Working together to promote sustainable fisheries and address the nature and climate crisis

This response to the draft Joint Fisheries Statement consultation was prepared by WCL members WWF-UK, RSPB and MCS who jointly comprise the Future Fisheries Alliance. This submission is supported by all members of;

Wildlife and Countryside Link
Wales Environment Link
Scottish Environment LINK

1. Executive Summary

The Future Fisheries Alliance, a partnership of the RSPB, Marine Conservation Society and WWF welcomed the publication of the draft Joint Fisheries Statement (described throughout this response as the JFS) on January 18th, in recognition of its significance in setting out how seafood production can contribute to tackling climate change, improve ocean resilience and restore biodiversity while maintaining a thriving sustainable fishing industry and coastal communities that aspire to world leading management.

The JFS as a requirement of the Fisheries Act 2020, has, as its purpose, to set out the policies that will deliver or contribute to the fisheries and other objectives of the Act, namely, as set out in section 1, the Fisheries Objectives of (a) sustainability, (b) precautionary, (c) ecosystem, (d) scientific evidence, (e) bycatch, (f) equal access, (g) national benefit, and (h) climate change. Taken as a whole, these should deliver a thriving, sustainable UK seafood industry (including aquaculture and wild capture fisheries) and a healthy marine environment.

The JFS is the opportunity for fisheries administrations to set out how they intend to bring about transformational change on and in the water, and as such should provide a toolkit for delivery, setting out clear time bound commitments for this change. We are concerned however that the draft JFS currently lacks the detail needed and contains too many uncertainties around how the objectives of the Fisheries Act are going to be met. Policies flowing from the Fisheries Act should make a positive contribution to the achievement of the targets proposed for Good Environmental Status (GES), under the UK Marine Strategy (UKMS) (as clearly required as part of the ecosystem objective including using *an ecosystem-based approach* in section 1(10)) for cetaceans, seals, birds, fish, commercial fish, food webs, benthic and pelagic habitats and seafloor integrity. The draft JFS however currently omits much of the necessary detail and ambition needed to deliver meaningful action on ocean recovery in the wake of a myriad of shocking international and domestic assessments on the degradation of our marine environment.

We believe that, unless significantly strengthened, the JFS will fall short of achieving its ground-breaking aim of delivering world leading sustainable fisheries management and will fail to satisfy the Fisheries Objectives under the Fisheries Act.

Unsustainable fishing continues at the stock level through overfishing. This year, annual Total Allowable Catch (TAC) negotiations between the UK and other member states resulted in only 35% of the 79 agreed TACs being set in line with scientific advice provided by the International Council for the Exploration of the Sea (ICES)[1]. This is a mild increase from 2020 and 2021, both of which saw 34% of TACs set in line with recommended limits and far from commitments made by the UK government to end overfishing by 2020. In addition, the aquaculture industry has shown significant growth over the last 40 years and is likely to continue to expand in the years to come due to increasing global and national demand for aquaculture products. It is vital that regulators ensure that any aquaculture expansion is done in an ecologically sustainable way at all stages of the production process.

The most direct pressure on our seas is fishing. Therefore, sustainable fishing is key to achieve many of the descriptors of GES (such as biodiversity, food webs, seafloor integrity). The deadline for achieving GES was 2020, but the UK administrations collectively failed to achieve 11 out of 15 indicators. Alongside climate change, commercial fishing was identified as one of the predominant human pressures preventing the achievement of GES hence, transformative, rapid change to deliver a climate and nature smart fishing industry is essential to achieve GES by the revised target date of 2024. With the JFS

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

required to outline how the four administrations intend to achieve the 8 Fisheries Objectives, the lack of clarity in a number of key areas as to how, when or whether these will be achieved is concerning. While there is a stated ambition of improving the evidence base, it is our view that the activities outlined within the JFS and associated policies fall far short of the level of science required to bridge these evidence gaps and deliver the objectives of the act.

Whilst we recognise the complexity presented by the devolved nature of fisheries in the UK, the lack of a comprehensive, co-developed, four-nation strategy, clearly outlining how objectives are going to be achieved, is a real concern. Further details are needed as to how consistency of approach will be applied across policy authorities and countries, in order to ensure the highest common denominator across the UK. The JFS in it's current format acts only as a framework, failing to provide the details and toolkit for delivery of the Fisheries Objectives or contribute towards achievement of GES under the UKMS. This is evident throughout, due to failing to provide in particular:

1) Timebound commitments to recover depleted stocks, deliver environmentally sustainable fisheries and effective ecosystem-based management that will help support and not hinder ocean recovery;
2) Urgent and effective action required to tackle wildlife bycatch in UK waters;
3) A firm commitment to the roll out of Remote Electronic Monitoring with cameras (REM); and
4) A timebound commitment from all administrations to set out a climate-smart fisheries strategy.

The rapidly changing world around us demonstrates the need to rapidly decarbonise our seafood sector, to tackle both climate and nature emergencies, but also to achieve energy security and sustainable food production. Seafood has a role to play in ensuring the UK has access to a low carbon and environmentally responsible food supply. But to deliver this, change is needed. The current approach to some wild capture fisheries is carbon intensive, and in some cases (e.g. demersal gears) highly impacts the environment and our ability to combat climate change. The Fisheries Act provides the building blocks for a revitalised and new approach to UK seafood production. Delivered via a just transition, and underpinned by strong policy direction, the UK could lead the way in sustainable seafood – but only if the JFS and Fisheries Management Plans (FMPs) deliver against all the objectives in the Fisheries Act ambitiously and at pace.

In order to bring about transformative change, moving us beyond the status quo for fisheries management, governments must:

- **Take a holistic approach to fisheries management**; minimising wider impacts on the marine environment, while driving the rapid recovery of depleted stocks. Evidence-based, plan-led spatial management is urgently required to ensure that cumulative anthropogenic pressures are regulated such that there is a net improvement of marine ecosystem health and functioning. The JFS must contain more specific detail on the policies and measures that will be used to deliver ecosystem-based management in practice, specifically policies and commitments to *inter alia* ensure the sustainable exploitation of stocks, reduce the impacts on habitats (including Priority Marine Features, Biodiversity Action Plan (BAP) habitats, Vulnerable Marine Ecosystems (VMEs) and critical fish and shellfish habitat), minimise discards and bycatch, reverse the decline in seafloor integrity, reduce carbon emissions and protect, recover and restore blue carbon habitats.
- **Review fleet capacity to meet the sustainability objective**; in order to address both the biodiversity and climate crises, prioritisation of recovery of both fish and shellfish stocks and marine ecosystems is required. The overall effort by fishing activity in UK waters should be reviewed, paving the way to bring capacity in line with sustainability, to support development of a modern and resilient fishing industry.
- **Implement an ecologically coherent and well-managed Marine Protected Area (MPA) network that is resilient in the face of climate change;** UK Fisheries Policy Authorities (FPAs) should outline policies relating to effective MPA management and monitoring within the JFS, and in line with IUCN

advice, commit to excluding bottom-towed fishing gears from MPAs designated for seabed protection as appropriate.

- **Ensure a precautionary approach is adopted at a strategic level and is at the core of delivery;** JFS delivery processes should be aligned across all four Administrations to enable effective monitoring and implementation and should be underpinned by the precautionary principle.
- **Provide clear targets or objectives to prevent unsustainable exploitation of stocks;** ensuring targets are set at levels below fisheries Maximum Sustainable Yield (MSY), allow populations to be maintained, or restored, above biomass levels capable of sustaining MSY.
- **Set out a timeline for completion of stock assessments for all commercially targeted fish and shellfish stocks;** Ideally this would result in all fish and shellfish stocks being contained within an FMP, including requirements to improve data to ensure adequate stock assessments, protect important species and habitats and enable ocean recovery.
- **Provide clarity regarding how evidence and scientific baselines will be identified and used;** Providing assurance through evidence that these stocks are sustainable, encouraging consumers to source more UK produced fish. Where MSYs do not exist, fishing opportunities must be set in line with the sustainable exploitation of the most vulnerable stock within a mixed fishery, and the scientific advice of ICES must be adhered to in setting fishing opportunities[2].
- **Embed action to address sensitive species bycatch within the JFS;** this includes timebound targets, testing and rollout of mitigation measures in high-risk fleets and effective monitoring at sea through REM (with cameras) and observer programmes.
- **Set out how UK fisheries are going to be effectively monitored and data collected;** this includes information on both target species and those caught accidentally and fishing activity more broadly to provide an accurate picture on the impact on the marine environment, allowing for better management, improved transparency and accountability, removal of potential barriers to entering sustainable supply chains and supporting positive marketing of UK seafood. Emphasis is needed on the role of independent data collection, in particular REM with cameras.
- **Gain accurate and independent information on landings;** whilst landing data is collected within UK ports (and applies only to UK landings), the data is primarily from 10m and over vessels[3], providing an incomplete picture of effort from UK landed species. Foreign landings often only provide incomplete data and certainly not an accurate representation of total catch. This absence in data risks undermining any future management and has implications for achieving GES.
- **Utilise robust evidence and set out clear timebound, transparent objectives when developing FMPs;** we do not believe FMPs, as described in the JFS and Fisheries Act, are going to meet key objectives of the Fisheries Act or reflect international standards relating to what a comprehensive FMP should contain, failing in particular to outline harvesting strategies and rules and regulations.
- **Invest in research to improve the evidence base and improve management for fisheries;** this is required in multiple areas to support sustainable UK fisheries.
- **Include provision for aquaculture throughout the JFS;** The UK's number one seafood export is farmed Atlantic salmon. The aquaculture industry is growing and is likely to have an increasingly important role in supplying the demand for seafood. As such, aquaculture should be given due emphasis in the JFS, equal to that given to the fishing industry.
- **Specify a date for delivery of a clear timebound strategy for climate smart fisheries;** Fisheries are both vulnerable to the impacts of climate change and contribute to it, due to emissions from fossil fuel use as well as disturbance of marine ecosystems, disruption to vital blue carbon and removal of fish and shellfish. A strategy to address emissions from seafood industries and ensure resilience to climate change is urgently needed.

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[2] Fisheries Act 2020 4: composition of species caught in individual fishing operations must be therefore considered to protect the most vulnerable stock(s)

[3] United Kingdom Work Plan for data collection in the fisheries and aquaculture sectors

2. Introduction

2.1 Ambition and delivering on UK relevant policy frameworks

2.1.1 The UK Marine Strategy

The UKMS Regulations require the UK to achieve and/or maintain GES, through development of a UKMS with measures to protect, preserve and, where possible restore marine ecosystems and to prevent and reduce inputs into the marine environment.

In addition to realising the objectives of the Fisheries Act, the JFS plays an essential role under this framework, as a policy flowing from the act to make "*a positive contribution to the achievement of the GES targets proposed for cetaceans, seals, birds, fish, commercial fish, food webs and benthic and pelagic habitats*[4]". The recently consulted upon UKMS Part Three Programme of Measures refers to the Fisheries Act and JFS in this context on some seventy occasions and the JFS itself states that "*the UK Marine Strategy (UKMS) is a key pillar of marine policy in the UK and the JFS is a cross-cutting measure which will help to deliver GES for commercial fisheries*"[5]. The importance of delivering GES is also reflected in the Fisheries Act Objectives, with the definition[6] of an ecosystem-based approach, part of the ecosystem objective, specifically including an approach which "(a) ensures that the collective pressure of human activities is kept within levels compatible with the achievement of good environmental status (within the meaning of the Marine Strategy Regulations 2010 (S.I. 2010/1627))…".

