



**D&S IFCA's Response to
Public Consultation on Devon Local Nature
Recovery Strategy**

November 2025

As part of the public consultation for the Devon Local Nature Recovery Strategy (LNRS), Devon and Severn Inshore Fisheries and Conservation Authority (D&S IFCA) was invited to provide specific comments on the following LNRS website pages:

1. Molluscs
2. Fish
3. Birds (Estuarine birds and Cliff nesting seabirds)
4. Intertidal invertebrates
5. Coastal Wildbelt

Several of these pages link to other pages which are relevant to D&S IFCA's remit, so D&S IFCA has also provided feedback on:

6. Invasive Species

D&S IFCA was also invited to provide feedback on:

7. Whether the LNRS website adequately covers intertidal fishing practices, and how the content might be improved
8. Potential information to be added to the LNRS web mapping tool to accompany the D&S IFCA District Boundary layer on that tool.

Officers have provided feedback on each of these areas in turn below. Overall the LNRS webpage gives an insightful overview of Devon habitats and species, and will be useful in informing a delivery plan. D&S IFCA comments below focus on those areas that overlap with its core remit and has sought to provide constructive feedback.

1. Molluscs

- (a) "About" section of LNRS Molluscs webpage

Minor suggested correction: There are around 76,000 known species of Mollusca (not close to 100,000).

- (b) "What we need to do and where" section of LNRS Molluscs webpage

Spiny cockle

This section lists the **spiny cockle** as a priority. It states that "*Devon boasts a notably higher population of spiny cockles compared to other regions in the UK, with this abundance particularly evident in areas like the Salcombe estuary. Despite their relatively high numbers in Devon, the spiny cockle is considered a nationally rare species.*"

This section also lists an action to “*Implement and enforce regulations on cockle harvesting to prevent overfishing and establishing seasonal closures during breeding periods to allow populations to reproduce and recover.*”, with this being suggested in the following ‘high opportunity areas’: “*All estuarine environments, in particular, intertidal mudflats and sandflats*”. Implementation and enforcement of regulations on cockle harvesting, including those mentioned, would require a significant amount of resource and, if required, would need to be carried out in a proportionate and evidence-led manner. This would require significant evidence gathering on the location and status (e.g. abundance, population growth etc/decline etc) of the spiny cockle in each location, as well as an understanding of the threats faced in each location. For example, the information states that the species is particularly abundant in Salcombe, yet to D&S IFCA’s knowledge there is not a known fishery for this species (or *Cerastoderma edule*) in this area. In areas where local stakeholders have raised concerns about the extent of intertidal handworking (Teign and Exe), D&S IFCA’s Officers are not aware of having seen spiny cockles during their regular cockle surveys of these areas, so the extent of the risk is unclear. The implementation of a hand-working byelaw remains a longer-term ambition for D&S IFCA, yet limited resources require a focus on higher risk fisheries including those using mobile gear and illegal use of nets in estuaries. It is not clear how the additional work – to quantify spiny cockle populations, understand their level of risk and implement/enforce appropriate management – would be resourced.

Native oyster

This section lists the native oyster as a priority, and says that INNS that impact on native oysters “*especially Pacific oysters*” should be monitored and managed where possible. It also states that “*Devon’s oyster population is threatened by the invasive non-native Pacific oyster.*”

However, it is not clear how much direct evidence there is that the two species are co-existing in Devon and whether in those areas the native oyster is being directly displaced by the Pacific oyster. D&S IFCA would be interested to receive reports of wild populations where this is the case. In areas where the native oyster does grow in the wild, there are known negative interactions with the introduced species *Crepidula fornicata* (slipper limpet) and *Urosalpinx cinerea* (the American oyster drill). The section on INNS threats to the native oyster on [MARLIN](#) lists only these two species and the leathery sea squirt as being direct INNS threats to the native oyster. Native species also predate actively on native oyster where present, including the oyster drill/sting wrinkle (*Ocenebra erinaceus*), dog whelk (*Thais lapillus*), common whelk (*Buccinum undatum*), shore crab (*Carcinus maenas*) and spider crab (*Hyas araneus*) (information available on [MARLIN oyster beds habitat webpage](#)).

