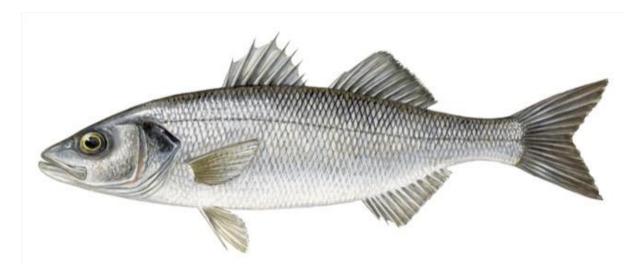




Proposed Fisheries Management Plan for Sea bass in English and Welsh Waters

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Contents

Executive Summary
Introduction
FMP Vision9
Scope of the Bass FMP and status of the fishery/stock
Species
Description of the fishery10
Current status of the fishery1
Current bass management approach12
Shared UK/EU approach12
Regional management measures13
Nursery areas13
FMP Goals and Management Strategy14
Management Goals15
Goal 1: Inclusive stakeholder engagement structures to inform management of the bass fishery18
Goal 2: Equitable access to the bass fishery, while prioritising stock sustainability
Goal 3: Minimise discarding of bass bycatch where survival rates are low 17
Goal 4: Encourage and facilitate full compliance with bass regulations
Social and Economic Goal19
Goal 5: Maximise the benefits of bass fishing for local coastal communities 19
Stock level goals
Goal 6: Sustainable harvesting of the bass stock in line with scientific advice 20
Goal 7: Ongoing protection of the juvenile and spawning bass stock2
Wider Environment Goals22
Goal 8: Minimise the impact of bass fishing on the wider marine ecosystem 22

Goal 9: Mitigate against and adapt to the impact of climate change on bass fishing	24
International collaboration	
Review & revision of the plan	26

Annexes:

1	Kev	policy	linkages
	1 1 C y	POIICY	minages

- 2 Evidence statement, references & research plan
- 3 Bournemouth report
- 4 Record of stakeholder engagement
- 5 Policy Lab Final report
- 6 Policy Lab lived experience
- 7 Policy Lab collective intelligence
- 8 Policy Lab co-design
- 9 SNCB Advice on Wider Environmental Considerations
- 10 FMP Goals: evidence & stakeholder views
- 11 Inshore Fisheries Management

Executive Summary

The Seabass (Dicentrarchus labrax, hereafter 'bass') Fisheries Management Plan (FMP) for England and Wales is one of 43 FMPs proposed around the UK set out in the Joint Fisheries Statement (JFS). The plan has been developed by the Department for Environment, Food and Rural Affairs (Defra) and Welsh government, in collaboration with scientists, regulators, Statutory Nature Conservation Bodies (SNCBs) and stakeholders from across the bass landscape, to deliver a roadmap for the long-term sustainable management of bass fisheries in English and Welsh waters over the next six years, in line with the objectives of the Fisheries Act 2020 (the Act).

What is an FMP?

FMPs are evidence-based action plans that chart a course towards sustainable fisheries for current and future generations. An FMP sets out a vision and goals for the target fishery (or fisheries), together with the actions and management interventions necessary to achieve these goals. Defra and Welsh government have an ambitious vision to use FMPs to tackle environmental, social and economic issues associated with fisheries, significantly enhancing our ecosystem-based approach to fisheries management.

Why an FMP for Bass?

Bass fisheries contribute culturally, socially, and economically to coastal communities through, for example, employment and recreational fishing interests. However, a combination of overfishing and poor year class strength (the number of individuals born in a year) saw a sharp decline in bass stock levels from 2010. In response, a joint UK/EU management approach was implemented in 2015, which has been amended annually. Since these measures were introduced, there has been a significant increase in spawning stock biomass - although recruitment remains low. While bass is currently fished within sustainable limits in English and Welsh waters, this FMP reviews current bass management in England and Wales, sets the direction to maintain bass stocks at sustainable levels and ensures the benefits of bass fishing can be realised by the communities that depend on them.

Current management

UK and EU vessels have access to fish bass in UK and EU waters in accordance with the access provisions for non-quota stocks (NQS), in the UK/EU Trade and Cooperation Agreement (TCA). The UK and EU have developed several management measures to protect the stock. These were introduced in 2015 (and adjusted

annually) after urgent scientific warnings of stock decline due to multiple years of poor recruitment and high fishing pressures.

Management measures include a Minimum Conservation Reference Size (MCRS), domestic authorisations required to fish for bass, seasonal closures for both commercial and recreational fishers, and catch/bycatch limits for commercial and recreational fishers. Three gear types are authorised for landing bass — trawls/seines, fixed nets (both bycatch only) and hook and line — all other gears are prohibited from landing bass. In addition, regional byelaws in England and Wales provide inshore (<6 nautical mile) management, while a network of nursery areas in England and Wales also provide protection for juvenile bass.

Stakeholder Engagement

Stakeholder engagement for the Bass FMP was facilitated by Policy Lab, a multi-disciplinary team of policy makers, designers and researchers based at the Department for Education. Policy Lab took a collaborative mixed-method approach, engaging with over 1400 bass stakeholders across England and Wales via interviews, online debates, pop-up port visits, workshops and surveys. Policy Lab's aim was to jointly develop a set of potential solutions for managing bass to inform the goals and actions of the Bass FMP. Policy Lab presented the results of their extensive exercise to Defra and the Welsh government in January 2023, and this work has informed drafting of the Bass FMP.

