Sea Bass Fisheries Management Plan: Evidence Priorities in Wales

The purpose of the next WBAG meeting on Tuesday 17 September is to finalise the evidence priorities to improve the management of bass in Wales. To ensure we get the most out of the meeting, please could you consider the following and come prepared with suggestions as to how we fill the evidence gaps to improve the evidence base which underpins management.

After considering the consultation feedback and discussions with science colleagues and the advisory group we have agreed the evidence priorities for the Sea Bass FMP in the short to medium term to be:

1. **Improve the quality of data feeding into the ICES bass stock assessments.**
2. **Improve understanding and testing of the biological stock.**
3. **Review bass minimum and maximum landing sizes.**
4. **Protection of spawning stock, particularly at sensitive times.**
5. **Understanding the contribution of Sea bass fisheries to Welsh and local community economies.**

As we have discussed, catch data and evidence play a crucial role in supporting stock assessment modelling. Where we have data/evidence gaps or weaknesses it can introduce uncertainty to the modelling outputs and therefore our understanding of the health of the stock. Any proposals in the future to change or introduce new bass management measures will have to be supported by robust evidence.

1. Improve the quality of data feeding into ICES bass stock assessments

ICES stock assessments inform the UK-EU consultations, which ultimately set the agreed quotas each year. These assessments also inform the UK internal governmental discussions on our collective approach to those consultations and the resulting apportionment of quota between catching sectors.

The ICES assessments are conducted for biological stock areas. These distinct oceanographic areas are set using the best science available for each species in the periodic benchmarking process. Welsh sea bass form part of the ‘northern stock’ which includes all the ICES divisions 4.b–c, 7.a, and 7.d–h (central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea).

Providing the best data we and all other interested parties can to ICES for their assessment is crucial to minimising uncertainties in the final catch advice. This

includes scientific surveys, records of commercial and recreational catches and estimates for discards and catch-and-release fisheries.

The impact of Welsh evidence at the biological stock level is mostly relatively small due to the large sea areas assessed overall, but crucial in terms of completing a stock level picture.

Data sources currently feeding into ICES stock assessments

a) Recreational fisheries data:

The Fisheries Act 2020 embedded recreational angling in the UK's management systems for the first time. It is estimated there are approximately 61,000 recreational sea anglers who fish in Wales (Cefas 2024) but there are no statutory data collection systems. The biological, social and economic data collected from recreational sea angling is important for fisheries managers, policymakers and the angling sector. Data is currently being collected through the following means:

- **Sea Angling Diary project**, delivered by Substance and Cefas, has been operating in England since 2016 and in England and Wales since 2022. The diaries record sea angling participation, catches retained / released and socio-economic data. Of 2000+ active diarists 433 (~20%) are based in Wales, however, this figure is less than 1% of the recreational fishers in Wales.

- **Catchwise** is a collaboration between Substance, Cefas and the Angling Trust funded by Defra through the Fisheries Industry Science Partnership scheme. Working with recreational sea anglers in England and Wales Catchwise is recording data from sea anglers and charter boats over a 12-month period from 2023-2024. The in-person shore surveys of sea anglers includes activity surveys, angler interviews (catch/ participation/ benefits) and social and economic impact surveys. Charter boat surveys gather information on participation, catch, social and economic impacts, and regional assessments. To date, over 800 anglers have been interviewed, 2700 angler activity and 158 charter boat surveys have been completed (January 2024). Catchwise is completed alongside the RSA diaries for validation purposes. The survey was due to finish in July 2024 and the project will report in early 2025.

- **UK Sea Angling Information Library (UKSAIL)** is a web app operated by Cefas, with Substance and the Angling Trust. It enables users to easily access sea angling data collated from a survey of 12,000 individuals to estimate the numbers and characteristics of anglers and the data reported by anglers through the Sea Angling Diary. Currently it contains data from 2016 up to

2021. It includes information on sea angling participation, catch and economic data and has the ability to partition catches by species, region and ICES area.

