



Detailed Evidence to Support Open Seas position

Scallops

- **Stocks** - Assessments undertaken by Marine Scotland Science indicate the East Coast, North East and Shetland stock sizes are declining. Elsewhere stocks appear to have recently stabilised (though, due to data paucity, it's unclear whether this is at a depleted level), but there are currently insufficient samples from Clyde, Irish Sea and Orkney to assess stock size. Furthermore, there is no limit in the amount of scallops which can be caught, or in the amount of effort which can be spent dredging, ie no real harvest control rules. There is also no MSY level set, and the areas used to determine stocks are not based on any scientifically or biologically meaningful range. [Marine Scotland Science advice](#), to limit or reduce effort, is currently overlooked. **We would expect that the FIP commits to establishing comprehensive stock assessments, throughout the scallop fisheries, establishes meaningful stock boundaries and catch limits, and effective management measures to limit both effort and catch when needed.**
- **Bycatch (“primary” and “secondary” species)** - Bycatch in dredge fisheries includes significant volumes of crab, monkfish, starfish, horse mussel and anemone. Because of the way dredges are built, around three quarters of all species encountered by dredge gear remain on the seabed damaged or dead. More investigation of the species and the mortality caused by dredges is needed. We are particularly concerned about the levels of damage caused to threatened species such as common skate, commercial species such as crabs, and sedentary species like horse mussel and ocean quahog. **We would expect the FIP enhances understanding of the non-target species killed in dredges, including those which remain on the seafloor, and mitigates rates of non-target mortality (via improved spatial management and other measures).**
- **Endangered, Threatened and Protected (ETP) Species** - Scotland adopted a list of Priority Marine Features in 2014. These are a central part of Scottish Government's [Marine Nature Conservation Strategy](#) (published in 2014) and should be protected from all damaging uses of the marine environment (including fishing) under Section 4.56, General Policy 9 and Fishing Policy 6 of the [Scottish National Marine Plan](#). MSC criteria state “The team shall define ETP (endangered, threatened or protected) species as follows... a) Species that are recognised by national ETP legislation...” Some of these will not interact with dredges at all, such as orca, others, such as common skate or horse mussels, may and should be assessed and protected. Although not very user friendly, the Scottish Government's [FEAST Tool](#) provides an overview of what features interact with dredges. **We would expect that the FIP seeks to understand dredge interactions with all Scottish Priority Marine Features and mitigates dredging impacts on those encountered.**

- Habitats** - We remain deeply concerned about the impact of dredging on habitats throughout Scotland's seas. The map at bottom of page indicates the 2017 dredge footprint for >12m boats: it shows an overlap with a range of habitats, from deep sands to reefs, including flame shell beds (akin to those in Loch Carron) and maerl (a coral like habitat important for many species). Many of the sensitive habitats have been denuded to only a fraction of their historical (and natural) extent. Unfortunately, even the remnant areas remain at risk given that many of the known records of these habitats exist outside protected areas, and because even MPAs are not all properly protected. A map showing the comparison between historic and current extent of one PMF can be seen [here](#). The network of MPAs remains partial and protection has only been established in [24 inshore MPA and SAC](#). The remaining 17 inshore sites, and all offshore MPAs remain without protection from scallop dredging (and bottom-trawling), despite now long-standing advice from Government's statutory scientific advisors. **We expect that the FIP develops an approach to manage the fishery's footprint, avoiding areas where damage is not sustainable. We would expect historical extent of habitats is considered. 17 of 41 inshore MPAs and all offshore MPAs are currently without any management, scallop dredge restrictions cover less than 5% of Scotland's inshore sea.**
- Ecosystem** - The impact of dredging is sufficiently damaging that it leaves the underlying ecosystem damaged and altered. Research in closed areas, including in the Clyde, indicate that un-impacted seabed habitats hold richer ecosystems, including with [higher abundances of juvenile cod and whiting](#) than in impacted areas. Similar effects are expected in [herring spawning grounds](#), and in 2018 we documented damage to the only recorded active herring spawning ground in the West of Scotland. **We would expect that the FIP seeks to better understand the impact of dredging on the nursery and spawning grounds of keystone species, and develops an approach to minimise disruption (e.g. again, through managing the fishery's footprint).**
- Consultation, roles and responsibilities & Decision making process** - To the best of our knowledge, the management system in place relies on a combination of the Regional Inshore Fisheries Groups and Marine Scotland. Marine Scotland have appointed contractors to investigate options for management of dredging on at least two occasions ([here](#) and [here](#)), on neither occasion have they implemented (fully) the recommendations of that work. Our work and discussion with various inshore fishers indicates that the Regional Inshore Fisheries Groups remain poorly representative of the fleet as a whole, meet infrequently and often in locations far from fisheries in question, and are currently limiting options for progress. This is in part due to under-resourcing and low-levels of engagement and lack of statutory and decision-making powers. **We expect the FIP to flag this issue and develop properly representative decision making processes. Furthermore, we expect the FIP itself to ensure engagement from relevant stakeholders, including the Scottish Scallop Divers Association.**
- Compliance and Enforcement** - There have been [11 reports of illegal activity](#) by scallop dredging vessels in MPAs and other restricted areas in 2018. Between May 2015 (when MPA management was first established) and May 2017 (when we

