless taken by such parties must be factored in in a precautionary way when agreeing catch limits between the other involved coastal states. In line with UNCLOS, collaboration on management should be multilateral when more than two coastal states have a stake in a given fish population, or fishery.
- **Implement the transparency obligations and rights under the Aarhus Convention in the management of shared stocks**. The underpinning scientific advice, management proposals, negotiations, positions of the parties and decisions should be published for public scrutiny, with access guaranteed for all stakeholders.
- **Apply long-term management as the underlying approach to fisheries management by default**. Although details will need to be revisited regularly, all stakeholders benefit from agreeing to, and working toward, long-term sustainable management objectives. This includes stable sharing arrangements and harvest strategies (including precautionary harvest control rules for setting catch limits). It also requires a robust monitoring and evaluation scheme, control measures and the fight against IUU fishing, a periodic review process, and any necessary mechanisms to transition from previous arrangements to a new system. For certain at-risk species and stocks, immediate emergency measures may be necessary.
- **Use published scientific advice from ICES as the basis for fisheries management decisions taken by coastal states**. For additional scientific input explicit standards should be set, ensuring that only the best available, peer-reviewed scientific advice from independent institutions recognised at the international level is used.
- **Contribute to the timely implementation of the bilateral agreements and memoranda of understanding with the main Northeast Atlantic coastal fishing states**. Priority should be given to sustainable management objectives and principles, the precautionary approach, and agreeing TACs in accordance with the best available scientific advice by ICES and governed by the MSY objective, as required for example under the TCA.
- **Prioritise resolving the allocation issues of pelagic stocks (mackerel, herring, and blue whiting) with the NEAFC Contracting Parties**, and ensure that the overall catches for each stock do not exceed scientific advice, and - where this advice does not fully reflect ecosystem needs and/or dynamics - are kept well enough below the advice to safeguard wider ecosystem health, and in no case lead to unilateral quota increases.
- **Where the UK and the EU fail to reach an agreement on TACs for shared stocks by the 20th of December 2024, provisional unilateral TACs must not exceed the respective party's share of the maximum catch level advised by ICES**, as per Article 499(2) of the TCA. This represents an important safeguard to ensure that stocks are not fished unsustainably where no agreement is reached.

4. Mixed fisheries and ecosystem considerations

Achieving sustainable exploitation of each stock in fisheries targeting multiple species (mixed fisheries) can represent challenges, particularly when dealing with overfished stocks (see section 6 below). Demersal fisheries around the UK are a representative example of this issue with a diversity of species and fisheries subject to numerous biological and technical interactions.

So far, UK management decisions for mixed fisheries have mostly prioritised the exploitation of the most productive and/or economically profitable stocks, at the expense of the most vulnerable populations (often caught as bycatch) or associated species. This approach perpetuates the depletion of vulnerable populations for the sake of avoiding short-term fisheries closures, when the focus should be on rebuilding depleted stocks which would support thriving fisheries in the long-term without the constant threat of "choking", thanks to a more resilient, productive ecosystem (also see section 6).

There are multiple measures that can be implemented simultaneously to mitigate these challenges and reduce fishing pressure where necessary. Using a combination of the tools below (Box 4), fishers and managers should be able to reduce the likelihood and mitigate the impact of "choke" situations whilst still fishing within MSY limits. The UK Government and devolved administrations should ensure that all these options are used to their maximum effect, particularly for at-risk species and stocks.

Moreover, the UK must deliver on its legal requirement to apply an ecosystem-based approach to fisheries management. In the context of fishing opportunities, this means that TAC decisions must reflect the ecosystem role of harvested species (both targeted and taken as bycatch), including their relationship to other species in the food web (for example as forage fish for seabirds or marine mammals), and the ecological consequences of target species exploitation. Similarly, additional pressures or stressors impacting on harvested stocks or the ecosystem they live in, such as consequences of climate change and offshore renewables development or other ocean uses, must be factored in when setting fishing limits.

It is the responsibility of the ICES clients such as the EU and the UK to request catch advice that effectively prioritises healthy and productive fish populations and ecosystems in the long-term, by taking full account of climate change, predator needs and other relevant factors.[61] As already explained in section 2, the current ICES single-stock advice aims for MSY-based exploitation and is not designed to maximise long-term population and ecosystem health and resilience. For example, following a request from the EU and the UK last year, ICES confirmed that its current single-stock advice for forage fish species like sandeel does not ensure that sufficient biomass is left for predator species that depend on these populations.[62] While

[61] For further details on how better requests for scientific advice can help accelerate momentum towards ecosystem-based fisheries management, see for example this briefing by the Pew Charitable Trusts (2024): To Improve Fisheries Management and Protect Ecosystems, Decision Makers Must Ask Better Questions. February 2024. https://www.pewtrusts.org/-/media/assets/2024/02/to-improve-fisheries-management-and-protect.pdf.

[62] EU-UK request on ecosystem considerations in the provision of single stock advice for forage fish species. ICES Advice: Technical Services. Report. https://doi.org/10.17895/ices.advice.24638433.v1. For example, this states in the overall conclusion that "*What is not conducted in the assessments is specific analysis of whether the forage fish biomass is kept high enough for specific predator requirements*" (p. 1). Regarding the use of $B_{escapement}$ as a basis for catch advice for example for sandeel and Norway pout, this document makes clear that this is "*not set based on the needs of predators and may or may not be appropriate for ensuring a good provision of ecosystem services*" (sandeel, p. 4) and aims to "protect recruitment, which may or may not also protect the role as a food source" (Norway pout, p. 5).

urgently advancing the development of ecosystem science and the full incorporation of relevant ecosystem considerations into ICES catch advice is crucial, decision-makers must not postpone action until scientists are ready to provide all the answers.

