Informal Consultation
Sustainable Nearshore Trawling Management in Sussex:

Proposed Regulation options

Summary

Trawling is a recognised and important element of the Sussex Fisheries. However, it is also recognised that bottom towed gears of some trawling operations can damage the marine environment in specific areas. This damage can prevent key habitats from providing key ecosystem services. These ecosystem services include the provision of functional habitats for breeding fish and as nursery grounds for their juveniles, giving food and shelter.

The Sussex Inshore Fisheries and Conservation Authority (IFCA) is currently reviewing its present management of nearshore trawl fisheries. This is an informal consultation document intended to gather views from the fishing community and other stakeholders on the future management of nearshore trawling within the Sussex IFCA District. Sussex IFCA is proposing to review the existing mobile gear byelaw and manage nearshore trawling fisheries on a zonal basis. We have divided up the District into five zones according to their geographical nature. The proposed management will be to exclude trawling fishing activity from nearshore areas in order to protect valuable sensitive habitats. The exclusion boundaries will be decided for each zone to reflect the habitat distribution and needs of the fisheries that utilise those habitats.

The document tries to balance the amount of information needed to understand the process whilst not providing an excessive detail for readers. The content briefly describes the Authority's management review process, and specific objectives and issues in respect to nearshore trawling management. Subsequently, management options have been identified that can address existing issues.

Questions have been provided to support the response process and help fully develop management options. These questions are particularly important to the Authority in reviewing existing management and developing further detail for any following formal Byelaw consultation processes. The questions are highlighted in section 2 of the document and include spaces to write information. If possible please try to answer the questions, space has been left for further comments if you have additional points. If you're not using the questionnaire sheet please try to reference your answers to the relevant question number.

All responses are treated as confidential, any information provided will be compiled and only reported upon once anonymised. Information will only be used for the purposes of the current IFCA management review process.

Please respond to the consultation by the 30th June.

1 Introduction

1.1 Background on the fishery

Trawling is an important element of the Sussex Inshore fishery. The Sussex IFCA District trawler fleet tends to fall in to four distinct categories:

- The less than 14m length overall (LOA) beam trawler, utilising twin 4.5m beam trawls or a single beam trawl of an overall length that is less than 9m.
- The less than 14m LOA demersal otter trawler, utilising a rock hopper ground rope rig and steel otter boards.
- The less than 14m LOA single, twin or triple trawlers, utilising one or more trawls simultaneously. They use a smaller circumference ground rope and steel or traditional wooden otter boards.
- The less than 14m LOA demersal pair trawlers also utilising a large diameter rubber rock hopper ground rope.

The beam trawler: These vessels commonly utilise a chain matrix with additional tickler chains in the beam trawl rig and wheels or fixed flat plate shoes at the ends of the beam. This rig allows the vessel to operate on mixed and varied seabed types. These vessels target the traditional demersal flat fish species such as sole and plaice and also including Cuttlefish, with a small bycatch of demersal round fish.

The rock hopper otter trawler: These vessels utilise the rock hopper style ground rope. This ground rope consists of large rubber discs which are circa 400mm<>600mm in diameter coupled with steel otter boards that allow the vessel to operate on mixed seabed types including harder and rockier areas. The headline height from the seabed of theses trawls also enable semi pelagic species to be targeted in addition to Cuttlefish, Squid and more traditional demersal flat fish and round fish.

The single, twin or triple rig otter trawler: These vessels utilise a smaller diameter ground rope circa 100mm<>200mm rubber discs with steel or traditional wooden otter boards. The seabed types where these vessels operate tend to be more sandy, fine shingle and a softer seabed. These trawls have significantly less headline height from the seabed than their rock hopper counterparts and primarily target traditional demersal flat fish and round fish species also including Cuttlefish.

