

## Review of the practice of shore-based netting in Wales

### Purpose

At the first meeting of the Wales Sea Bass Advisory Group (WSBAG) an overview of the Fisheries Management Plan for Sea Bass in English and Welsh Waters (the 'bass FMP') was presented which outlined the proposed short-term actions and priorities for Wales. There was broad agreement in the group for the short-term actions which included a commitment to review the practice of shallow inshore and shore-based netting to ensure sufficient protection is in place for migratory fish along with juvenile and spawning bass.

The purpose of this paper is to open discussions on this topic. In the advisory group meeting of 17 September 2024 we highlighted shore-based net catches are an evidence gap in the commercial and recreational bass fishery. In light of this, and the differences between the two activities, we have decided to start by reviewing shore-based nets. A review of the practice of shallow inshore netting (using vessels) will be delivered separately.

The paper includes some background information on the need for a review, a description of shore-based netting along with a brief history of this activity and its regulation in Wales. The paper also refers to some relevant advice from NRW on shore-based netting in relation to bycatch of salmon where they are a designated feature of Special Areas of Conservation (SAC).

We would like to hear views from the advisory group on the content, the issues identified and the options before finalising the review. Any proposals to change the current regulation of shore-based nets would be subject to public consultation before there were any changes in management.

### Background

In line with the Fisheries Act (2020) and the Joint Fisheries Statement 2022 the bass FMP was published in 2023. To ensure effective management of bass stocks in English and Welsh waters over the next 6 years the FMP identified 9 goals with actions which focused on domestic management priorities.

These actions included a commitment to '*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*'. This commitment falls under Goal 8.1 of the FMP. Also relevant are Goals 4 and 7 in the bass FMP and the objectives outlined in section 1 of the Fisheries Act 2020 which include the sustainability, precautionary, ecosystem, bycatch, and national benefit objectives.

This paper also considers advice from Natural Resources Wales regarding shore-based nets, which suggested the Welsh Government should consider implementing greater protections for mobile salmon and other migratory species. Furthermore, this paper highlights agreements that were made in 2021 between the UK and EU to introduce catch reporting and monitoring of commercial shore-based netting. Both these points are covered in greater detail later in the paper.

The review will consider the effectiveness of the current legislation and whether any improvements are required to ensure the sustainability of this activity.

### **What is shore-based netting?**

Shore-based nets are fixed, stake, set or anchored gill nets which are used in the intertidal zone without the need for a vessel. The nets are set at low tide, usually perpendicular to the shore, and rise with the incoming tide when they are suspended in the water by a floated headline. This creates a single taut sheet of net hung between the floating headline and a weighted lower footrope which sits on or near the seabed. The nets vary in length, limited by the regional byelaw regulations in the areas where they are set (see Table 1), and are held in position by conventional anchors, weights, or lead lines, preventing movement with the tide.

As the net is fixed, fish may encounter the net either by actively swimming into it or passively with water currents. Fish are caught behind the gill plates or around the widest point of body. The taut nature of gill nets means target sizes can be regulated by using different mesh sizes and net configurations. This provides a degree of size selectivity compared to other nets, however, they can inadvertently pose a bycatch risk to non-target species.

NB: Although this is the way shore-based nets are commonly used there are other techniques which may be used.

To manage and regulate inshore fisheries, the South Wales Sea Fisheries Committee (SWSFC) and the North Western and North Wales Sea Fisheries Committee (NWNWSFC) were established under the Sea Fisheries Regulation Act 1966 and were granted powers to implement Byelaws within their designated districts. Both Sea Fisheries Committees introduced byelaws on the use of fixed nets including closed seasons to restrict the use of nets at times when salmonids were most likely to be migrating to rivers. At that time, shore-based nets were mainly used to target bass.

The former Sea Fisheries Committees (SFCs) were abolished in 2010. The byelaws of these committees, along with specific byelaws from the Environment Agency (EA) adding additional restrictions beyond the SFC territory, have had effect since 1 April 2010 as if made by the Welsh Ministers through a statutory instrument. This is through operation of Article 13(1), (3), and (4) of, as well as Schedules 3, 4, and 5 to,

the Marine and Coastal Access Act 2009 (Commencement No. 1, Consequential, Transitional and Savings Provisions) (England and Wales) Order 2010.

In 2010 the International Council for the Exploration of the Seas (ICES) estimated the breeding population of bass in the EU was 15,000 tonnes. By 2014 this figure dropped to 11,000 –12,000 and was projected to decrease to 10,000 by 2015, marking the lowest level in two decades. ICES figures later estimated that the breeding population continued to decline, dropping just below 8,000 in 2017. ICES identified overfishing as a major factor driving the decline. They also reported the total EU catch in 2013 was 5,632 tonnes, with 4,123 tonnes caught by the commercial fleet and an estimated 1,500 tonnes by recreational anglers.

The decrease prompted a joint management approach by the UK and EU and since 2015 management measures have been in place to protect the stock, including:

- Increase in minimum conservation reference size (MCRS) from 36cm to 42cm.
- Domestic authorisations for commercially licenced vessels to fish for bass.
- Seasonal closure from 1 Feb to 31 Mar for commercial fishers
- Catch and release using rod and handline only from 1 Feb to 31 Mar for recreational anglers.
- Catch and bycatch limits for commercial and recreational fishers.

These measures are reviewed annually in alignment with ICES advice and amended as necessary.

Additionally, from 2016 to 2020 the retention of bass from shore-based nets was prohibited.

Following the UK's departure from the EU, The Sea Fisheries (Amendments etc.) Regulations 2021 were introduced in June 2021. These regulations ensured continuity of fisheries management and conservation measures which were previously under EU policy, while also allowing for adjustments to better suit national and regional priorities. Fishing for, retaining, transshipping, relocating or landing bass is prohibited in certain areas. The regulations introduced an exception allowing bycatch of bass in up to 50 shore-based fixed gill nets in the Welsh Zone, which were not set from a vessel. The regulations also made amendments which increased the quantity of bass commercial fishers could take as bycatch in the Welsh and English zones each year.

