Devon and Severn IFCA Public Consultation on Changes to the Netting Permit Conditions Within the Salcombe Estuary

This document is our formal response to the proposed changes to the netting permit conditions. Bass Anglers Sportfishing Society (B.A.S.S) strongly opposes the proposal.

We are astonished that this proposal has even made it to a public consultation given that the proposed change is for a net fishery that would be of limited financial gain to a small minority of individuals. It is even more incongruous that that these proposals are to open up netting in an important Bass Nursery Area that will result in high mortality of juvenile and spawning sized bass and where all netting was banned only five years ago.

All of this, at a time when DEFRA have been looking at protective measures and goals in the Bass Fisheries Management Plan and the most recently released advice from International Council for the Exploration of the Sea (ICES) is that the Bass Spawning Stock Biomass (SSB) is struggling to recover and still sits very much below the minimum safe limit (B_{lim}).

The rationale of the B&PSC Members for the opening of a fixed net fishery within the Salcombe Estuary is as follows:

• That the B&PSC considers that a mortality rate of 18.8% of bass, caught during the netting trials within Salcombe Estuary is acceptable.

• That the B&PSC recognises a reported decline in profitability in pot fisheries.

• That the B&PSC supports providing opportunities for commercial fishermen to diversify and boost their winter income by participating in a limited netting fishery within the Salcombe Estuary.

• That the B&PSC recognises that sea trout are present at an unknown scale, for feeding purposes, in the Salcombe Estuary, but it is not a known migratory route.

1. Mortality

BASS believes that 18.8% as stated is not an acceptable level of mortality. The rate was generated from a science-based trial program in which the greatest of care was given to the safe return of sea bass. Nets were cut to release fish; fish were placed into reviving tanks before being released. Your own report states: "***Taking into account all sources of uncertainty it is likely that the true mortality would be higher in real-world fishing conditions.***"

There are many factors that constitute towards a more realistic mortality rate that creates further questions:

- Firstly - the proposal is to target grey mullet in a fishery where studies demonstrated sea bass outnumbered other species, making up 52% of the catch. This fishery is proposed to be open for a period of six months, where sea bass may only be retained for one month. The outcome of this proposal is a high level of mortality through bass discards of all sizes for five months of the proposed netting period and of juvenile bass during the one month when bass may be retained. (Note that Bass Nursery Areas, unsurprisingly, contain significant numbers of juvenile bass at all times of the year.)

- Soak Times – The proposal states that nets will have a soak time of 60 minutes. When does the timer start for this activity? Is it from when the net first meets the water or once the net is fully shot and submerged? What is considered the end period of the 60-minute timer? Is it at the first stage of retrieval or on the total retrieval of the net? If as expected the 60 minutes is based on the time the net is fully submerged then the true soak time will exceed the 60 minutes with parts of the net still fishing up to a further 60 minutes depending on the time it takes to fully shoot the net and the retrieval time on completion. Again, this is variable based on the abilities and experience of the fisher and how many fish are captured within the net.

- What analysis and studies have taken place with regards to the sea bass survival rate based on the number of fish captured within a gill net? Each tide and fishing activity can produce different results. For example, a net which has captured 150 fish, will take a period of time and effort for the fisher to recover and release all surviving fish back into the water. A net which has captured 600 fish is going to take a lot more effort to retrieve and will take a considerable amount more time to haul, resulting in a longer soak period and time when sea bass can become entangled within the net. What is the sea bass mortality rate for a larger haul of fish?

- The proposal is that this fishery would use 100mm mesh sized nets. What protection does this provide to undersized sea bass? Many studies, which include those carried out by Pickett and Pawson et al and more recently by CIFCA, show that nets of 100mm mesh will capture a percentage of undersized sea bass. ***Reference - Cornwall IFCA "Mesh Size analysis of fishing net gear for caught and landed sea bass 2016 – 4inch mesh size 101mm retained 21.2% of fish below the 42cm MRCS for Sea bass"***. Again, this has many variables based on the tide and location. A net shot over the turning of a tide will have little to no water resistance and will become slack entangling greater numbers of undersized sea bass.