In line with the fundamental precautionary approach, the UK and its international negotiation partners must therefore set TACs below the single-stock advice,[63] especially in the face of uncertainty and data limitations and of the ongoing biodiversity and climate crises and other mounting pressures. This will require a decisive move towards a new approach to TAC-setting that by default prioritises the rebuilding of all stocks, both UK-only and shared ones, well above sustainable levels, rather than aiming to merely keep them at or near those (often diminished) levels. For example, a recent scientific paper by Kemp *et al.* 2023 concludes that the "*biomass of fish stocks should be allowed to regenerate to a minimum of 120% of that which will achieve MSY to provide a buffer against the uncertainty in ecological response to climate change*".[64] Similarly, an earlier study by Beaugrand et al. 2022 investigating the impacts of fishing pressure and climate-induced environmental change on cod found that "*alleviating fishing effort is the only way to maintain a stable SSB when the environmental regime becomes less suitable*" and that "*preventing collapse is easier than trying to reverse a collapse*".[65] There also needs to be an explicit focus on ensuring a healthy age/size structure, which fishing below F_{MSY} could contribute to and which is a key element of GES under the Marine Strategy Regulations and should already have been achieved by 2020. The reasons and benefits of investing in larger stocks with a healthy proportion of larger fish are manifold:

- Such stocks are likely to be more resilient to challenges posed by climate change and other mounting pressures, as well as more productive since larger fish tend to produce more offspring per spawner.
- They can improve carbon efficiency of fishing operations and potentially increase the value or marketability of the catch since a lower amount of fuel and time is needed to catch the same amount of fish compared to a situation where fish are less abundant and smaller.
- Year-to-year fluctuations in stock size may also be more effectively mitigated by larger overall stock sizes, and adopting a habit of not fully exhausting every advised catch increase can buffer future decreases in fishing opportunities if the perception of the stock deteriorates, offering more stability for fishers.
- Overall, it would constitute a key way of future-proofing UK fisheries in the face of climate change and mounting pressures which may negatively impact productivity going forward, for example providing a potential buffer against recruitment failures caused or exacerbated by environmental factors.

[63] Also see the recent study by Edgar et al. (2024) and the related perspective by Froese & Pauly (2024) published in Science last month, as referenced in footnotes 37 and 38 in section 2 above, which suggest that scientific stock assessments tend to overestimate biomass levels and recovery trajectories particularly for overfished fish populations.
[64] Kemp, PS, Subbiah, G, Barnes, R, Border, K, O'Leary, BC, Stewart, B, Williams, C (2023). The future of marine fisheries management and conservation in the United Kingdom: Lessons learnt from over 100 years of biased policy. Marine Policy 147 (2023) 105075, https://doi.org/10.1016/j.marpol.2022.105075, p. 1 (abstract).
[65] Beaugrand, G, Balembois, A, Kléparski, L, Kirby, RR (2022). Addressing the dichotomy of fishing and climate in fishery management with the FishClim model. Communications Biology 5, Article number: 1146 (2022). https://doi.org/10.1038/s42003-022-04100-6, pp. 4 and 8.

- Ultimately, it is an investment into the long-term profitability of the fleet as well as access to sustainable seafood for current and future generations, whereas a continuation of unsustainable fishing levels and practices jeopardises long-term sustainability across all three dimensions referred to in the "sustainability objective" of the Fisheries Act (environmental, social, economic).

The UK and third parties fishing shared stocks, such as the EU, must urgently put an end to the irresponsible habit of as a default maxing out on (or even exceeding) the single-stock headline advice provided by ICES while failing to request ICES to provide fully ecosystem-based and recovery-focused advice (and then continuing to use the absence of such advice as an excuse to keep defaulting to the single-stock headline advice). Instead, as already outlined in section 2 and Box 2 above, the UK should work with ICES and other ICES advice clients like the EU to ensure that future requests for scientific advice on fishing opportunities are explicitly geared towards (1) rapid rebuilding of populations that are below sustainable biomass levels, (2) reaching and maintaining population levels well above B_{MSY} with a healthy age/size structure, and (3) fully accounting for ecosystem needs and dynamics.

In the meantime, while fully ecosystem-based and recovery-focused advice is not yet available, it is the responsibility of the EU and its negotiation partners to urgently develop an approach for incorporating the necessary precaution into TAC-setting. As already outlined in section 2 and Box 2, this could involve setting TACs that are geared towards a certain biomass increase or towards recovering/maintaining stocks at a certain percentage (e.g. 120% or 150%) above existing reference points like MSY $B_{trigger}$. Similar approaches, based on the concept of maximum economic yield (MEY), are already in use for example in Australia.[66] Decision-makers could also as a default set TACs no higher than a certain fraction (e.g. 80% or less) of the single-stock ICES headline advice (see Box 2 above), in order to integrate a buffer against climate change and other impacts and ease fishing pressure where ecosystem needs and dynamics are not yet fully reflected in the available ICES advice.