Following an increase in spawning stock biomass ([ICES 2020 advice on fishing opportunities](#)), agreements were made in 2021, as stated in the Written Record of the annual fisheries consultations between the UK and the EU, to allow commercial bycatches of bass using fixed gillnets under specific circumstances. These

agreements stipulated that commercial shore-based netting activities should not target bass and should only consist of unavoidable bycatches. The parties also agreed in the Specialised Committee for Fisheries to introduce catch reporting and monitoring of commercial shore-based nets, however, due to resource constraints and competing priorities this has not yet been implemented in Wales.

### **Current shore-based netting regulations**

The use of shore-based nets is currently regulated by a range of provisions contained in byelaws and statutory instruments. These provisions apply in different geographic areas and regulate the use of shore-based nets for different purposes.

The following paragraphs provide a summary:

Byelaws of the former SWSFC apply in the area of South Wales described in those Byelaws. Byelaw 30 prohibits the placing and use of any fixed nets in the area and at the times listed in the byelaw. Byelaw 30 also provides powers to authorise the placing and use of fixed nets for fishing of Sea Fish for scientific purposes or for stocking or breeding.

Byelaws of the former NWNWSFC apply in the area described in Byelaw 24(a). Byelaw 24 restricts the use of fixed engines for the purposes of section 37 of the Salmon Act 1986. The placing and use of a fixed engine is prohibited in the areas described and for the periods set out in the Byelaw.

Byelaw 24(f) provides an additional power to *temporarily prohibit* the setting of any shore-based net in the area to minimise the risk of salmonids being taken. Any exercise of this power would be subject to public consultation.

The Byelaws of the former SFCs also include restrictions relating to the manner and use of shore-based nets, including the net length, mesh size, clearing frequency, and how many nets an individual can have in use simultaneously (see Table 1 and Byelaws 30, 32 and 33 of the SWSFC and Byelaws 7, 8, 11 and 24 of the NWNWSFC). It should be noted these restrictions are not consistent between the north and south Wales areas. They also specify a number of areas where other restrictions apply, such as closed periods during the spawning season. This has resulted in extensive fishery closures targeting key river mouth locations along the Welsh coastline (Figure 1).

The provision in the Byelaws of the former SFCs is supplemented with further location restrictions and closed periods, beyond the SFC territory, through the EA Wales (South) Byelaw 3 and EA Wales (North) Byelaw 5.

The Byelaws of the former NWNWSFC, SWSFC and the Environment Agency have had effect since 1 April 2010 as if made by the Welsh Ministers in a statutory instrument by virtue of article 13(1), (3) and (4) and Schedules 3, 4 and 5 to the Marine and Coastal Access Act 2009 (Commencement No. 1, Consequential, Transitional and Savings Provisions) (England and Wales) Order 2010.

The current regulations for fishing for bass in England and Wales include assimilated regulations which derive from the Common Fisheries Policy (CFP):

- assimilated Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures (“assimilated Regulation (EU) 2019/1241”)
- assimilated Council Regulation (EU) 2020/123 of 27 January 2020 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters (“assimilated Regulation (EU) 2020/123”)

Post-Brexit, these regulations have been retained and adapted into UK law and, in relation to fishing for bass, have been subject to amendments by the following instruments:

- The Sea Fisheries (Amendment etc.) Regulations 2021
- The Sea Fisheries (Amendment etc.) (No. 2) Regulations 2021
- The Sea Fisheries (Amendment) Regulations 2023

### **Commercial bass fishing with nets**

Article 10(1) of assimilated Regulation (EU) No 2020/123 prohibits UK fishing vessels and commercial fisheries from shore to fish for, retain, tranship, relocate or land bass in ICES divisions 4b and 4c and in ICES sub-area 7. An exception is provided for by-catches in up to 50 shore-based gill nets that are not set from a vessel. Furthermore, there is no limit set on the amount of bycatch which maybe caught by shore-based nets.

At present, there is no obligation to record shore-based net catches on CatchApp as the activity is not vessel-based, nor does the CatchApp have the capability to record shore-based netting catches separately. Furthermore, as no vessel is needed to set a shore-based net, a vessel licence is not required and therefore catches fall outside of the requirements of the Registered Buyers & Sellers (RBS) regulations: [The Registration of Fish Buyers and Sellers and Designation of Fish Auction Sites Regulations 2005 \(legislation.gov.uk\)](#).

There are a substantial number of existing regulations which apply to shore-based netting in Wales. Although there are a number of spatial restrictions in Wales under

the Byelaws, the extensive nature of the coastline, the lack of equivalent tools to vessel monitoring systems (VMS) and the intermittent nature of this activity can make observing it and enforcement challenging. The existing regulations were introduced by different bodies for different purposes resulting in variations between the north and south areas of Wales. In addition, the current regulations do not allow management to be varied in a timely manner in response to evidence about changes in the fishery or the environment.

### **Recreational bass fishing with nets**

Under the current regulations for recreational bass fishing, bass may only be taken as provided for by Article 10(5) of assimilated Regulation (EU) 2020/123. Article 10(5) provides that in recreational fisheries, including from shore, the following provisions apply in the Welsh zone:

- a) During the period from 1 February to the end of March in each calendar year, only catch-and-release fishing with a rod or handline for bass is permitted.
- b) During January and during the period from 1 April to the end of December in each calendar year, no more than two specimens of bass may be caught and retained per fisherman per day. The minimum size of bass which may be retained is 42cm.

Point (b) of the first subparagraph above does not apply to recreational fixed nets, which may not be used to catch or retain bass at any time.