last asked) there had been [101 reports of illegal fishing](#) inside MPAs. We have evidence that indicates vessels >12m with VMS are implicated in suspected infringements alongside those smaller than 12m. VMS devices are only fitted to a subset of the scallop fleet ([25% of the fleet are not](#)) and are generally considered insufficient to monitor compliance and enforcement in any case. 51 of Scottish scallop dredge vessels are >15m in length but appear to regularly be operating without AIS devices operational, this is a breach of [EU Control Regulations](#). **We expect the FIP to require that high resolution VMS (potentially with Remote Electronic Monitoring cameras and winch sensors) are active on all vessels in the fishery as a matter of urgency. We expect the FIP flags that vessels larger than 15m are already obligated to operate AIS devices, but frequently switch them off outside of port.**

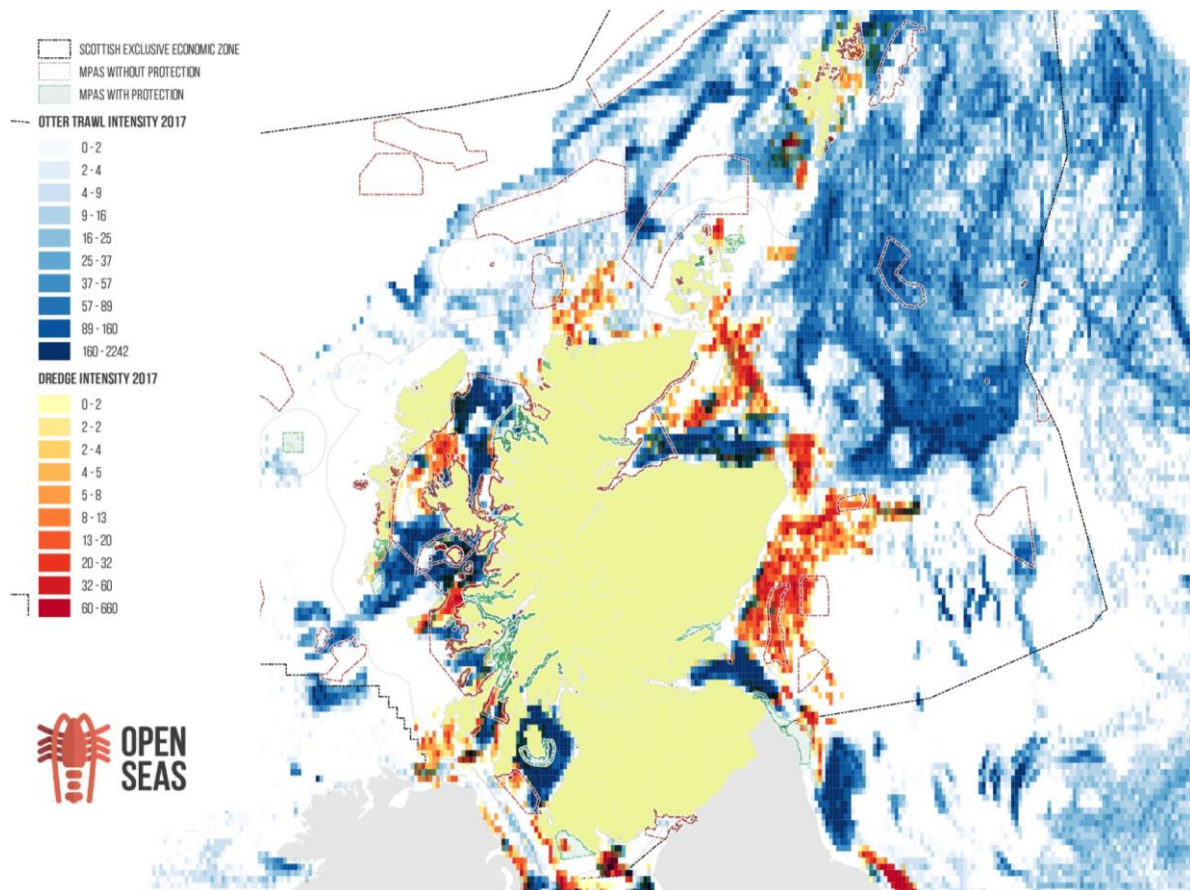
Nephrops

- **Stocks** - Nephrops stocks are well studied and ICES provides annual stock assessments alongside MSY limits, etc. The advice given by ICES follows the delineation of the biological stocks, whereas unfortunately the management approach taken by UK and Scottish Government follows political boundaries. There is therefore a disjoint in the fishing limits established for the fishery, and the amount the stock can sustain, which risks over-exploitation and unsustainability. Furthermore, although catch levels have been roughly in line with ICES advice and SSB is high in many stocks, we do see advised harvest rates apparently being overlooked and exceeded in some areas, for example [Clyde and Jura in 2017](#). **We expect the FIP requires that best scientific advice is followed and that the misalignment of quota and stocks is resolved.**
- **Bycatch (“primary” and “secondary” species)** - Bycatch issues are significant in the trawl fishery. Recent and robust evidence regarding bycatch quantities is not easily found. However, estimates that are available indicate [significant proportions of whiting, cod and haddock in catches](#), often including large quantities of juvenile fish. These vary in quantity and age depending on where the fishing is taking place. [ICES have routinely raised concern](#) regarding the impact of these catches on those species and stocks, including for west of Scotland cod and whiting, which are so depleted that the advice is for no catch. [Recent research](#) has concluded that whiting will not recover unless this bycatch is reduced. Gear adaptations have reduced the severity of some issues, but have not mitigated the issue to the point where [concerns from ICES and others no longer exist](#). Conversely, creeling has fewer bycatch issues given the mouth of the creel pot is smaller than lobster and crab pots, and few non-target species can enter creel pots. However, issues exist regarding cetacean entanglement in the creel lines are a major concern and are not fully understood. **We expect the FIP rapidly establishes robust and accurate estimates of bycatch rates in the trawl fishery across each Functional Unit, and recommends actions including the avoidance of identified bycatch ‘hotspots’. We also expect the FIP aims to understand the prevalence of entanglements in the creel fishery and requires that creel vessels follow the [cetacean entanglement best practice](#).**

- **Endangered, Threatened and Protected (ETP) Species - As with scallops, we expect that the FIP will take proper account of the Scottish Priority Marine Features (PMF).** As discussed below, the habitat which holds Nephrops is itself a PMF. This does not necessarily mean that fishing in the habitat is inconsistent with ETP protection, but does mean that a degree of care is needed to ensure that, where fishing is taking place, it is not causing serious damage to the PMFs.