To adequately account for mixed fisheries interactions and ecosystem dynamics, as well as factoring in and mitigating against risks posed by climate change and other pressures, we therefore urge the UK Government and devolved administrations to follow the recommendations in Box 4 below.

Box 4. Recommendations for TAC-setting in a mixed fisheries and ecosystem context

- **Use mixed fishery MSY considerations provided by ICES** to assess the compatibility of single-stock TACs with the ambition to safeguard the most vulnerable stock(s) caught in the fishery. When seeking mixed fisheries scenarios from ICES, options geared towards the recovery of depleted stocks should be prioritised rather than those focusing on the full exploitation of the more abundant stocks in the fishery.

[66] Department of Agriculture and Water Resources (2018). Guidelines for the Implementation of the Commonwealth Fisheries Harvest Strategy Policy, Canberra, June. CC BY 4.0, p. 19. "*Some commercial fish stocks around the world are managed to a biomass target that achieves maximum sustainable yield (B_{MSY}). This target maximises the long-term catch that can be taken in a fishery, but ignores the increasing costs of fishing as stocks are fished down to B_{MSY} levels. MEY is generally achieved at a lower catch level (and conversely a higher biomass, B_{MEY}) and aims to maximise the economic returns from fishing rather than maximise the quantity of fish landed*." The guidelines further explain that for stocks for which bioeconomic models, needed to determine MEY-based reference points and targets, are not available or feasible, MEY proxies are used, including for example the proxy of 1.2 * B_{MSY}. This proxy is explicitly geared towards a biomass 20% larger than B_{MSY}.

- **Set TACs for more abundant stocks in mixed fisheries below the ICES single-stock maximum catch advice** to account for mixed fishery interactions, and to ensure that no stocks in the fishery are fished above scientific advice.
- **Adopt spatial measures to reduce fishing pressure on more vulnerable species**, including temporary and permanent closures, real-time closures and 'move-on' rules.
- **Ensure independent, reliable monitoring and full documentation of catches** through Remote Electronic Monitoring with cameras (REM), supported by observer coverage as appropriate, to better understand catch composition in mixed fisheries and use this to inform further fisheries management.
- **Mandate the use of the best available technology and practices to improve the selectivity of fishing operations**. A list of authorised mitigation measures should be made available for each active mixed fishery to support fishers. Selectivity measures employed during fishing activity should be included within the legal requirement of logbook reporting to track progress and place the burden of proof onto fishers to prove they are doing everything possible to minimise unwanted catches.
- **Ensure that TAC decisions are based on scientific advice that fully incorporates ecosystem considerations, for example regarding predator-prey interactions, and commission such advice where these considerations are not yet fully reflected, and - in its absence - explicitly build additional precaution into TAC-setting** (see Box 2 and below). We note the current use by ICES of multispecies modelling to account for foodweb dynamics in natural mortality values in the assessments of several species. However, there are concerns that this approach does not ensure that a sufficiently large biomass of forage fish (and other fish forming part of the prey of dependent predators) remains in the water or that areas closed to fishing are fully accounted for[67] to allow dependent predators to meet their needs. In light of various political commitments around maintaining food web integrity, conserving seabirds and marine mammals, and in line with the precautionary objective and the ecosystem-based objective,[68] decision-makers should therefore:

  (1) Adopt an ecosystem-based approach to fisheries management by incorporating the needs of marine predators (e.g., seabirds and cetaceans) into the TAC-setting of forage fish (e.g., sprat, herring, sandeel), by setting TACs for such species well below the current single-stock advice from ICES;

  (2) Adjust TAC-setting downwards to account for areas where fishing is no longer permitted (e.g., marine protected areas and relevant sandeel closures) to prevent a concentration of fishing effort into an area smaller than the one which the advice was given, while respecting and supporting the UK and Scottish sandeel closures as a key step towards ecosystem-based fisheries management.[69,70]

[67] Dunn, E (2021). Revive our Seas: The case for stronger regulation of sandeel fisheries in UK waters. Royal Society for the Protection of Birds. June 2021.
[68] Fisheries Act 2020, S1(1)(b)-(c)
[69] NGOs on both sides of the English Channel released a joint statement earlier this year in support of the decision to close sandeel fishing in all Scottish waters and English waters of the North Sea. https://rspb.org.uk/media-centre/sandeel-closures-eu-challenge.
[70] It is important to note that an impact assessment report produced in response to a request from DEFRA also highlighted that ICES "*takes no account of area closures when advising on TACs*". Natural England, Cefas and Joint Nature Conservation Committee (JNCC) (2023). What are the ecosystem

(3) Request that ICES explores more ecologically robust alternative reference points, which set safe ecological limits for predators by accounting for not only how much fish biomass predators consume (i.e. their physiological requirements) when breeding successfully, but also the much greater biomass they require access to in order to do so (i.e. their ecological requirements).[71,72]

- **Swiftly act on the findings of the ICES response to the EU/UK request regarding the extent to which ICES single-stock advice for forage fish factors in ecosystem considerations, which confirms that this advice does not ensure a sufficient food supply for dependent predators, and that solely relying on quota advice is insufficient to ensure ecosystem-based management and wider ecosystem resilience in line with GES.[73]** This request represents a key step in the right direction, but it will be crucial to ensure that any gaps identified (i.e. occasions where the single-stock advice does not yet fully and robustly account for all relevant ecosystem considerations) are urgently addressed. Recognising that developing or adopting the relevant methodologies may take some time, it is the responsibility of the decision-makers in the meantime to use the currently available scientific advice in a much more precautionary way, for example by setting TACs below the single-stock headline advice where relevant ecosystem considerations are not yet fully reflected (also see section and Box 2). In order to clearly identify such cases, the EU and the UK could request ICES to specify in future on a stock-by-stock basis (for all stocks, not just forage fish species):

  (a) which ecosystem considerations are (likely to be) relevant for each stock;
  (b) to what extent they and any other conservation measures (e.g. area closures) have (not yet) been factored into the advice; and
  (c) what the consequences of a failure to reflect these aspects are likely to be for the stock in question and for the sustainability of the respective headline advice.