### **Bass Nursery Areas (BNAs)**

The Bass (Specified Areas) (Prohibition of Fishing) Order 1990 prohibits the fishing for bass by any fishing boat within the areas in England and Wales described in the schedule during the periods specified in relation to each area. The BNAs comprise river estuaries, harbours and power station outfalls where bass below the MCRS are abundant and could be caught, particularly during the summer months.

The BNAs were designated to reduce the impact of commercial and recreational fishing in areas where most bass were likely to be below the minimum conservation reference size (MCRS). These spatial restrictions are thought to play an important role in protecting bass stocks by improving recruitment.

The 1990 Order designated 12 BNAs in Wales (Figure 2) and the closure periods for each are listed below:

<b>Bass Nursery Area</b>	<b>Closure Period</b>
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	
Dwyrhyd/Glaslyn Estuary	
Conwy Estuary	
Dee Estuary	Between 31 May and 1 October

These spatial restrictions only apply to fishing from a boat. With the exception of the Dee, shore-based nets can still be used in BNAs during the closed periods.

Furthermore, there are parts of the Aberthaw power station and Conwy BNAs which are not covered by fixed net restrictions. In both instances there is a potential risk of bass below the MCRS being taken.

In 1999, the principal Order was varied to prohibit the use of sand eels as bait when fishing for bass in BNAs.

### **Migratory Fish**

Wales has a number of migratory fish species which could be vulnerable to shore-based nets including salmon, allis shad, twaite shad, marine lamprey (all features of Special Areas of Conservation in Wales) and sea trout. It is challenging to get data on the movements of these species in the marine environment. At present, with no catch return system or activity monitoring in place, we have limited data available on unintended bycatch by shore-based nets.

On 18 August 2023 the Welsh Government asked their statutory nature conservation adviser, Natural Resources Wales (NRW), to consider whether the existing suite of byelaws provided sufficient protection from the risk of bycatch for designated salmon features in SAC rivers.

In their response (shown in full in Annex 1), NRW highlighted that, in common with many other rivers, salmon were classed as 'at risk' in most of the 5 SAC rivers where salmon are a designated feature. In addition, all these SAC salmon populations were classed as 'unfavourable' in the 2020 protected sites condition assessment.

NRW considered the current byelaws do provide protection for salmon in SAC rivers around river mouths, however, in the absence of robust shore-based netting data, NRW could not be confident that nets outside of restricted areas are not affecting

salmon. They reported evidence that salmon, sea trout and salmonids have been intercepted by shore-based nets outside restricted areas on beaches at Penbryn, Tresaith and Llanon respectively. They also noted they were aware of an increase in shore-based netting activity in the area of the Three Rivers estuary, Pembrey and Cefn Sidan.

NRW suggested the Welsh Government should consider providing greater protection to mobile salmon and other migratory species of conservation interest, specifically:

1. Extending the current spatial closures where salmon are likely to be present.
2. Authorising all shore-based nets to allow better control, support compliance checking, and provide catch and effort data that would support further controls.
3. Developing an effective notification and compliance checking (monitoring) scheme for shore-based netting activity.

In response to the findings and recommendations we requested further evidence from NRW in support of their advice. After considering whether this was sufficient to underpin a policy proposal, we have asked NRW to provide further, more specific, information about the supporting evidence.

### **Other species susceptible to bycatch**

Although the focus of this review has been on migratory fish, in line with the action in the bass FMP, there are a range of other protected species which could be susceptible to bycatch by shore-based nets. These include mammals such as dolphin, porpoise and seal as well as birds such as cormorants.

Historically there has been very little information about bycatch from shore-based netting in Wales. On 19 August 2024 we received reports of 2 porpoise and 3 cormorants being found dead on the beach at Old Colwyn close to a dried-out shore net.

An examination of both porpoises has been carried out by the UK Cetacean Standings Investigation Programme. The interim postmortem found evidence of marks on the porpoises' bodies consistent with entanglement in monofilament gear. To note, these are interim reports pending official sign off and agreed cause of death by a vet.

Officials discussed the incident and potential options to prevent future bycatch by shore-based nets with NRW staff, who said this is the first confirmed evidence they have seen of porpoise (mother and calf) potentially being bycaught in a shore set net in Wales. However, bycatch of seabirds in shore set nets has previously been reported. Although this particular incident occurred outside sites for which these



species are designated, this incident demonstrated the risks such nets could pose to seabirds and mammals.

### **Issues identified by this review**

The purpose of this review is to determine whether additional regional or national protections are needed to prevent migratory fish bycatch by shore-based nets in Wales. On the basis of this review of the available information, we have identified the following issues:

1. Although there are a substantial number of existing restrictions on shore-based netting in Wales, they vary between the north and south areas of Wales regions and are not adaptive.
2. The extensive nature of the coastline, the lack of equivalent tools to vessel monitoring systems (VMS) and the intermittent nature of this activity can make observing it and enforcement challenging.
3. Current shore-based netting spatial closures in Wales protect migratory fish from bycatch around estuaries, however, they could be extended at locations should evidence show additional protection is required.
4. There is a lack of BNA closed period restrictions in place for shore-based netting. Applying the same BNA closed period restrictions that are in place for vessel-based netting to shore-based netting could help safeguard bass below the MCRS and support recruitment to the fishery (see also bass FMP goal 7).
5. There is a limited amount of data available on bass removals by shore nets. To improve management of shore-based netting and the bass fishery in Wales as a whole, accurate information is required.
6. In addition, there is a limited amount of data available on all other catch and bycatch by shore nets. For broader fisheries management purposes and to ensure sustainability, accurate information is required.

### **Options to resolve these issues**

To deal with the issues highlighted above we have identified 3 potential options:

1. **No change** – This option would not address any of the issues highlighted in the review.

