# 5. Ecosystem Management Strategies

## 5.1 Primary and Secondary Species

Under the MSC standard, the assessment must ensure that the fishery does not impair the recruitment of non-target bycatch (e.g. those species not being included in the Unit of Assessment). Such species are categorised as primary (e.g. managed with set reference points) or secondary (unmanaged). This latter category also includes an assessment of species outside the scope of MSC certification e.g. seabirds and marine mammals. Primary and secondary species are further sub-classified as *main* (e.g. more than 5% by weight of the total of all catches in the UoA or where it is less resilient and makes up >2% of the catch) or *minor*.

A report conducted by Spencer, Caslake & Huntington (2020) based on data from Emma Pearson’s (2017) thesis data – ‘*A collaborative study to develop and facilitate a fisher directed stock assessment of Cancer pagurus in the inshore potting area, South Devon* indicated that there is one ‘main’ bycatch species in the fishery, spider crab with all other species caught as bycatch being listed as minor. A full catch composition can be found in the annex.

In terms of bait use, there were 14 sources identified: mackerel (primary, main) and red gurnard (secondary main). In addition some small sharks e.g. small spotted cat sharks *Scyliorhinus canicula*, common-smooth hounds *Mustelus* *mustelus* & starry dogfish *M. asterias* may be used for bait, and collectively are >5% of the catch. Any small shark species caught in pots are released alive (unless retained for use as bait) and no shark finning takes place in this fishery.

### 5.1.1 Management strategy

This is a passive fishery where baited pots are set and hauled over relatively short time periods. Upon retrieval the pots are rapidly opened and legitimate catch removed and any unwanted bycatch returned to the water. This returned bycatch is almost always alive, undamaged and should have a very high level of post-discard survival. This is the predominant management strategy for primary and secondary species in this fishery.

Furthermore, within the catch composition data that was received there were no ETP species identified as bycatch. However, this may not mean that ETP species do not interact with the fishery, but that none were recorded.

### 5.1.2 Other considerations

In the main crab’s and lobsters are targeted and caught using set pots/traps. A number of gear designs and modifications have been adopted by industry to minimise the mortality of target and non-target species e.g. alternative measures. The most effective of these being escape gaps fitted to pots to allow juvenile crabs and lobsters and non-target species to easily escape. Due to the low impact nature of the fishery non target specimens too large to escape can be released alive on retrieval of the pots.

Primary and secondary species utilised as bait are landed under the requirements of the Landing Obligation as thus are unmarketable for human consumption, and are utilised as bait products by the crab and lobster fleets. Due to the mixed fishery-nature of the southwest, species used as bait are not targeted and form a component of the bycatch in the fishery.

Management measures are also in place to manage effort in the fishery these include restrictions on fishing effort, vessel size, pot limitations. Any management restrictions to reduce on the target species will have an obvious knock on effect on the levels of bycatch. More reactive management measures such as seasonal closures or real time reporting could be implemented in areas where bycatch is highlighted as a greater issue. **For more information please see Caslake (2019). Alternative management & gear measures, P2 Reducing Bycatch. 7 pp + appendices**

## 5.2 Endangered, Threatened and Protected Species

The UK brown crab and lobster Fisheries Improvement Project (FIP), used the expertise of CEFAS, to identify endangered threatened and protected (ETP) species for further investigation; their findings can be found in report C4788 (Poole, 2019).

A more recent report by Spencer, Caslake and Huntington (2021) found that within Pearson (2017) catch composition data there were no ETP species identified as bycatch. However, this may not mean that ETP species do not interact with the fishery, but that none were recorded. There were ETP species identified as at risk of interacting with the fishery: leatherback turtle, minke whale and basking shark. Humpback whale was considered as potential risk of interaction with the fishery due to the effects of climate change making interaction more likely. Notably, giant goby was deemed a low risk species.

### 5.2.1. Management strategy

Only ETP species that were known to occur within potting areas were considered – those which do not – such as those which frequent deeper, offshore waters were not considered necessary to include. The recommendation from CEFAS in terms of *''sinking the excess or otherwise reducing the amount of unused vertical line slack is no more than general best practice''* is currently the most appropriate way to avoid entanglement of marine mammals and sharks in potting gear and the South West. The FIP is well placed to encourage further adoption of best practice gear setting techniques across the South West fleet.