  A recent review of the inclusion of ecosystem trends and variability in ICES advice on fishing opportunities by Trenkel *et al.* 2023[74] already presents important findings in this regard that such further work should build on. Such information could be provided as part of the single-stock advice by default and support ecosystem-based TAC-setting even where ecosystem considerations are not yet fully incorporated into the advice in a quantitative manner.

risks and benefits of full prohibition of industrial Sandeel fishing in the UK waters of the North Sea (ICES Area IV). March 2023. p. 41. https://www.gov.uk/government/publications/evidence-report-on-the-ecosystem-impacts-from-industrial-sandeel-fishing. Similarly, ICES confirmed in its most recent single-stock advice for sandeel that the UK and Scottish area closures were not accounted for in the stock assessment. ICES (2024). Sandeel (Ammodytes spp.) in divisions 4.a–b, Sandeel Area 4 (northern and central North Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.25019657.v1, p. 3. In this and similar situations, ideally ICES could be requested to adjust its advice on fishing opportunities by removing the amount of sandeel (or other species in question) no longer available to fishing due to area closures from its headline advice. If this aspect is not reflected in the ICES advice itself, it will have to be accounted for at the TAC-setting stage in order to prevent concentration of fishing effort into an area smaller than that for which the advice was given.

[71] Hill, SL, Hinke, J, Bertrand, S, Fritz, L, Furness, RW, Ianelli, JN, Murphy, M, Oliveros-Ramos, R, Pichegru, L, Sharp, R, Stillman, RA, Wright, PJ, Ratcliffe, N (2020). Reference points for predators will progress ecosystem-based management of fisheries. Fish and Fisheries. 2020; 00:1–11.

[72] Note for example, that the MSC Fisheries Standard aims to leave up to 75% of the unfished population of "low trophic level" species (such as forage fish like sandeel) in the ocean to meet ecosystem needs, compared to 40% as is typically the case for species managed based on MSY. See Marine Stewardship Council (2023). Clarifying the assessment of key low trophic level stocks.

[73] ICES (2023). EU-UK request on ecosystem considerations in the provision of single stock advice for forage fish species. ICES Advice: Technical Services. Report. https://doi.org/10.17895/ices.advice.24638433.v1.

[74] Trenkel, VM, Ojaveer, H, Miller, DCM, Dickey-Collas, M (2023). The rationale for heterogeneous inclusion of ecosystem trends and variability in ICES fishing opportunities advice. Mar Ecol Prog Ser 704:81-97. https://doi.org/10.3354/meps14227.

- **Set TACs below the single-stock advice where stocks are subject to additional pressures or stressors such as climate-related and other impacts that are not (yet) explicitly factored into the advice**. One option to integrate the necessary precaution in the face of uncertainty or knowledge gaps on ecosystem needs or dynamics into TAC-setting could be, as a minimum, to default to setting TACs below the single-stock ICES headline advice by at least a certain percentage and/or explicitly aim for larger stock sizes than B_{MSY} (or relevant proxies) (see Box 2), while in parallel supporting the incorporation of all relevant ecosystem considerations into ICES advice on sustainable catches going forward (see above).

5. Landing obligation challenges

Since the LO came fully into force in 2019, TACs have been set based on total catch advice (albeit with some deductions for exempted discards), rather than the landings advice used before 2015. Despite the LO having been phased in since 2015 and formally having been fully in place since 2019, it is recognised that non-compliance is widespread, unreported discarding continues and the LO is not effectively controlled and enforced.[75] Setting TACs based on catch advice rather than landings advice, while illegal discarding continues, allows for unsustainable catches potentially far beyond scientific advice.[76] Poor implementation of the LO fundamentally undermines sustainable fisheries and decisive steps must be taken to remedy the current situation.

Furthermore, there are industry voices who claim that failures of implementation mean that the policy is unworkable, and that a reform/elimination of the LO is needed. The UK's departure from the EU represents both opportunities, for example for taking a leadership role in the roll-out of REM and full catch documentation, and risks, such as the introduction of further exemptions that would make control and enforcement even more difficult. Recent developments in the context of "Future Catching Policies", for example the now concluded Defra consultations under the previous UK Government about a discards reform[77] and about REM,[78] suggest that the UK and devolved administrations are considering substantial changes in the way discards are managed, though the direction the new UK Government and the devolved administrations will take on these issues is yet to be seen. We welcome some of the elements in the previous Government's consultation conclusions, such as the overall vision of fully documented UK fisheries and the ambition to introduce a catch accounting approach that attempts to set the right incentives towards improved selectivity and may help promote REM uptake. However, many shortcomings, such as the envisaged REM roll-out being too slow and patchy, remain and we stand ready to support the new Government and the devolved administrations in addressing these issues and championing sustainable, thriving UK fisheries to fully deliver on the fisheries objectives in the UK Fisheries Act.