Key goals

To ensure effective management of bass stocks in English and Welsh waters over the next six years, this plan identifies nine goals focused on domestic management priorities. Each goal is set out with a rationale, evidence, stakeholder views, short (one-two years) and medium-long term actions, and performance indicators to monitor delivery. The nine goals outlined in this FMP are:

- 1. Inclusive stakeholder engagement structures to inform management of the bass fishery
- 2. Equitable access to the bass fishery, while prioritising stock sustainability
- 3. Minimise discarding of bass bycatch where survival rates are low
- 4. Encourage and facilitate full compliance with bass regulations
- 5. Maximise the benefits of bass fishing for local coastal communities
- 6. Sustainable harvesting of the bass stock in line with scientific advice
- 7. Protecting juvenile and spawning bass
- 8. Minimise the impact of bass fishing on the wider marine ecosystem
- 9. Mitigate against and adapt to the impact of climate change on bass fishing

While there are multiple complex interactions, synergies and tensions between these goals, the overarching aim of the FMP is to ensure stocks are harvested sustainably

whilst benefiting a diverse range of environmental, commercial, recreational and social interests.

Actions and implementation

In the short-term, improvements to bass management measures to help ensure sustainability and flexibility for the fishing sector include:

- The establishment by governments of bass management groups to facilitate stakeholder participation in management decisions
- Exploring opportunities to develop more adaptive management systems which protect the stock and allow fishers to take advantage of any increases in stock abundance
- Considering whether to review the existing domestic authorisation system for an alternative approach to align fishing opportunities with other FMP goals (for example, reducing discarding, minimising environmental impact and maximising benefits to local coastal communities)
- Reviewing the most suitable timing and duration of the closed seasons
- Considering how best to monitor and reduce discarding, for example, using existing data recording tools like the CatchApp and/or managed access (within existing annual limits) in return for data
- Encouraging better monitoring, the use of gear modifications and engagement with relevant schemes to help reduce the incidence of sensitive species bycatch associated with bass fishing
- Improving communication and understanding of bass regulations, including Registered Buyers and Sellers (RBS)

In the medium-long term, there are further actions that could be considered to help meet the goals outlined above. These include:

- Reviewing appropriate size limits for the bass stock, for example, a MCRS or slot sizes
- Reviewing appropriate harvest strategies for bass in light of outcomes from the International Council for the Exploration of the Sea (ICES) 2023-24 benchmarking exercise
- Encouraging participation in Remote Electronic Monitoring (REM) earlyadopter programmes where appropriate to improve data collection on discards and sensitive species bycatch
- Supporting industry to decarbonise and adapt to the impacts of environmental change on bass distribution and abundance
- Reviewing the practice of shallow inshore and shore-based netting to determine whether additional protections are needed to prevent migratory fish bycatch

- Investigating the possibility of implementing a percentage catch composition definition of bass bycatch for net fishers
- Reviewing the feasibility of a model whereby all bass are landed to reduce discarding, and/or the pros and cons of moving away from bycatch and towards a catch limit or quota approach
- Improving collaboration between regulators on targeted enforcement and alignment of powers to ensure consistency
- Improving sector equality so that regulations apply to all those fishing for bass

Improving the evidence base

This FMP is based on the current biological, social and economic evidence available on bass life history, stock assessment and fishing and management practices (Section 8: Fishery Management Goals and Management Strategy, Annexes 2 and 3). Bass is a relatively data-rich ICES category 1 stock with robust MSY assessments produced annually. However, filling a number of evidence gaps could still improve stock assessments - including improved data collection on discarding, recreational catch and better understanding bass stock structure and recruitment. Improving the evidence base on the cultural and social importance of bass fishing, as well as the impacts of fishing on the wider environment, will also support progress towards more sustainable bass fisheries management.

Monitoring and review of the plan

Detailed work plans will be developed to support the implementation of this plan. As laid out in the Act, the Bass FMP for English and Welsh waters will be reviewed at least every six years. This formal review will assess how the FMP has performed in terms of performance indicators and outcomes. However, it is anticipated that the FMP will also be reviewed and updated more regularly in collaboration with bass management groups.

To conclude

The Bass FMP has been prepared for the purpose of meeting the requirements set out in the Act. This statement and the contents of the plan meet the obligation set out in section 6 of the Act.

This FMP has collated existing management measures and all available science and evidence to assess the status of bass stocks around England and Wales in 2023 to help determine a sustainable level of exploitation. At the time of publication, bass is being fished within sustainable limits around England and Wales as part of established management measures. The FMP highlights where improvements in evidence and management can be considered for the long-term sustainability of the fishery in English and Welsh waters.

Defra and Welsh government would like to acknowledge the advice, evidence and support that has been provided by the Association of Inshore Fisheries and Conservation Authorities (AIFCAs), Cefas, Environment Agency (EA), Joint Nature Conservation Committee (JNCC), Marine Management Organisation (MMO), Natural England (NE), Natural Resources Wales (NRW), Seafish and our stakeholders, throughout the development of this FMP.