In relation to the giant goby, through the South West MSC FIP, we are able to encourage the wider adoption of escape gaps across the fleet, which enable small animals to escape without human interference, as well as encouraging reports of sightings and releases through a specifically designed web reporting tool available on the South Devon and Channel Shellfishermen (SD&CS) website in order to increase scientific understanding of giant goby distribution. Background information and further detail can be reviewed in Poole, 2019*.*

### 5.2.2 ETP reporting mechanisms

South Devon and Channel Shellfishermen have agreed to host the ETP reporting mechanism for this FIP. Any fishermen within this FIP wishing to report an interaction with an ETP species can do so anonymously by filling out a form on their website: <http://www.shellfishermen.org/report-a-sighting-or-entanglement-incident.html>

The process is straightforward and is kept centrally by South Devon and Channel Shellfishermen before being passed over to the relevant authorities. Within the form it outlines where the incident occurred, what species was involved and what activity occurred e.g. released, untangled, died.

Alongside this form, useful ID guides can be found to aid fishermen in distinguishing what species they had interacted with. In the case of large cetaceans it is encouraged that any interaction is also reported to the British Divers Marine Life Rescue immediately.

Records from South Devon and Channel Shellfishermen reporting site indicate that for January – December 2020:

Entanglements reported in SW pot fisheries: nil

Incidental capture of giant goby reported in SW pot fisheries: nil

## 5.3 Habitats

### 5.3.1 Management strategy

<Brief description of the approach to which a fishery will ensure that they will not hinder the rebuilding of the main primary and secondary species at/to levels which are highly likely to be above the point of reproductive impairment (PRI). This should provide at least a partial strategy[[1]](#footnote-1) for their management>.

Information from the pre-assessment indicated that there is a comprehensive management strategy in place through the combination of International, EU, UK and local management regimes across the UoA. Active monitoring of areas subject to specific environmental designation does take place, and irregular sampling and monitoring of habitat outside these areas is also conducted, though primarily inside the 6nm limit. Ongoing monitoring for habitat risks forms part of the strategy.

The static gear used to prosecute the fishery is in contact with the bottom, but unlikely to have significant interaction with vulnerable habitats. The habitat risk of this fishery was identified as low risk in the pre-assessment. Evidence suggests fishery impact on the bottom is restricted to some abrasion caused by dragging pots and anchors during hauling and tide and wave action (Grieve et al., 2014).

### 5.3.2 Other considerations

<Provide supporting evidence that the management strategy above is likely to work, based upon information about the fishery or the species involved. Include evidence that the measures and partial strategy are being implemented successfully. In the case of sharks, provide evidence that it is highly likely shark fining is not taking place>.

<Provide evidence that There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species and they are implemented as appropriate>.

This strategy is likely to work, and there is previous evidence of measures being implemented in order to protect at-risk habitats (e.g. ban on benthic gear in certain areas). The presence of on-board VMS systems being rolled out will support the management system

Active monitoring of areas subject to specific environmental designation does take place, and irregular sampling and monitoring of habitat outside these areas is also conducted, though primarily inside the 6nm limit. Ongoing monitoring for habitat risks forms part of the strategy.

## 5.4 Ecosystem

### 5.4.1 Management strategy

<Brief description of the approach to which a fishery will ensure that they will not hinder the rebuilding of the main primary and secondary species at/to levels which are highly likely to be above the point of reproductive impairment (PRI). This should provide at least a partial strategy[[2]](#footnote-2) for their management>.

There is a presumption that static potting gear impact on the ecosystem is low risk and this has been borne out by studies to date. Information in the pre-assessment indicated that this fishery is unlikely to have ecosystem impacts.

### 5.4.2 Other considerations

<Provide supporting evidence that the management strategy above is likely to work, based upon information about the fishery or the species involved. Include evidence that the measures and partial strategy are being implemented successfully. In the case of sharks, provide evidence that it is highly likely shark fining is not taking place>.

<Provide evidence that There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species and they are implemented as appropriate>.

The work of the IFCAs and government bodies has ensured improved knowledge and awareness of the state of the marine environment within the 6nm inshore regime. This has been substantially enhanced with the national policy to identify and establish Marine Conservation Zones (MCZs) and to support the assessment by Cefas of shellfish stocks in inshore English waters.

1. A ‘partial strategy’ represents a cohesive arrangement which may comprise one or more measures, an understanding of how it/they work to achieve an outcome and an awareness of the need to change the measures should they cease to be effective. It may not have been designed to manage the impact on that component specifically. [↑](#footnote-ref-1)
2. A ‘partial strategy’ represents a cohesive arrangement which may comprise one or more measures, an understanding of how it/they work to achieve an outcome and an awareness of the need to change the measures should they cease to be effective. It may not have been designed to manage the impact on that component specifically. [↑](#footnote-ref-2)