Estimates suggest recreational sea anglers are responsible for around 30% of all bass removals and the sea angling diary reporting rate is currently 1% in Wales, this creates a level of uncertainty in our estimation of recreational mortalities. The independent sampling research provided by Catchwise does validate the conclusions from the Sea Angling Diaries and UKSAIL, confirming that those surveys are broadly representative of recreational fishers as a whole. To further improve the quality of the analysis of the data and reduce uncertainties we need to increase the level of participation in the sea angling diary project or equivalent systems.

b) Commercial fisheries data:

Commercial fishing vessels operating within the UK are subject to a fishing licence regime which also extends to foreign vessels. The owners/skippers of licensed fishing vessels are required to record their catch information using statutory catch recording systems. Catches are monitored closely and are subject to compliance checks. Vessel positions are also monitored using Vessel Monitoring Systems (VMS) across the Welsh zone. Catch and VMS data from all UK vessels is received automatically and shared with the UK fisheries data hub. Although statutory reporting of catch by commercial vessels is comprehensive, at present there is no requirement to provide data on bass discards. Shore-based netting falls outside of this statutory reporting regime and therefore, at present, there is no requirement for fishers to provide catch data.

Potential actions to improve data feeding into ICES stock assessments

a) Recreational Fisheries

1.1 Maintain commitment to recreational angler surveys and encourage UK and EU partners to support recreational data collection to extend the dataset and increase confidence in stock modelling outputs for northern bass stock.

1.2 Increase participation in sea angling diaries to a prescribed level which is appropriate to the estimated 30% of removals.

1.3 Explore opportunities to strengthen current recreational recording systems or, if necessary, develop new ones.

b) Commercial Fisheries

1.4 Conduct port sampling of commercial bass catches to improve our understanding of the accuracy of fishing mortalities and population structure.

1.5 Collect data on discards where commercial catches are returned to the sea as discards / bycatch.

1.6 Gather quantitative data on shore-netting activity including bass removals to inform stock modelling and also to understand potential risks to protected species through bycatch.

c) All fisheries

1.7 Continue to support research on survivability of returned bass to improve our understanding of both the survivability of fish returned/discarded and the numbers, health & weight of fish returned. The percentage of fish that survive a catch and release experience, whether by commercial or recreational fishers, is crucial to understanding the remaining spawning biomass of the stock. The survival of returned fish will vary both according to the catch method and the nature of their return to the sea, as these variables change over time so will the survivability. Ongoing and regularly updated research will be necessary to accurately reflect this variable in stock and fisheries assessments.

2. Improve understanding and testing of the biological stock

Whilst ICES stock assessments are undertaken at biological stock areas for each species, those areas and other biological variables are defined by periodic detailed ‘benchmarking exercises’ every few years. This process includes consideration of biological stock boundaries and the best available evidence at the time for the biology of sea bass.

Contributing to the scientific understanding of stock areas and species biology may inform both the ICES stocks assessments and any local measures each fisheries authority, including the Welsh Government, chooses to take in the light of that science.

The Welsh Government has commissioned Bangor University to contribute to identifying European sea bass stock boundaries by expanding existing research on stable isotope analysis and tagging. It is hoped this will inform future ICES benchmarking, however, it is possible further work will be required to ensure the results are sufficiently robust. If the current benchmarking exercise identifies any

specific evidence gaps not outlined above to improve stock modelling, we will seek to address them.

3. Review the minimum and maximum landing sizes for bass

At present, sea bass has a minimum conservation reference size of 42cm agreed and set across all UK and EU fisheries at the annual consultations. There is currently no maximum landing size in the UK.

Some other species, for example spurdog, have existing protections that include maximum landing sizes, to protect larger breeding individuals. This may also be considered if the scientific evidence shows this would be beneficial for sea bass.

The Welsh Government has commissioned Bangor University to review the minimum and maximum landing sizes for European seabass using existing data sets from Wales.

4. Protect spawning stock, particularly at sensitive times

Temporal and spatial closures (closed seasons and closed areas) applied at a local level can play an important role in safeguarding commercial fish stocks, particularly where quotas are set an international level.