The action listed for native oysters is proposed to focus on all coastal wildbelts. D&S IFCA would support the restoration of the native oyster where ecologically possible. However,

it is important to ensure that targeted actions align with other policies – including Defra’s policy regarding the farming of Pacific oyster, which is still encouraged south of 52°N – including in designated sites where regulators have conducted assessments which conclude that the species does not pose a risk to the site or where appropriate mitigating conditions can be applied. Evidence from recent assessments for estuaries in Devon and interaction with stakeholders shows that Pacific oyster mariculture can be carried out sustainably without detriment to the local area, and it is important that actions to recover other species are targeted appropriately to avoid interference with these legitimate activities.

(c) “Inspiration” section of LNRS Molluscs webpage

This section includes good information on D&S IFCA’s stock assessments. It would be preferable if this is reworded to include the Teign estuary and more broadly reflect the mollusc work undertaken. A suggestion is below:

The Devon and Severn Inshore Fisheries and Conservation Authority (IFCA) conducts regular stock assessments for various marine species, including intertidal mussel and cockle beds. Stock assessments in areas like the Exe, Teign and Taw-Torridge Estuaries help monitor the health and size of mollusc populations. This information is crucial for ensuring the long-term viability of populations and management of sustainable harvesting practices.

2. Fish

In the ‘About’ section of the Fish webpage, there is a subsection on fishing, which states the following:

“During their marine life stage many species such as Atlantic salmon can become accidentally caught as [bycatch](#) by commercial fishermen due to sharing the same behaviour as other marine species. Although usually released the likelihood of survival from being caught in nets is low.

Species such as the European eel are often caught and illegally targeted to be sold on the black market, especially those at juvenile stages.

Although there are now byelaws which require catch and release for species such as Atlantic salmon these are still ignored.

Anglers and rod license sales provide valuable income which often gets directed back to making improvements to rivers. Valuable rod catch return data is used to help assess stock health, monitor fishing pressure and inform conservation efforts”

It would be valuable to more directly outline where the risks occur so that actions and attention can be directed properly. For example, starting the section with a focus on

commercial fishermen (as it currently is) is likely to leave the reader with the impression that commercial fishermen are also implicated in subsequent issues (e.g. illegal targeting of eels and ignoring byelaws on catch and release of salmon), which I think are more freshwater angling issues? Is it worth including information on EA-licensed rod and line fisheries, how these are monitored etc? Also, the first part of the paragraph (issue of marine stage bycatch of salmon) is likely to be true in many areas, but may not accurately reflect the local reality which is improved by a D&S IFCA permit condition requiring headlines of nets in specified coastal areas to be 3m or deeper (allowing migration of salmonids in surface waters). Unfortunately, there is not good data on marine bycatch in local waters.

In the section ‘What we need to do and where’, there is a priority action to subsection on fishing, which states the following:

“Increase the abundance and distribution of populations of fish [...] in particular those identified as Devon Special Species”.

This is a good aim but, as discussed at the workshop in October 2025, the achievability isn’t clear – is this just something that will be dealt with in the delivery plan? Taking the tompot blenny as an example: the information on this species states that *“Although not currently endangered, they are vulnerable to habitat degradation, especially from coastal development, pollution, and recreational disturbance”*. This raises questions around whether *increasing* the population should be a priority (given limited resources) compared to other species which may be more vulnerable, and whether it would be more appropriate to target actions by species based on their needs (e.g. a need to protect current blenny habitats from coastal development, rather than expend resources on investigating and replicating specific habitat requirements with a view to increasing population size/distribution). This is not to denigrate the importance of the tompot or its protection, but more about targeting resources.