The JFS is critical to achieving GES not just for commercially targeted and non-targeted species of fish, but for a host of other targets including on cetaceans, seals, birds, food webs, benthic habitats, seafloor integrity and marine litter. A detailed cross-analysis of the JFS against the UKMS is not possible within the scope of this response, but the deficiencies of the JFS highlighted throughout demonstrate clear limitations to the achievement of GES across these targets and descriptors. This is particularly concerning given that commercial fishing was identified alongside climate change as one of the predominant human pressures preventing the achievement of GES in the UKMS part 1 assessment of progress.

With the completion of the second cycle of the UKMS and proposals to enhance and streamline the existing delivery programme and improve implementation for the next reporting cycle starting in 2024, it is vital that this opportunity for concurrent improvements is not squandered. We note with some concern proposals within Defra's Nature Recovery Green Paper to split the high-level GES target into individual descriptor level targets with specific timelines for each. We are concerned that breaking GES down from a compound target may result in a siloing of approaches to marine and fisheries management at a framework level just at a point where the JFS has made steps to propose a more holistic approach. These indications of a contradiction in approach are troubling.

Changes to the JFS following from this consultation must not result in policies (or the lack thereof) that impede the overall achievement of GES. To be transformative and grasp the opportunity ahead, the JFS and FMPs must be ambitious, implemented well and appropriately resourced to ensure effective delivery to address the pressures of fishing activities upon the achievement and maintenance of GES and their role in the wider nature and climate emergencies. The importance of delivering GES is also reflected in the Fisheries Act Objectives.

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4 UK Marine Strategy Part Three: UK Programme of Measures - consultation document (defra.gov.uk)

5 Page 19 of the Consultation Document

6 Section 1(10)

2.1.2 Wider Policies

The implementation of the UK Fisheries Act should contribute to the delivery of the 25-year Environment Plan and Environment Act in England, we are concerned however that insufficient policies or detail are provided in the current draft JFS to meet commitments relating to fisheries management in these wider policies and legislation (see Client Earth's JFS response for detail).

In Scotland, the JFS should contribute toward the Scottish Government, industry and stakeholders achieving the objectives of Scotland's National Marine Plan (which we hope will be updated soon), Scotland's Environment Strategy[7], Future Fisheries Management Strategy and recently launched Blue Economy Vision.

In Northern Ireland, the JFS is a key, cross-cutting mechanism for the delivery of several proposed fisheries commitments with the Draft Environment Strategy for Northern Ireland including: Marine and Coastal Water Resources: Quality and Quantity, Historic Environment Protecting Nature at Sea and Productive & Sustainably Used Seas.

In Wales, the JFS, FMPs and all further policies derived from these should all be developed and implemented in a fashion that delivers more equal and sustainable outcomes for people in Wales. These should be in accordance with both the goals and ways of working of the Future Generations (Wales) Act 2015 and the national priorities of the Environment (Wales) Act 2016.

In terms of wider failings under UK and international agreement (Climate Change Act 1998, Net Zero Strategy 2021, Trade and Cooperation Agreement, UN Sustainable Development Goals, OSPAR and UNCLOS) we refer you to the JFS consultation response provided by ClientEarth.

2.2 Participatory decision making and the role of NGOs

We note the Consultation (3.6.2) outlines '*there are different models of participatory decision making in place across the UK, which provide the seafood and marine sectors, non-government organisations and coastal communities with a voice in the decisions that impact them*'. Yet no details are provided regarding how participatory decision-making will be delivered or the engagement opportunities for both NGOs and broader public stakeholders to shape future fisheries management and FMP development and delivery. We believe it is crucial new decision-making processes are fully inclusive of all relevant stakeholders on an ecosystem-based regional sea basis, since many stakeholders have vast expertise and experience that would be of benefit to these processes. In addition as the UK's own Consultation Principles[8] state

> *"D. Consultations [on new policies] are only part of a process of engagement Consider whether informal iterative consultation is appropriate, using new digital tools and open, collaborative approaches. Consultation is not just about formal documents and responses. It is an on-going process"*

And therefore just this consultation should not be considered enough especially when crucial information including proposed measures, actions and details are still missing. We would suggest that to ensure compliance with the Convention on Access to Information, public participation in decision making and access to justice in environmental matters 1998 (the Aarhus Convention), in particular Article 6, public participation, continued involvement of stakeholders should occur.

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7 The Environment Strategy for Scotland: vision and outcomes - gov.scot (www.gov.scot)

8 Consultation Principles 2018

3. Consultation Response

3.1 Question 1: Would you like your response to be confidential?

No, we are happy for our response to this consultation to be made public.

3.2 Question 2: To what extent do you think the policies articulated in the draft JFS will achieve, or contribute to, the achievement of the fisheries objectives? Please explain your answer, with reference to specific content in the JFS where possible.

Positively, the JFS recognises that *'a healthy and resilient marine environment is the foundation for a prosperous seafood sector and thriving coastal communities*' and that *'sustainable use and conservation of the sea is central to the fisheries management approach.'* This is a welcome recognition of the need to modernise and create a climate and nature smart fishing industry that can provide a win-win for fishers, the environment and livelihoods, putting us on the path to ocean recovery. We also welcome the recognition that *'the protection, restoration and sustainable management of blue carbon habitats provides a nature-based solution that can support adaptation and resilience to climate change, alongside benefits for carbon sequestration and biodiversity'* and hope to see future provisions made through effective fisheries spatial and effort management across all of our seas, and through specific management of Marine Protected Areas (MPAs), to protect and restore these habitats.

We believe addressing both the biodiversity and climate crises by prioritising the recovery of fish and shellfish stocks alongside marine ecosystems will pave the way to supporting a modern and resilient fishing industry. It is therefore concerning that these objectives are not supported by clear timeframes or targets outlined within the JFS that reflect the urgency needed to tackle these crises and recover UK fish and shellfish stocks and marine habitats. Having missed the legally binding targets to end overfishing by 2020, it is imperative that the FPAs agree on new targets contained in the JFS.

Furthermore, the JFS contains many uncertainties and risks being open to interpretation. Recognition of differences in approach to policy development within each nation is referenced; as such it remains unclear how consistency of approach will be applied across policy authorities, regulators and stakeholders in regard to fisheries management, with particular emphasis given to FPAs' obligation to set out policies for achieving, or contributing to the achievement, of all Fisheries Objectives (2.2.5).

Timebound commitments to recover depleted stocks and deliver environmentally sustainable fisheries and effective ecosystem-based management: Environmental sustainability must be the basis of fisheries management, with the environmental pillar of sustainability underpinning socio-economic sustainability. FMPs must provide practical and environmentally sustainable management through the development of stock and geographic level management plans, including spatial and temporal management measures. In order to reflect current global best practice, requirements for FMPs contained within the JFS should be much more comprehensive than currently drafted and include clear, timebound objectives to recover and maintain stocks within safe biological limits. Wider marine environmental factors, including: critical fish and shellfish habitats that fisheries rely upon; BAP habitats; Priority Marine Features; and key prey species for seabirds, seals, cetaceans and other species, must also be addressed within the FMPs. It is vital these are properly restored and protected through the implementation of an ecosystem-based approach to ensure our seas meet GES and other targets. The development of FMPs should also be transparent, inclusive and use the most robust evidence upon which to base decisions to meet the Fisheries Act Objectives.

Urgent and effective action to tackle wildlife bycatch in UK waters: There remains a lack of meaningful progress by UK administrations to effectively tackle the issue of marine wildlife bycatch in UK waters. Each year thousands of seabirds, marine mammals, and other marine wildlife die unnecessarily in UK waters despite the fact that there are clear solutions to many of the problems. The JFS provides an opportunity to make real progress on this issue and to set urgent timebound targets to minimise and where possible eliminate sensitive species bycatch, as well as some of the key measures that are needed to further support this objective, including effective monitoring and mitigation. The JFS identifies the Bycatch Mitigation Initiative (BMI) as the place where such actions will be set out. However, this document is not yet in the public domain, despite the expectation that would be published by the end of 2021. This lack of progress in both developing an effective strategy and, importantly, taking action to address preventable bycatch is highly concerning. While we hope to see ambitious commitments outlined within the BMI and practical measures delivered, FPAs are missing an opportunity to embed these within the JFS and outline clear actions that are needed to achieve the ecosystem objective.

A firm commitment to the roll out of REM with cameras: As the UK Fisheries Act was scrutinised by the UK Parliament and devolved legislatures in 2020, there were strong voices from seafood businesses and parliamentarians alike that REM with cameras was a robust and cost-effective tool that would support the sustainability and accountability of UK fisheries. Yet to date only one administration (Scotland) has come forward with proposals for the introduction of REM with cameras. The JFS notes only the commitment to further consider its use. We are concerned that this doesn't go far enough, given the benefits that embracing this technology would bring in underpinning sustainable fisheries. REM is a proven fisheries management tool already utilised by countries currently leading the way in sustainable fisheries management, such as the United States, Canada, Australia and New Zealand. The JFS should set out how UK fisheries are going to match other nations in effectively monitoring and collecting data on both target species and those caught accidentally (including marine wildlife). Not only would this provide a more accurate picture of the impact UK fisheries are having on the marine environment, allowing for better management, but it would also improve transparency and accountability across the UK fleet, remove potential barriers to entering sustainable supply chains and support positive marketing of UK seafood.

A timebound commitment from all administrations to set out a climate-smart fisheries strategy: We welcome the recognition that the protection, restoration, and sustainable management of blue carbon habitats provides a nature-based solution that can support adaptation and resilience to climate change, alongside benefits for carbon sequestration and biodiversity. However, there is little in terms of concrete commitments as to how and when this will be delivered. It would be in keeping with the UK's nature and climate commitments to commit to setting out, in collaboration with stakeholders, a clear timetable for the delivery of a climate-smart fisheries strategy.

3.2.1 Wild capture Fisheries

3.2.1.1 The Sustainability, Precautionary and Scientific Objectives

We have chosen to group our responses relating to the sustainability, precautionary and scientific evidence objectives as we believe they are intrinsically linked and will be achieved by overarching policies. Therefore, the following section outlines to what extent we believe these three objectives are likely to be met by policies outlined in the JFS.

We welcome the recognition throughout the JFS of the need to apply the precautionary approach to fisheries management. We also welcome the wider recognition of the need to reduce the effects of fishing on the marine environment and the health of our fish and shellfish stocks, particularly in light of climate change.

Whilst we recognise delivery may require a degree of pragmatism, we are concerned by the references made to being 'mindful' of the precautionary approach in section 2.2.7:

> *"2.2.7 It may, at times, be necessary to prioritise one fisheries objective over another in the short term. Decision making in such prioritisation will need to take place on a case-by-case basis, taking into account individual circumstances. For example, to help a fishing community adjust to the introduction of a management measure, or to address an environmental challenge in a fishery such as the bycatch of sensitive species in a particular area or fleet. However, when doing so, the fisheries policy authorities will adopt an evidence-based approach, mindful of the precautionary approach whilst ensuring that management interventions are proportionate to the risk of the issue being addressed."*

Emphasis needs to go beyond being 'mindful' and deliver a precautionary approach as a core objective of the Fisheries Act. We urge FPAs to take a more holistic approach to fisheries management, to minimise the wider impacts on the marine environment while driving the rapid recovery of depleted stocks. Adopting the precautionary approach as defined in the UK Fisheries Act will contribute to meeting the sustainability objective[9] (amongst others) and complements the aims of the scientific evidence objective, given the requirement within the Act to implement conservation and management measures even in the absence of sufficient scientific information.