- What studies have taken place to understand the average size of sea bass within the Salcombe estuary?
  Reference - devonandsevernifca.gov.uk/illegal-gill-net-recovered-from-salcombe-kingsbridge-estuary – "***Illegal gill net, Salcombe – Kings bridge estuary October 17th 2023 - On Saturday 23rd September Officers had sufficient equipment available to recover the illegal net which measured approximately 150 metres in length. Officers removed 47 grey mullet and 17 bass from the net. Most of the bass that were removed from the net were below 42 cm in length (the Minimum Conservation Reference Size)."***

From a total of 64 fish captured, sea bass made up 26%, of which the vast majority were presumed to be undersized!

- The study also revealed that a high number of sea bass sustained injuries due to being captured within the fixed net.

Reference - Research Report: Understanding Mortality of European Sea Bass (Dicentrarchus labrax) in Small-Scale Inshore Netting – Research Report – V1.0 (22nd August 2023) 4.2 Observed sea bass injuries and reflex impairments – "**A range of injuries were recorded on 98% of all sea bass captured in this study; these injuries included bruising, fin fraying and scale loss. The implications of these injuries for later sea bass mortality are unclear, but it is known that scale loss can lead to delayed mortality by compromising osmoregulation (internal fluid/salt balance) or due to the onset of infection (Butcher et al., 2010). The covering of fish skin produces a protective mucus layer that contains immune "defence factors" such as immunoglobins, lysozymes, and proteases; this protective layer can be damaged by netting and handling, while the stress of capture increases production of cortisol and stress hormones, which suppress the immune system. Overall, these factors increase vulnerability to disease (Arlinghaus et al., 2007)."**

What is the estimated survival rate for the 98% of sea bass that sustained injuries? What is the likelihood, given that these sea bass are resident fish, that if they survived the injuries from the first netting activity that they could be indeed be captured and injured for a second time? What is the estimated survival rate for sea bass that have been captured for a second / third time?

2. Decline in profitability in pot fisheries –

Again, we find ourselves asking many questions and failing to fully understand the connection between a pot fishery and netting for mullet within a BNA! We are strongly assuming that the D&S IFCA has failed within its responsibilities to sustainably manage the crab/lobster fishery:

"***D&S IFCA will lead, champion and manage a <u>sustainable</u> marine environment and inshore fisheries, by successfully securing the right balance between social, environmental and economic benefits to ensure healthy seas, <u>sustainable fisheries</u> and a <u>viable industry</u>***"

and has allowed the potters to decimate brown crab stocks within the local seas.

- How long have the D&SIFCA been aware of the decline in profits from the pot fishery?
- What measures and actions have been implemented to project brown crab and lobsters?

- How do the D&S IFCA propose to ensure that the pot fishery is sustainable for the future?
- Is it within the D&S IFCA's policy that once a species has been overfished to identify the next viable species and decimate that?

3. Opportunities for commercial fishermen to diversify and boost their winter income –

The proposed Grey Mullet fishery is estimated to be worth approximately £45,000. When divided out between the proposed 17 under 6m vessels would equate to around £2,647.00 each before expenses.

- The proposed fishery is of relatively little value. Is there a reason why this income boost cannot be achieved from fishing open waters?

- Many commercial fishers across the UK hold a second trade for periods such as winter. Indeed, in a June 2021 video interview with local fisherman David Morgan, posted on the South Devon and Channel Shellfishermen's YouTube channel, Mr Morgan states that several potters are either part-time, have other occupations or are retired and concludes ''but it's very seasonal and dare I say it's more of a hobby as far as they're concerned''. The UK is currently suffering with staff shortages of approximately 330,000. Have the D&S IFCA looked to seek advice on retraining / up-skilling fishers to ensure they are finically secure during the winter months?