In the section on seahorses, there is an action listed to *“Reduce impacts from bycatch. Modify fishing gear, for example by using larger mesh sizes or escape panels to help prevent seahorse bycatch.”* D&S IFCA assesses the impacts of fishing activities on designated features of MPAs in inshore waters. In some areas this includes seagrass and seahorses. Where assessments conclude that there is a risk to the feature, D&S IFCA collects and evaluates evidence regarding the most appropriate way to reduce the risk. This evidence includes valuable input from a range of stakeholders. Given these processes are in place through statutory means, it would be inappropriate to commit in advance to making fishing gear modifications when these may not be the most appropriate method to reduce bycatch risks. With that in mind, if a fishing-related action is to be included here it may be better to focus on e.g. *“Assess and, where required, reduce impacts from bycatch”*, but not to commit to a specific mitigation approach.

Another helpful approach for conservation of seahorses could be to encourage reporting of seahorse captures/sightings from any stakeholder group. There is already some good guidance on this on the gov.uk [webpage](#) on seahorses, which many people may not be aware of:

“Records of seahorse distribution are vital for their conservation. Any sightings of seahorses whether in the sea, or stranded, should be shared with Natural England by emailing the Seahorse Team, at: seahorses@naturalengland.org.uk.

Please include when and where the seahorse sighting occurred, and, where possible (without disturbance occurring), a photograph. If possible, location on a map, GPS coordinates, a grid reference or What3words to give more precise location are particularly helpful.

You can also report your sightings to [The Seahorse Trust](#) to help with their research.”

It may be worth referring to the protected status of some species e.g. of both species of shad under the Wildlife and Countryside Act 1981. Also, although the Twaite shad is not as endangered as the Allis shad, they are difficult to tell apart in practice, so it may be worth considering whether it is best to focus on the overall decline and need for protection, rather than highlighting that Twaite shad are not as endangered. That said, migratory fish such as shad and salmonids do not fall within D&S IFCA's remit, and the EA may have a more informed view on these issues. Regarding salmonids, there is some text that refers to restrictions in place under certain byelaws. It may be worth clarifying which byelaws these are, or who is responsible for monitoring/enforcing this, otherwise there is a risk of confusion that this falls under D&S IFCA byelaws, which are the byelaws which seem to be most often referred to in the other sections.

There is an action listed to “*Reduce marine impacts on migratory freshwater fish*”, with the following components:

- *Prevent overfishing in marine and estuarine areas. Overfishing can reduce adult populations before they reach spawning grounds. This is especially critical for species already under pressure from habitat loss and pollution in rivers.*
- *Prevent / reduce bycatch. The accidental capture of non-target species in commercial fisheries poses a major threat. Migratory fish are often caught in nets or gear intended for other species, leading to injury or death and further reducing breeding populations.*

It's not clear that good data are available on marine targeted catch or bycatch issues – if you have access to these data and are able to share this it would be very useful. The ICES working group WGNAS found that insufficient information exists on coastal fisheries to be able to evaluate coastal bycatch risk. The potential for bycatch has previously been

raised at D&S IFCA Byelaw and Permitting Sub-Committee meetings but data have not been forthcoming regarding bycatch rates in Devon waters. As mentioned above, D&S IFCA has a Netting Permit Condition in place which specifies the required depth at which a net should be set in specific coastal waters, with a view to allowing passage of migratory fish in surface waters above the 3m-deep headline of the net. In addition, netting is prohibited in all Devon estuaries. Understanding the risk is an important first step before deciding on actions to take to mitigate risk. eDNA data collection from scientific and commercial pelagic fisheries may help improve detection of salmon and improve knowledge of their migratory pathways/bycatch risk.

3. Birds

D&S IFCA has reviewed the pages relating to Birds, with particular attention to estuarine birds and cliff-nesting birds.

On the cliff-nesting birds page there is a section about Fishing. This includes the following text: *“Fishing can reduce availability of small fish such as sand eels which are already under pressure due to climate change. Reduced fish discards from fishing vessels can impact on scavenging species such as gulls.”* While these statements are true generally there are potential reasons to avoid including them in relation to Devon unless with significant caveats.

Regarding reductions in fish discards: this is generally a positive outcome in environmental terms and highlighting discard reductions here seems to imply that something should change in order to benefit scavenging species, which D&S IFCA would not encourage.

