

Crab & Lobster Draft Fisheries Management Plan (FMP)

Summary of the Crab and Lobster FMP

The Crab & Lobster draft FMP has been prepared for the purpose of meeting the requirements set out in the Fisheries Act. It has been prepared in partnership with the Sea Fish Industry Authority (Seafish) in collaboration with the Crab Management Group (CMG) that brings together industry, government, and scientists. Feedback from the CMG and from the wider sector, during stakeholder engagement events, has shown that there is a need for better management of crab and lobster fisheries in England.

The Crab and Lobster FMP relates to all brown crab and European lobster fisheries in English waters, and also includes data limited species for which there are no formal stock assessments. For the FMP these include crawfish, velvet swimming crab, common spider crab and common prawn.

Crab and lobster have been prioritised for an FMP due to the crab and lobster industry raising concerns and the stocks' vulnerability to over-exploitation, the economic value of these fisheries, and a lack of evidence to properly assess and monitor the state of the stocks. Crab and lobster fisheries contribute socially and economically to coastal communities through employment and recreational fishing interests. Improved management action is therefore needed to protect crab and lobster and secure their future and the future of the industry that depend on them.

In terms of stock status there is a reasonable understanding at a broad level on stock status. However, there are evidence gaps and assessing the impact of current fishing effort on long terms stock viability is a challenge. This FMP combines a long-term vision to achieve MSY with clear measures to reach and maintain this goal. This FMP presents an opportunity to take a precautionary and adaptive approach to long-term management to create sustainable crab and lobster fisheries. Much of the existing management is largely based on administrative boundaries such as IFCA Districts where a range of management measures are in place. However, the boundaries do not necessarily reflect biological boundaries and some biological stocks may be subject to different management restrictions depending on where fishing takes place.

Key Goals and Proposed Management Actions of the FMP

The FMP for English water details shared shellfish principles common to all shellfish fisheries and crab and lobster specific objectives relating specifically to the management of crab and lobster in English waters. The plan outlines a proposed iterative fisheries management cycle to drive continuous improvement through data collection, analysis, assessment and management action. Under the management approach the FMP proposes the following tasks:

- **Task 1:** Improving the availability of accurate, reliable, and fit for purpose data sets (FMP Objectives 1 and 3). These include fishing effort (e.g., pot hauls/numbers/ patterns of fishing from VMS/IVMS data); spatial distribution of fishing across all sectors of the fleet; fleet characteristics and segmentation(i.e., vivier boast vs day boats); reporting recreational catches for totality mortality estimates; and bycatch.
- **Task 2:** Addressing issues in current assessment processes and making the best use of available information until the evidence base improves (FMP Objective 2). Unlike some other shellfish fisheries there are already existing stock status assessments for crab and lobster that highlight the need for better management. However, there are uncertainties and assumptions used in these assessment models that need to be addressed and these outputs are outlined the Evidence and Research Plan of the FMP.

- **Task 3:** Taking initial management action based on existing information and adjusting management as impacts are observed / new information becomes available (FMP Objectives 4 and 5). This will include an assessment of latent capacity; pilot finer small-scale management of selected crab fisheries units by applying a management 3-S approach – limiting effort by Size, Sex and Season; piloting targeted effort management of individual Lobster Fisheries Units (LFU); aligning minimum landing sizes of lobster and crawfish nationally
- **Task 4:** Developing a harvest strategy with appropriate harvest control rules to set appropriate measures that a) limit fishing effort in the long-term, and b) can be reviewed and adjusted in response to changes in stock status (FMP Objective 6). These will be throughout the life of the FMP and its iteration and look at management at the right spatial scale This will also look at the different sectors of the fleet, such as inshore/offshore; day boat/viviers; size, capacity and fishing patterns.

Proposed Early Management Interventions and Officers' Comments (in blue)

The proposed Initial (early) Management Interventions, which are designed to increase protection for stocks in line with the Precautionary Objective, are:

- opportunities for harmonising **lobster and crawfish minimum landing sizes (MLS)** with existing IFCA measures in English waters, i.e., 90mm for lobster and 110mm for crawfish. A larger MLS is likely to have conservation benefits in terms of supporting a larger spawning stock biomass and enhanced reproductive capacity. MLS are easily enforced at the point of landing (and via at sea inspection), are already applied in UK shellfish fisheries, and are already accepted by industry as an effective means of limiting removals.

The proposal for an increase in MLS for both these species nationally would deliver harmony with the existing management measures already in place in D&S IFCA's District and allays concerns of the inshore fishing industry regarding the different management measures relating to MLS inside and outside 6nm boundary.

- prohibiting the landing of **soft brown crab for bait**. The Sea Fisheries Act (Shellfish) 1967 prohibits the landing of any brown crab that 'has recently cast its shell', unless it is to be used for bait. The proposal is to limit the landing of soft-shelled brown crab thus closing the legislative loophole which currently allows soft-shelled brown crab to be used for bait. The purpose of this management measure is: to address stock sustainability by prohibiting the removal soft shelled individuals before they are able to reproduce within a given moult cycle and to create incentives to ensure crab landings attract the highest market value – as meat yield will be higher. This will also remove the incentive to keep all the catch and the poorer quality being sold for whelk bait at a much-reduced price.