Many different fisheries in the UK and in the EU have differing temporal and spatial closures to protect breeding, nursery or migrating stocks, and occasionally to protect other species that may be a bycatch at certain times and places. Implementation of such closures are routine and are regularly notified between parties.

Local evidence is therefore important when considering the implementation of spatial or temporal closures.

Existing closures and related work

a) Current bass closed season – February-March (commercial and recreational)

b) Bass nursery areas. The Bass (Specified Areas) (Prohibition of Fishing) Order 1990 defines 12 designated bass nursery areas in Wales (Annex 1):

- Burry Inlet
- Taf, Tywi and Gwendraeth estuary
- Milford Haven
- Teifi estuary
- River Dyfi

- River Mawddach
- Dwyryd/Glaslyn estuary
- Conwy estuary
- Dee estuary

c) NWSFC Byelaw 24 and SWSFC Byelaw 30 – the former SFC byelaws, which now apply as orders as if made by Welsh Ministers, include additional restrictions (spatial and temporal) on the use of shore nets (Annex 2).

Potential actions to strengthen existing suite of closures

4.1 Review Bangor University work on spawning behaviour/timing and determine if it is sufficient to support the timing of the current closed season or if any changes would be beneficial to the stock.

4.2 Review the existing bass nursery areas (BNAs) to determine if they provide effective protection for juvenile bass, if sufficient areas are protected or if any change to the current BNAs is required.

5. Understanding the contribution of sea bass fisheries to Welsh and local community economies

The balance between fishing methods and management practices can be affected by policy changes at both government and international levels, the best practice of making informed choices includes the proper consideration of the socio-economic effects of those changes. A specific socio-economic assessment of Bass fisheries (all recreational and commercial methods) will lead to more informed policy making in this area.

5.1 Conduct a socio-economic review, including the collation and assessment of existing studies and the commissioning of new evidence gathering where required, of the contribution recreational and commercial bass fishing make to the Welsh and local economies.

Potential actions for prioritisation – Table 1

No.	Action	Priority
1.1	**Maintain commitment to recreational angler surveys and encourage UK and EU partners to support recreational data collection** to extend the dataset and increase confidence in stock modelling outputs for northern bass stock.	
1.2	**Increase participation in sea angling diaries** to a prescribed level which is appropriate to the estimated 30% of removals.	
1.3	**Explore opportunities to strengthen current recreational recording systems** or, if necessary, develop new ones.	
1.4	**Conduct port sampling of commercial bass catches** to improve our understanding and the accuracy of the fishing mortalities and population structure.	
1.5	**Collect discards data** – where catches are returned to the sea as discards / bycatch (for commercial fisheries).	
1.6	**Gather quantitative data on shore-netting activity** including bass removals to inform stock modelling and also to understand potential risks to protected species.	
1.7	**Continue to support research on survivability of returned bass** to improve our understanding of both the survivability of fish returned/discarded and the numbers, health & weight of fish returned. The percentage of fish that survive a catch and release experience, whether by commercial or recreational fishers, is crucial to understanding the remaining spawning biomass of the stock. The survival of returned fish will vary both according to the catch method and the nature of their return to the sea, as these variables change over time so will the survivability. Ongoing and regularly updated research will be necessary to accurately reflect this variable in stock and fisheries assessments.	
4.1	**Review Bangor University work on spawning behaviour/timing** and recommend if it is sufficient to underpin a legislative change in the closed season. If it is not, commission additional work to ensure it is sufficient.	
4.2	**Review the existing bass nursery areas (BNAs)** to determine if they provide effective protection for juvenile bass, if sufficient areas are protected or if any change to the current BNAs is required.	
5.1	**Conduct a socio-economic review**, including the collation and assessment of existing studies and the commissioning of new evidence gathering where required, of the contribution recreational and commercial bass fishing make to the Welsh and local economies.	

Next steps

At the next meeting (date):

1. Finalise the evidence priorities to improve the management of bass in Wales (Table 1). Please send your top 5 evidence priorities to Sebastian.evans003@gov.wales by no later than **Friday 6 September**. These will be collated and discussed at the meeting.