Regarding fishing reducing availability of sandeels: sandeels are ecologically important as prey for seabirds (e.g. puffins, kittiwakes), marine mammals, and larger fish. However, it is important to note that recent data (MMO sales notes for 2019 – 2024) show no landings into Devon ports or by D&S IFCA permit holders over that time period, indicating no commercial fishery exists in the immediate area. There is provision in D&S IFCA's management measures for small scale hand-hauled trawling (from vessels 7m or under) for sandeel for use as bait, but this provision is not thought to be widely used. There is a small seasonal inshore sandeel fishery around St Ives, Cornwall, and previous analysis suggests that across the broader Celtic and Irish Seas area (including the summer fishery around St Ives) there are only small landings from this large area (average 6.6 tonnes per year, 2016-2021).

It may be useful to note that, due to the reliance of this species on suitable sediment habitats, it is possible that a broad range of marine developments could impact the species (e.g. by disturbing spawning or nursery areas). D&S IFCA and the MMO are conducting assessments in relation to the Bristol Channel Approaches SAC which may shed light on this in future.

4. Intertidal invertebrates

The ‘Disturbance from Recreation’ section states that “*Foraging has become increasingly popular, but it remains unregulated and there is limited understanding of its ecological impact.*” However, it is not entirely unregulated; for example, public mussel beds in the Exe and Teign are currently closed to gathering to protect stocks, while minimum shellfish sizes apply on the Taw-Torridge and there are codes of conduct in place in some areas. Furthermore, ecological impacts have been assessed as part of MPA assessments to ensure that present levels do not prevent achievement of Conservation Objectives of designated sites.

Under the research and monitoring section, it could potentially be made clearer how the proposals correspond to known threats to the key habitats and species, or potentially to be more specific with what is to be funded and how, given limited resources. For example, there is an action to fund research into reef resilience, but it isn’t clear where this funding would come from, what kinds of reef are being considered, and what aspect of the environment/disturbance their resilience is being assessed against. Is this only intended for inclusion in the delivery plan?

5. Coastal Wildbelt

An action has been listed to ‘Control invasive species’ including “*Trial removal and eradication schemes for invasive non-native species such as Pacific oysters*”. Please see comments above regarding the value of removal/eradication schemes and the need to target resources according to feasibility of outcomes. Ecological impacts of removal methods should also be considered, particularly in relation to protected areas. D&S IFCA is seeking funding for a project to trial removal methods with a view to understanding the ecological impacts of the removal techniques and their scalability for effective application in Devon estuaries.

Under ‘Survey, research and awareness’ there is a specific action to “*Use advanced tools and technologies, such as remote sensing, drones and GIS, to improve the accuracy, efficiency and coverage of habitat assessments*”. To make best use of the outcomes, it would be very beneficial to have look into implementing a broad memorandum of understanding between all organisations collecting and using the data to enable efficient data sharing/pooling of resources to achieve more with less and ensure that the best use is made of the data. This could include collaboration on data collection protocols so that data can be collected once for multiple uses – this could reduce costs per organisation and minimise ecological risks at the same time. For example conducting a single drone survey of an area of an SPA, with data shared across organisations, would reduce aggregate survey costs, reduce overall administrative costs of conducting multiple protected area assessments (e.g. for research in SPAs that may disturb birds) and reducing bird exposure to disturbances.

Under the coastal wildbelt subpage on Organic Reefs, there is a section of text on Pacific oysters: “*The Pacific oyster is an invasive species with an aggressive growth rate that threatens native habitats. It can rapidly blanket coastal areas, outcompeting native species and changing the structure of these delicate ecosystems.*” There is a complex and changing evidence base around the various impacts of Pacific oysters on different ecosystems. In areas where native oysters have been reduced to a combination of disease and historic overfishing, Pacific oysters and other structure-creating organisms have been shown to increase diversity and in some habitats have been suggested to mimic the role that native oysters may have fulfilled in a pre-disturbance era (e.g. King et al., 2021; Hansen et al., 2023). Given these complexities it would be preferable to focus on the evidence and try to avoid the use of emotive language – for example there is nothing inherently *aggressive* about the growth rate of a Pacific oyster, which would be better described as fast or rapid etc.