- It is noted that some of the commercial fishers are already holding secondary jobs or businesses, which include owning holiday lets. Has it been evidenced that there is an actual requirement to boost their winter income by commercially netting within a BNA?

4. Sea trout are present at an unknown scale, for feeding purposes, in the Salcombe Estuary but it is not a known migratory route.

Reference - "***The Salcombe Estuary has no freshwater input /rivers that allow for migratory fish to move up the estuary to the rivers to spawn and therefore the catch of salmonids is very minimal or totally absent (in the case of salmon). Therefore, opening a net fishery will not impact salmonids. Any sea trout, if caught, can immediately be returned to the sea. I believe there is no concern relating to the stocks of sea trout*".**

- It is known that migratory fish are seeking refuge within the Salcombe estuary regardless of the lack of fresh water input. To state that ''opening a net fishery will not impact salmonids'' is at best optimistic and at worse counter to salmonid protection laws. The close proximity to the Rivers Dart, Exe, Plym and Avon, which have migratory salmonid, would almost certainly be effected by netting activity within the Salcombe harbour.

- Have recent studies been untaken to understand the survival rate and injuries sustained during netting activities?

Bass Nursery Areas.

Studies by Dr T Stamp (2018) show that Salcombe harbour is of high importance due to holding sea bass for 12 months of the year. Furthermore, these sea bass have been recorded leaving and entering other local estuaries / waterways and on some occasions even navigating their way into Welsh waters. Commercial pressure on the bass stocks within the Salcombe harbour will most

certainly have a negative impact on sea bass stocks within surrounding areas and even potentially far reached waters within the UK.

Referencing Government publications, we would like to remind you of the purpose of BNA's -

Juvenile sea bass occupy nursery grounds in estuaries and coastal areas for up to their first six years of life during which time they are subject to being bycatch in fisheries. 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 sea bass were likely to be below the minimum conservation reference size (MCRS – formerly, minimum landing size (MLS)) established in UK and EU legislation. In total, 37 estuaries and other coastal sites were designated as BNAs and additional restrictions on commercial and recreational fishing were imposed. These are thought to have played an important role in protecting the stock, possibly generating changes in size distribution, increased juvenile survival, and improvements in the productivity of the stock.

The Salcombe Bass Nursery Area designation needs to be respected and protected, not undermined by statutory agencies such as the D&S IFCA.

International Council for the Exploration of the Sea (ICES)

What consideration has been given with regards to the latest sea bass advice published by ICES within the proposal to introduce a high sea bass mortality fishery within the Salcombe estuary? We include some charts from this advice for convenience.