**Introduce voluntary measures** - Implement a voluntary recording system for shore-based netters as the members of the WSBAG have indicated there would be some support for this. This would be combined with the following additional measures to safeguard protected species linked to evidence provided by NRW in Annex 1 or other evidence that may arise:

2. **Introduce a voluntary catch recording system with voluntary spatial restrictions** in locations where evidence shows additional protection is needed.
3. **Introduce a voluntary catch recording system and extend spatial restrictions in the north Wales area** subject to consultation, using Byelaw 24(f), which allows for the temporary prohibition of setting any shore-based nets in the area to minimise the risk of capturing migratory salmonids.
4. **Introduce a voluntary catch recording system and a statutory instrument**, subject to consultation, to enable adaptive management of restricted areas in both sets of byelaws in response to evidence.

Options 2 to 4 would only partially address the issues highlighted above but could potentially enable better enforcement of the regulations already in place.

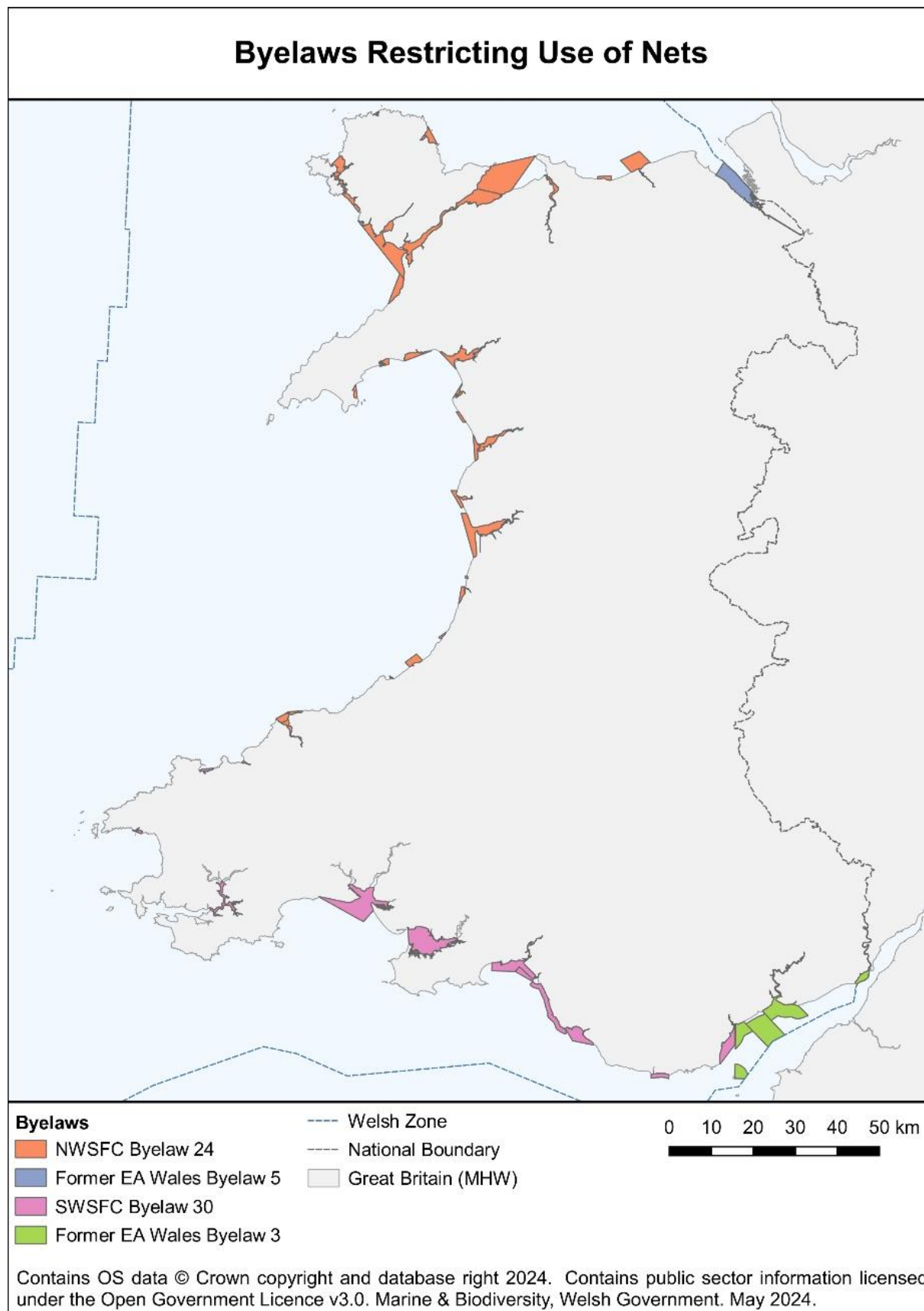
5. **Introduce measures through legislation** – Through a combination of amending existing legislation and bringing into force new legislation, for example, to create a permitted shore-based fishery, we could address all the issues highlighted above. This type of regulation could enable adaptive management where measures can be varied based on evidence about the fishery and the environment. Any proposals would be based on scientific evidence and would need to be subject to public consultation before there were any changes in management.

In the advisory group meeting we will explore the issues identified so far, the potential options described above and any other options identified by the group. We will also discuss the best methods to gather data on this fishing activity to improve fisheries management and safeguard protected species.