The pair trawlers: These vessels also utilises the rock hopper ground rope fitted with large rubber discs circa 400mm<>600mm in diameter. Towed between two vessels of similar capacity the pair trawl can be operated on mixed seabed types including harder and rockier areas. These vessels target primarily black seabream and bass (bass are now a bycatch species only as a result of recent European protection regulations). The headline height from the seabed of theses trawls also enable pelagic species to be retained in the trawl as a target species or bycatch.

The home ports from which trawlers operate in Sussex are Shoreham (circa three vessels), Newhaven (circa four to six vessels), Hastings (circa five vessels) and Rye (circa eleven vessels).

Maps created from Sussex IFCA sightings data, which is collected every time the Fisheries Patrol Vessel Watchful is out on patrol in the district, show that trawling occurs across the whole district. The frequency of sightings varies between areas. Figure 1 overlays the points at which vessels were sighted trawling, with the habitat type.

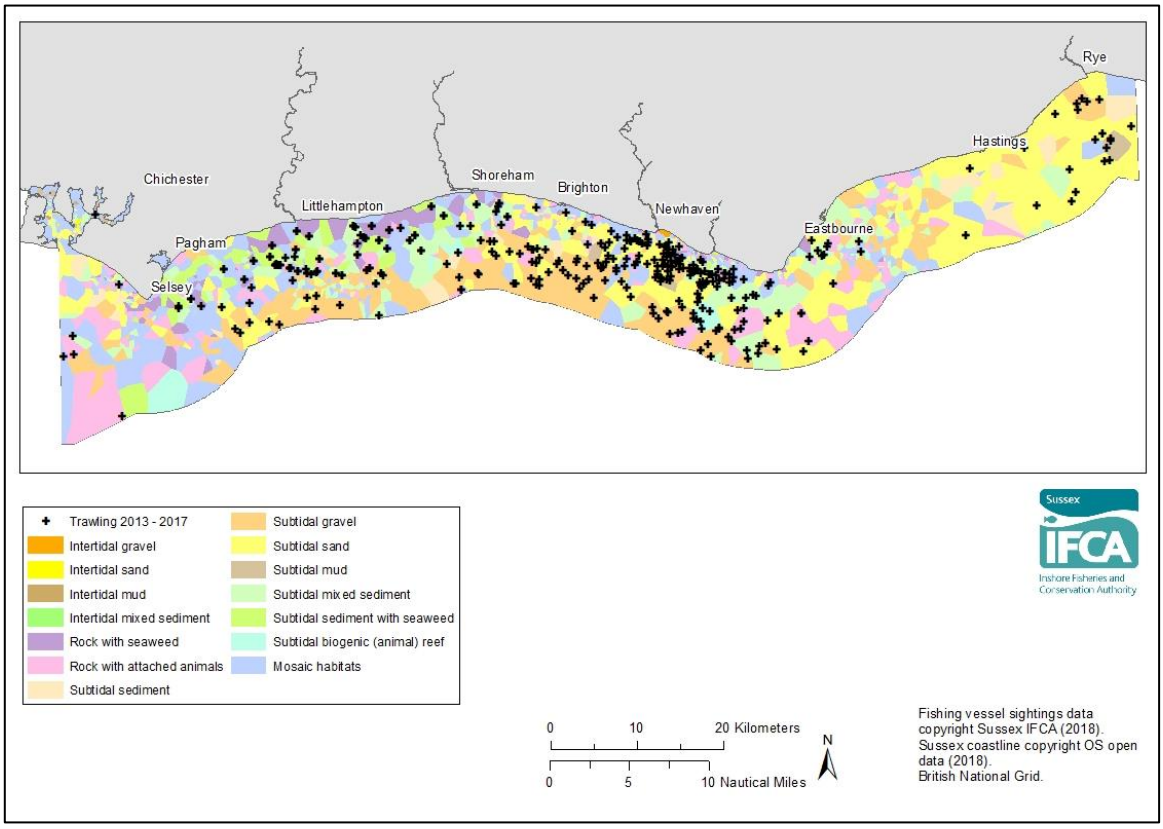

Figure 1, Sightings data for towed gear, overlaid on habitat type, within the Sussex IFCA district, data from 2013 to 2017.