Fig1

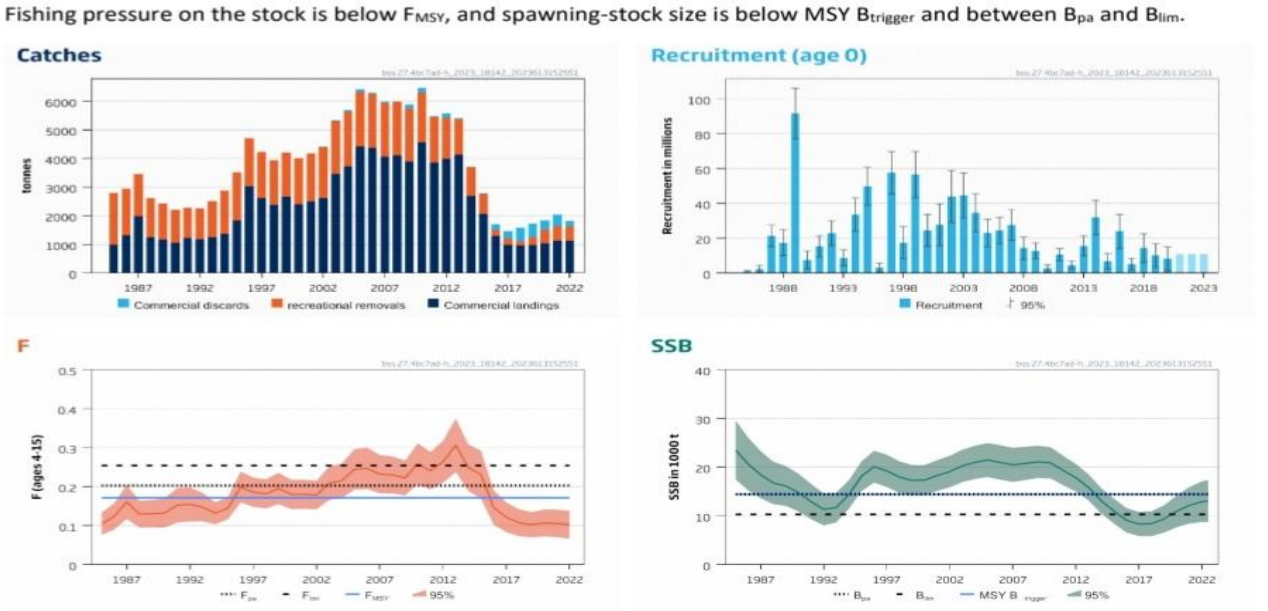

Figure 1 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Summary of the stock assessment. Recreational removals are model estimates based on a survey in 2012 and implemented management measures. Discard estimates are available since 2002. Fishing mortality (F) is shown for the combined commercial and recreational fisheries. The assumed recruitment values for 2021–2023 are shaded in a lighter colour.

Fig 2

Table 2 Sea bass in divisions 4.b–c, 7.a, and 7.d–h. Annual catch scenarios. All weights are in tonnes.

Basis	Total removals* (2024)	F_{total} (2024)	SSB (2025)	% SSB change**	% advice change ***
ICES advice basis					
MSY approach: $F = F_{MSY} \times SSB_{2024}/MSY\ B_{trigger}$	2432	0.154	11975	–7.7	–4.3
EU MAP^: $F_{MSY} \times SSB_{2024}/MSY\ B_{trigger}$	2432	0.154	11975	–7.7	–4.3
EU MAP^: $F_{MSY\ upper} \times SSB_{2024}/MSY\ B_{trigger}$	2432	0.154	11975	–7.7	–4.3
EU MAP^: $F_{MSY\ lower} \times SSB_{2024}/MSY\ B_{trigger}$	2042	0.128	12304	–5.2	–19.7
$F = F_{MSY\ lower}$	2256	0.142	12124	–6.6	–11.2
$F = F_{MSY\ upper}$	2683	0.171	11764	–9.4	5.5
$F = F_{MSY}$	2683	0.171	11764	–9.4	5.5
F = 0	0	0	14040	8.2	–100
F_{pa}	3132	0.20	11387	–12.3	23
F_{lim}	3825	0.25	10807	–16.7	51
$SSB_{2025} = B_{lim}$	4418	0.30	10313	–21	74
$SSB_{2025} = B_{pa}$^^					
$SSB_{2025} = MSY\ B_{trigger}$^^					
$F = F_{2023}$	1698	0.105	12595	–3.0	–33
$SSB_{2025} = SSB_{2024}$	1247	0.076	12978	0	–51

* Includes commercial catch and recreational removals (taking mortality of released fish into account, estimated at approximately 5%).
** SSB 2025 relative to SSB 2024.
*** Advice value for 2024 relative to the MSY value for 2023 (2542 tonnes).
^ MAP multiannual plan (EU, 2019).
^^The B_{pa} and MSY $B_{trigger}$ options were left blank because B_{pa} and MSY $B_{trigger}$ cannot be achieved in 2025, even with zero catch.

The Sea bass Spawning Stock Biomass has plateaued over the last 12 months with the stock firmly seated between the Blim and B-trigger (see Fig1). The latest advice forecast suggests that any gains through protective measures over the last 3 years could be eliminated in the coming year and potently tighter measures re-implemented.