Introduction

The Act sets out the legal framework governing fisheries (both commercial and recreational) in the UK. It places a duty on Fisheries Policy Authorities¹ to prepare and publish FMPs which set out policies to restore stocks and maintain them at sustainable levels. The Joint Fisheries Statement (JFS), published in November 2022, sets out further details of the policies the UK Fishery Authorities will follow to achieve or contribute to achieving the eight fisheries objectives in the Act. The JFS includes a list of FMPs, setting out the lead authority for each FMP, the stocks covered and timescales for publication.

The policies and measures contained within this plan have been prepared by Defra and the Welsh government according to the requirement of section 6(5) of the Act. This FMP details the policies and management approach needed to manage bass fisheries in English and Welsh waters. Further details on the requirements of the Act and wider commitments, and how these are met in this plan, are set out in Annex 1.

This FMP was developed by Defra and Welsh government. It was informed by extensive stakeholder engagement conducted by Policy Lab, which brought together over 1400 stakeholders with interests in bass fishing including commercial and recreational fishers, researchers, government, regulators, NGOs and policy makers to recommend potential measures to improve bass management. Further details on Policy Lab's stakeholder engagement are set out in Annexes 4-8 and 10.

FMP Vision

This FMP seeks to create a roadmap for the effective management of bass stocks in English and Welsh waters over the next six years, to allow this valuable natural resource to benefit a diverse range of environmental, commercial, recreational and social interests whilst ensuring stocks are harvested sustainably. Bass management should aim to be flexible, adaptive, and ecosystem based.

The Act requires FMPs to take a precautionary approach to fisheries management in the absence of sufficient scientific information, which means that the lack of scientific certainty is not a sufficient reason alone to not act or to postpone the implementation of effective management measures that will conserve a stock or its environment. The precautionary approach must explicitly consider undesirable and potentially

¹ Defra, Welsh government; Scottish government; the Department of Agriculture, Environment and Rural Affairs (DAERA) in Northern Ireland and the Marine Management Organisation (MMO)

unacceptable outcomes and provide contingencies to avoid or mitigate such outcomes.

The Bass FMP adopts an evidence-based approach, with management measures to be developed and implemented using the best available evidence. However, the FMP also identifies evidence gaps and details how these will be addressed. An Evidence Statement & Research Plan have been drafted (Annex 2) to identify these evidence gaps and detail how these will be addressed in future iterations of the FMP.

Scope of the Bass FMP and status of the fishery/stock

Species

This FMP applies to European bass only in the northern stock that occur in English and Welsh waters (central and southern North Sea, Irish Sea, English Channel, Bristol Channel and Celtic Sea; ICES divisions 4.b-c, 7.a and 7.d-h). This includes activity from all vessels fishing in English and Welsh waters. Bass have a complex lifecycle with a pelagic larval phase, juveniles then occupying nursery grounds in inshore areas, before migrating out to join the adult population. More detailed information on bass biology and ecology can be found in Annexes 2 and 3.

Description of the fishery

Bass are distributed across the northeast Atlantic and around all UK waters, but abundance varies between areas and seasons. The majority of bass caught within UK waters are from within ICES area 7e (western English Channel), followed by ICES area 7d (eastern English Channel) (Figure 1).

The majority (approximately 99%) of bass landed within all UK waters is landed within the FMP area. Most commercial bass landings (in weight) by UK vessels within the FMP area are caught by English vessels (82%-90% of landings between 2016 and 2021), with Welsh vessels landing most of the remainder. Vessels predominantly use hook and line (handline) fishing gears, followed by bycatch from fixed nets and demersal trawls. EU vessels also land bass within the FMP area, accounting for approximately 16% of total landings in recent years. Reported landings by UK vessels since 2012 show a peak during 2014, followed by a steep decline to a low between 2017-2019. Landings have increased again slightly in recent years.

Bass are also an important target species for recreational fisheries, with recreational removals for all countries (UK and EU) exploiting the northern stock estimated to be in the region of 27% of total removals. More detailed information on bass fisheries can be found in Annex 2.

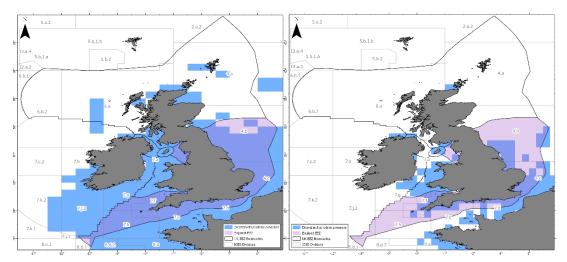


Figure 1. Recorded presence of bass around the British Isles, based on data supplied by the Ocean Biodiversity Information System (OBIS; A), and commercial fisheries landings data (B). Shaded area highlights the geographical area covered by the Bass FMP.

Current status of the fishery

ICES currently recognises four bass stock units within the Atlantic. This FMP covers English and Welsh waters, within which solely the northern stock is found. The northern Stock extends beyond the boundaries of this FMP (central and southern North Sea, Irish Sea, English Channel, Bristol Channel and Celtic Sea; ICES divisions 4.b-c, 7.a and 7.d-h), but biological information in this FMP is provided for the entire northern stock (Annexes 2 and 3). The majority of landings occur within the FMP area (99%). An ICES benchmark assessment for bass is being undertaken in 2023-2024 to review the biological relevance of the current stock structure and propose changes if needed.