[75] For example, Communication from the Commission to the European Parliament and the Council (2022). COM(2022) 253 final. Towards more sustainable fishing in the EU: state of play and orientations for 2023. Commission Staff Working Document SWD(2022) 157 final.
[76] Borges, L (2020). The Unintended Impact of the European Discard Ban. ICES Journal of Marine Science. Also see: ClientEarth's and Our Fish's briefings on the LO. This short 5 min presentation (starting at 15:30) visualises the risk that 'topped up' catch-based TACs pose in combination with illegal discards.
[77] https://www.gov.uk/government/consultations/discards-reform (consultation closed on 9 October 2023).
[78] https://www.gov.uk/government/consultations/remote-electronic-monitoring (consultation closed on 9 October 2023).

The shared NGO position is that the LO has not been given a chance to work and that the underlying problems (such as a lack of fishing gear selectivity and effective avoidance of unwanted catches) can and must be tackled under the existing framework. Any future catching policy should ensure that the full ethos of the current LO – minimising and avoiding unwanted catches and waste – is maintained and should outline how its success is going to be quantified. Provisions should also be made to fully document fisheries while collecting relevant data. All of these elements will be supported by the adoption of REM with cameras which will provide improved understanding and evidence of selectivity as well as support compliance. To avoid negative effects of the failure to properly implement the LO on the setting of sustainable catch limits we make the following recommendations in Box 5 below.

Box 5. Recommendations regarding TAC-setting in the context of the LO

- **Underpin sustainable TAC-setting by robust controls and full catch documentation using remote electronic and camera monitoring**. REM has become a vital and irreplaceable tool that is increasingly being implemented in fisheries around the world. The swift roll-out of REM across UK waters is key to ensuring that catches are fully documented and accounted for, and that management measures (including TACs) are complied with.[79]
- **In the absence of robust, comprehensive control and monitoring, factor in poor compliance with the LO by proposing and setting TACs lower than the ICES maximum catch advice**, to ensure that the agreed TACs do not lead to fishing mortality beyond sustainable levels. So-called quota "top-ups", intended to cover catches that used to be discarded prior to the LO and now have to be landed, should not be applied while the LO is not effectively monitored and controlled. If such top-ups nevertheless continue to be used, then TAC deductions need to be made in order to account for continued discards covered by LO exemptions. Such deductions need to be based on robust discard estimates, and where discard information is limited or uncertain, larger deductions need to be applied in line with the precautionary approach.
- **Make access to quota "top-ups" conditional on demonstrated vessel compliance with the LO and full catch documentation**, notably through REM, supported by independent observer coverage as appropriate. Such top-ups were intended to allow fishers to legally land catches that would have been discarded prior to the LO, and therefore must not be made available to vessels that are not demonstrably complying with the LO.
- **Create and promote quota redistribution solutions**, beyond traditional swaps, to avoid closing fisheries if quota is available elsewhere.

[79] https://marine-conservation-society-production.s3.amazonaws.com/documents/REM_TransparentSea_Final_v2.pdf.

6. Depleted stocks with zero or very low catch advice

The most recent scientific advice published by ICES highlights the continued critical status of a number of key fish populations, many of which are jointly managed with the EU. Examples of these severely depleted stocks include Celtic Sea and Irish Sea cod and whiting, herring in the Irish Sea, Celtic Sea and southwest of Ireland, Celtic Sea pollack, and as of this year also eastern Channel common sole.[80] All of these stocks are below the biomass limit reference point (B_{lim}), and for all of them except sole the ICES advice is for zero catch. With climate change also likely to be affecting the resilience of some fish populations,[81] effective efforts to recover these stocks are needed more urgently than ever.[82]

We are extremely concerned that limited effort has been made by all parties involved to apply effective recovery measures while TACs continue to exceed scientific advice. As already outlined in section 2, regardless of the CJEU ruling on the Council's discretion regarding the setting of fishing opportunities for bycatch stocks in relation to the 2020 MSY deadline of the EU's CFP, both the UK and the EU remain legally obliged under their respective domestic legislation to restore and maintain all populations of harvested species above biomass levels capable of producing the MSY and to minimise negative impacts on marine ecosystems. Moreover, these stocks are a public resource and recovering them is a necessity to contribute to a healthy resilient marine ecosystem and to provide long-term benefits to coastal communities.

It is high time to break the vicious cycle of overfishing already depleted "bycatch" stocks in order to avoid short-term fisheries closures or quota cuts, thereby preventing stock recovery and trapping fisheries in a suboptimal situation, perpetually overshadowed by choke risks. The fact that most depleted fish populations have been in a dire state for many years and in some cases are now at or near the all-time low, is undeniable proof that this approach has failed to rebuild struggling stocks, and repeating it year after year but expecting different results has no rhyme or reason. Instead, the UK and its negotiating partners like the EU must now urgently prioritise recovery of all stocks that are below sustainable levels, by setting TACs accordingly and developing effective rebuilding plans and measures.