We also welcome the need to take '*an evidence-based approach to fisheries management, making full use of the best available scientific evidence*' that will be *'underpinned by a wide-ranging and coordinated monitoring programme and advisory framework, which will be further enhanced by research'* (3.2.2). We also note the need to utilise the science available to support revisions of management plans and outcomes of monitoring programmes on a regular basis. This sentiment is shared by the Seafood Vision 2040 framework, which pointed out the need to collect data for data deficient fisheries/stock. However, there is limited clarity on how evidence and scientific baselines will be identified and used, particularly where evidence may be missing.

3.2.1.1.1 Investment in research

Investment in research to improve the evidence base supporting achievement of GES and management of fisheries is required in multiple areas, (specifically for fish (and shellfish), birds and seafloor integrity descriptors) including:

- Species and stock distribution, where data is limited. For example, sandeel and sprat in the Celtic Seas ecoregion and in inshore and estuarine areas (which are of great importance to many forage fish in early life stages). This should include dedicated surveys to guide sustainable management of stocks.
- Location of spawning and nursery grounds (essential habitat), including dedicated surveys designed to collect ichthyoplankton data.
- Impact of climate change on forage and commercially important fish species.
- Predator-take to inform stock assessments. Research should be undertaken to collect data on predation of forage fish species by seabirds, so that mortality due to predation can be incorporated into stock assessments. There is precedent for this, as predation data is incorporated in North Sea assessments (for species such as sandeel and sprat).
- Seabird diet composition and temporal changes across the UK.
- Catch-recording and monitoring to better understand and fully document fishing activities.
- Large-scale spatial trials to determine the impact of mobile bottom-contact fishing gear on the seabed, seabed recoverability and therefore the scope for achieving GES for seafloor integrity.

[9] https://www.legislation.gov.uk/ukpga/2020/22/section/1/enacted

Whilst the JFS goes some way to reducing the impact of fisheries on the wider marine environment, the reliance in regard to delivery of this puts emphasis on strategies yet to be published, such as the BMI. As a result, we are unable with the information provided to comment on the specifics within those strategies and whether a precautionary approach to fisheries management is being applied with wider environmental considerations in mind. We had anticipated more detail would be provided within the JFS, as opposed to signposting to other policy documents yet to be published. For specific considerations regarding sensitive species bycatch see section 3.2.1.3.

We welcome the recognition that effective monitoring is a key component of ensuring a well-evidenced, sustainable future for the fishing industry and marine environment. However, commitments within the JFS on monitoring are weak, for example '*where appropriate, the fisheries policy authorities will explore the use of technologies such as vessel monitoring systems and Remote Electronic Monitoring (REM) for scientific purposes and to aid the sustainable management and control of fisheries (3.2.12)*'. See section 3.4.2 key asks for REM

We welcome the recognition throughout the JFS regarding the impact of climate and the need for a healthy, resilient marine environment. However, clear climate policies have not been outlined for implementation. Measures are required in order to take a precautionary approach for fisheries management that take into account climate needs, see section 3.2.1.5 for details.

Whilst we recognise the role the fishing industry has in bringing expertise to support development of FMPs, we are concerned regarding the role they take in providing a '*greater shared responsibility for sustainably managing fisheries, while making a greater contribution towards the costs. This can include, for example, work to develop new management 35 of 82 practices and contributing to fisheries science, being more actively engaged in fisheries management decisions, and co-designing future policy (3.6.1)*'. To ensure effective engagement there needs to be consistency in approach, utilising best available evidence for both fisheries management and wider environmental needs. Alongside this, there should be clearly defined objectives to ensure the precautionary approach is applied and exploitation of marine stocks is a level that enables restoration and maintenance of populations of harvested species above biomass levels capable of producing MSYs (as outlined within the Fisheries Act).

3.2.1.1.2 Delivering Sustainable Management of Fisheries

We recognise not all (fish) stocks currently have sufficient evidence to establish MSY-type limits, and the need to provide proxies where this is the case. Fishing opportunities must be set in line with the sustainable exploitation of the most vulnerable stock within a mixed fishery, and the scientific advice of ICES must be adhered to in setting fishing opportunities. Proxies must take this into account[10]. Where MSY reference points have not been defined, a higher level of precaution must be applied, such that fishing pressure is reduced to the lowest possible levels and does not exceed defined precautionary fishing mortality reference points. Where reference points have not been defined, fishing pressure must be reduced to the lowest possible levels until such time that values can be defined and adopted. Currently, the JFS states that the FPAs will only "aim to" set levels by reference to MSY.

Rarely does fishing activity result in the capture of a single species. Fishing opportunities must be set and allocated to ensure that no stocks in the fishery are fished above levels recommended by scientific advice. This would aid faster recovery and reduce the levels of unwanted catch. At present ICES mixed fisheries advice is instead being used to justify the increase of fishing opportunities for the most vulnerable species and allow the continuation of the fishing activity. For stocks caught within a mixed fishery, mixed fisheries considerations must be factored into the setting of fishing opportunities to

[10] Fisheries Act 2020 4: composition of species caught in individual fishing operations must be therefore considered to protect the most vulnerable stock(s)

ensure that all stocks are restored and/ or maintained above biomass levels capable of producing MSY. Where the mixed fisheries approach requires a greater reduction in TAC than single species advice, this should be followed to safeguard more vulnerable stocks.

We note the reference in 4.1.8 to *'the fisheries policy authorities will also take a precautionary approach to fisheries management in accordance with the precautionary objective, and will aim to fish within sustainable limits based on the best available scientific advice, including MSY or using appropriate proxies where sufficient scientific data are available'.* Use of proxies should be minimised and emphasis must be placed on gathering data to properly assess the state of stocks and inform management choices. In addition, the words 'aim to' should be deleted from this sentence, as fishing within sustainable limits must be a requirement in order to achieve the objectives of the Fisheries Act. In addition to the specific precautionary objective, in line with agreed definition by the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA18), the precautionary approach should be implemented for stocks which do not have defined MSY or precautionary reference points (Bmsy or Bpa). Monitoring and data collection should be enhanced for these stocks to enable the definition of biomass and mortality reference points.

We welcome the statement that *"The scientific evidence objective means fisheries policy authorities will always take an evidence-based approach and make full use of the best available scientific advice to support decision making. This includes improving our collective understanding of how fishing and aquaculture impacts the marine environment with other marine sectors/activities."*

The Data Collection Framework (DCF), updated in 2022, is proposed to deliver the requirements of the science objective. However, this appears to be limited to a continuation of the existing multinational plan as transposed from the EU. While extended for the period of 1 January 2022 to 31 December 2024, there does not appear to be any significant increase in data collection. With many UK stocks, around a third, data deficient, it is challenging to understand how decision making will be supported or informed.

Whilst the transposition of the DCF does demonstrate no regression, the DCF itself notes the limitations of the approach, in particular to areas such as:

- Landings; whilst data is collected within UK ports, the data is primarily from 10m and over vessels[11], providing an incomplete picture of effort from UK landed species. Further, this only applies to UK landings. Whilst data from vessels fishing in UK waters but landing in foreign ports should be shared under the multiannual plan, experience demonstrates that information available on foreign landings often only provides incomplete data, and certainly not an accurate representation of total catch. The absence of such data results in an incomplete data set, and therefore risks undermining any future management.
- Observer capacity; as noted in the DCF, bycatch data from the at-sea observer trips are used in national and international assessments on the impact of fishing on endangered, threatened, and protected species. In the absence of any clear commitments to utilise REM with cameras, the UK fleet is currently dependent upon observers to fulfil data collection. The DCF itself notes the limitations of this *"The overall sampling effort is largely constrained by financial and staff resources currently ~525 staff days are available for at-sea observer sampling."* In total this amounts to under 3 full time staff covering the entire Welsh & English fleet.
- Human observers are expensive and logistically challenging to deploy in order to provide the robust levels of data collection required to support sustainable management. It is clear that there is a need for REM with cameras to be deployed, alongside a separate science budget for enhanced analysis of footage, in order to gather the data required to deliver the ambition of the scientific evidence objective.

[11] https://www.gov.uk/guidance/data-collection-framework

The absence of an increase in data collection has implications for other areas of the JFS, including the achievement of GES across multiple indicators. Data collected under the DCF are "*also used to derive UK Marine Strategy indicators on current environmental status and provide the source information for national assessments on management measures - for example changes in gear selectivity and impact of the landing obligation.*" The updated DCF also notes existing monitoring programmes under UKMS are focussed on monitoring the status of descriptors, whilst relationships between receptors and pressures are poorly understood. While there is a stated ambition of improving the evidence base, it is our view that the activities outlined within the JFS and associated papers fall far short of the level of science required to bridge these evidence gaps and deliver the objectives of the act.

There also appears to be an absence of data collection to determine how fishing and aquaculture impacts the marine environment, as it does not seem to be applied to the areas relating to Fishing Capacity or Access to UK waters. When considering how fishing activity in UK waters impacts *"other marine sectors/activities",* the absence of a clear understanding of the overall effort and potential effects in UK waters by all fleets will undermine any decision making in regard to fishing capacity or effort management through the proposed FMPs. Adequate stock assessments are required for all commercially fished species, alongside a requirement for the inclusion of climate change adaptation and mitigation considerations in scientific advice on fishing opportunities.

In relation to stocks subject to international negotiations, a clearer commitment is needed that the UK will insist on sustainable management of shared stocks, such that catch limits are set within scientifically recommended levels that do not exceed MSY reference points.

3.2.1.1.3 Fishing capacity

The JFS fails to go far enough to contribute to the achievement of the sustainability objective, though positive comments are included to: ensure that fishing capacity is *"appropriately balanced between maintaining economic viability and maintaining stock health*"; and a "*presumption against allocating public funding for new fishing vessels where this increases fishing capacity beyond sustainable levels*." Monitoring and data collection are imperative to ensuring that the collective fishing effort in UK waters does not undermine both the economic viability or health of a stock. Therefore, the fishing capacity must reflect, and be matched to, the desired level of effort that achieves and maintains healthy stocks. Where stocks are already fished at MSY, effort and fleet capacity should not be increased. While the JFS recognises the advantages of limiting the growth of fleet capacity, it fails to address the need to realign, and likely reduce, the existing fleet capacity operating in UK waters.

To properly contribute to the achievement of the sustainability objective, the following broader commitments are required:

- Reform the Fisheries Quota Allocation system so that low impact fishers are prioritised as stated in clause 25 of the UK Fisheries Act. The reform should include the ability to regularly review and update the system to account for changes and developments within the fishing industry, such as gear and vessel sustainability developments (which would also contribute towards achieving the climate change objective).
- Apply an integrated approach to fisheries management, factoring in related objectives (e.g. bycatch, habitat, and climate change) when evaluating fleet capacity.
- Change the policy so that the "***presumption** against allocating public funding for new fishing vessels where this increases fishing capacity beyond sustainable levels*" is replaced with a bar on all such public funding and subsidies, subject to limited and specific exemptions. This bar should also apply to all public funding and subsidies to environmentally damaging vessels. These changes would contribute to the elimination of harmful subsidies, which is a major target for the achievement of

UN Sustainable Development Goal 14. In addition, an end to tax relief for marine fuel would help the UK meet its commitment to become a net-zero nation by 2050.