Although in management terms bass are a non-quota species (stocks not subject to a Total Allowable Catch or quota), ICES provides annual catch advice on fishing opportunities for the northern stock of bass relevant to this FMP (https://www.ices.dk/advice/Pages/Latest-Advice.aspx). The assessment model that covers the northern stock is treated as Category 1 with a full analytical assessment and forecast. The history of stock dynamics, as estimated in the 2022 assessment, showed that the biomass declined until 1990 due to weak year class strength, but increased markedly in the 1990s because of strong year classes particularly in 1989.

The decline in spawning stock biomass from 2009 to 2018 was due to a combination of high fishing mortality and weak year class strength (the number of individuals spawned each year). The stock has been characterised by periods of poor

recruitment in the 1980s and since 2008. These periods of poor recruitment have a major impact on biomass, which is exacerbated by any increase in fishing mortality. An increasing trend in biomass was estimated to have occurred since 2018, which may have resulted from the management measures introduced since 2015 alongside above average recruitment events since 2013. More detailed information on bass stock status can be found in Annex 2.

Current bass management approach

Shared UK/EU approach

The UK and EU have access to fish bass commercially in each other's Exclusive Economic Zone (EEZ) under the access provisions for NQS in the TCA (Annex 38 of the TCA). This provides for access to fish NQS 'at a level that at least equates to the average tonnage fished by that Party in the waters of the other Party during the period 2012-2016'².

Since 2015, UK/EU measures have been in place to manage fishing pressure on the northern bass stock. These agreed measures include:

- A minimum conservation reference size (currently 42cm)
- Closed seasons (currently February/March for both commercial and recreational fishers)
- Annual catch limits per vessel for three gear types trawls/seines (3.8 tonnes), fixed nets (1.6 tonnes) and hook and line (6.2 tonnes). All other metiers are prohibited from landing bass
- For those fishing with trawls/seines and fixed nets, only bass bycatch may be landed, which is capped at a 5% live weight per trip for trawls/seines
- A track record for UK/EU vessels landing bass during the reference period of 1 July 2015 to 30 September 2016 is required for authorisation to use nets and hook and line gears
- Recreational bag limits are capped at two fish per day

For more details on current bass measures, please see MMO and Welsh government's Bass Fishing Guidance: <u>Bass Fishing Guidance 2023 - GOV.UK</u> (www.gov.uk) / Bass fishing: 2023 guidance [HTML] | GOV.WALES

Since 2021, these measures have been discussed by the UK and EU annually. Subsequent changes to UK legislation have been implemented via statutory

² Access to fish in the territorial waters is based on historic fishing patterns during a refence period.

instrument, the most recent being the Sea Fisheries (Amendment) Regulations 2023. During the 2022 consultations, the UK and EU agreed to consider the development of a multi-year strategy (MYSt) for bass within the framework of the Specialised Committee for Fisheries (SCF).

Regional management measures

In addition to the overarching joint management framework outlined above, fisheries within the six nautical mile limit off the English Coast are managed by 10 IFCAs. IFCAs have a duty to sustainably manage the inshore marine environment and have general duties in relation to conservation and biodiversity.

In England, the current byelaws put in place by IFCAs to manage bass fisheries protect a wide range of regional habitats and features of conservation interest, including juvenile bass habitats. All IFCA byelaws relevant to the bass fishery are listed in Annex 11.

In Wales, inshore fisheries are managed by the Welsh government. Relevant byelaws are outlined in Annex 11.

Nursery areas

Bass Nursery Areas (BNAs) were designated in England and Wales in the 1990s to reduce the impact of commercial and recreational fishing in areas where the majority of bass were likely to be below the MCRS – formerly, minimum landing size (MLS) established in UK and EU legislation. In total, 37 estuaries and other coastal sites are designated as BNAs (Figure 2), with additional restrictions on commercial and recreational fishing.

BNAs are thought to have played an important role in protecting the bass stock, including by generating changes in size distribution and improving juvenile survival and stock productivity. However, it is difficult to assess the relative contribution of individual nursery areas to the adult stock and to density dependent mechanisms that could reduce survival in nursery grounds. This makes a cost-benefit analysis of individual nursery areas challenging. Additional BNAs also may not actually increase protection for juvenile bass where existing byelaws already protect estuarine fish.

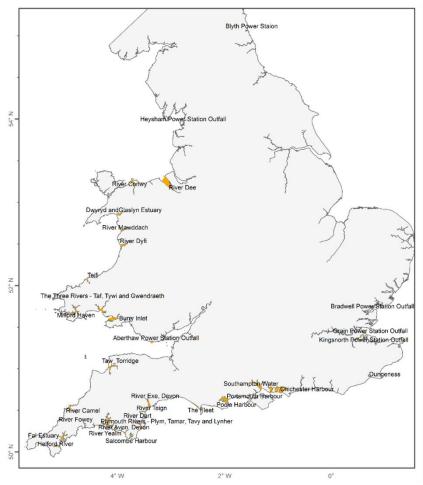


Figure 2. Existing BNAs specified under the Statutory Instrument 1999 No 75 The Bass (Specified Areas) (Prohibition of Fishing) (Variation) Order 1999

FMP Goals and Management Strategy

The existing management approach since 2015 has seen bass stocks recover and catch limits set within sustainable limits aligned with annual MSY stock assessments produced by ICES, meeting the obligation set out in section 6 of the Act. The goals and management strategy outlined below for this FMP therefore seek to build on the existing framework to set out a long-term sustainable domestic management approach for all individuals and vessels fishing for bass in English and Welsh waters. For stock-level goals, a co-ordinated international approach could support achieving the full benefits these goals for UK fishers - see Section 7 for more details on international collaboration.