The Marine Management Organisation collects landings data for the Sussex ports. The data for trawler landings is summarised below. It should be noted that this information contains data from vessels that have caught fish outside the District but have landed it within a District port.

From 2012 to 2016 Otter trawls (all types) have accounted for over half of the landings by weight (55%), with beam trawling making up 34%, followed by pair trawls (9%). The annual average live weight landed was 1116 tonnes. The greatest species live weight was for plaice which accounted for 29% of the total catch percentage for towed gear, followed by sole (15%), lesser spotted dogfish & black seabream (both 7%), lemon sole (4%), and cuttlefish (3.7%).

In 2016 there were 53 distinct vessels which landed seafood caught with towed gears, with an average live weight of 4 tonnes per vessel. The most landed by a single vessel was 170 tonnes. Not all these vessels have home ports in Sussex.

Shoreham was the port with most landings from trawling, by weight (43%) and value (45%), followed by Newhaven (weight 27% and value 22%) and Rye by weight (20%) and value (21%).

The total value of seafood caught by beam trawl was highest of the different mobile gear types for catch landed in Sussex ports. Otter trawls accounted for the second highest landings value within the district, but the highest sum live weight in tonnes.

When it comes to marine habitats the chalk coasts of the South East are very different from the harder rock coastlines of western and northern Britain. The chalk seabed can continue below the low water mark, and the largest areas of these underwater chalk seascapes are found in Kent and Sussex. These areas also contain sandstone and claystone reefs. The wave cut platforms, with their gully features, are exemplified in Beachy Head West Marine Conservation Zone (MCZ). The fauna tends to be dominated by burrowing piddock shells, sponges and worms. Short snouted seahorse, blue mussels, oyster, edible crabs and velvet swimming crabs are also be found in these chalk seascapes.

Underwater habitats of chalk are rare in Europe, with those occurring on the southern and eastern coasts of England accounting for the greatest proportion. This is a UK Biodiversity Action Plan (BAP) Priority Habitat (BAP habitats are now Habitats of Principal Importance/Priority Habitats). Chalk reefs are listed in Annex 1 of the Habitats Directive. Sussex is the only location on the British Isles where chalk strata appear as offshore linear 'cliffs' (i.e. vertical faces between 1-4 m in height). These exposures are therefore of regional, if not national, importance, more as an unusual feature rather than on account of the marine communities they possess. Other sublittoral chalk cliff exposures off Sussex include the Worthing Lumps Marine Site of Nature Conservation Importance (mSNCI), South-West Rocks (mSNCI) and Looe Gate (mSNCI).

1.2 Sussex IFCA's Duties and Obligations

The Authority's key duties, obligations and internal policies in respect to introducing appropriate nearshore trawling management are summarised as follows:

- Marine and Coastal Access Act 2009 (MaCAA 2009) Section.153 to manage the exploitation of fish stocks within the Authority's jurisdiction to ensure sustainable commercial and recreational fisheries and continued social-economic benefits from the fisheries.
- Conserving stocks through management of inshore nursery area helps protect a wide range of commercial and non-commercial fish stocks and can help increase local fish stocks.
- Preventing or removing any trawling pressures would reduce the potential for damage to designated Marine Protected Area features and contribute toward Authority S.153 & s.154 duties within the Marine and Coastal Access Act 2009.
- Helping to achieve the broad scale objectives of the EU Marine Strategy Framework Directive intended to ensure a sustainable marine environment (meeting descriptors 1 Biodiversity, 3 Commercial Fish Stocks and 4 Food Web).

1.3 Nearshore Trawling within IFCA Review of Management

In 2013 the Authority established its current approach to reviewing its existing management measures. As part of the process the Authority conducted a comprehensive public consultation exercise. The resulting strategy identifies future priorities and objectives. The five core strategic priorities and objectives are as follows:

- Implement measures to manage the statutory marine protected area network in Sussex
- Apply appropriate minimum sizes to fish and shellfish
- Manage effort on key stocks (including gear identification) and establish objectives to manage shellfish
- Effectively manage fishing close inshore
- Reduce unwanted bycatch

In turn, these objectives were prioritised into work packages with common themes encompassed within a strategic review of management measures. Existing Byelaws that fit within these themes are reviewed in context of latest evidence, economic value, duties and community expectations.