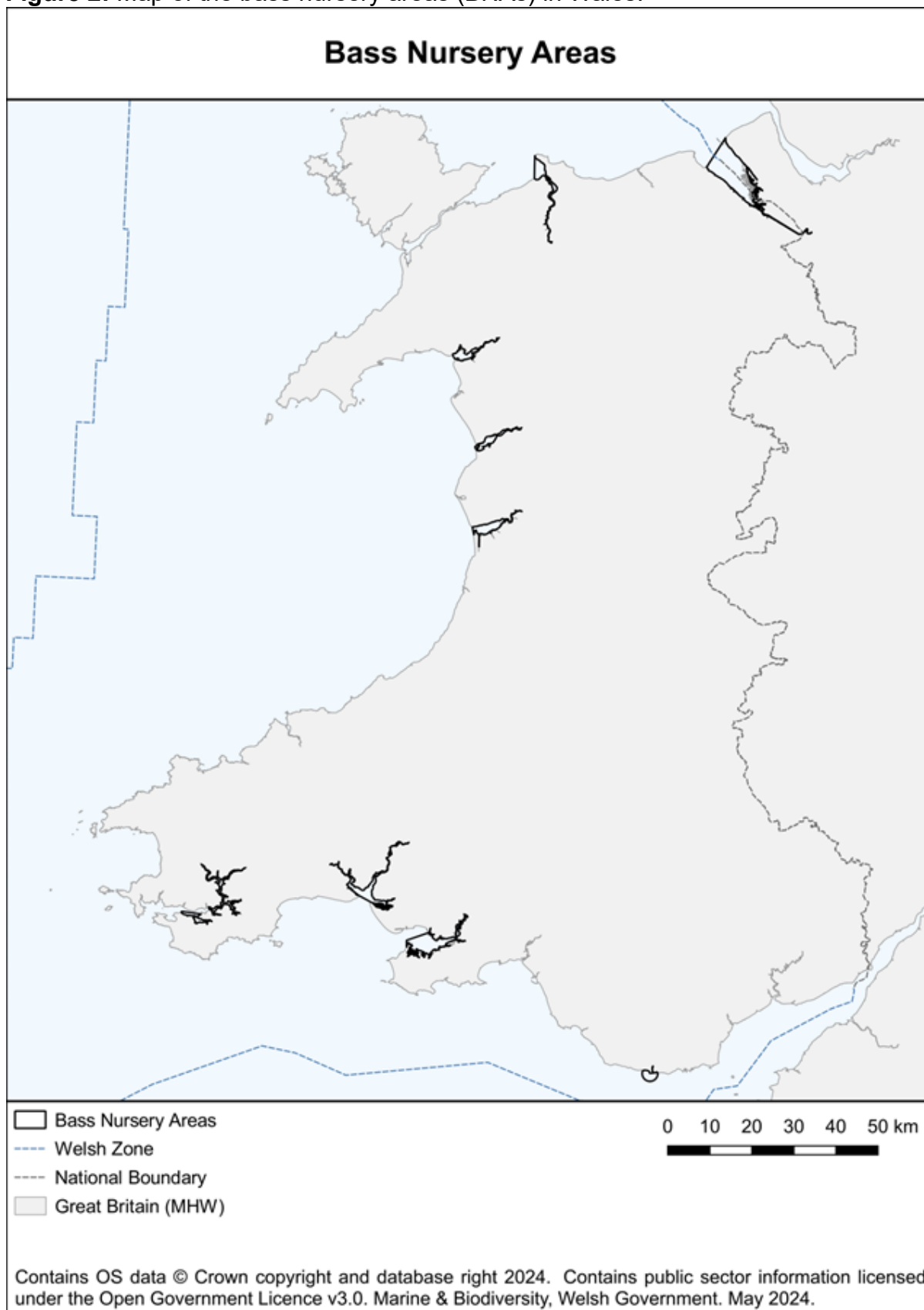
**Table 1:** This table details the Byelaws set by the Sea Fisheries Committee and former Environment Agency for both North and South Wales.

<b>Regulation</b>	<b>South Wales Byelaws</b>	<b>North Wales Byelaws</b>
<b>Net placement</b>	The net is to be cleared of fish at least once every two tides if set below the low water mark, and at every low tide if set in the intertidal zone	The nets are to be used in such manner that salmonids are not taken. If such fish are taken, the fixed engine is to be re-set to avoid any re-occurrence.
<b>Net length</b>	Cannot exceed 200m	Cannot exceed 275m
<b>Net height</b>	No stake net shall have a height above the seabed greater than 1.25 metres.	None
<b>Distance between other nets (minimum)</b>	200m	137.5m
<b>Mesh size</b>	When the mesh is stretched diagonally lengthwise of the net a flat gauge 100 mm broad and 2mm thick shall pass through it easily without pressure when the net is wet.	When the mesh is stretched diagonally lengthwise of the net a flat gauge 89mm broad and 2mm thick shall pass through it easily and with sufficient manual pressure. Small nets: 65 mm
<b>Maximum no. of nets</b>	No more than one net at any one time, and this must be fished and serviced by the person who set that net unless they have informed the Committee in advance of the net being serviced.	None
<b>Freshwater restrictions</b>	No net is to be placed within 200 metres of any freshwater source.	None