Each goal is presented with a rationale, evidence, stakeholder views, actions to achieve the goal, performance indicators and links to the Act objectives (evidence and stakeholder views for each goal are set out in Annex 10).

Any fisheries management intervention will result in a range of social, economic, and biological impacts. When implementing a new fisheries management measure, there

is a statutory requirement to estimate the anticipated wider national benefits (for example, improved stock status of target species) as well as likely impacts on stakeholders and means of mitigating negative impacts. Broader impacts on local communities and economic, social and human rights impacts will be set out in associated impact assessments that will be required as part of the development of measures.

Management Goals

Goal 1: Inclusive stakeholder engagement structures to inform management of the bass fishery

Rationale: The bass stock is a shared national resource which is important to many different stakeholders. Working together collaboratively would help to improve management of the resource for the benefit of all.

How this can be achieved:

Short term

- Defra and Welsh government to establish a formal bass management group
 or groups with balanced representation, an effective code of conduct and an
 independent chair to provide advice and support a collaborative approach to
 bass management. Participation should include, for example, commercial
 fishers, recreational anglers, representatives of the wider supply chain and
 industry, scientists, policymakers and regulators
- Consider establishing an evidence sub-group of the bass management group to:
 - Seek consensus between sectors by placing science and evidence at the heart of decision-making
 - o Build relationships and trust between fishers/scientists/government bodies
 - Build understanding of the scientific process, including how stock assessments are undertaken, through effective science communication and collaboration
 - Utilise qualitative (and quantitative if possible) data from fishers, including experiential knowledge, for inclusion in formal stock assessments
 - Develop a monitoring and evaluation strategy for the Bass FMP

Medium-long term

 Continue to work collaboratively to build capacity as a forum for discussing matters of wider importance to the bass fishery, for example, longer-term management and evidence needs, marine spatial use, identifying areas of particular importance to bass fishing.

Performance indicators and monitoring: establishing a bass management group and associated evidence subgroup within one year of publication of the Bass FMP.

Link to the Act objectives: Scientific, National benefit

Goal 2: Equitable access to the bass fishery, while prioritising stock sustainability

Rationale: The existing commercial bass authorisation system has been effective in capping fishing pressure, which has improved sustainability of the bass stock in recent years. However, in the medium-long term the aim should be to deliver the right balance between all (commercial and recreational) access to the bass fishery and protecting the stock, while aligning with other goals of this FMP (for example, minimising discarding, minimising impact on the wider environment, maximising benefits to local coastal communities).

How this can be achieved:

Short term

- Bass management group(s) to commence a review of the current domestic authorisation system (designed to help manage fishing pressure on the bass stock). Any alternative system should seek to:
 - Reduce latent capacity within the fleet;
 - Maintain access to the fishery (within sustainable limits); and,
 - Align with other Bass FMP goals (for example, minimising damage to the wider environment, minimising discards, maximising benefits to local coastal communities and ensuring sustainable harvesting of the stock).

Medium-long term

 Depending on the outcome of the review, implement an alternative system managing access to the fishery

Performance indicators and monitoring: Alternative bass access systems are reviewed and implemented if appropriate.

Link to the Act objectives: Equal access, National benefit, Sustainability, Precautionary, Scientific

Goal 3: Minimise discarding of bass bycatch where survival rates are low

Rationale: Reduce the waste of dead fish and improve data collection to better manage discarding.

How this can be achieved:

Short term

- Consider incentivising domestic participation in scientific trials to improve data collection on discards, such as providing derogations to land bass discards. For example, consider allowing authorised <10m trawling vessels to apply for a derogation to >5% bass per trip, while remaining within annual bycatch allowances on the condition that fishers record details of their bass discards. Closely monitor the impact this has on landings, discards and stock sustainability and review annually
- Explore the use of the Catch App to record discard data
- Support continuation of the REM Celtic Sea programme to increase data collection

Medium-long term

- Consider adopting an alternative bass authorisation system if agreed (see Goal 2), designed to help minimise discarding
- Review the efficacy of management approach in light of improved data collection
- Consider how to incentivise participation in REM early adopter programmes where appropriate to improve data collection on discards
- Consider potential gear developments to reduce discards from nets and trawls
- Propose that the bass management group investigate the feasibility of implementing a model whereby all bass caught are landed (where survival rates are low), but above existing catch limits profits upon sale are not retained by fishers
- Propose the bass management group consider the pros and cons of moving towards a catch limit or quota approach (instead of a bycatch approach), which could come with a landing obligation

Performance indicators and monitoring: New data is generated on bass discarding; the Bass Management group has reviewed the domestic management approach of discarding, including the feasibility of landing all bass (where survival rates are low).