The common themes agreed were:

1. Marine Protected Area management
2. Shellfish
3. Netting (static and mobile)
4. **Trawling**

5. Bit digging/hand gathering

The Authority has significantly progressed Themes 1 & 2 and is now focussing upon themes 3 & 4. This document relates to theme 4, Trawling.

1.4 The Sustainability Issues Under Consideration

Fishing gear can impact significantly upon marine habitats. For example, reefs can be severely damaged if heavy gear is towed across them. Bottom towed fishing gear can cause the mortality of non-target species through direct physical damage inflicted by the passage of the trawl or indirectly through immediate non-lethal damage to the individual, and consequent mortality through exposure and predation. Decreases in species biomass, species richness, production, diversity and alterations to species composition and community structure may lead to long-term changes in the benthic community structure. Overall reductions in benthic productivity have been reported in areas where intense bottom trawling takes place.

Studies of areas of the seabed that have experienced different levels of fishing activity demonstrate that continued fishing disturbance leads to the removal of high-biomass species. Following basic ecological theory and contrary to the belief of fishers that fishing enhances seabed production and generates food for target fish species, productivity is actually lowered as fishing intensity increases and high-biomass species are removed from the benthic habitat. These organisms also increase the complexity of the seabed which has been shown to provide shelter for juvenile fishes, reducing their vulnerability to predation. Disturbance from repeated trawling incidences can select for certain species, with communities becoming dominated by smaller-bodied infaunal species with fast life histories, juvenile stages, mobile species and rapid colonists.

There are various different seabed habitats in Sussex inshore waters and this high level of diversity is in itself a feature. Inshore, there is a mix of rocky reef, bedrock and mobile sediment. In some areas there are patches of seaweed dominated sediment and ephemeral mussel beds. Offshore there is coarse sediment. In the east of the district there is more sand. Different habitats provide different ecosystem services and are variable in their sensitivity to abrasion from fishing gear. Particularly sensitive or valuable areas should be protected from damaging activities.

The habitat map below is currently our best understanding of the habitats in Sussex coastal waters. It is based on over 2500 data points from video, grab and dive surveys analysed in a Sussex IFCA project. The polygons have been drawn with their boundaries equidistant between neighbouring data points.

The amount of ecosystem services provided by each habitat has been assessed by taking data from peer-reviewed studies as part of a Sussex IFCA sponsored Master of Science Project. These services included: food provision, raw materials, climate regulation, natural hazard prevention, primary production, nutrient cycling, nursery function, biodiversity, water quality, cognitive value, recreation and feel good factors. No habitat provided ecosystem services at a very low level. There was generally higher service provision in the west of the District. Intertidal sediment and rock with attached seaweeds provided the most services at the highest level.