As already highlighted in section 2, the findings recently published in Science,[83] that current scientific stock assessments tend to overestimate productivity and recovery trajectory, further underpin the need for additional caution if population rebuilding efforts are to be successful. Relying on so-called "phantom recoveries" that in hindsight, based on more recent information, turn out not to have materialised,[84] risks perpetuating or exacerbating an already precarious situation. More explicitly, as Froese & Pauly (2024) put it, "*managers need to be aware of the*

[80] ICES advice for the referred depleted stocks: Celtic Sea cod, Celtic Sea whiting, Irish Sea cod, Irish Sea whiting, herring in the Irish Sea, Celtic Sea and southwest of Ireland, Irish Sea sole, Celtic Sea pollack, eastern Channel common sole.
[81] Drinkwater, KF (2005). The response of Atlantic cod (*Gadus morhua*) to future climate change. ICES Journal of Marine Science, Volume 62, Issue 7, 2005, Pages 1327–1337. https://doi.org/10.1016/j.icesjms.2005.05.015.
[82] Sumaila, UR and Tai, TC (2020). End Overfishing and Increase the Resilience of the Ocean to Climate Change. Frontiers in Marine Science. https://doi.org/10.3389/fmars.2020.00523.
[83] See the recent study by Edgar et al. (2024) and the related perspective by Froese & Pauly (2024) published in Science last month, as referenced in footnotes 32 and 33 in section 2 above.
[84] *Ibid*., for example, Froese & Pauly (2024) stated that "*rising trends in biomass reported for overfished stocks were often inaccurate, resulting in so-called phantom recoveries for stocks where actual biomass was fluctuating at a low amount or even declining. In other words, overfished stocks that were in urgent need of catch reduction and rebuilding were instead displayed by models as increasing in biomass. [...] On the basis of these data, fishery managers could reasonably conclude, albeit incorrectly, that the stock was recovering and able to support even higher catch levels*."

difficulties of predicting the status of an invisible resource and should apply their common sense when repeatedly confronted with phantom recoveries of a depleted resource."[85]

Managing mixed fisheries involving stocks subject to zero or very low catch advice presents a number of challenges. However, there are steps that can be taken to reduce unwanted catches, minimise the impacts of fishing on depleted stocks and prioritise their rapid recovery. With specific regard to low or zero catch advice stocks, we provide the following recommendations in Box 6 below, complementing those presented in Box 4 above regarding mixed fisheries.

Box 6. Recommendations regarding depleted stocks with zero or low catch advice

- **Request ICES to provide advice geared towards rapid rebuilding of all stocks that are below MSY $B_{trigger}$**, to support the setting of future catch limits at or below levels that aim for recovery within no more than twice the time needed for recovery in the absence of fishing ($T_{MAX}/T_{MIN} <= 2$, as suggested by ICES WKREBUILD2).[86] Where such bespoke rebuilding-focused advice is not yet available and the EU and/or its negotiating partners are, as in previous years, considering the use of bycatch TACs despite zero or very low catch advice from ICES, they could at least aim for a minimum increase in biomass to be defined based on the specific stock situation and available catch options and their corresponding biomass projections.[87] See Box 2.
- **Follow the scientific advice provided by ICES and set catch limits for depleted stocks accordingly**. The UK should prioritise the recovery of depleted stocks over short term profit maximisation, as this is in the long-term interest of both the marine environment and coastal communities.
- **Prioritise the recovery of depleted stocks particularly in cases where "bycatch TACs" are adopted**, and do not allow catches unless and until the relevant management authority has put in place an effective rebuilding plan or multi-year management strategies with clear recovery targets, timeframes and bycatch reduction strategies, including spatial measures (such as temporary and permanent closures) and selective gears, to achieve them. Such rebuilding plans and remedial measures (reflecting the findings of ICES WKREBUILD2)[88] should be implemented for all populations below MSY $B_{trigger}$, include strong safeguards to prevent future population declines or stagnation below MSY $B_{trigger}$, and be subject to close monitoring and enforcement using REM with cameras.
- **Ensure that fisheries using "bycatch TACs" are fully documented using REM** (supported by observer coverage as appropriate), and strong remedial measures are in

[85] *Ibid.*
[86] ICES (2023). Workshop on guidelines and methods for the design and evaluation of rebuilding plans for category 1-2 stocks (WKREBUILD2). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.24763293.v2.
[87] In the absence of ICES advice that is explicitly geared towards stock rebuilding over a particular timeframe, the EU and UK negotiation teams could review the available catch options in the ICES single-stock advice sheet, and for example base TACs on the scenario corresponding or closest to the mid-point between the biomass increase projected for zero catch and that for $F_{MSY\ lower}$ or $F_{MSY\ lower}$ × SSB 2025/MSY $B_{trigger}$, or set them halfway between the corresponding catch options.
[88] ICES (2023). Workshop on guidelines and methods for the design and evaluation of rebuilding plans for category 1-2 stocks (WKREBUILD2). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.24763293.v2.

place. This is particularly crucial in light of long-standing concerns about the lack of compliance with the LO, as well as indications in the ICES advice for several depleted or struggling stocks that the relevant TACs have regularly been overshot in the past (e.g. for North Sea cod).