- Provide financial assistance to improve the sustainability of fisheries, including investment in less damaging gear and diversification, to allow for a greater number of smaller, low impact vessels and the support of decarbonisation in vessels.
- Consider the role of using Public Money for Public Goods through future funding schemes that seek to replace the existing EMFF. Ensuring that low impact and environmentally responsible fishing is prioritised in relation to access to public funding.

3.2.1.2 Ecosystem Objective

3.2.1.2.1 Part a – Ecosystem-based approach

The draft JFS contains welcome language and overarching commitments to delivering an ecosystem-based approach to management and outlines the dependence of thriving communities and sustainable seafood industries on a healthy marine environment. However, to ensure the ecosystem objective is delivered, the JFS must contain more specific detail on the policies and measures that will be used to deliver ecosystem-based management in practice.

The JFS should specifically include policies and commitments to *inter alia* ensure the sustainable exploitation of stocks, reduce the impact on habitats and the ecosystem services they provide, minimise discards and bycatch, reduce carbon emissions and protect, recover and restore critical fish and shellfish habitats and blue carbon habitats. Although there is welcome language relating to these areas in the JFS, there is a general lack of detail on the specific measures or timebound targets that will be used to achieve an ecosystem-based approach.

We welcome the explicit recognition of reducing the effects of fishing on the marine and coastal environment in the FPAs' shared vision, and the intent set out in paragraph 2.1.13 for FPAs *'to achieve, or contribute to the achievement of the ecosystem objective through management regimes, which maintain or, where required, recover, protect and improve the health of marine ecosystems by minimising the impacts of fishing on the environment beyond individual stocks…'.*

Section 4.1 also contains welcome language around environmental sustainability underpinning seafood industries. In particular, section 4.1.7 sets out the FPAs' intent to take an ecosystem-based approach to managing fisheries, and the recognition of this underpinning multiple Fisheries Act Objectives, alongside achievement of GES. We welcome recognition that the JFS must contribute towards GES however, to successfully achieve this, the JFS must go further and drive the transformation of fisheries management. Transformation of fisheries management is *fundamental* to achieving GES, particularly for seafloor integrity, and is a prerequisite to meeting rather than simply 'contributing to' targets.

The draft JFS makes essential commitments for FPAs to include measures to *'sustainably manage target species, to protect key forage species such as sandeels, essential fish habitats i.e. key spawning areas and sensitive species, to minimise seabed abrasion from fishing and manage fishing related litter'* and work with stakeholders across broad range of topics to introduce additional management across the aforementioned pieces in addition to *'reducing unwanted catches, or the use of REM'.* Yet the specific measures that will be put in place and the timeframes for delivery are absent, and no further policies are identified.

FPAs should be committed to implementing an ecosystem-based approach in practice by inclusion of the following within the JFS:

- Changing the basis for fisheries management and the setting of fishing opportunities from a single species TAC system to a legitimate ecosystem-based approach, with multiple species and wider elements of the ecosystem accounted for. As part of this, the composition of species caught in individual catches should be considered, with fishing opportunities set and allocated to ensure that no stocks are exploited above levels determined, on the basis of best available scientific advice, as being necessary to restore or maintain biomass levels above those capable of producing MSY.
- Applying a holistic and integrated approach to management that applies mixed-fishery advice and factors in the bycatch, ecosystem, and climate change objectives when setting catch limits and evaluating fleet capacity (rather than the current single species TAC management approach). Targeted actions should be implemented to ensure primary habitats of species that are integral components of marine food webs are protected. Where these are commercially exploited, these must be appropriately managed through FMPs or specific management measures (see section 3.3 for details). Full integration of fisheries management with conservation should go beyond mitigating negative fishery impacts on key habitats and sensitive/non-target species. There should also be investment in contemporary ecosystem approaches to fisheries stock monitoring and modelling that take account of climate change effects on commercial stocks, and proactively provide policy support to integrate protection and restoration of key stock recovery habitats and blue carbon sequestration;
- Specifically incorporating wild capture fisheries and aquaculture into existing and future marine plans and utilising adaptive technical, spatial and temporal conservation measures. In order to apply a holistic approach to fisheries management, all activities including commercial and recreational fishing need to be considered to ensure the full impact on our fisheries resources and marine environment is contained to acceptable levels. This is particularly important for the protection of habitats that support critical life history stages such as breeding, spawning and feeding/foraging grounds and inshore habitats which are important for juvenile stages of fish. A range of technical, spatial and temporal conservation measures should be used to protect and recover critical fish and shellfish habitat, fish stock recovery areas (including the use of No-Take Zones), VMEs and to eliminate non-target sensitive species bycatch;
    - Improved technical, spatial and temporal conservation measures will rely on better data, which would be made possible with REM with cameras (see section 3.4.2 for detail).
- Implementing an ecologically coherent and well-managed MPA network that is resilient in the face of climate change – UK FPAs should outline policies relating to MPA management within the JFS and, in line with IUCN advice, commit to excluding bottom-towed fishing gears from MPAs designated for seabed protection as appropriate. Governments should manage fisheries and all activities at sea according to an ecosystem-based approach, which would include adopting a "whole site approach"[12] to managing UK MPAs.
- Completing and implementing robust action plans for tackling sensitive species bycatch – Regulatory bodies need to develop and urgently implement strategies for the minimisation and, where possible, elimination of bycatch of sensitive species (see section 3.2.1.2.1 for detail).

Integrated decision-making and management of fish and shellfish is essential to achieving healthy ocean ecosystems and mitigating the cumulative impacts of human activities and other factors (such as climate change) on the marine environment. Ecosystem impacts are often transboundary, meaning the lack of a UK-wide common framework could significantly hinder the successful adoption of an effective ecosystem-based approach to management for cross-border activities and stocks. It is therefore important that governments aim to establish complementary and consistent policies if they are to deliver healthy and resilient marine ecosystems.

[12] (PDF) Managing marine protected areas in Europe: moving from 'feature-based' to 'whole-site' management of sites (researchgate.net)

3.2.1.2.2 Part b – Sensitive species bycatch

Inaction on cetacean, seabird and other sensitive species bycatch has meant that this problem has effectively continued largely unabated in UK waters. Yet bycatch is solvable. Elsewhere in the globe, other countries have successfully reduced bycatch to virtually zero in some fisheries. Despite legislation and policies at global, multilateral, European and domestic levels designed to protect wildlife and tackle bycatch, implementation across the UK has lagged behind.

While the true extent of the impact of bycatch on vulnerable marine wildlife is unknown, due to pitifully low levels of at sea monitoring across fleets, there is a bycatch problem in UK waters in need of urgent action. There are mitigation methods (technical, spatial, temporal and gear switching) that could be adopted and there is a clear opportunity to embed bycatch action within the JFS.

As set out in more detail below within our commentary on the bycatch objective, 2.2.1 being clear on the overall objective of the JFS namely, to set out what *the fisheries policy authorities* need to do to *make significant overall progress in reducing the effects of fishing on the marine environment and the health of our fish stocks* and *being* designed to meet the Fisheries Objectives is essential.

And as the Consultation Document also makes clear in Table A on page 28, achieving the bycatch objective also contributes towards the sustainability and ecosystem objectives.

Although we welcome the commitments in section 4.2.7 – without the publication of the UK BMI or any further detail on wildlife bycatch action in the JFS – it is impossible to comment on whether the actions or policies within the JFS on sensitive species bycatch are sufficient and will enable achievement of the ecosystem objective to minimise and where possible eliminate incidental catch of sensitive species.

We urge the UK's fisheries authorities to commit to timebound targets to tackle bycatch, testing and rollout of mitigation measures in high-risk fleets and effective monitoring at sea through REM (with cameras) and dedicated observer programmes (to monitor both bycatch rates and subsequent bycatch reductions, once mitigation measures are implemented). Specifically, we would like to see these actions embedded within the JFS (and subsequent BMI).

The JFS provided an opportunity to enshrine bycatch action into practical fisheries management in the UK. However, we do not believe that the current measures proposed will meet the legal requirement of the UK Fisheries Act 2020. Specifically, this is because there is already an absence of measures to tackle bycatch to meet existing obligations and the draft JFS does not contain any further detail on action that will be taken, referring only to the unpublished BMI.

Neither the JFS nor what we believe will be the final version of the BMI clearly set out how, or by when, the 'ecosystem objective' of the Act, that specifies '*incidental catches of sensitive species are minimised and, where possible, eliminated*' will be achieved. Without this information it is not clear how or when the issue will be solved, the ecosystem objective achieved, and legal requirements met.

Detail is also lacking on how actions contained within the BMI will be implemented complementarily by the four fisheries authorities. Clear governance and stakeholder frameworks must therefore urgently be established alongside:

- Bycatch risk criteria
- Measures of success
- Triggers for action
- Timebound targets for tackling bycatch
- Mandatory application of mitigation measures (where appropriate)

- Accountable parties for actions
- Recognition of priority high risk areas and/or fleets
- Information about resource
- Effective monitoring and reporting requirements

We are concerned that no pathway is provided to demonstrate how or when the BMI will be utilised or implemented to meet the requirements of the Act. Progress will need to be measured in a quantitative way. Yet there is significant concern that sensitive species bycatch monitoring requirements (and broader monitoring of fishing activity at sea) remain inadequate to record bycatch rates and monitor subsequent reductions in bycatch due to any management measures that are implemented. We hope that the new protected species Bycatch Monitoring Programme (and commitments from fisheries authorities on rollout of REM with cameras) will address this. It is essential that the new BMP is clearly linked to requirements under the UK Fisheries Act, BMI and any associated Implementation Plans. For more information on our priorities for bycatch monitoring see previous correspondence on bycatch monitoring[13] [14] the Defra-commissioned bycatch monitoring gap analysis (in prep) and the recent ICES review of protected species bycatch monitoring. [15]

The BMI must follow best practice[16] [17] [18] and be a true action plan – setting out clear, ambitious annual targets to reduce bycatch and put the UK on a track to zero bycatch. It must ensure that resource is prioritised to invest in solutions for bycatch in UK waters at a fleet level, including trials and fleet roll-out of alternative gears, effective technical and spatial solutions on fishing gear and adequate independent at sea monitoring to track progress.

The three yearly evaluation report of the JFS should explicitly report back on implementation of progress made to minimise and where possible eliminate incidental bycatch of sensitive species through implementation of actions outlined in the JFS and BMI. The BMI (and associated implementation plans) need to provide clear links to FMPs, where bycatch is a risk or where FMPs are required in otherwise 'well managed' fisheries (e.g. MSC-certified hake) to prevent sensitive species bycatch and to meet the requirements of the Act.

Likewise, FMPs need to deliver an ecosystem approach to management, and cannot only consider fish stocks. Specific recognition must be given to the impacts on the wider marine environment and associated species (including bycatch) and, where identified, these should be addressed.

Table A should include the 'ecosystem objective' for 4.2.5 Approach to access to UK waters to ensure that bycatch mitigation, monitoring and reporting requirements are applicable to all vessels fishing in UK waters and UK vessels fishing elsewhere.