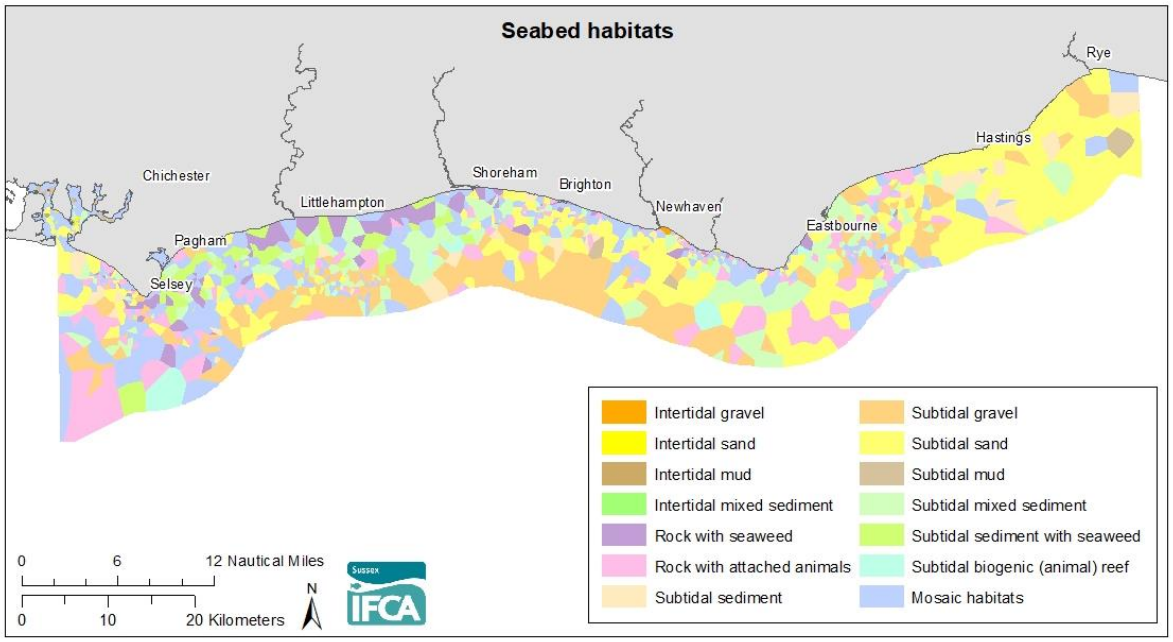

Figure 2, Habitat map of Sussex District from the SCHIP2 project.

The sensitivity of each habitat has been assessed by researching the key species and their resistance to abrasion and how quickly they could recover from damage. Generally, the species were fairly easily damaged but the population could recover quickly. No habitat had very high sensitivity. Rock with attached animals or seaweeds were the most sensitive habitats.

The diversity, ecosystem services provision and sensitivity of each habitat can be combined to calculate environmental score. This is highest where there is high diversity, high level of ecosystem services provision and the habitats are highly sensitive. Environmental score is highest in the west of the District. No habitat is classed as having a very low environmental score.