- **Prioritise the recovery needs of these stocks in management for mixed fisheries** by ensuring that catches under no circumstances exceed the scientific advice, rather than the full exploitation of the possible fishing opportunities of healthy stocks in the same fishery.[89] As highlighted in Box 4, this means setting TACs for the more abundant stocks caught in the same fisheries (such as Norway lobster in the Irish Sea or haddock in the Celtic Sea) below their single-stock advice in order to safeguard depleted stocks (such as Irish Sea whiting or Celtic Sea whiting cod).
- **Request ICES to provide additional mixed fisheries scientific catch scenarios focusing on options which allow vulnerable stocks to rebuild** to inform fisheries management of the actions and/or reductions in TACs for healthy stocks which would be required. Evaluation of such scenarios could present options which avoid immediate fisheries closures while still allowing depleted stocks to recover within an ambitious timeframe.

7. Stocks not managed by a TAC

A few stocks which are currently not subject to a TAC have been exploited unsustainably for several years. Examples include the critically endangered European eel and European sea bass in the North Sea, Irish Sea, English Channel, Bristol Channel and Celtic Sea. In addition, very few effective management options have been explored for bycatch of vulnerable and critically endangered species like tope shark (*Galeorhinus galeus*).

The sustainability and precautionary objectives of the Fisheries Act, as well as the precautionary approach and the ecosystem-based approach are fundamental principles that must underpin UK fisheries management in general. It is crucial that effective stock-specific measures be introduced, particularly where no TAC is in place to regulate fishing levels, to ensure that vulnerable stocks are restored above sustainable levels, in line with legal requirements and the UK's wider sustainability ambitions. The fact that we know very little about the true catch levels of some of these species further strengthens the case for REM to improve data for their sustainable management. We therefore provide the following recommendations in Box 7 below for stocks not managed by a TAC.

[89] ClientEarth (2020). Ask the right question, get the right answer: Scientific advice for bycatch or non-targeted stocks that have zero catch advice.

Box 7. Recommendations for stocks not managed by a TAC

- **Introduce effective management measures for all non-TAC stocks** that aim to ensure each stock's recovery and sustainable exploitation in line with the UK's sustainability objectives, for example through recovery plans. In any cases where TACs have been removed and not reinstated, a quantitative evaluation of potential alternative management measures and their efficiency should be urgently conducted, as recommended by ICES for several deep-sea stocks in 2018,[90] to ensure the CFP's objectives are met for the affected stocks. Management of non-TAC stocks should also be underpinned by REM to provide robust data on capture of these species.
- **Assess and minimise the impact of fisheries for stocks subject to TACs on non-quota species and other marine life**. For example, high numbers of dab are caught in the plaice and sole fishery in the North Sea, but mostly discarded, with a discard rate of 90%.[91] This should be addressed by setting TACs for the relevant target stocks at lower levels and implementing effective bycatch reduction measures to minimise the impact on associated non-quota stocks.
- **Ensure that the prohibited species list has clear criteria for uplisting and removal of species.** There is a clear need for transparent criteria for the listing of prohibited species to ensure that species that are in need of protection can be listed and species that have recovered can be sustainably exploited again.
- **Ensure a continued and swift recovery of sea bass.** Given that the spawning stock biomass is still below MSY $B_{trigger}$ and B_{pa} (i.e. outside safe biological limits) and projected to increase only marginally based on ICES headline advice,[92] catches should be limited to well below the headline advice to allow for a continued recovery of the stock. To achieve this:
    - **There should be no increase in catch limits for 2025, in order to allow growth to get back on track.** The flawed ICES Advice Rule (see section 2 for more details) and anomalous 2020 and 2021 pre-recruitment assumptions have resulted in an unsafe headline catch advice that jeopardises the stock recovery - growth is stalled and yet the ICES advice suggests an unsustainable 14% increase in fishing pressure.
    - **There should be a "percentage of catch" restriction for fixed netters.** The UK landing data indicates some fixed netters are routinely illegally targeting bass as they migrate to and from spawning areas.[93]

[90] ICES (2018): EU request for ICES to provide advice on a revision of the contribution of TACs to fisheries management and stock conservation for selected deep-water stocks. ICES Advice: Special Requests. Report. https://doi.org/10.17895/ices.pub.4493.
[91] ICES (2023). Dab (Limanda limanda) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat). Replacing advice provided in 2022. ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.22793633.v1. Table 1, p. 2.
[92] ICES (2023). Sea bass (Dicentrarchus labrax) in divisions 4.b–c, 7.a, and 7.d–h (central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea). ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.21840747.v1.
[93] Bass Anglers' Sportfishing Society (2024). Targeting of pre-spawning aggregations of bass by nets in Cornwall. https://issuu.com/ukbass/docs/targeting_of_pre-spawning_aggregations_of_bass_by_ .

    - **Bycatch must be reduced.** In 2023, bycatch metiers represented 65% of all commercial bass landings - this is a barrier to stock recovery.
    - **Wales should urgently deliver on its 2021 commitment to the EU to introduce catch reporting for shore netters.**
- **Add European eel to the prohibited species list, stop all targeted fishing for eel, both commercial and recreational, and urgently introduce measures that address habitat loss and water quality in priority areas**. European eel is a shared stock with the EU and other countries and is subject to targeted fishing in both the UK and many other countries, despite being listed as Critically Endangered by the International Union for Conservation of Nature (IUCN).[94] The most recent scientific advice from ICES on fishing opportunities for eel,[95] provided to both the UK and the EU, is zero catch of all life stages and in all habitats, including eels used for restocking and aquaculture. It also includes advice to bring all other anthropogenic mortalities to zero and to urgently restore habitats ensuring connectivity and water quality to support recovery of the population.
- **Do not consider resuming UK international trade in eels**. In 2019, the UK requested advice from ICES regarding a potential UK non-detriment finding (NDF) for international trade in European eel in the context of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).[96] This indicates an openness in the UK to resuming international trade in European eel. However, in light of the most recent ICES advice on eel fishing opportunities, its conservation status and the widespread illegal trade in glass eels, we strongly advise against pursuing this further.