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13 RSPB response to the UK Marine Strategy Part 2 - Programme of Monitoring (November 2020) - available upon request

14 NGO considerations for bycatch monitoring (March 2022) - available upon request

15 ICES (2022) EU request on the review of monitoring of bycatch of protected, endangered, and threatened species of mammals, birds, turtles and fish under the service of EC DG ENVIRONMENT. ICES Advice: Technical Services. Report

16 Good, S.D., Baker, G.B., Gummery, M., Votier, S.C. and Phillips, R.A. (2020) National Plans of Action (NPOAs) for reducing seabird bycatch: Developing best practice for assessing and managing fisheries impacts. *Biological Conservation* **247**

17 FAO. 2021. Fishing operations. Guidelines to prevent and reduce bycatch of marine mammals in capture fisheries. FAO Technical Guidelines for Responsible Fisheries No.1, Suppl. 4. Rome

18 BirdLife Europe and Central Asia (2021) Off the Hook? Reducing seabird bycatch in the EU

For further detailed comments please see our previous consultation responses[19] [20] correspondence[21] [22] and reports[23] on sensitive species bycatch which we believe remain relevant.

3.2.1.3 Bycatch Objective

Discarding of healthy fish has long been recognised as a fundamentally wasteful practice and one which undermines sustainable fishing, through the impact it has on the individual stock and also in the removal of fish and other species from the ecosystem more generally. It is estimated that in the region of over 9 million tonnes of fish are discarded annually, with almost 50% of these coming from bottom towed fishing gear.

It was in recognition of this incredible waste of resource and the need to fish more selectively that the European Union Common Fisheries Policy introduced the landing obligation in 2013. This represented one of the biggest operational shifts in European fisheries. Governments and stakeholders were faced with the challenge of adopting new approaches to fisheries management, and managers needed to incentivise change – both in terms of gear and behaviour - that resulted in social, economic and environmental benefits. At the time of introducing the landing obligation it was pointed out that effective implementation needed to include maximum use of selective fishing (gear and behaviour) as to how, where and when fishing occurs. There was a view that innovation would be key – in how quota was managed, how fisheries were supported through the transition, in securing effective monitoring and in control and accountable flexibility through the phasing period.

Unfortunately, despite scope to change, little action has been seen on the water to date, with little understanding of the true scale of discarding at a UK level. There has been no increase in at-sea monitoring to evidence either this, or the extent to which more selective practices have been adopted.

In recognition of the problems associated with discarding and bycatch in fisheries, we welcome the bycatch objective. Although in section 2.1.16 of the JFS, (a) and (b) represent fundamental elements of sustainable fisheries management and actions which are critical for supply chain confidence, while (c) reflects the ongoing commitment to the landing obligation rather than a key element of sustainable fishing practice. What is important from a sustainability perspective is not whether a fish is landed or discarded once caught, but that it was removed at all and that it is accounted for. Disappointingly, what is set out in the JFS provides little confidence that the bycatch objective will be delivered effectively.

Sections 1 and 2, the Fisheries Act are clear that the JFS must include policies for achieving, or contributing to the achievement of the "bycatch objective" namely (a) the catching of fish that are below minimum conservation reference size, and other bycatch, is avoided or reduced, (b) catches are recorded and accounted for, and (c) bycatch that is fish is landed, but only where this is appropriate and (in particular) does not create an incentive to catch fish that are below minimum conservation reference size.

Again this should be discussed in detail with the Devolved Administrations due to their powers within Schedule 8 of the Act. But as paragraphs 2.1.17-18 of the Consultation document make clear the bycatch objective is to

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19 Joint NGO response to the Defra Call for Evidence on Remote Electronic Monitoring (REM) in England and RSPB response (November 2020) - available upon request

20 Environment Links UK and RSPB responses to the UK Marine Strategy consultation Part 2 Programme of Monitoring and Part 3 Programme of Measures (November 2020 and 2021)

21 RSPB comments on draft Bycatch Plan of Action (March 2020) - available upon request

22 RSPB comments on the draft Bycatch Mitigation Initiative (July 2021) - available upon request

23 Course, G.P., Pierre, J., and Howell, B.K., 2020. What's in the Net? Using camera technology to monitor, and support mitigation of, wildlife bycatch in fisheries. Published by WWF. 53p

"2.1.17 ….to avoid or reduce the catching of fish…. The fisheries policy authorities are committed to ending the wasteful practice of discarding and to increasing the level of accountability for fishing activities at sea, while building the confidence we have in our seafood products.

2.1.18 The fisheries policy authorities are committed to ensuring that all catches of fish are accounted for with a preference that all catches of fish managed by Total Allowable Catch (TAC) are landed, unless:

- *There is strong evidence fish will survive the capture process or*
- *There are limits to the application of technical mitigations or*
- *Landing the fish will result in excessive disposal costs"*

With 2.2.1 being clear on the overall objective of the JFS namely to set out what *the fisheries policy authorities* need to do to *make significant overall progress in reducing the effects of fishing on the marine environment and the health of our fish stocks* and *being* designed to meeting the Fisheries Objectives

And as the Consultation Document also makes clear in Table A on page 28, achieving the bycatch objective also contributes towards the sustainability and ecosystem objectives.

There is little in the way of detail as to how greater selectivity in both gear and behaviour will be achieved. Critically, the JFS fails to make a clear commitment to one of the key elements needed to underpin this objective and many of the others, that of REM with cameras. This is despite acknowledging that effective monitoring is a key component of ensuring a well evidenced, sustainable future for the fishing industry and marine environment alike. Instead, it notes that FPAs will explore the use of technologies such as vessel monitoring systems and REM for scientific purposes and to aid the sustainable management and control of fisheries. It is hugely disappointing that there is seen to be a need to further investigate either of these proven technologies. VMS is already standard operational practice across large parts of the fleet. Operationalising it for the remainder of the fleet need not be overly complex and could be superseded by the adoption of REM with cameras which provide positional data as part of the package.

REM is a fisheries management tool that has been well trialled and shown to work in fisheries across the world, including in the UK. While we appreciate the devolved nature of fisheries management, and the sensitivities around committing to a tool such as REM in the JFS, it would be possible for FPAs to acknowledge that they were in agreement regarding direction of travel and that each FPA will;

i) by a certain date (in 12 months time, for example) set out the plan for rolling out REM and
ii) that plan will identify clear dates for application of REM to the various fleet segments.

The benefits of this are that it demonstrates the commitment to the adoption of REM as a key fisheries management tool. It is fundamental to underpinning many of the elements required for sustainable management - including data for managing removal rates, accounting for these removals, evidencing impact on other parts of the marine environment, delivering compliance and, importantly, demonstrating accountability throughout the supply chain and, with it, consumer confidence.

As a priority, there should be a firm commitment to mandating the implementation of REM. As noted above, the commitment that FPAs explore the use of technologies such as vessel monitoring and REM, "*where appropriate*" is wholly inadequate. The JFS should include a commitment to implementing fully documented fisheries across the board, with REM to be mandatory for all catches (including discards and bycatch). In addition to REM, gear modifications and alternative gears that are shown to reduce

bycatch or trials of these could be supported by UK governments (cost and lack of incentive due to unlevel playing field are some barriers the gov could help with).

Addressing the different elements of the objective:

(a) the catching of fish that are below minimum conservation reference size, and other bycatch, is avoided or reduced,

This requires that selectivity needs to be maximised and evidenced in order to demonstrate to managers and the supply chain that everything that can be done to avoid or reduce catching undersized fish is happening.

(b) catches are recorded and accounted for,

For this element to be met there is a need for confidence in the process of recording and accounting, and as stated above we believe ultimately this requires the adoption of REM with cameras to deliver on this and other objectives.

(c) bycatch that is fish is landed, but only where this is appropriate and (in particular) does not create an incentive to catch fish that are below minimum conservation reference size.

This element of the objective reflects the EU landing obligation, which is not in our view a key element of sustainable management in itself. But monitoring and accounting for all removals most certainly is, and which, if done in conjunction with REM with cameras, would negate the need for this element of the bycatch objective.

We note that the JFS identifies bycatch as including those non-fish species that are incidentally caught while fishing. The ecosystem objective also refers to sensitive species bycatch, so our point above around the adoption of REM also applies to addressing key concerns around the bycatch of sensitive species for purposes of monitoring both bycatch occurrence and mitigation.

3.2.1.4 The Equal Access and National Benefit Objective

The social and economic benefits to a coastal community should not be constrained to the fishing industry. As fish are a public resource, the national benefit objective should seek to define social and economic benefits based on interlinked geographical and social commonalities. The health of fish stocks or populations are reliant and interlinked with their environment, and as fish are a public resource, we would suggest that anyone with a social or geographical link to an area where the fish is caught, processed or sold should be considered a part of that community, and the potential impacts to these members should be considered. This would include sea users and local people beyond the fishing industry themselves. Many of these people also have social and economic links with the sea and a shared need of a healthy marine environment – such as through diving schools, wildlife tourism industry or general health and wellbeing. If there is a potential negative social or economic impact as a result of a particular fishing practice on any of these wider community members, this must also be considered.

As an island nation, we have a long tradition of seafood consumption, where the public expect the UK seafood they eat to be from well-managed fisheries or responsibly farmed aquaculture. Unsustainably managed fisheries and aquaculture in the UK will discourage local seafood sourcing by the seafood market supply chains, which in turn will deter consumers from buying UK produced seafood. Additionally, the Department of Health recommends the UK public to eat two portions of fish a week, with a minimum of one portion of oily fish, and that this should come from a sustainable source. Meaningful and detailed seafood labelling and evidencing of claims would help facilitate greater

transparency and traceability across the supply chain and give both consumers and retailers the confidence they need to know their seafood is coming from an environmentally sustainable source.

Buying seafood caught by small scale and artisanal sectors of the UK fishing industry can be viewed favourably, but there is a need to look at the overall footprint of the product from the environmental impact, the climate perspective and the socio economics of the product in terms of supporting local fishing and coastal communities. Locally caught seafood is not always synonymous with sustainably caught, and it can mean transparency, traceability and sustainability are often more challenging to demonstrate. It is important this distinction is made clear and FPAs do what they can to improve the sustainability of seafood produced in the UK. There is a need to incentivise the use of low impact fishing gear, including reallocation of quota - the language used in the JFS is not strong enough to achieve this aim. Although the promotion of local seafood products would be best managed at a devolved level, it would be beneficial for a UK wide approach to be taken with regard to definitions of what 'sustainable' means in terms of seafood, both wild caught and farmed, through the JFS. Many retailers have already expressed concerns over proving the provenance of UK seafood, highlighting that if traceability is not improved their customer base will choose seafood sourced elsewhere. The absence of a fully transparent and interrogatable seafood provenance risks the achievement of the Equal access & national benefit objective, by reducing access to market for UK seafood.

If the intention is to manage fishing opportunities as a public asset, then it follows that opportunities, existing and new, should be allocated according to public interest criteria and criteria outlined in article 25 of the UK Fisheries Act. This means allocating fishing opportunities according to transparent and objective environmental, social and economic criteria in a way that incentivises the most sustainable and low impact fishing practices. Support should also be provided to fisheries willing to increase the sustainability of their catch.

In order to address national benefit there is a need to:

- Reallocate quota among the UK fleet using transparent environmental and social criteria to provide additional quota to low impact fishers.
- Make publicly available a web-based database of catch information, to include the electronic exchange of seafood traceability information along the full supply chain from capture to sale.
- Work with retailers to ensure that data on catching method, location and environmental impact is fully transparent to increase consumer confidence and improve market access.