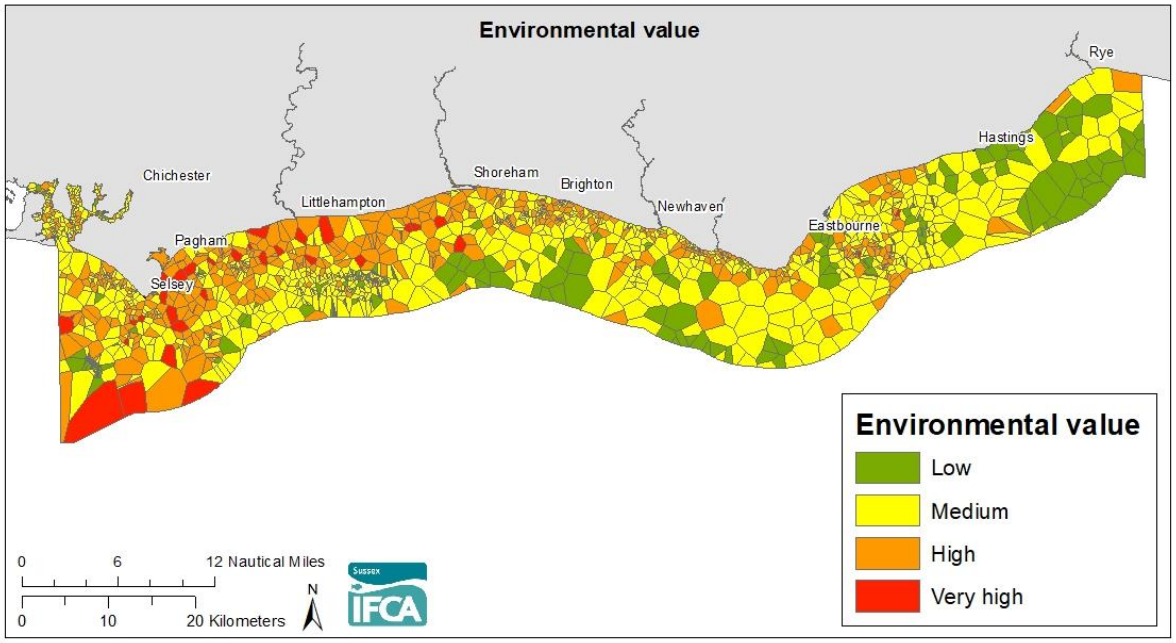

Figure 3, Environmental Value Scores of Sussex District habitat map based on the sum of the ecosystem services provision, diversity and sensitivity scores. Where 1.1 – 2.0 = low, 2.1 – 3.0 = medium, 3.1 – 4.0 = high and 4.1 – 5.0 = very high.

These environmental score parameters have been assessed to understand how they vary across the District with distance from the coast and within potential management zones. The District has been divided into the following zones;

Zone number	Zone description
1	Chichester Harbour to Selsey
2	Selsey to Brighton marina
3	Brighton marina to Beachy Head
4	Beachy Head to Hastings
5	Hastings to Rye

At all distances, there is higher environmental score closer to the coast compared to further offshore. The highest average environmental score is within 3km (2.87). The greatest difference between inshore and offshore is at the 5km distance (0.63). The highest average ecosystem services provision is within 0.5km (3.40) but this distance is least for all the other parameters. Sensitivity is highest within 3km (2.58) as is diversity (2.81) jointly with the 5km distance.

When assessing the zones, zone 3 (Brighton marina to Beachy Head) had the highest average environmental score (2.76) but when just the 1km coastal strip was assessed, zone 2 (Selsey to Brighton marina) had a higher environmental score (3.02). When assessing the whole zone, zone 3 also had the highest ecosystem services provision (2.95), sensitivity (2.54) and diversity (2.80). However, when just the inshore 1km was assessed, zone 1 (Chichester Harbour to Selsey) had the highest ecosystem services provision (3.48), zone 2 had the highest sensitivity (2.75) and zone 4 (Beachy Head to Hastings) had the highest diversity (3.35).

In Summary the key points are:

- Rock with attached animals and seaweeds are the most sensitive habitats and provide the most ecosystem services.
- Environmental score was highest south of Selsey and inshore from Selsey to Brighton.
- Looking at environmental score within 0.5, 1, 2, 3, 4 and 5km of the coast, environmental score was higher inshore compared to offshore at all distances.
- The highest average environmental score was within 3km (compared to the other distances).
- Potential management zone 3 (Brighton marina to Beachy Head) had the highest environmental score.
- However, when assessing just the inshore 1km strip, zone 2 (Selsey to Brighton marina) had a higher environmental score.