6. Invasive Species

D&S IFCA has also reviewed aspects of the Invasive Species page which are relevant to its remit.

The Invasive Species page lists the Pacific oyster as a key concern. The introductory text for this species states that “*they may predate on native oyster larvae and outcompete them for food*”. D&S IFCA suggests that some rewording may be required here. Pacific oysters are passive filter feeders so it would be wrong to portray them as actively predated upon native oyster larvae – though they are likely to *consume* them in the course of filter feeding. D&S IFCA is also not aware of good evidence that food is limiting in, for example, the estuarine environments where these species and other filter feeders occur, so competition for food does not appear to be a significant concern.

It is also important for the information presented in the LNRS to adequately reflect the relative threats to native species. For example, although Pacific oysters (and native bivalve molluscs) are likely to consumer some native oyster larvae in areas where they coexist, it is well known that larval survival of bivalves is naturally very low, and it is important to consider impacts at other life stages. For example, *Bonamia ostreae* is a significant risk for later life stages, and different species of oyster drill feed on oyster spat and are a significant concern for populations of native oysters. The American (Atlantic) oyster drill is likely to be more of a concern in the populations in south and south east England than currently in the southwest, where other species including the slipper limpet and leathery sea squirt are also of concern. Native species also predate actively on native oyster where present, including the oyster drill/sting wrinkle (*Ocenebra erinaceus*), dog whelk (*Thais lapillus*), common whelk (*Buccinum undatum*), shore crab (*Carcinus maenas*) and spider crab (*Hias araneus*) (information available on [MARLIN oyster beds habitat webpage](#)).

The text also states, correctly, that “*There are currently no effective control methods for Pacific oysters*”. However, in the ‘Actions’ section the text states that “*Manually removing Pacific oysters from affected areas can help to reduce their numbers. This method is labour-intensive but can be effective in small, localised areas*”. This conflicts with the statement above and is not very well supported by the evidence.

Teixeira Alves *et al.* (2021) showed that control measures are unlikely to be 100% effective in removing all individuals of a wild population, do not offer a means of widespread eradication and need to be ongoing to maintain effectiveness. Their modelling demonstrates that even under a medium scenario of external recruitment (likely to be exceeded given extensive populations along the south coast) and *no local spawning*, eradication control would have to remove more than 50% of the population every year in order to have a chance of eradication within 5 years (Teixeira Alves *et al.*, 2021). External recruitment to areas such as the Dart and Devon Avon, from wild populations along the south coast, is likely to be high. Teixeira Alves *et al.* (2021) showed that while the density of populations subject to high levels of external larval recruitment can be reduced markedly through management, a reduction of 90% of the initial density can never be achieved, irrespective of the initial density, spawning frequency and management effort/frequency combination.

This needs to be understood in the context of the Natural England study on monitoring and eradication of Pacific oysters in the South West. This study demonstrated that volunteer ability to control Pacific oysters in the Dart was very low: Out of over 176,000 oysters culled in the South West between 2017–2020, fewer than 600 of these were from the Dart. By comparison, over 85,000 were removed from the Fal, 3,700 from Plymouth Sound and Estuaries SAC and over 5,000 from Salcombe-Kingsbridge Estuary. This appears to reflect the difficulty experienced in recruiting volunteers to work on the Dart. That being said, depending on the conditions of any future oyster farming opportunities on the Dart and Avon, the oyster farmers could have a role to play in population control by harvesting some wild stock where possible. Local oyster farmers have expressed significant interest in this, and have outlined that this can also be a profitable enterprise. This is therefore an important consideration when determining whether leases will be granted or extended. Without the presence of oyster farmers harvesting, maintaining and monitoring sites, the ability for the removal of wild stocks in the vicinity will be severely limited.