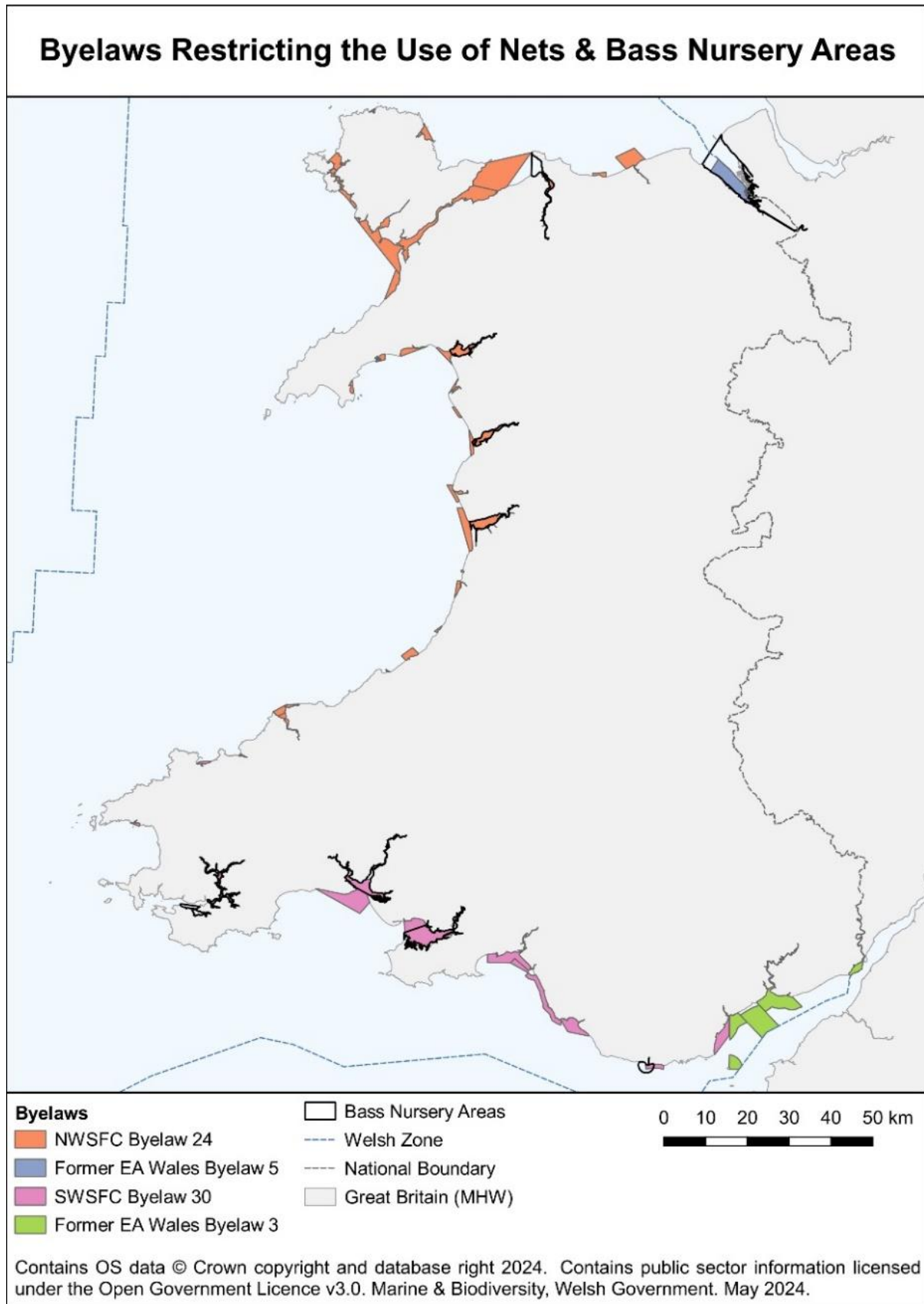
**Figure 1:** This map highlights the Byelaws set by the Sea Fisheries Committee And former Environment Agency for both North and South Wales.



**Figure 2:** Map of the bass nursery areas (BNAs) in Wales.



**Figure 3:** Map of the areas with byelaws restricting the use of nets and bass nursery areas (BNAs).



**Annex 1: Natural Resources Wales Salmon – shore set net review**

## Salmon – shore set net review

**Ben Wilson (Principal Advisor Fisheries)**

**Jan 2023**

### Background

There are several former Sea Fisheries Committees and Environment Agency (Wales) byelaws introduced some time ago to protect migrating Atlantic salmon (*S.salar*) and sea trout (*S. trutta*). All these byelaws are now administered and regulated by the Welsh Government.

Welsh Government are seeking to clarify whether their byelaws provide sufficient protection from the risk of bycatch for populations of Salmon protected under the Habitats Regulations.

Specifically, NRW have been asked to:

1. Confirm [Welsh Government's] understanding of the SAC rivers with salmon as a feature is correct.
2. Review the existing spatial and temporal restrictions afforded by the former byelaws and confirm if they afford reasonable levels of protection to mobile salmon.
3. Identify any gaps which may need to be addressed.

Welsh Government have provided a summary of the byelaws designed to protect salmon and sea trout.

Following internal consultation with NRW Operational enforcement staff, fisheries and marine policy advisors, this document sets out NRW's response to these questions, as well as observations on the status of salmon and sea trout stocks in Wales and future management options.

### 1. Confirmation of SAC rivers with salmon as a feature.

Under the Habitats Directive, Atlantic salmon are an Annex II species and a primary reason for designation in the following Special Areas of Conservation:

- Afon Gwyrfai a Llyn Cwellyn - Special Areas of Conservation ([jncc.gov.uk](http://jncc.gov.uk))
- Afon Teifi/ River Teifi - Special Areas of Conservation ([jncc.gov.uk](http://jncc.gov.uk))
- River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid - Special Areas of Conservation ([jncc.gov.uk](http://jncc.gov.uk))
- River Usk/ Afon Wysg - Special Areas of Conservation ([jncc.gov.uk](http://jncc.gov.uk))
- River Wye/ Afon Gwy - Special Areas of Conservation ([jncc.gov.uk](http://jncc.gov.uk))
- Afon Eden - Cors Goch Trawsfynydd - Special Areas of Conservation ([jncc.gov.uk](http://jncc.gov.uk))

We also advise that consideration needs to be made to the Severn Estuary Site of Special Scientific Interest (SSSI), Severn Estuary Special Area of Conservation (SAC), and Severn Estuary RAMSAR. Atlantic salmon and sea trout (*S. trutta*) are part of the assemblage of fish species sub-feature of the Estuaries feature of the [Severn Estuary SAC](#) (Natural England (NE) and Countryside Council for Wales (CCW), 2009). Atlantic salmon and sea trout are also part of the assemblage of migratory fish under Ramsar criterion 4 (JNCC, 1995) of the Severn Estuary Ramsar site. Hence, in relation to the Severn Estuary we also advise on the suitability of protections provided to sea trout as well as salmon

Salmon and sea trout should be considered in any HRAs conducted for changes to netting regulations the Severn Estuary SAC and in the upstream river catchments which drain into the SAC (Taff, Ely, Rhymney, Wye, Usk, Severn, Bristol Avon, Parrett etc.) and should also be considered farther offshore outside the SAC. Hence, we will also advise on the suitability of protections provided to sea trout as well as salmon in relation to the Severn Estuary

In addition to these sites, given salmon are a mobile and migratory species, we consider estuarine and marine migratory routes for these populations as functionally linked supporting habitat for the species and advise impacts on salmon migrating through the marine environment are assessed for various projects

## Salmon stock status

Before considering the reasonableness of netting protections, it is necessary to consider the status of stocks in all Welsh rivers, not just those currently protected by byelaws.