Link to the Act objectives: Bycatch, Sustainability

Goal 4: Encourage and facilitate full compliance with bass regulations

Rationale: To ensure that all those fishing for bass understand and comply with the regulations.

How this can be achieved:

Short term

- Continue with the existing overarching framework for bass management shared between England and Wales, with scope for regional variation between Welsh waters and English (IFCA) districts
- Improve communication and understanding of bass regulations, including RBS through:
 - Clearer MMO guidance on GOV.UK and communication with existing licence holders
 - Bass management group to help with disseminating information to the commercial and recreational fishing community
 - Collation of relevant IFCA and Welsh byelaws as part of this FMP (see Annex 11)
 - Improve communication of regulations to buyers of bass to improve compliance, for example, through bass management group, wider supply chain and MMO coastal engagement
 - Investigate how to improve signage of existing regulations at popular fishing destinations and local hospitality venues.

- Consider commissioning research to better understand current levels of compliance with bass regulations
- Consider how to improve collaboration between regulators on targeted enforcement and alignment of powers to ensure consistency in how regulators enforce RBS legislation
- Consider implementing a requirement that vessels must immediately discard unwanted bass to facilitate effective enforcement of bass regulations at sea rather than only upon landing
- Seek to review the 'Prohibitions' under The Bass (Specified Areas)
 (Prohibition of Fishing) (Variation) Order 1999 to consider: the relevance
 across all sectors, whether there is a need to expand the prohibitions beyond
 its current scope, for example, fishing from a boat, and whether there is a
 need to consider the addition of a carriage clause
- Work towards sector equality in ensuring bass regulations are applicable to all those fishing for bass. This could include consideration of how non-powered vessels should be managed

Consider reviewing the implications of re-defining bass 'bycatch' for netting by introducing a percentage catch composition limit (for example, <50% total catch). Any new headroom for the stock generated as a result could be used to allow other individuals fishing using nets the ability to land their bass bycatch, for example, in combination with a review of the authorisation system outlined in Goal 2

Performance indicators and monitoring: MMO bass guidance is updated; improved feedback on the communication of regulations, levels of compliance are improved.

Link to the Act objectives: National benefit

Social and Economic Goal

Goal 5: Maximise the benefits of bass fishing for local coastal communities

Rationale: Bass is particularly important to inshore fishers due to its high market prices, appealing fishing experience for recreational sea fishers and historical legacy for English and Welsh coastal communities. If managed appropriately, bass fishing therefore has the potential to generate substantial social and economic benefits for local coastal communities.

How this can be achieved:

Short term

- Consider moving annually set catch limits from secondary legislation into licence conditions to deliver flexible management of fisheries and allow fishers to benefit from changes more quickly and in line with evolving evidence.
- Increase research on the social, economic and cultural importance of bass fisheries to show the benefits for local coastal communities and how they could be maximised and measured.

- Seek to review benefits and reconsider management approach in light of new evidence, including allocating fishing opportunities according to benefits generated (if deemed appropriate). The review of alternative authorisation systems outlined in Goal 2 should also be joined up.
- Consider application of the ICES bass catch allocation tool (once it is amended as part of the 2023-24 benchmarking exercise) to ensure fair allocation of bass catches.

 Consider how to ensure compliance with bass regulations for buyers and sellers of bass as well as fishers to help local coastal communities better maximise the benefits from bass fishing (see Goal 4).

Performance indicators and monitoring: Research has been undertaken on the social, economic and cultural benefits of bass fisheries; consideration of whether catch limits should be moved into licence conditions.

Link to the Act objectives: National benefit, Sustainability

Stock level goals

Goal 6: Sustainable harvesting of the bass stock in line with scientific advice

Rationale: The primary aim of FMPs is to ensure that the stocks in scope are harvested sustainably. Since the introduction of the current management approach in 2015, harvesting of the bass stock has been maintained within sustainable limits aligned with ICES advice. In future, it may be possible to build on this foundation to enhance the potential benefits from bass fishing by exploring alternative harvest strategies in line with other FMP goals.

How this can be achieved:

Short term

- Continue allocating catch in accordance with ICES scientific advice which does not exceed an MSY approach (within 95% confidence intervals)
- Consider how to fill evidence gaps required for improved stock assessments, including additional data on levels of discarding in the commercial sector and on recreational removals (Annex 2):
 - Work with scientists, regulators and the recreational sector to improve data collection on recreational catches - including options for other approaches, for example, applications, registration & reporting, onsite approaches
 - See Goal 3 for discarding

- Consider outcomes from the ICES benchmarking exercise in 2023-24 and implications for future stock management/harvest strategies.
- Following the conclusion of the ICES benchmarking exercise, seek to review and carry out new research to assess alternative harvest strategies for bass that prioritise societal and ecosystem benefits (for example, Maximum

Economic Yield (MEY), Large Stock Strategy, Maximum Societal Benefits) with a view to maximising the efficiency, profitability and sustainability of bass harvesting in line with other FMP goals.