8. Deep-sea stocks

Scientists indicate that deep-sea fish populations in European waters are either depleted or lacking information to assess their status. Deep-sea fish tend to be slow-growing, late maturing and long-lived. The biological characteristics of most deep-sea species and the ecosystems they inhabit make them exceptionally vulnerable to over-exploitation and poorly adapted to sustained fishing pressure, whether targeted or not, since their productivity and recovery capacity are very limited. Deep-sea habitats themselves, including vulnerable marine ecosystems (VMEs), are highly susceptible to damage from deep-sea fishing - damage that can take centuries to recover from. Given these characteristics, deep-sea species and ecosystems should be managed with significant precaution, instead of being treated as by-products of target fisheries for other stocks and/or jeopardised as collateral damage.

However, TACs have been repeatedly set above the precautionary advice provided by ICES, or even been removed for many of these vulnerable stocks, without successful efforts to date to fill the data gaps that still prevent full MSY-based stock assessments for many deep-sea species.

[94] Pike, C, Crook, V, Gollock, M (2020). Anguilla anguilla. The IUCN Red List of Threatened Species 2020: e.T60344A152845178. https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T60344A152845178.en.
[95] ICES (2023). European eel (Anguilla anguilla) throughout its natural range. ICES Advice: Recurrent Advice. Report. https://doi.org/10.17895/ices.advice.21907860.v1.
[96] ICES (2019): UK request for an independent review of the scientific basis for a UK non-detriment finding (NDF) for the international trade in European eel, seen in relation to CITES legislation. ICES Advice: Special Requests. Report. https://doi.org/10.17895/ices.advice.4688.

This is contrary to the UK's sustainability requirements, including the precautionary approach, which requires more caution when data are lacking or uncertain, and the ecosystem-based approach of minimising negative impacts of fishing activities on the marine ecosystem.

It also fails to deliver on the UK's international commitments to manage deep-sea fisheries in a manner consistent with the global standard established by the United Nations General Assembly (UNGA).[97] This standard requires UK regulations to contain, amongst other things, obligations to: end overfishing of deep-sea species; rebuild depleted stocks; prevent by-catch of vulnerable species; to take into account the potential impacts of climate change and ocean acidification in taking measures to manage deep-sea fisheries and protect VMEs; and to protect VMEs, including all species associated with VMEs, from the adverse impacts of bottom fisheries, whether they target deep-sea species or take them as bycatch.

Box 8. Recommendations for deep-sea stocks

Many of the recommendations provided throughout Boxes 2 to 7 in this document directly apply to deep-sea stocks, particularly regarding the following:

- The setting of TACs below the ICES scientific single-stock advice where this does not yet fully reflect ecosystem needs and dynamics and/or is not explicitly geared owards rapid recovery above sustainable population levels;
- The application of the precautionary approach and the ecosystem-based approach to fisheries management and the need to prioritise the protection and recovery of vulnerable and/or depleted stocks;
- The concerns around TAC removal and the need for the implementation and evaluation of effective recovery measures to ensure the UK's sustainability objectives are met; and
- The need to urgently improve data collection and address current data gaps in order to enable the definition of MSY reference points or suitable proxies (to support rebuilding above levels which can produce MSY as required by the UN Fish Stocks Agreement) for the stocks concerned.

In addition to the above, recognising the particular vulnerability of deep-sea species and ecosystems, we recommend that the UK Government and devolved administrations:

- Support a swift implementation of the EU's adopted implementing act on the closure of vulnerable areas to fishing gears which touch the seabed, an act which aims to protect VMEs,[98] and consider a similar approach in UK waters;
- Adopt the position of a zero TAC for deep-sea species that are recognised as vulnerable, threatened or endangered, such as roundnose grenadier which is listed as Critically Endangered in the North Atlantic on the IUCN Red List; at NEAFC the UK should support a zero TAC for both roundnose grenadier and orange roughy;

[97] Resolutions 61/105, 64/72, 66/68, 71/123 and 77/118 adopted by the General Assembly of the United Nations.
[98] Regulation (EU) 2016/2336 of 14 December 2016 establishing specific conditions for fishing for deep-sea stocks in the north-east Atlantic and provisions for fishing in international waters of the north-east Atlantic and repealing Council Regulation (EC) No 2347/2002. https://oceans-and-fisheries.ec.europa.eu/news/fisheries-eu-moves-one-step-closer-protecting-deep-sea-ecosystems-bottom-fishing-its-waters-2022-06-28_en

- Set bycatch quotas at zero for any deep-sea species recognised as vulnerable, threatened or endangered, and implement effective mandatory bycatch mitigation measures for deep-sea sharks that are on the prohibited species list.

Environmental organisations remain committed to the objectives of the Fisheries Act, the TCA and other international agreements. We will continue to scrutinise the progress in ending overfishing and boosting long-term population and ecosystem health and resilience as we urge the UK Government and devolved administrations to finally deliver on their ambition to champion sustainable fisheries management.

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