3.2.1.5 Climate change objective

Fisheries are both vulnerable to the impacts of climate change and contribute to anthropogenic driven climate change, due to emissions from fossil fuel use as well as the disturbance of marine ecosystems, through disruption to vital blue carbon and removal of fish.[24] [25] [26] [27]

[24] Clare Shelton. Climate Change Adaptation in Fisheries and Aquaculture. Compilation of initial examples. FAO Fish. Aquac. Circ. (2014)

[25] Gaël Mariani, et al. Let more big fish sink: Fisheries prevent blue carbon sequestration—half in unprofitable areas. Sci. Adv. 6, eabb4848 (2020)

[26] Oswald J. Schmitz, et al. Animating the Carbon Cycle. Ecosystems 17, 344–359 (2014)

[27] Trisha B. Atwood, Rod M. Connolly, Euan G. Ritchie, Catherine E. Lovelock, Michael R. Heithaus, Graeme C. Hays, James W. Fourqurean, Peter I. Macreadie. Predators help protect carbon stocks in blue carbon ecosystems. Nat. Clim. Change 5, 1038–1045 (2015)

Efforts to meet the goal of net-zero have recently revealed the importance of ocean and coastal habitats, which can capture and store more carbon per unit area than terrestrial ecosystems.[28] When it comes to tackling the climate and nature crisis, we ignore the ocean at our peril. Under the UK's leadership the final wording of COP26 recognised the role the Ocean will play in combatting climate change.

The inclusion of the 'climate change objective' in the UK Fisheries Act is a world first: there are no other examples of governments being legally required to manage their fisheries and aquaculture in such a way that they contribute to tackling climate change.[29] This is an opportunity to show world leadership and set the standard for what 'climate-smart fisheries' could look like. However, despite the leadership shown at COP26, and the inclusion of a climate change objective within the Act, the JFS falls short on putting the ambition into action. The reference to the need to identify "*feasible*" changes (which, we note, is not worded as a commitment) ignores the fact that there are several measures already available which could, and should, be included in the JFS. Chief amongst these is an end to tax relief on fossil fuel use in the fishing industry.

There should be a recognition in the JFS of the fact that the waters around the UK will change in response to climate change, and that this will lead to changes in the species and ecosystems that they support. For example, there are likely to be warmer waters, leading some colder water species currently living at the edge of their geographical range retreating north (such as cod), while new warmer water species migrate further north (such as anchovy). It is important that those species living within their furthest extents (be it warm or cold) are not fished to a level where they are no longer able to demonstrate resilience to climate change, like cod in the Celtic Sea. It is necessary that the JFS account for these possibilities, limiting the development of new fisheries until impact assessments can be carried out and the risks of fishing pressure to emerging species are reviewed with appropriate limitations put in place. To aid and support changes in species distribution, assessments from international bodies must include targeted climate adaptation strategies that specifically match issues such as Biotope Shift and reduce impact on mitigation potential as part of adaptation, being part of a dynamic ecosystem-based approach. Going forward, the UK must request this additional information as standard.

In August 2021, the Future Fisheries Alliance set out a blueprint with the essential elements for achieving the climate change objective. Sadly, few of these were included in the JFS, and we are disappointed by the level of detail provided in the statement in relation to meeting the climate change objective. A requirement should be included for administrations to publish climate smart strategies which would provide focus and an understanding of ambition and direction of travel for both adapting to and tackling climate change.

Further key commitments that the JFS must include to ensure that it does not fall short of achieving this objective are:

- Halting damaging activities in offshore MPAs - this includes ending fishing with bottom-towed gear on protected seabed;
- Introducing bottom-towed gear-free zones across the most vulnerable habitats in nearshore waters;
- Protecting and promoting low-impact, low-carbon fisheries and engaging with coastal communities to deliver benefits for all;
- Inclusion of climate change adaptation and mitigation considerations in scientific advice on fishing opportunities;

[28] Shafiee, R. T. Blue Carbon. Scottish Parliament Reports

[29] Stephenson, S. and Johnson, A.F. (2021) Shifting gears: achieving climate smart fisheries. Published by WWF, RSPB and Marine Conservation Society

- Provision of incentives for carbon savings from engine upgrades, gear choices and green technology and ending tax relief for fossil fuel use across the industry through a just transition to low carbon fishing.

3.2.1.5.1 A commitment to removing fuel subsidies

The JFS commitments to explore decarbonising the fishing industry through innovation are warmly welcomed, but widespread decarbonisation, supported by a just transition, will not be realised with the urgency needed if we do not commit to removing the fuel subsidies that are driving overcapacity and use of fuel-intensive methods.

The true costs of fishing must be factored into the economics of the business model, which will not happen while government subsidies for fossil fuel use continue. Often these subsidies determine the profitability of fishing operations and energy costs are generally the largest overhead.[30]

Increasing fuel costs for fishers would actively help move UK fisheries away from fuel-intensive fishing gear types, such as bottom towed dredgers and trawlers, towards more low emission methods. This subsidy removal should be phased in for the most highly polluting vessels in the first instance.

It is worth noting that passive gears are not without problems such as bycatch of undersized and Endangered Threatened and Protected species (ETP) and, in some cases, habitat damage. Nevertheless, removal of fuel subsidies could result in greater motivation to decommission older diesel vessels and retrofit or invest in electric or hybrid vessels that generate significantly lower emissions.

In 2021 Red diesel was entitled to a tax rebate of 46.81 pence per litre (PPL), giving it an effective duty rate of 11.14 PPL. This equates to an 80% tax subsidy, approximately.[31] Red diesel can be found at quaysides, marinas and on inland waterways and its subsidised price drives fuel use, overcapacity, and fuel hungry methods of fishing. It distorts relative prices in favour of the most carbon-intensive fishing methods such as scallop dredging and overall reduces the incentive to reduce CO_2 emissions.[32]

In March 2021, policy changes made by UK governments meant that the entitlement to use red diesel and rebated biofuels will be restricted to certain sectors as of April 2022 to meet net zero targets.[33] The fishing industry has, however, been granted entitlement to continue benefiting from the use of red diesel and fuel subsidies. Thus highlighting how the fishing industry's emission contributions are typically not considered in national climate change mitigation plans.[34]

3.2.1.5.2 Applying the precautionary approach to blue carbon

We welcome the recognition that the protection, restoration and sustainable management of blue carbon habitats provides a nature-based solution that can support adaptation and resilience to climate change, alongside benefits for carbon sequestration and biodiversity. We hope to see future provisions made through effective fisheries management and management of MPAs to protect and restore these habitats.

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30 Ateyah Alzahrani , Ioan Petri, Yacine Rezgui , Ali Ghoroghi. Developing Smart Energy Communities around Fishery Ports: Toward Zero-Carbon Fishery Ports. Energies 13, (2020)

31 HMRC. Reform of red diesel and other rebated fuels entitlement. (2021)

32 Carpenter, G. & Millar, C. How the expense of Scottish fisheries management can be sustainably funded

33 HMRC. Reform of red diesel and other rebated fuels entitlement. (2021)

34 HMRC. Reform of red diesel and other rebated fuels entitlement. (2021)

The JFS commits FPAs to *"conduct research into the impact of fishing activities and aquaculture on blue habitats."* Building a clear understanding of UK blue carbon habitats and stock volume - a key recommendation in the Climate Change Committee's (CCC) recent report - is essential in helping the UK fishing industry move towards climate-smart approaches that will help to manage and safeguard key UK blue carbon habitats.[35]

However, lack of perfect data must not lead to delays or weak levels of protection and in line with the Precautionary Principle, a precautionary approach should be applied. We know that marine ecosystems store more carbon per unit area than terrestrial ecosystems, and that extensive bottom trawling and dredging of UK seas is a threat to both sequestered blue carbon and the sequestration potential of marine habitats.[36] In the absence of sufficient data and given how easily blue carbon sinks can turn into blue carbon sources if disturbed, FPAs must be required to apply the precautionary principle. Currently, the JFS only requires FPAs to *"take this [evidence/research] into account in future decision making."* With the CCC's report on blue carbon calling for the strengthened protection of marine areas with consideration of their carbon value, this language is too weak.

3.2.1.5.3 Reducing pressure from active fishing gear types

The primary way in which fisheries impact blue carbon habitats is through bottom towed fishing gear contact with the seabed.[37] Whilst in many cases such gear allows fishermen to land high volumes of (often mixed) catch, they also cause extensive physical disturbance to seabed communities and sediments.[38] Considering marine sediments are home to the largest pool of organic carbon globally,[39] such fishing activity can therefore have significant consequences for blue carbon stores and GHG emissions. This is because when fishing gears disturb and resuspend organic carbon stored in marine sediments, the carbon within them can be re-mineralized. This is thought to lead to increased ocean acidification and add to the accumulation of atmospheric CO_2 through air-sea CO_2 flux.[40] Bottom towed fishing gears have similar, significant impacts on other blue carbon habitats through the destruction and removal of carbon stored in vegetated habitats like seagrass and kelp.

For the UK to move towards net zero emissions we must rethink practices and modernise to meet the climate change challenge. Steps should be taken to reduce the fishing industry's impact on important blue carbon stores with commitments in the JFS that require each FPA to:

- Reduce the UK dependence on bottom towed fishing gears by putting a greater focus on prioritising the use of well managed passive fishing gear over bottom towed fishing gear to reduce damage to blue carbon sediments and habitats.
- Restrict bottom trawling in designated areas to actively reduce the disturbance of bottom trawling to sensitive features, whilst also limiting new areas of seabed available to bottom trawling.
- Develop, implement, and enforce new and existing MPA sites that are specifically designated for carbon storage protection in particular areas known to accumulate carbon due to specific Oceanographic conditions which can be modelled.

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35 Briefing: Blue Carbon - Climate Change Committee (theccc.org.uk)

36 Tiziana. Luisetti, R. Kerry Turner, Julian E.Andrews, Timothy D.Jickells, Silke Kröger, Markus Diesing, Lucille Paltriguera, Martin T.Johnson, Eleanor R.Parker, Dorothee C.E.Bakker Keith Westona. Quantifying and valuing carbon flows and stores in coastal and shelf ecosystems in the UK. Ecosyst. Serv. 35, 67–76 (2019)

37 Clare Shelton. Climate Change Adaptation in Fisheries and Aquaculture. Compilation of initial examples. FAO Fish. Aquac. Circ. (2014)

38 Jan Geert Hiddink, et al. Assessing bottom trawling impacts based on the longevity of benthic invertebrates. Appl. Ecol. 56, 1075–1084 (2018)

39 Trisha B. Atwood, Andrew Witt, Juan Mayorga, Edd Hammill, Enric Sala. Global Patterns in Marine Sediment Carbon Stocks. Front. Mar. Sci. 7, 165 (2020)

40 Dan Laffoley. Protecting and effectively managing blue carbon ecosystems to realise the full value to society- a sea of opportunities. (2020)

3.2.2 Aquaculture

There is an omission in the draft JFS regarding the importance of the aquaculture industry. Given that the UK's number one seafood export is farmed Atlantic salmon, in combination with the fact that any increased demand for seafood will have to be met by aquaculture, this importance of this industry should be made explicit and given equal emphasis to the fishing industry.

On page 19 of the draft JFS, reference is made to marine aquaculture. However, this excludes other forms of aquaculture that can and do contribute to fish protein production and local employment, such as the production of rainbow trout in freshwater and the land-based production of warm water prawns and cleaner fish.