2. Discuss and agree actions to fill the evidence gaps and improve the evidence base.

Annex 1: Map of the designated bass nursery areas in Wales

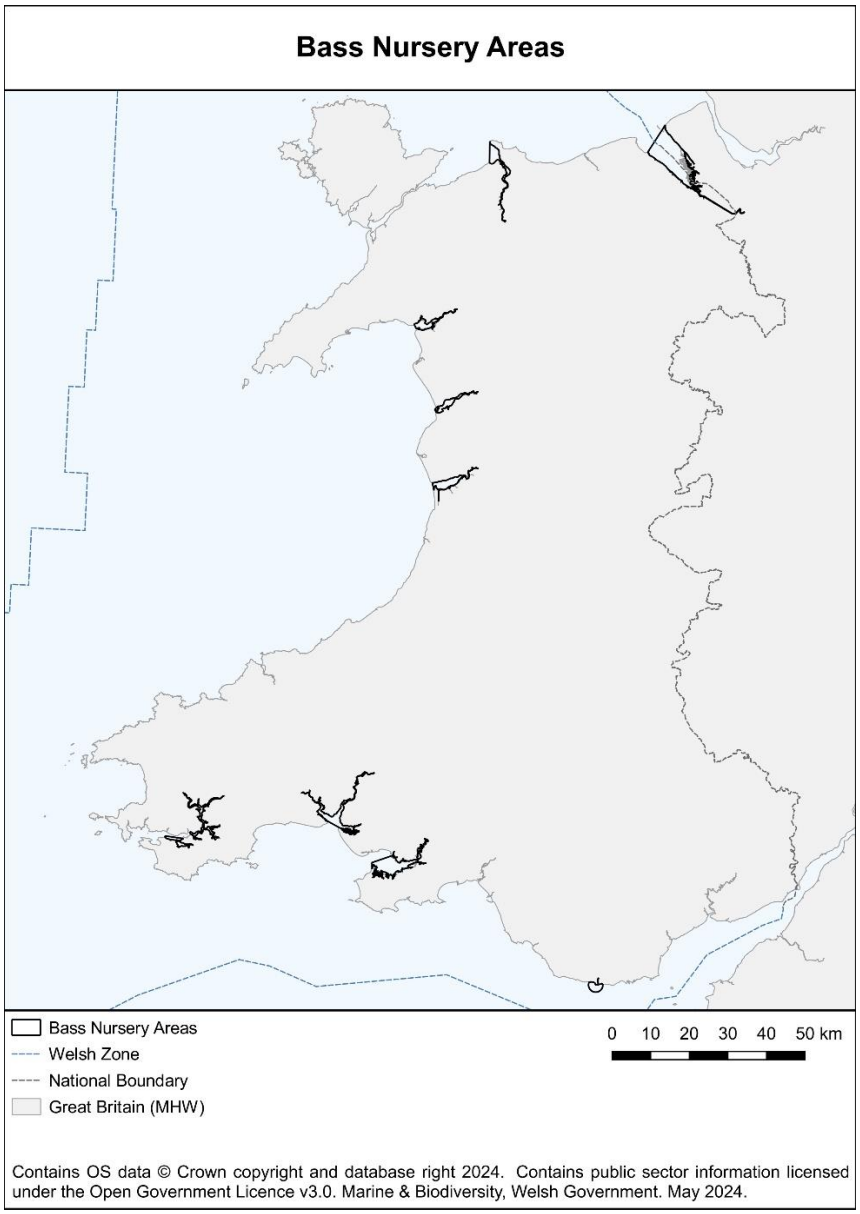

Table of BNA closure periods

Bass Nursery Area	Closure Period
Aberthaw Power Station	All year
Burry Inlet	Between 30 April and 1 November
Taf, Teifi, Gwendraeth Estuary	
Milford Haven	
Teifi Estuary	
River Dyfi	
River Mawddach	
Dwyryd/Glaslyn Estuary	
Conwy Estuary	
Dee Estuary	Between 30 April and 1 October

Annex 2: Map of the NWSFC Byelaw 24 and SWSFC Byelaw 30 areas