- **Habitats - Nephrops live in burrowed mud, which is itself a habitat-class PMF.** Creeling has a small footprint in that habitat, but can flatten some of the PMF species it holds such as fragile tall sea pens. Trawling can have a much more severe impact, including disrupting the structure and function of the habitat more generally. Importantly trawl fishery impacts on the habitats fan mussel aggregations, northern sea fan and sponge communities and horse mussel beds must also be properly understood and, given their importance and vulnerability, mitigated. As with dredging, MPAs exist and have been developed in part to protect this and other habitats. However, of the 41 inshore MPA and SAC, 16 are still without protection as are all offshore sites. **We would expect the FIP develops an approach to spatially manage and limit the footprint of trawling on muds, and specifically avoiding sensitive habitats such as horse mussel beds, sea fan and sponge communities, etc. Noting that the MSC cod certificate agreed voluntary closures to protect this habitat but were [breached 379 times in one year](#), we would expect voluntary measures are not relied upon.**
- **Ecosystem -** Due to the extensive bycatch, including of juvenile fish, the trawl fishery is significantly impacting the structure of the marine ecosystem. [Studies on the impact of trawling in previously unfished areas](#) shows significant structural changes lasting more than 18 months. [Others have also found that the structure](#) of bycaught species' populations (cod, haddock, whiting) have also changed due to Nephrops trawl. **Extensive evidence indicates Nephrops trawling has altered ecosystems, we expect that this is investigated and measures to protect natural processes and maintain ecosystem function are developed.**
- **Consultation, roles and responsibilities & Decision making process -** As in the case of scallops, we are concerned that the decision making processes here are not supporting sustainability improvements. Open Seas is involved in a project with the North West Responsible Fishermen's Association, a group aiming to trial the segregation of creel and trawl fishing for Nephrops in the Inner Sound. We have been surprised that historically RIFGs have blocked progress to a similar proposal. Further to our concerns (noted above about the resourcing of RIFGs) the lack of constituted scientific and NGO membership in Regional Inshore Fishing groups is of concern when compared to decision-making processes in English IFCA's. **We expect the FIP to flag this issue and develop properly representative decision making processes.**
- **Compliance and Enforcement -** Unfortunately we have also learned of illegal trawling activity inside MPAs. In light of the fact that species known to be bycaught by this fishery are not being landed to its key ports, we are extremely concerned that illegal discarding is taking place. [FOIs indicate that](#), of the 101

reported illegal fishing events inside MPAs between May 2015 and 2018, 18 relate to illegal trawling. **We expect compliance and enforcement issues related to illegal fishing inside MPAs and continued discarding, despite the Landings Obligation, are addressed. We expect vessel that high resolution VMS (potentially with Remote Electronic Monitoring cameras and winch sensors) are active on all vessels in the fishery as a matter of urgency.**

Beyond these sustainability concerns, we remain concerned regarding the socio-economic impacts of these fisheries. We note in particular that non-RFS certified scallop dredge vessels are still ranked critical in the [Seafood Slavery Risk Tool](#). We believe that the seas and their resources are a public resource and should be used to deliver the best public benefit. We would welcome any improvements to this concerning issue which may be delivered through the FIP process.



Extent of >12m trawl and dredge vessel footprints, alongside MPAs. Extent of creel unknown due to majority of fleet being <12m. Data from OSPAR.