3.2.2.1 The Sustainability Objective

Despite aquaculture being included in the opening statement, section 2.1.2 only defines sustainable fishing. There is no definition of sustainable aquaculture, which is essential if it is to be *"environmentally sustainable in the long term".*

It is vital that any aquaculture expansion is done in an ecologically sustainable way, and that the policies outlined in the JFS reflect how the devolved administrations intend to achieve this. FPAs need to clearly outline their definition of *'environmentally sustainable aquaculture'* practices and products, factoring in all stages of the production process. Fully integrated spatial planning is essential and urgent to identify the most, and least, suitable places for aquaculture to operate, with those less suitable identified as aquaculture free zones.

3.2.2.2 The Precautionary Objective

No mention of aquaculture is made under this objective. We believe that any future expansion of the aquaculture industry should be approached in a precautionary way to limit further damage to marine and terrestrial environments. An adaptive management approach is favoured, particularly in Scotland, and whilst this is an acceptable way forward for development, it should be built from a precautionary mind set. We do not have a clear understanding of cumulative impacts of aquaculture within a water body; accumulation and distribution of chemical treatments outside an Allowable Zone of Effect; a comprehensive map of Priority Marine Features or a full understanding of future challenges arising from a changing climate.

The application of best available science, from a precautionary starting point using an adaptive management framework, is the most appropriate way forward for the aquaculture industry in each of the devolved administrations.

Whilst the precautionary objective may be limited to a precautionary approach to fisheries management and exploitation of marine stocks restores to maintain populations of harvested species above biomass levels capable of producing MSY, the Precautionary Principle should be considered for all aspects of the JFS[41]. It is vital, particularly due to the absence of complete data for many aspects that a precautionary approach is taken when setting out measures and requirements for action, that the lack of data is not an excuse for limited action.

[41] As mentioned above, whilst we appreciate the final version of the Environmental Principles Policy Statement as required by s.17, the Environment Act 2021, is yet to be produce this should not mean consideration of the Principles should be excluded from requirements.

3.2.2.3 The Ecosystem Objective

How the ecosystem objective will be applied to fishing activities is defined in 2.1.12 and 2.1.13, but there is no definition as to how it will be applied to aquaculture activities. For ecosystem-based management to be achieved for all sectors, each devolved administration should develop plans and policies to deliver fully integrated spatial marine planning. Such plans should take into account multiple users and services that a water body provides and recognise and account for the protection and recovery of biodiversity. Joint approaches should also be developed to incentivise low carbon and low impact aquaculture.

3.2.2.4 The Scientific Evidence Objective

Within the aquaculture sector science is often conflicting, incomplete or commercially sensitive. The best available science needs to be independently reviewed and made public for all to access if an evidence-based approach is to be adopted. See the regulatory review of Scottish aquaculture carried out by Professor Griggs for further opinion on this issue[42].

3.2.2.5 The Climate Change Objective

As well as focusing on decarbonising the seafood sector, there is also an opportunity to promote low carbon seafood. The farming of seaweed and shellfish, either independently, or as part of an Integrated Multi Trophic Aquaculture (IMTA) system, is a way of producing low carbon seafood from primary production[43]. It is important to note that aquaculture also has non-food use benefits for restoration purposes, such as native oysters[44] and kelp[45].

Feed is the biggest contributor to GHG emissions in aquaculture. However, it is not mentioned in the JFS. The JFS should set details on how the aquaculture in the UK can support the reduction of emissions in feed and FPAs should set measures to support the net zero target.

3.2.2.6 Environmental Limits

In addition to the aquaculture-specific comments made for each objective, it is important to define what *"environmental limits"* are. Environmental limits can be defined at a farm, area or water body scale. The definition of a water body is, in itself, a contentious issue. To ensure that environmental limits are not to be breached, it is therefore imperative that how they are defined and measured is agreed and adhered to in each country.

Contribution to food security can only a be achieved if aquaculture is a net producer of fish protein. For those species that require more fish in their diets than they produce, for example Atlantic salmon, they can only be considered to contribute to food security when the fish in: fish out ratio is less than 1. For this to be achieved, the production and inclusion of non-marine proteins and oils should be supported.

3.2.3 Reporting and review process

The requirement of the Fisheries Act for all devolved administrations to jointly report every three years on the success of the JFS and underlying policies and FMPs in achieving act objectives is noted. It is not

[42] A Review of the Aquaculture Regulatory Process in Scotland. Scottish Government. (2022)
[43] Marine Conservation Society. 2022. MCS recommendations for the diversification and development of responsible UK aquaculture
[44] Dornoch Environmental Enhancement Project (DEEP)
[45] Sussex Kelp Restoration Project

possible to determine from the JFS in its current format how this reporting cycle will align with that of the UKMS though. With the Marine Strategy split into three parts and currently reported on over a six-year cycle, it is difficult to see how consistent alignment between reporting cycles could be achieved.

With the critical role that the JFS and underlying policies will play as cross-cutting measures to achieve GES, a high degree of harmonization between reporting the JFS and UKMS is essential. This will help to ensure that the relationships between pressures on and the status of indicators of marine health are aligned with the policy framework designed to relieve them.

JFS reporting should also explicitly cover progress made to minimise and, where possible, eliminate incidental bycatch of sensitive species as a result of the JFS and BMI, and assess the success of relevant FMPs in achieving this aim.

3.3 Question 3: What are your views on the proposals for developing FMPs?

3.3.1 Ambition

FMPs are not a new concept and play an integral role in current world leading fisheries management frameworks. It is therefore very welcome that the UK policy authorities have agreed to incorporate FMPs within the UK fisheries policy framework and recognise their importance in securing *"the long-term sustainability of our fish stocks",* as stated in section 5.2.1 of the JFS.

However, we do not believe FMPs as currently described in the JFS and Fisheries Act are going to deliver this ambition, meet key objectives of the Fisheries Act or reflect international standards relating to what a comprehensive FMP should contain. The Food and Agriculture Organisation of the United Nations (FAO) describes FMPs as "*an explicit arrangement between a fishery management authority and the recognized interested parties. It should identify these parties and clarify their respective roles, rights and responsibilities. It should list the objectives agreed on for the fishery and the harvesting strategy, rules and regulations applied to realize those objectives. It should also describe the mechanisms for on-going consultations, the arrangements to ensure compliance and any other information relevant to the management of the fishery".*

The proposed format for FMPs does outline recognised interested parties and their respective roles, rights and responsibilities. However, it falls short of including requirements within the JFS to outline harvesting strategies, rules and regulations and defining arrangements to ensure compliance with these policies. Additionally, we recommend FMPs go beyond FAO recommendations and reflect current best practice globally, as seen in the USA and Canada. There should therefore be a requirement in the JFS for FMPs to set out clear, timebound objectives to achieving and maintaining environmental sustainability and recover stocks that are already depleted. We believe a requirement within the JFS to address these areas, as a minimum, would lead to the creation of robust FMPs and would supplement the development of bespoke plans which reflect the needs of the fishery in question. This approach has already been proven successful in the US, where requirements to address these areas are contained within their primary legislation.[46]

Section 5.4.2 of the JFS states that the "*design and structure of the FMPs directly relate to the precautionary, scientific evidence, ecosystem and equal access fisheries objective...*" while section 5.4.3 goes on to say that "*interventions seeking to tackle the impact of fishing on the environment*" may contribute to one or more of the sustainability, ecosystem, bycatch and climate change objectives. Limiting the required scope of the FMPs to the precautionary, scientific evidence, ecosystem and equal access objectives would result in a missed opportunity to redefine the way we manage our marine

[46] Magnuson-Stevens Fishery Conservation and Management Act

resources and match the ambition of current world leading FMPs. It is vital, as per delivery of 2 (1) (b) of the Act, that FMPs achieve, or contribute to the achievement of, the Fisheries Objectives. The JFS must include commitments for the design and function of every FMP to have a transparent and criteria-based assessment of how it contributes to each of the Fisheries Objectives. The JFS should also require a collective evaluation of progress by the four administrations towards delivering each of the Fisheries Objectives through the FMPs. Given the importance of the sustainability objective in particular, it is vital the design and structure of FMPs also reflects the ambition for fishing activities to be "*environmentally sustainable in the long term*" and to ensure "*fishing capacity of fleets is such that fleets...do not overexploit marine stocks*".

The format of the FMPs provides an opportunity to monitor and manage fleet capacity/fishing effort in relation to the size and conservation status of the stock being exploited. Informed decisions could then be made regarding new entrants to the fishery, fleet reductions and possible licencing restrictions. A review of the fleet capacity could also identify ways to support diversification within the sector.

3.3.2 Wales points to address on FMPs

Annex A proposes twenty-nine FMPs with input from Welsh Government as a relevant authority – twenty-six as joint plans, and a further three as plans limited to Welsh waters. We welcome the latter three plans for cockles, crab & lobsters and whelks [Welsh shellfish stocks] as sensible starting points, but urge Welsh Government to engage fully with the development of FMPs relevant to the shared stocks of crabs and lobsters in the Bristol channel, and cockles in the Dee area. In relation to the Welsh offshore area, it is important that Wales, as the authority responsible for management, fully engages in the development of FMPs to ensure fleet access is aligned with both the Fisheries Act and the Well Being and Future Generations (Wales) Act, ensuring globally responsible practices.

We note that the proposed FMPs for Welsh waters would represent an increase in commitment to fisheries management that may be challenging for Wales to meet, given the absence of increased fisheries management within the current Programme for Government and the attendant marine and fisheries capacity within Welsh Government. For the objectives of the Fisheries Act to be met in Wales in a timely fashion, a number of steps further to implementation of the JFS and FMPS should be taken including, but not limited to:

- A Future Catching Policy for Wales akin to that currently under consultation from Scottish Government; and the realisation of the ambition for a Welsh Fisheries Bill, as proposed by the Minister for Environment, Energy and Rural Affairs in Senedd committee sessions in 2019, through new legislation or the adaptation of existing legislative powers;
- Managing access and effort within the Welsh EEZ to ensure fishing effort is compatible with the delivery of national legislation and targets.

Lastly, we welcome the commitment to integrated impact assessment of the JFS and policies through the lens of the Wellbeing of Future Generations (Wales) Act 2015 objectives and ways of working. We look forward to the enactment of fisheries management in Welsh waters with the purpose of maximising economic, social, cultural and environmental wellbeing equally.

3.3.3 Northern Ireland points to address on FMPs

The Northern Ireland Department of Agriculture, Environment and Rural Affairs (DAERA) have been allocated as the lead authority for three FMPs listed in Annex A. We welcome the proposals for a mixed fishery management approach for the Irish Sea Demersal FMP and welcome the positive intention to manage this FMP through an ecosystem-based approach. We recognise, however, that this would

represent a significant increase in commitment to fisheries management that may be difficult to meet and would require additional resources for DAERA to effectively monitor and ensure fishing activity is compatible with sustainability and legislative targets. A review of DAERAs capacity to deliver the proposed FMP allocations, both effectively and in a timely manner, may be helpful, and should include future management tools such as adequate vessel monitoring systems and the potential for the exploration of REM of fishing activities.

3.3.4 Scotland points to address on FMPs

We acknowledge that by landings weight and value Scotland's waters support around two thirds of the UK catch, and therefore the Scottish Government has the largest list of FMPs on which to lead development. However, we also note the lack of proposed FMPs in Scotland for non-quota stocks, such as king scallop, brown crab and European lobster, and are concerned that this may negatively impact stock sustainability and reduce supply chain access opportunities. According to analysis done to inform sustainability ratings for the Marine Conservation Society Good Fish Guide, Scottish non-quota fisheries, on average, perform worse than similar stocks in England, often due to a lack of management plans and stock assessments. This is partly down to the existence of Inshore Fisheries and Conservation Authorities in England, which has, in some cases, resulted in the implementation of management measures for non-quota stocks within their jurisdiction.