Many other reports have highlighted the challenges of controlling Pacific oyster spread in the UK and Europe. For example, King *et al.* (2021) states that management efforts are “*likely to be undermined by the widespread nature of large source populations and C. gigas’s extensive dispersal capacity*”, and that as management interventions “*are unlikely to prevent expansions, there may need to be a change in attitudes of managing C. gigas, away from that of traditional [Invasive Non-Native Species]*”. King *et al.* (2021) also note that “*In some countries (e.g. the Netherlands), acceptance of C. gigas as a “naturalized”*

species occurred decades ago, and there is increasing discussion on managing C. gigas expansion as a natural resource in countries where expansions have occurred more recently". They state that the perception of Pacific oyster as positive or negative will depend both on the priorities of ecosystem managers and on the potential impacts to vulnerable sites (e.g. the MPAs discussed above) (King et al., 2021).

Finally, as mentioned above, it is important that targeted actions are carried out in line with other policies in relation to this species. For example, an action is listed as "*Pacific oyster farms should follow strict biosecurity practices to ensure that they don't escape into the wild*". Aquaculture Production Businesses are already subject to biosecurity controls, and there is an opportunity here to align with Defra policy:

The Pacific oyster "*is currently considered to be **established in England south of latitude 52°N** and therefore, with current technology, cannot be prevented from establishing in, or be successfully or economically eradicated from, this area*". "*South of 52°N, authorisations for farms within 5km of MPAs will continue to be granted only after the regulator has considered the outcome of site based environmental impact assessments. These assessments will take into account the impact of Pacific oysters on the current condition of local MPAs. If Pacific oysters are likely to have an adverse impact on these sites, **Defra supports regulators to introduce mitigating authorisation conditions, such as triploidy or monitoring.***" D&S IFCA and the Fish Health Inspectorate have worked with Natural England on site assessments which show **no risk from Pacific oyster farming** to the achievement of the Conservation Objectives.

It is also worth noting here that although local escapees may be a concern in some areas, particularly those where lack of water exchange leads to retention of larvae in close proximity to farm sites, generally the evidence suggests that supply of larvae from wild stocks is likely to vastly outweigh larval supply from farmed stocks, and that external recruitment is a dominant source of local settlement.

The 'Find Out More' section on invasive species has links to more information including on research into Pacific oyster. These links are useful, and D&S FCA may be able to provide further resources for this section, summarising the latest scientific evidence regarding Pacific oysters, their spread and ecological effects.

7. Intertidal fishing practices

D&S IFCA has provided some comments above on intertidal fishing practices. Overall there is a tendency for the language on the LNRS website to give the impression that intertidal fishing is inherently damaging and should be minimised, whereas there may be more scope for recognising it as a legitimate activity that can be carried out sustainably. Clearly it is difficult to outline all of the evidence for these perspectives in the small space available, which makes balance more difficult to achieve.

8. Information on D&S IFCA be added to the LNRS web mapping tool

Pop-up information would complement the LNRS web mapping layer showing D&S IFCA's District. Example text is below:

Devon & Severn Inshore Fisheries and Conservation Authority (D&S IFCA) is responsible for managing sustainable inshore fisheries and protecting the marine environment within its District. Its work ensures that fishing activity is balanced with the conservation of important habitats and species. Anyone wishing to fish commercially or recreationally in the District may require a permit, and should contact [D&S IFCA](#) for details on permits, current regulations and exemptions for other activities such as fishing for scientific purposes.

References

Hansen, B. W., Dolmer, P., and Vismann, B. 2023. Too late for regulatory management on Pacific oysters in European coastal waters? *Journal of Sea Research*, 191: 102331.

King, N. G., Wilmes, S. B., Smyth, D., Tinker, J., Robins, P. E., Thorpe, J., Jones, L., *et al.* 2021. Climate change accelerates range expansion of the invasive non-native species, the Pacific oyster, *Crassostrea gigas*. *ICES Journal of Marine Science*, 78: 70–81.

Teixeira Alves, M., Taylor, N. G. H., and Tidbury, H. J. 2021. Understanding drivers of wild oyster population persistence. *Scientific Reports*, 11: 7837. Nature Publishing Group.