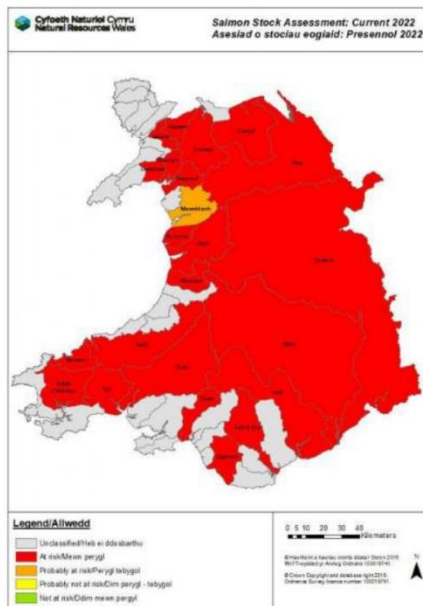
Wales has 23 principal salmon river catchments (including the cross-border rivers Wye, Dee, and Severn) for which stock assessments are undertaken and reported upon annually. In 2022 Wales recorded the second lowest catches of both salmon and sea trout since consistent records began in the 1970s.

The map below shows the 2022 salmon assessment with:

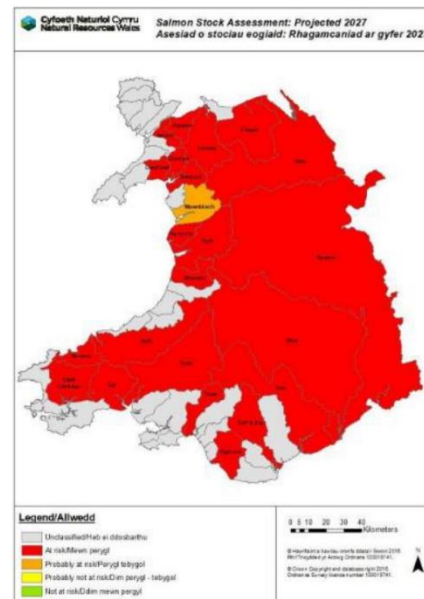
- 96% or 22 of the 23 Principal salmon rivers in Wales categorised as 'at risk', and
- Four percent or 1 river, the Mawddach, categorised as 'probably at risk' (CEFAS 2023)



## 2022



## 2027 projection



The following SAC rivers are classified as 'at risk'

- [Afon Teifi/ River Teifi](#)
- [River Dee and Bala Lake/ Afon Dyfrdwy a Llyn Tegid](#)
- [River Usk/ Afon Wysg](#)
- [River Wye/ Afon Gwy](#)

And, the River Mawddach, which comprises the Afon Eden SAC, is categorised as 'probably at risk.'

The 5-year projection to 2027 showed no changes in classification on all rivers.

The Afon Gwyrfai is not one of NRW's principal salmon rivers and as such has not been formally classified against using conservation limit compliance models. Recent and historic juvenile and rod catch data would suggest however that salmon population on the river are below safe biological limits.

All of these salmon populations were classed as being Unfavourable in the 2020 protected sites condition assessment ([here](#)).

Migratory fish assemblage for the Severn Estuary Ramsar site is also considered to be in unfavourable condition, partly due to the status of salmon populations in the Severn Estuary and its associated river catchments.

Salmon have been identified as being Endangered and are one of seven species categorised as being threatened with extinction at the regional level (Nunn et al 2023). NRW published an evidence report (Milner, N. & Garcia de Leaniz, C. 2023) that highlighted the increased risk of salmon populations in Wales dropping below critical thresholds in the coming decade.

## Sea Trout stock status

Results from the latest 2022 assessment have shown that from the thirty-three main sea trout rivers:

- 79% or 26 sea trout rivers in Wales are now categorised as being 'At Risk',
- 15% or 5 rivers categorised as 'Probably at Risk'
- 3% or 1 river categorised as 'Probably Not at Risk', and
- 3% or 1 river categorised as 'Not at Risk'. (NRW 2023 Unpublished Report)

## Are the levels of protection reasonable?

We have reviewed the temporal and spatial restrictions afforded currently by the Welsh Government byelaws and have considered the evidence available on possible catches within and outside of these restricted areas.

The freshwater inlets protected by the net byelaws include all the named SAC rivers designated for salmon. Therefore, in the close vicinity of the SACs, the protection afforded by current temporal and spatial controls could be viewed as reasonable under the Habitats Regulations.

However, it should be noted that as these fisheries are unlicensed there is a near complete absence of data from set net fisheries in the unrestricted areas, in terms of fishing effort, catch or bycatch. This means that it is difficult to be confident that any nets operating outside of the restricted areas are not affecting salmon or sea trout.

It is presumed the restricted areas named under the byelaws were identified as areas where migratory salmonids were perceived to be at greatest risk from interception in coastal nets operating in and around the mouths of freshwater inlets. We understand that this approach was predicated on the assumption that the majority of returning adult salmon identify and enter their natal river and do not stray in coastal areas between rivers. However, not all salmon return directly to their natal rivers. Swain (1982) demonstrated that returning salmon, tagged as smolts in the River Severn, Wye or Usk, were captured in rivers throughout the Severn estuary. Solomon et al (1999) also demonstrated how salmon entered multiple river estuaries prior to their final entry to fresh water. Likewise, Norwegian Atlantic salmon have been shown to return to coastal waters up to 1100 km away from their natal river on their return migration prior to navigating to their natal river (Uvan et al 2018). It now appears well understood that migration to natal rivers is not

always direct, and some straying and searching behaviour is known to occur in coastal areas. All of this highlights the risk that mobile salmon face in coastal waters between, and not just adjacent to, the mouths of estuaries.