However, the existence of IFCAs alone has often not resulted in management measures that go far enough to sustainably manage non-quota, in particular shellfish, stocks. We were therefore very pleased to see that FMPs for non-quota stocks that meet the 4 criteria outlined within the JFS have been proposed for England, Wales and Northern Ireland. We see Marine Scotland's decision not to take forward these plans as a significant oversight and feel this is a missed opportunity to improve the management and sustainability of economically and environmentally important stocks. Scottish shellfish fisheries landings have a value of over £120 million - almost a quarter of the value of all landings by Scottish vessels. Whilst we acknowledge Marine Scotland already has the majority of proposed FMPs in the UK, we still see the decision not to implement FMPs for fisheries such as king and queen scallop, brown crab and European lobster as a missed opportunity and hope this is reconsidered.

3.3.5 Fisheries outside of the proposed list of FMPs

FMPs will provide a key tool for practical management through development of stock and geographic level management plans, of which 43 have been identified within the JFS, covering a wide range of species and mixed fisheries. However, there are far more commercially targeted species than the proposed 43 FMPs intend to cover. Furthermore, given the criteria used to determine which stocks should be covered by an FMP (section 5.3.1), we believe there are a number of stocks which have been overlooked and would benefit from being subject to an FMP. These include forage fish and a number of non-quota species in Scotland such as crab, lobster, skates and rays.

The inclusion of proposed FMPs for forage fish that are integral components of marine food webs such as sprat and herring is very welcome. We note however that other stocks of these species have not been included and believe that a holistic approach is needed to forage fish management that ensures the appropriate management frameworks and measures are put in place e.g. through a forage fish policy.

Given that many fisheries are mixed, and stocks of fish and shellfish in the wild overlap and intermingle, it is welcome to see proposed mixed fishery FMPs in English, Welsh and Northern Irish waters. We are concerned by the different approach being taken by the Scottish government which instead has proposed individual FMPs for all stocks. We believe mixed stock fisheries would benefit from being part of one mixed FMP rather than being siloed in order to help deliver ecosystem-based fisheries management.

3.3.6 Industrial forage fisheries

We welcome the recognition, provided in 4.1.7, to take an ecosystem-based approach to managing our fisheries, in particular in contribution to the achievement of GES, and the need to include measures to *'sustainably manage target species, to protect key forage species such as sand eels (GES: food webs), essential fish habitats i.e., key spawning areas, and sensitive species (GES: biodiversity)'*. Yet we note industrial fisheries for sandeel and Norway pout are not included within the list of FMP species outlined within the JFS.

Instead, section 5.3.4 states that existing conservation/management measures will continue to apply for sandeel, Norway pout and other specified stocks. As outlined in our response to the UK Fisheries Administrations' joint call for evidence on fisheries management for sandeel and Norway pout and the RSPB's sandeel report, we do not believe current conservation or management measures are sufficient to allow nature to recover. While welcome steps have recently been taken to manage the industrial North Sea sandeel fishery there is a need for a strategic and holistic approach to management of industrial fisheries in the long term to contribute towards the achievement of GES for commercial fish, food webs and marine birds.

Stronger regulation of industrial forage fisheries offers the UK's fisheries authorities a key opportunity to demonstrate ecosystem-based management in practice. There is a clear need to revisit the way these stocks are managed in UK waters, and for all UK fisheries authorities to make a commitment within the JFS to not support industrial forage fisheries in UK waters (in line with the Scottish Government's existing commitment for Scottish waters). We recognise that if UK governments commit to excluding industrial fishing for critical forage fish species in UK waters, there will still be a requirement to monitor the health of these stocks.

Further information regarding specific management recommendations for the industrial North Sea sandeel fishery can be found in the RSPB report 'Revive our Seas: The case for stronger regulation of sandeel fisheries in UK waters'[47] and our response to the sandeel call for evidence[48]

3.4 Question 4: Are there any other areas of fisheries policy you think should be include in the JFS?

3.4.1 Wild capture Fisheries

No clear targets for recovery of depleted stocks and sustainable management of UK fisheries are provided within the JFS. It is imperative that firm, time-bound commitments are included to ensure exploitation of marine stocks is carried out at levels below Fisheries MSY, ensuring populations are maintained, or restored, above biomass levels capable of sustaining MSY. No indication has been provided regarding whether this will be set through FMP development. Given the legally binding nature of the JFS, this should be detailed here.

Practically, the JFS contains many uncertainties and risks being open to interpretation. Recognition of differences in approach to policy development within each nation is referenced. As such, it remains unclear how consistency of approach will be applied across policy authorities, regulators and stakeholders in regard to fisheries management, and how the FPAs' obligation to set out policies for achieving or contributing to the achievement of all Fisheries Objectives will be met.

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47 RSPB report. 2021. Revive our Seas: The case for stronger regulation of sandeel fisheries in UK waters

48 RSPB and joint NGO responses to the sandeel and Norway Pout call for evidence consultation (November 2022) - available upon request

3.4.2 Mandating REM with cameras

Effective monitoring of fisheries is an essential component of environmentally sustainable fisheries management. As mentioned previously in this response, REM is a powerful, tried and tested, and cost-effective management tool shown to work in fisheries across the world. The JFS should include a firm commitment to set out by the end of 2023 how governments intend to roll out REM with cameras. This should also outline how REM will support the implementation and monitoring of new Future Catching Policies. We recognise that the Scottish government has gone some way to doing this.

Not only would this provide the data required for the sustainable management of fisheries (see sections '3.2.1.2 Ecosystem Objective' and '3.2.1.3 Bycatch Objective' above) but it would also improve our understanding and knowledge of fisheries in a number of ways.

1. REM with cameras can help us better understand how climate change is impacting fish stocks and other marine species and habitats. For example, there are ongoing counter-claims around the health of cod in the North Sea, with scientific assessments stating that levels are worryingly low while fishermen claim that there are more cod than they have seen for years. If REM were applied across the vessels involved in the fishery, then robust, representative, independent data could be gathered and analysed, to evidence the true situation and in turn be used to monitor any mitigation measures and management that is introduced. The degree to which REM with cameras is applied will be a key factor in the fishing industry's ability to adapt to the impacts of climate change.
2. REM with cameras would improve carbon emission calculations. There are still significant holes in current knowledge surrounding the UK fishing industry's estimated CO_2 emissions and their contribution to total UK annual carbon emissions. UK emission inventories of the fishing industry are particularly sparse and annual fuel efficiency data is not readily available for all vessels, particularly for smaller vessel sizes. Consequently, inventories have been heavily based on assumptions in UK fuel use from days at sea calculations, rather than accurate vessel movement estimates. To fill the knowledge gaps surrounding fisheries CO_2 emissions, it is recommended that emissions be tracked, calculated, and the information made transparent and publicly available. This should be combined with REM technologies and live CCTV to ensure accurate data collection.
3. REM enables better enforcement for protected areas. REM systems usually include Global Positioning Systems (GPS), which allows greater monitoring of both vessel position and activity. This is important when monitoring vessels within MPAs and when they interact with known blue carbon ecosystems. Position monitoring can be delivered by Vessel Monitoring Systems (VMS), but at present only vessels >12 metres in length are legally required to be fitted with VMS, meaning that the UK fleet (79% of which is made up of vessels <10 metres in length) is largely untracked. A better alternative would be to make REM with cameras mandatory and adhere to specifications that meet governments' needs and current VMS rules. This would mean using one piece of combined equipment that would allow the capture of reliable evidence and additional data that can be used to support climate smart UK fisheries.
4. REM provides a more comprehensive picture of the impact that fisheries have on climate change. The fishing industry's extraction of fish above sustainable levels is also an extraction of blue carbon, further contributing to GHG emissions. Fisheries have significantly depleted some fish and shellfish stocks relative to pre-industrial levels, thereby removing large volumes of carbon in the form of marine organisms. These fish would otherwise eventually sink as carcasses and their carbon would become stored in deep ocean sediments. Overfishing practices further impact blue carbon by contributing to biodiversity loss and changes in ecosystem function. Fishing above sustainable levels can lead to the removal of enough fish biomass within certain trophic levels to unbalance food webs and increase grazing pressure on vegetated blue carbon habitats.
5. Finally, increasing transparency and traceability of UK fishing would ensure that fisheries activities and management progress is more easily and efficiently measured. Increased accuracy in monitoring vessel behaviour and fishing activity would further ensure fisheries are compliant with

sustainable catch limits. This in turn should help conserve carbon lost through overfishing practices that impact food webs through biodiversity and ecosystem function-related losses. As the CCC's recent report on blue carbon recommends, we encourage "efforts to monitor, understand and analyse changes in the extent, condition and functioning of marine and coastal ecosystems" and agree that this should include an "assessment of the risks these present to emissions and wider ecosystem value, and with reference to the changing climate and other pressures."[49]

For further detail see the Joint NGO response to the Defra Call for Evidence on REM in England and RSPB response (November 2020) which we believe remain relevant[50].

3.4.3 Aquaculture

There is an opportunity to promote and encourage the research and development of low-carbon aquaculture feed alternatives; such as bacterial, insect and micro-algae protein production techniques, and consider integration of production with animal feed and nutraceutical industries[51]. The absence of an overarching policy driver will limit the opportunity for investment and growth in these areas.

With regard to the future development and operation of aquaculture, we believe it essential that a new evidence-based framework that sets environmental parameters be established and implemented. This would then underpin and inform the type, size and technology required for farms to operate within environmental limits, and for those sites that are unable to operate within those parameters to surrender their licenses. This may, as result, allow alternative species, such as shellfish and seaweed, to be farmed in former finfish sites, or for those sites to remain aquaculture free.

We do have a concern over the presented conflict between the precautionary principle and an adaptive management approach, and would not want to see a move from the former to the latter. The benefits of data collection, increasing our understanding of environmental performance and the development of a comprehensive data evidence base can be achieved using a precautionary approach, as long as it is fit for purpose and be diligent and reactive in regards to data gathering and evaluation.

[49] Briefing: Blue Carbon - Climate Change Committee (theccc.org.uk)

[50] Joint NGO response to the Defra Call for Evidence on Remote Electronic Monitoring (REM) in England and RSPB response (November 2020) - available upon request

[51] Marine Conservation Society. 2022. The feasibility of alternative feed ingredients for aquaculture - potentials and barriers

4. Acronyms

BAP	Biodiversity Action Plans
BMI	Bycatch Mitigation Initiative
CCC	Climate Change Committee
DCF	Data Collection Framework
DAERA	Northern Ireland Department of Agriculture, Environment and Rural Affairs
FMP	Fisheries Management Plans
FPA	Fisheries Policy Authorities
GES	Good Environmental Status
IMTA	Integrated Multi Trophic Aquaculture
ICES	International Council for the Exploration of the Sea
JFS	Joint Fisheries Statement
MPA	Marine Protected Areas
MSY	Maximum Sustainable Yield
PPL	Pence per litre
REM	Remote Electronic Monitoring
TAC	Total Allowable Catch
UKMS	UK Marine Strategy
VME	Vulnerable Marine Ecosystems