During the development of the draft FMP Officers who sat on the management and science groups pushed for this measure to be included as an early intervention in the life of the plan. Officers welcome the inclusion of the short-term intervention of prohibiting the landing of soft-shelled crab as bait and would support going a step further and suggest a prohibition of the use of crab (soft or hard shelled), per se, for bait. D&S IFCA's permit conditions already prohibit the use of edible crab as bait whilst fishing for edible crab, lobster, and spider crab.

D&S IFCA is part of a Fishing Industry Science Partnership funded project, together with Bangor University, Seafish and South Devon and Channel Shellfishermen, which is developing a methodology to measure the hardness of the shell of brown crab

using a durometer (used by North American crustacean fisheries). If successful this methodology would be used to enforce the change in legislation required to introduce this early intervention. The research work has started this summer and a Research Assistant will be employed by the project to aid D&S IFCA officers in this work.

- **Piloting finer scale management of brown crab and European lobster** in certain areas based on spatial scale rather than administrative boundaries. This would be done by applying the 3-S approach – management measures based on **Size, Sex and Season** but will be on certain crab and lobster fishery units. The proposal suggests three pilot areas – two for lobsters - Northumberland and Durham Lobster Fishery Unit (LFU) and the Yorkshire Humber LFU where the stock sizes for both are below the minimum reference size point and there are high exploitation rates, near the maximum limit in 2019. The other area is the Western English Channel Crab Fishery Unit (CFU), which unlike the other two suggested pilot areas, the stock size was considered near MSY and exploitation rate moderate in 2019. The Plan states that however there are anecdotal concerns about significant increases in fishing effort in the area in recent years, which are not yet reflected in stock assessment data

Officers, whilst supporting the 3-S approach, are concerned about the inclusion of the Western English Channel CFU as a pilot area without more information and evidence. Cefas Crab and Lobster stock assessments for 2022 were due to be published early this year but these has been delayed. Their publication is expected in September 2023. It would be useful to view the most up to date stock assessment for the Western Channel CFU to see if the anecdotal concerns are reflected in it. Another important factor would be to analyse the sectors of the fleet that could be impacting stocks outside the 6nm boundary. There has been a larger increase in offshore viviers boats entering the fishery since 2015 and many operate in the Western Channel. Officers believe that there are up to 15 vivier vessels operate in the Western Channel each with approximately 5,000-6,000 pots. Much more information is required regarding this sector of the fleet and its effort on crab stocks. Details of the catches, effort, and landings per unit effort of this sector would be needed to determine the potential management measures that would aid the sustainability of the stock. Further information is required on the amount of crab that is landed from these vessels that goes to whelk bait. Anecdotal information suggests that all of the sizeable crab, no matter what the condition, is retained on these vessels, and any soft and poor quality crab, or crab that has died in the vivier, is sold for whelk bait.

The South West IFCAs (D&S IFCA, CIFCA and IoS IFCA), have already introduced the largest Minimum Conservation reference Size (MCRS) for brown crab in the inshore area of England, having implemented MCRS of 150mm for females and 160mm for males. Outside of the 6nm the MLS remains at 140mm. Increases in MLS in the Western Channel to match D&S IFCA sizes would support the size aspect of the 3-S approach. Officers would like to see better harmonisation for MLS across the inside and outside 6nm limit. Whilst there may be spatial and biological stock difference in around the coast, Officers believe that in the different Crab Fishery Units that there should be harmonisation inside and outside of the 6nm boundary. If the increased MLS for brown crab is extended across the whole of the South West Crab Fishery Unit, Officers believe this would reduce the pressure on the stock and be a conservation measure for stock sustainability. This could similarly be implemented in other Crab Fishery Units depending on biological restraints. Harmonisation cross the 6nm in the different fishery units is important and will aid

fishermen by simplifying the legislation and support better compliance and enforcement of measures.

In terms of season, within IFCAs' District, potting seasonality is often determined by the weather with inshore vessels having limitations on going to sea in bad weather, larger groundswell, inability to leave harbours in poor conditions, challenges associated with working in spring tides, and therefore their effort is limited to a reduced number of days compared to those vessels constructed to withstand such sea conditions and poor weather. Introduction of any seasonal measure would need to look at those vessels that can withstand poor weather and sea conditions rather than apply to the inshore vessel that are already restrained by these environmental factors. Seasonal management may be more relevant to the offshore vivier vessels.

The other area of the 3-S approach is sex of crab. The Western Channel Crab Fishery, particularly inshore, is dominated by females migrating along the Channel. Any measure introduced based on restricting female catches would severely impact the inshore fishery. All the above factors, highlighted by Officers, would need to be considered in light of better evidence.