Performance indicators and monitoring: Stock is maintained within sustainable limits (FMSY (Fishing mortality consistent with achieving Maximum Sustainable Yield), within 95% confidence intervals); more research is delivered to fill data gaps/improve stock assessments and assess alternative harvest strategies; management strategies are reconsidered in light of new evidence.

Link to the Act objectives: Precautionary, Sustainability, Scientific, National Benefit

Goal 7: Ongoing protection of the juvenile and spawning bass stock

Rationale: Although the bass stock has shown signs of recovery in recent years, spawning stock biomass (SSB) and the recruitment of juveniles remains a concern. Effective protection of the spawning and juvenile bass stock will enable the stock to replenish most efficiently.

How this can be achieved:

Short term

 Seek to gather evidence on the most suitable timing and duration of the closed seasons to optimise the protection of spawning bass stocks (See Annex 3) - including investigating the possibility of regional variation and an assessment of the potential impacts on fishers.

- Consider a prohibition of fixed netting in bass nursery areas, and the application of BNA rules to shore fishing as well as fishing from vessels
- Review the most appropriate size limits for the bass stock, for example, a MCRS or slot sizes whereby fish above and below a certain size are returned to the breeding stock
- Review the possibility of local spatio-temporal closures to protect spawning bass as evidence evolves/allows
- Develop best-practice handling guidance to improve fish survival from commercial and recreational fisheries
- Consider developing gear modifications to reduce bycatch of juvenile bass
- Increase research to better understand the relationship between environmental factors, in particular the impact of climate change, on the recruitment of juveniles to the bass stock

Performance indicators and monitoring: SSB; FMSY; relevant evidence has been delivered and handling guidance produced; appropriate size limits for the bass stock have been considered.

Link to the Act objectives: Sustainability, Precautionary, Ecosystem

Wider Environment Goals

Goal 8: Minimise the impact of bass fishing on the wider marine ecosystem

Conservation advice provided by SNCBs (Annex 9) considered risks to designated highly mobile species outside of Marine Protected Area (MPA) boundaries and risks to UK Marine Strategy descriptors arising from fisheries contained in FMPs. Highly Protected Marine Areas (HPMAs) protect all species and habitats and associated ecosystem processes within the site boundary, including the seabed and water column. It is anticipated that extractive, destructive and depositional activities will be prohibited within HPMAs which will include all commercial and recreational fishing. SNCB advice, as well as stakeholder, Defra and Welsh government priorities, have informed the goals identified in the following section.

Rationale: A thriving fishing industry is underpinned by a healthy marine environment (JFS 2022), and the government is committed to an ecosystem approach to fisheries management which will account for, and seek to minimise, impacts on non-commercial species and the marine environment generally (25 Year Environment Plan, JFS 2022). The Ecosystem objective of the Act further articulates that an ecosystem-based approach to fisheries management is 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)); and (b) does not compromise the capacity of marine ecosystems to respond to human-induced changes.

Goal 8.1: Reduce bycatch of Endangered, Threatened and Protected species in bass fisheries

Rationale: The Ecosystem objective in the Act states that 'incidental catches of sensitive species is minimised and, where possible, eliminated', while the UK Bycatch Mitigation Initiative sets out in more detail policy objectives and actions required to meet the Ecosystem objective. Certain segments of the bass fishery, in particular the use of nets, present a bycatch risk to species including seabirds, marine mammals, elasmobranchs (sharks, skates and rays), turtles and migratory fish (including salmon, allis shad and twaite shad). Some of these species are features of MPAs, whose protection extends beyond site boundaries; others have

population targets associated with the UK Marine Strategy, others have international protections or population targets.

How this can be achieved:

Short-term

- Consider allowing fishers with relevant authorisations the option to switch from using fixed nets to hook and line gears associated with a lower risk of Protected, Endangered and Threatened (PET) species bycatch.
- Improve monitoring to better understand PET species bycatch in bass fisheries, such as how to promote fishers' uptake of validated (observer/REM) monitoring on boats.
- Utilise communications channels to highlight and promote:
 - Existing bycatch self-reporting requirements
 - Participation in bycatch reduction trials
 - Appropriate incentivisation schemes
 - Gear modifications and activities to reduce bycatch (for example, as publicised on the Clean Catch Bycatch Mitigation Hub)
 - Relevant materials (for example, seabird bycatch toolkits) to allow fishers to make informed decisions to reduce their sensitive species bycatch risk

Medium-long term

- Review the practice of shallow inshore and shore-based netting to determine
 whether additional regional or national protections are needed to prevent
 migratory fish bycatch. Note links to special consideration of netting in nursery
 areas (Goal 7).
- Consider how and where to incentivise and encourage participation in early adopter REM programmes where appropriate to improve data collection on PET species bycatch associated with bass fishing activity.
- Consider research into what an ecosystem-based approach to bass management would look like for future iterations of the Bass FMP to incorporate.

Goal 8.2 Reduce impacts of gear on seabed integrity

Rationale: Minimise the impact of fishing gear on seabed integrity and benthic habitats.

How this can be achieved:

Maintain current restrictions on targeted trawling and netting of bass as part of a continued shift towards lower impact gears (for example, hook and line). This is also relevant for Goal 8.1 to reduce the incidental bycatch of sensitive species.