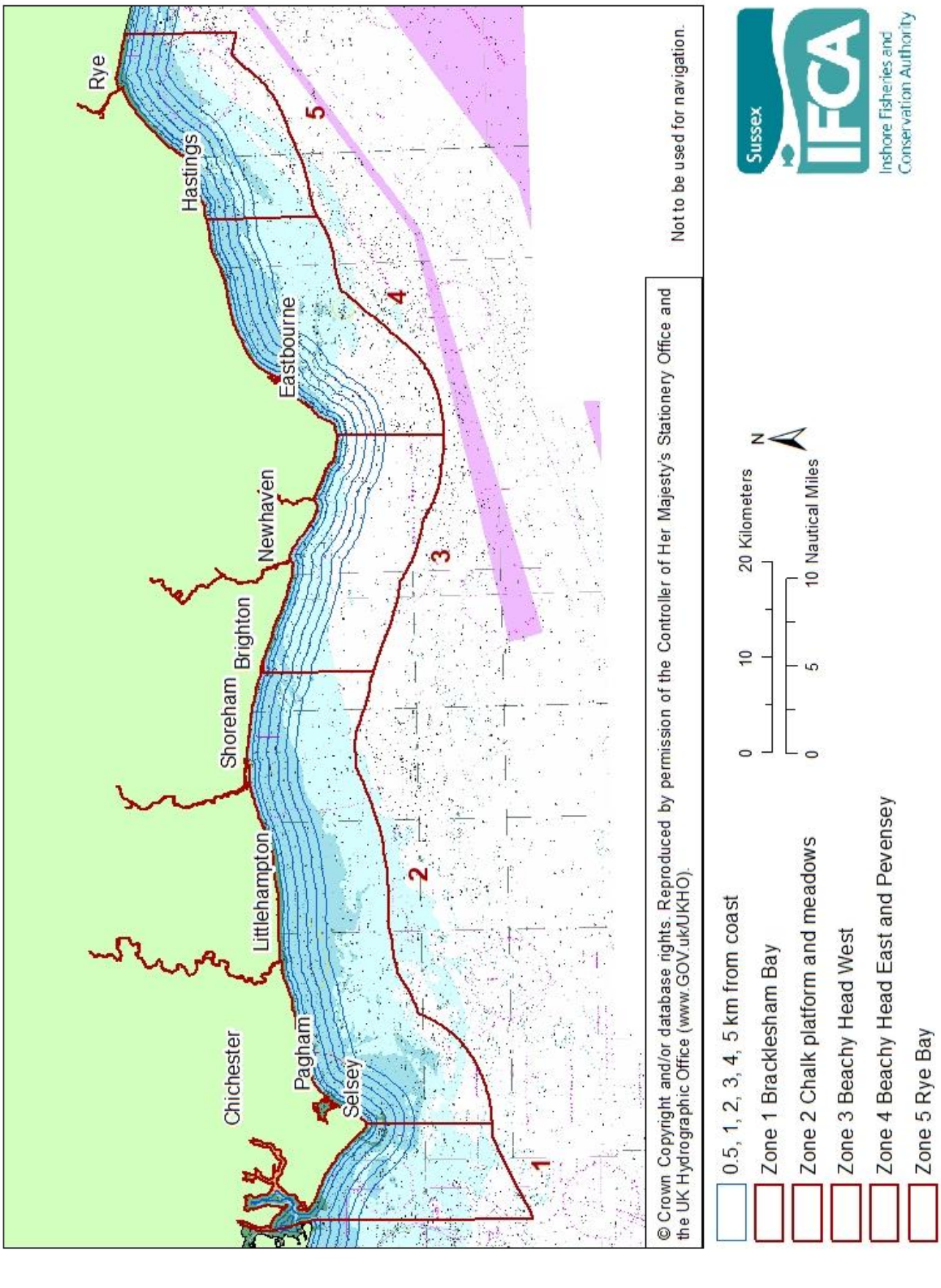

Figure 4, Potential management zones and distances from shore.

Currently, only the proportion of valuable sensitive habitats that fall within designated Marine Protected Areas are managed for the impacts of trawl fisheries, together with a limited protection of some nearshore areas of the District out to quarter of a nautical mile. The proposed management within this consultation aims to protect other areas of valuable sensitive habitats. This proposed protection will allow the natural capital of valuable sensitive sites to reach its full potential, and so deliver ecosystem services for, e.g. commercial and recreational fisheries.

1.5 Rationale for Intervention

Bottom towed gears of some trawling operations can damage the marine environment in specific areas. This damage can prevent key habitats from providing key ecosystem services. These ecosystem services include the provision of functional habitats for breeding fish and as nursery grounds for their juveniles, giving food and shelter. These impacts are felt across fisheries.

1.6 Policy Objectives and Intended Effects

The objective of the proposed management is to update the existing Sussex District Byelaws in line with the duties of the IFCA under MaCAA. Namely section 153 of MaCAA which includes duties to ensure sustainable exploitation by marine fisheries, balance the social and economic needs of fisheries exploitation with environmental protection and to balance the different needs of persons engaged in the exploitation of sea fisheries resources. Specifically the objectives are to protect sensitive habitats and the fish that utilise them for breeding and nursery ground life stages, and to balance the exploitation of resources by commercial netting fisheries, mobile gear (trawl) fisheries and recreational sea anglers.