- How can the D&S IFCA justify introducing a new net fishery at a time when sea bass are still within protective measures and with a forecasted decline in SSB?
- What impact will the introduction of a new net fishery have on the future SSB?
- How does the introduction of a new net fishery within a BNA align with policies within the D&S IFCA with regards to sustainability and fishery management?

Bass Fisheries Management Plan

During 2023 DEFRA released the Bass Fisheries Management Plan aiming to set out a road map for future domestic management of sea bass in England and Wales to ensure sea bass stocks are maintained at sustainable levels. Reference – government/consultation/bass-proposed-fisheries-management-plan-consulatation. To ensure effective management of bass stocks in English and Welsh waters over the next 6 years, this FMP identifies nine goals focused on domestic management priorities. For each goal, the plan sets out:

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. Ensure 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.

The D&S IFCA / B&PSC proposal seemingly disregards many of the key goals set out in the bass fisheries management plan. The proposal fails to:

- Prioritise stock sustainability
- Minimise discards
- Compliance of sea bass regulations
- Maximise benefits to local coastal communities
- Sustainably harvest sea bass in line with scientific advice
- Protect juvenile and spawning sea bass
- Minimise the impact of sea bass fishing on the wider marine ecosystem.

Conclusion -

Bass Anglers Sportfishing Society strongly opposes the proposal to allow a new net fishery within the Salcombe Estuary –

- We believe that there is insufficient data/research and that the study used in the proposal was not appropriate to use as evidence due to the netting activities being carried out with damage limitation in mind. The overall assessment of mortality is not a true reflection of real time commercial fishing activity.

- The proposal does not align with the scientific advice released by ICES. This new net fishery would increase sea bass mortality rate by means of discarding undersized fish and out of season spawning stock.

- D&S IFCA has shown a lack of fisheries management by allowing the pot fishers to over fish brown crab from the local area to an unsustainable level. We are surprised by the lack of emergency measures / restrictions, studies / analysis and general management to provide a sustainable pot fishery. We do not believe that proposing a new fishery targeting another species is an acceptable countermeasure for over fishing.

- We do not believe it is acceptable to propose a new net fishery within a Bass Nursery Area. BNA's are the only safe sanctuary available for juvenile sea bass to reach maturity and should be protected to ensure we see thriving sea bass stocks that can be enjoyed by all at sustainable levels.

- There is no indication on the impact this new fishery would have on other stakeholders such as recreational sea anglers through means of discards and removals.

- A new net fishery will create additional resource requirements for further enforcement at a time where resources and funding are already strained. There are already identified problem

issues such as illegal netting taking place that require greater enforcement / management without increasing further pressure on officers.

- The estimated value of the proposed grey mullet fishery is relatively low in comparison to the damage and the potential future income lost from the sea bass fishery.

- The mortality rate has been severely underestimated at a mere 18.8%. The reality stands to be substantially more, which given that sea bass will be the main species captured in a 6 month fishery where only 1 month is currently available for any in sized fish to be retained is not acceptable on any level.

- We do not believe that the proposed use of 100mm mesh nets within a fishery that will largely capture sea bass is acceptable given that as many as 25% of all sea bass captured will be juvenile undersize fish.

- The proposal of the new net fishery, fails to align with many of the key goals set out in the DEFRA bass fisheries management plan.

- The study carried out suggested that as many of 98% of surviving sea bass would incur injuries to some degree. Though no further studies were carried out, it is clear that these injuries would contribute towards a greater level of mortality.

We highly suspect that the D&S IFCA / B&SPC proposal is actually an attempt to target and retain large quantities of sea bass during January, which has been dressed up in the guise of a Grey Mullet Fishery. We are fully expecting an increase in commercial efforts during this month when highly valued sea bass become available for legal landing.

Bass Anglers Sportfishing Society are open to collaborative working with all fisheries managers on matters relating to sea bass or fisheries that could impact the sea bass fishery.

Please feel to contact us at chairman@ukbass.com and secretary@ukbass.com