Working with stakeholders, Defra and Welsh government will consider the evidence and then develop further recommendations on the potential effects of fishing activities (alongside other activities) on seafloor integrity and the state of benthic habitats, including contributing to the implementation and coordination of the Benthic Impact Working Group. This work will consider the issues at a strategic level and within the context of ongoing changes in marine spatial use and environmental protection to achieve the objective of Good Environmental Status under the UK Marine Strategy

Goal 8.3 Reduce contribution of bass fishing to marine litter

Rationale: Abandoned, lost, or discarded fishing gear is associated with sensitive species entanglements and ghost fishing.

How this can be achieved:

- Implement the second 'Regional Action Plan on Marine Litter', including actions to tackle marine litter from fishing.
- Implement a multiyear 'End of Life Fishing gear Recycling Scheme' (Wales), a nationwide scheme for the collection and recycling of end-of-life fishing gear.
- Continue monitoring programmes to assess seafloor litter, surface litter and beach litter - and ongoing research initiatives to support the reuse and repurpose of end-of-life fishing gear back into the fishing industry.

Performance indicators and monitoring for Goal 8: Improved data collection on PET bycatch associated with bass fishing, including through early adopter REM programmes where appropriate; greater awareness amongst the bass fishing community of existing monitoring requirements; trawling/netting bycatch approach maintained.

Link to the Act objectives: Bycatch, Ecosystem, Sustainability

For further detail on how the Bass FMP meets and intersects with wider environmental policy considerations, please see Annex 1.

Goal 9: Mitigate against and adapt to the impact of climate change on bass fishing

Rationale: The Climate Change Act 2008 (Amended in 2019) sets a legally binding target of achieving net-zero greenhouse gas emissions (GHGe) by 2050 across the UK economy, with an ambition of a 78% reduction by 2035. To support these targets, all sectors, including the UK seafood sector, must develop pathways to reduce their GHGE and utilise alternative clean energy sources to contribute to meeting the Net Zero target. The impact of climate change on fish stocks, and therefore the fishing industry, will also likely increase in future. The Bass FMP

therefore needs to support industry in adapting to the impact of climate change on bass stocks, as well as in contributing to climate mitigation efforts to meet the net zero target wherever possible, for example, through technological, managerial, and behavioural changes to increase energy efficiency, transition to alternative fuels and energy sources, and reducing the direct impact of fisheries on marine carbon stores.

How this can be achieved:

National level actions outside this FMP

- Building the evidence base on the impacts of climate change on fish and shellfish stocks and fisheries through the existing research and development projects, for example, the Marine Climate Change Impact Partnership (MCCIP)
- Building the evidence base on blue carbon habitats in the UK through existing partnerships, for example, the Blue Carbon Evidence Partnership
- Collaboration across government, industry and academic organisations to understand the current evidence gaps and latest innovations to support the development of pathways towards Net Zero for the UK fishing fleet

FMP level

Short term:

- Consider increasing research on the impact of climate change on bass distribution, abundance, and recruitment - including exploring the use of citizen science and experiential knowledge to map species range shifts
- Consider increasing research to understand the carbon footprint of the bass fishery and how it could be reduced

Medium-long term:

- Start to integrate new evidence into future management decisions and iterations of the Bass FMP
- Consider how to support industry to adapt to the environmental impacts of climate change, including changing distributions of the bass stock in response to warming ocean temperatures
- Consider how to support industry to decarbonise (for example, aligned with a Net Zero by 2050 target)
- An alternative harvest strategy (for example, a large stock strategy or MEY, as determined by the review associated with Goal 6) could increase bass biomass and contribute to improved blue carbon ocean storage

Performance indicators and monitoring: Vessel emission monitoring, population monitoring.

Link to the Act objectives: Climate change, Ecosystem

International collaboration

The northern bass stock in scope for this FMP also extends into EU territorial waters. Bass is therefore a shared stock, which has been successfully jointly managed at UK/EU level since 2015 (in addition to appropriate regional management). This FMP addresses the domestic management of bass in English and Welsh waters and will apply to all vessels fishing in these waters. However, for UK fishers to maximise the benefits of effective stock management, ongoing international collaboration will be required.

At the 2022 annual consultations, the UK and EU agreed to consider the development of a MYSt for bass within the framework of the SCF. The evidence and management approach set out in this FMP will inform the UK's approach to the development of a MYSt for bass. It should also be noted that the ICES benchmarking exercise ending in 2024 will reassess stock unit boundaries, which may have implications for future management of the shared stock.

Review & revision of the plan

As laid out in the Act, the Bass FMP for English and Welsh waters will be reviewed at least every six years. This formal review will assess how the FMP has performed in terms of deliverables and the outcomes achieved including those relevant to the Act objectives. The findings of this review will also inform the development of subsequent iterations of the FMP.

The FMP will also be assessed as part of the review of the JFS; the Act requires fisheries policy authorities to review the JFS whenever deemed appropriate, or at least within six years of publication.

In addition to the statutory requirements set out above, it is intended (as outlined in Goal 6) that the Bass FMP be informally reviewed more frequently in collaboration with the bass management group to ensure that future management of the bass fishery remains adaptive to evolving evidence and circumstances. This could include, as set out in Goal 1, the development of a monitoring and evaluation strategy for the Bass FMP.