- **Implement measures to improve the information base on recreational crab and lobster fishing.** Recreational shellfish fisheries are largely exempt from reporting requirements (apart from some IFCA districts that require recreational reporting), this means that not all removals from stocks are accounted for. Measuring total fishing mortality is fundamental to understanding exploitation rates and stock health. Introducing regulations to ensure that data are gathered on recreational catches could allow fishery managers to assess the likely impact of recreational fisheries and introduce appropriate management, where necessary, to limit impacts on stocks.

Whilst D&S IFCA has a system in place to understand the level of recreational activity, in terms of numbers of recreational potting permit holders and the implemented catch limits, it does not have the administrative or financial resource capability to introduce of a catch return policy which support this measures of improving the information base of recreational crustacea catches. Officers do not see this intervention as a priority.

- The FMP will also explore **wider environmental issues and impacts** from crab and lobster fisheries in particular risks of bycatch of endangered, threatened and protected species and unwanted marine species, and marine litter from abandoned, lost and discarded gear.

Officers welcome the inclusion of this action, although Officers have assessed the impacts of potting on MPA designated features as not having a significant the features or MPA site integrity, which has been supported by Natural England, and would primarily focus support on the greater understanding of the impacts of lost or abandoned gear. Officers are looking to explore funding opportunities to support the removal of 'ghost fishing gear'.

Longer Term Management Measures

The FMP proposes an adaptive, iterative approach to management and over time, with further evidence, data on stock status, and monitoring effectiveness of management, more targeted measures will be developed. Some of the interventions under consideration through

a longer-term approach are restrictions of landings based on sex, seasonal closures, effort limits such as days at sea, and pot and catch limits.

As these relate to longer term approaches to management, Officers will review suggestions relating effort control as these are considered in more detail. Officer will continue to sit on the Crab and Lobster Management Group and Science Sub-group.

Additional Officers' Observations on the Crab & Lobster FMP

The Crab and Lobster FMP consultation contains many documents, some of which are 180 pages long, that require review in order to understand the background to the proposed management measures and what data and evidence is being used to inform it.

The Draft FMP has numerous annexes associated with it which includes the Crab and Lobster FMP Evidence Statement Annex 1. The data used within this include landings of different segments of the fleet. This is welcomed but the data used to date does not identify those vessel that are 'day boats' and those that are viviers vessels which operate for many days at sea and deploy greater numbers of pots than day boats. Many of these vessels are under 15m and therefore included in the data for the 12-15m sector. Officers welcome points made in the FMP that greater evidence will be gathered to differentiate these vessels from day boats so that their effort on the stock can be assessed.

Economic data have been included in the Evidence Statement Annex 1. The data suggest that the prices for crab in any 12-month period between 2016 and 2021 fluctuated by £500/tonne in some years, and over £1,000/tonne in others. From Officers' understanding of prices per kilo of crab landed for human consumption, this appears very low. Prices rarely go below £2.00 per kilo (£2000 per tonne) and realistically range between £2000 to £3000 per tonne over this time period with cock crab reaching higher values. From MMO landings data into Devon ports from 2016 -2021, the price per kilo of crab for the under 10m vessels range from £1.55 to £3.17 and between £2.05 to £3.66 for the 10m and over vessels. The disparity between national landings value and Devon landings value implies that large quantities are being landing at a lower value, which is likely to be used as whelk bait and brings down the average price per kilo of crab.

Officers welcome the reference, within the FMP and Evidence and Research Plan (Annex 2), to the use of REM and AI for gathering data on catch composition as part of fishery dependent data collection.

Under FMP Objective 4 of the Evidence and Research Plan there is reference to the research needs of reviewing the available evidence of how other fisheries impact crab and lobster stocks. This too is welcomed as there have been reported impacts of scallop dredge vessels on the crab stocks within Western Channel; those vessels having been displaced from further east along the Channel due to seasonal closures to protect spawning stock. The displacement has created unintended impacts which Officers have raised in their recent consultation response on the proposal for season scallop closures in ICES areas 7d and inshore 7e in the Channel. Proper assessment of the impacts of these and other fisheries on crab migration and stocks is essential.

Another key area that needs addressing within the evidence gathering is the impact of more efficient viviers vessels' effort on stocks and also the impact of other activities such as capital dredging on the migration of female brown crab from east to west along the Channel. Also, worth investigation is whether there is any link between the amount of effort in the southern North Sea, Eastern Channel and further along the Western Channel on crab movement and stocks, and consideration of environmental fluctuations such as the North Atlantic Multidecadal oscillation on crab populations. These are not mentioned in the FMP, Evidence Statement or Research Plan.

D&S IFCA officers have submitted comments of previous drafts of the plan some of which have been included in the final plan whilst others have been omitted. One area within the Annex 1 Table 8 Crab and Lobster Evidence Statement details the MMO data on landings and value. Officers have pointed in their comments that landings into Dartmouth and the River Dart should be amalgamated and not listed as separate ports as there is not a recognised difference between two places of landings. Currently Salcombe lies 4th in the highest landings and value of brown crab (656 tonnes and £2.2 million respectively) in England and those landings into the Dart (amalgamated) would be the 5th largest in port in terms of value for crab (£1.6 million). This shows the significance of brown crab landings into Devon ports and the importance to the fishing industry and associate businesses.