Benefits will come from the protection and enhancement of natural capital in the nearshore zones, including chalk reef habitats and seaweed communities. Specific benefits will include predicted increases in biodiversity and ecosystem services such as breeding success of exploited fish species. Exploited fisheries will include those catching adult fish which utilise protected areas as breeding and nursery grounds, recreational sea anglers, commercial charter operators and static gear operators. These natural capital assets will benefit non fisheries business such as those supporting recreational scuba diving.

1.7 Other Relevant Policies

There are a number of other policies currently being considered or implemented that are relevant to introducing the proposed regulation which will need to be taken into account. However, we don't expect these to have any implications for this proposed regulation. The Sussex IFCA currently has three byelaws in relation to trawling.

- The Fishing Instruments byelaw includes a provision for trawls fishing for demersal, pelagic and shellfish species. Codend restrictions apply to pair trawls. There is are quarter nautical mile exclusion zones in some areas between May and October.
- The Chichester Harbour European Marine Site (Specified Areas) Prohibition of Fishing Method Byelaw prohibits trawling in the sea grass beds of Chichester Harbour Special Protected Area.

- The Marine Protected Area Byelaw, Kingmere Schedule, prohibits trawling in the sensitive habitat and black seabream breeding zones of the this MCZ. This includes a total prohibition from the site during the black seabream breeding season from April to June.
- The Marine Protected Area Byelaw, Beachy Head West Schedule, prohibits trawling in the entire MCZ.
- The proposed Marine Conservation Zones in the Tranche 3 designation round include Beachy Head East and Selsey Bill & The Hounds. These will be considered for management once their specific designation consultation process is confirmed.

2. Proposed Management Options

The proposed management options for this consultation are given below together with questions to help inform the consultation. We would welcome your feedback on the comments and options. Questions are presented to help frame your feedback. Proposed options are presented in the boxes.

2.1 Zonal Management

We are proposing to divide the District up into five zones, as illustrated in Figure 4. These zones reflect the different geography of the seabed along the Sussex coast and, as such, the differing needs of fisheries and environment along our coast.

Q1: Do the five zones reflect the differing geography, environments and fisheries patterns?

2.2 Impacts on valuable sensitive habitats of trawls

Q2: Do you agree with our assessment of how mobile fishing gears, such as trawls, can impact on the marine environment?

2.3 The spawning and nursery habitats of exploited fish and shellfish

Q3: Do you agree that the nearshore key spawning and juvenile nursery habitats of exploited fish and shellfish species should be protected?

2.4 Benefits to static gear fisheries and other nearshore marine users

Q4: Do you agree that there are benefits for static gear fisheries and other nearshore marine users from the application of management measures on trawling?

2.5 The scale and nature of equipment used in trawling operations

Q5: What are your views on the scale of trawling operations?

Q6: What are your views on the types of trawling gear used in the fishery?

2.6 Protection of habitats within existing regulations

Do you agree that valuable and sensitive habitats should be protected?

2.7 The specific need of small scale fishing businesses, sometimes referred to as low impact fisheries

Q7: Do you agree that we should recognise the specific needs of small scale fishing businesses of Sussex where their operations are low impact and sustainable?

2.8 The exclusion of trawlers from the nearshore areas

We are proposing to create areas in the nearshore where trawling activity would be excluded. These exclusion areas would be selected in each zone according to habitat and fisheries requirements.

Q8: What would be appropriate exclusion distances from the shore for each of the five zones detailed in Figure 4?

How do I respond?

Responses can be sent in writing or by email. The summary question sheet above can be used if you wish. Please respond to the consultation by the 30th June 2018

Contact us at admin@sussex-ifca.gov.uk

or write to:

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