There is also a body of evidence arising from for the Samarch Project ([Home | SAMARCH - SALmonid MAnagement Round the CHannel](#)) demonstrating the vulnerability of salmon and sea trout to set nets in coastal waters between river inlets. Published data on the sampling methods used by the researchers showed that both salmon and sea trout were vulnerable to set nets in coastal waters, including sites not proximal to freshwater inlets. As such, it should be recognised that there is an unquantified risk to salmon of interception by nets in coastal waters between estuaries.

Further evidence from the SAMARCH project (in prep) also shows that migratory salmonids utilised the entire water column and could be potentially exposed to bottom as well as surface set nets. It should also be noted that most salmon and sea trout retrieved from these nets were either dead or moribund. This may have relevance to the former South Wales Byelaw 30 which prescribes how authorised fixed nets are to be used and cleared of fish.

- (1) Any fixed net authorised by these byelaws shall be cleared offish at least once every two tides if set below the low water mark, and at every low tide if set in the intertidal zone, and any salmon or sea trout (sewin) or undersized sea fish which is caught by such net shall be returned to the sea immediately upon the clearing of the net, whether dead or alive, and if alive, with as little injury as possible.

The experience of NRW enforcement staff, supported by the findings of the SAMARCH report, suggests that any salmon or sea trout caught in nets are unlikely to survive long enough to be released unharmed if this was to be considered mitigation in any future HRA.

Given the paucity of data from this unlicensed fishery and the knowledge that salmon are taken as bycatch in unrestricted areas it is not possible to be confident that the level of existing protection afforded by the Welsh Government byelaws adequately protect migratory salmon and sea trout of SAC populations. As previously described, due to the considerable decline in stocks, run size and the conservation status of both salmon and sea trout any additional loss due to net bycatch would likely have an adverse effect on the number of returning adults.

## Evidence from NRW enforcement activity

Due to limited resources, it has not been routinely possible for NRW enforcement staff to check nets in the permitted areas as:

- Nets are set without the requirement to notify either NRW or WG enforcement teams, thus making compliance monitoring almost impossible and extremely labour intensive, especially in winter.

- Nets are inspected as the tide goes out regardless of what time of the day or night, which places additional resourcing pressures on enforcement staff

As a result, the extent of any current salmonid “bycatch” across Wales remains unclear.

We do however have direct evidence that salmon and sea trout have been intercepted in some unrestricted areas where netting is currently permitted. This includes the following areas

1. Pebnbryn beach, Ceredigion, North of the Teifi Estuary. This beach is targeted for bass by shore netters, and we are aware that salmon is a frequent by-catch.
2. Tresaith beach- This beach is also targeted and is next door to Penbryn. Sea trout were taken from this beach
3. Llannon beach- Ceredigion coast. This beach is a fair distance from the Teifi Estuary, but salmonids are caught as by-catch at this location also.

Evidence of the illegal taking of salmon and sea trout from these was used in a recent prosecution case.

We are also aware that there is an elevated level of fishing activity in the Three Rivers estuary, which is adjacent to the River Tywi SAC. Whilst salmon are not a designated feature of the Tywi, one of the designated species, shad, is likely to be at risk.

## Gaps to be considered

- The collection of effort, catch and bycatch data for net fisheries, through a net permit and reporting condition. Without this information it is hard to determine the level of risk nets pose in specific locations.
- The survival rate of released bycatch.
- Former south Wales byelaws do not allow for the adaptive implementation of additional controls.
- The current question relates specifically to salmon. Other protected SAC species, such as Shad (Twaite and Allis), should also be considered when assessing the possible impacts of these net fisheries.
- There are additional fish species listed under Section 7 of the Environment Act Wales 2016 and under SSSI legislation that Welsh Government should consider if reviewing their netting regulations.
- More detailed assessment of the movements of salmon and sea trout in coastal waters.

## Summary

The existing Welsh Government byelaws provide some protection to salmonids in the vicinity of several specified rivers. The level of protection provided would have been considered reasonable when they were made, given the status of stock at the time and the working assumption that salmon, in particular, were thought most at risk in waters adjacent to their natal rivers. However, there is reduced confidence in reaching the same conclusions now due to:

- The declining conservation status of salmon (and in some cases sea trout), highlighting the need to provide enhanced protection around the coast of Wales.
- Salmon migration is not direct. Salmon and sea trout have been intercepted by shore nets outside the byelaw exclusion areas, as evidenced in recent enforcement cases undertaken by NRW
- There is minimal fishery data on which to assess the impact of exclusion zones and legal net fisheries.
- Resource pressures and the nature of these fisheries often means compliance activity on these net fisheries is limited.

There is little assurance that the risks to salmon and sea trout in the marine are fully understood or managed.

On this basis we suggest that consideration is given to providing greater protection to mobile salmon, as well as other migratory species of conservation interest, such as sea trout and shad.

Additional protection measures could include:

- i) Extending the byelaw protection zones to include additional areas where salmon are likely to be present. A more detailed assessment would be required to identify specific areas, but priority areas would include sites where migratory salmonids have been shown to be taken, including (*inter alia*)
  - (a) Llanon Ceredigion
  - (b) Penbryn Ceredigion
  - (c) Tresaith beach Ceredigion
  - (d) 3 Rivers, Pembrey and Cefn Sidan, Carmarthenshire
- ii) Authorising of all shore nets would allow better control, would support compliance checking and would provide effort and catch data that would support further controls.
- iii) Developing an effective notification and compliance checking (monitoring) scheme for shore netting activity.

- iv) The provision of adaptive management controls in south Wales could be considered.

Consideration should also be given to other SAC features that may be affected e.g., Twaitte and Allis shad and to other protected fish species under relevant legislation.

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