# Whelk Draft Fisheries Management Plan (FMP)

## Summary of the Whelk FMP

The whelk industry recognised in 2019 that action was needed to better manage the stocks. With support from Seafish and Defra, the WMG, which brings together industry, government and scientists, was formed in 2020 to consider specific actions. This early work and engagement allowed the decision to be taken to channel the work into an FMP. The whelk draft FMP has been prepared for the purpose of meeting the requirements set out in the Fisheries Act. Whelks have been prioritised for an FMP due to the stock's vulnerability to over-exploitation, the economic value of the fishery and a lack of evidence to properly assess and monitor the state of the stock. Whelk fisheries contribute culturally, socially, and economically to coastal communities through employment and recreational fishing interests. Feedback from the WMG and from the wider sector, during stakeholder engagement events, has confirmed the need for better management of the whelk fishery in England.

There is currently no stock assessment for whelks in English waters, no delineation of stock boundaries, and no Maximum Sustainable Yield (MSY) reference points or proxies. Consequently, there is no assessment of likely stock health and abundance and evidence on the state of whelk stocks is poor. The FMP presents an opportunity to take a precautionary proactive and adaptive approach to long-term management to create sustainable English whelk fisheries.

## Key Goals and Proposed Management Actions of the FMP

The FMP for English water details shared shellfish principles common to all shellfish fisheries and whelk specific objectives relating specifically to the data collection, assessment, and management requirements of these fisheries. They are also focused on ensuring that the environmental impacts associated with whelk fishing are understood and where whelk pot fisheries are considered to have an adverse impact on the marine environment, action is taken to avoid, remedy or mitigate such impact.

This FMP proposes to transition whelk fisheries in English waters to a regime of iterative and agile effort management, underpinned by the best current and future available evidence. The proposed approach to achieve this is twofold:

**Action 1 - Assessing and tracking stock status**

There is currently no stock assessment for whelks. Challenges have been identified relating to assessing the current stock status as there are anecdotal concerns from the industry of increasing pressure on the stocks. Therefore, the primary focus is to collect the data that scientists and fishery managers need to build an appropriate time series to inform future management. As identified under the Evidence and Research Plan (Annex2) there is research planned to support the FMP:

- Establish and implement a data collection programme
- Agree on proxy stock boundaries for whelks as the basis for management (Whelk Objective 2). Given the highly variable nature of whelk 'stocklets', it may be necessary to focus initially on determining appropriate proxy stock boundaries for whelks at an appropriate scale for effective management.

- Assess CPUE, or other indices of abundance, as data improve to monitor general trends in performance
- Develop a whelk specific Harvest Strategy to drive management action and determine acceptable levels of fishing pressure, in response to changes in stock status.
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**Action 2 - Implementing an adaptive management approach**

The focus of this action is on delivering more tailored effort management to ensure stock status remains at or above an agreed MSY target. The FMP therefore proposes a multi-step, iterative approach in which management decisions are implemented, reviewed, and refined to deliver long-term sustainability. This adaptive management approach will run alongside efforts to improve the evidence base as detailed above.

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

**Task 1:** Introduce a whelk permit scheme/entitlement to manage whelk fishing effort and to provide a mechanism for proactive effort management in the future. A permit scheme/entitlement may be used as a vehicle to introduce various conditions that manage fishing effort and introduce data collection requirements to inform and bolster future management approaches.

The purpose, as detailed in the FMP, is to better control fishing effort of whelk fisheries and facilitate further management measures by means of variable conditions.

The rationale behind this proposal is detailed in the FMP. Whelk fisheries are currently open access meaning any vessel with a fishing licence can fish for whelks. The FMP raises the point that, therefore, it is easy to switch to whelks when market prices are good, when there is down turn on other species or allows vessel owners to diversify to other species. The FMP also recognises the need, in particular with inshore fisheries, to be able to move between fisheries to maximise their fishing opportunities and maintain their financial capability. This is also backed up by the information in the Evidence Statement Annex 1, where 49% of vessels landing whelks are less than 20% dependant on the fishery, 37% were 5% dependent on the whelk fishery. Only 14% of vessels landing whelk were 80-100% dependent on the fishery and these were responsible for 30-55% of the whelk landing between 2016-2021. The whelk fishery is described as of a polyvalent nature vital to small scale inshore fisheries. Therefore, the introduction of a permit scheme or entitlement will restrict the access to this fishery by the inshore fleet, by removing the ability of vessels to diversify and where necessary move into the whelk fishery. It would not immediately address effort expansion by those already active in the fishery- in a sense making it a private fishery for those already operating in the fishery.

The FMP suggests that this early intervention would provide the vehicle to introduce effort limitations such as increases in MLS, pot and catch limits, seasonal and spatial restrictions. Such measures have traditionally been introduced through a licence condition or variation (as has been done to date e.g., the South Devon Inshore Fishing Grounds – Inshore Potting Agreement area management). Officers find it difficult to understand why this route cannot be used to deliver the changes in management rather than a restricted access permit or entitlement system. The FMP recognises that this would be a complex system to run and would require consideration of a number of practical issues, these include, but are not limited to, how to assess the number of permits, eligibility for permits, payment for permits, impacts on newcomers and transferability.

Officers are concerned that the introduction of a limited permit scheme or entitlement will lead to a value being given to the permits as has happened with fishing licences and open up a

trade in these permits or entitlement. With the current fishing licence system many of the licences or quotas have been bought up by Produce Organisations and are a tradable asset and fishing licences have a value and are bought separately or with a vessel. If such as system was applied to the whelk fishery then permits would have a value. It is difficult to understand how a new system would prevent only the larger fishing organisations from buying up the permits and the selling them at a high price so limiting the small inshore vessel that need to diversity to maintain their fishing opportunities. Officers would like to have sight of an example of where a restricted permit or entitlement has not resulted in a financial value to those who hold the permit or entitlement. To officers' knowledge this has always been the result of implementing this form of management. The bass authorisation is an example of where the system was implemented as a fair system but in fact these are now valuable and only increase in value when vessels are sold, or entitlements traded.

Under the Stakeholder Evidence Report for the Whelk FMP Annex 3, various options were considered for management. Stakeholders generally supported a permit or entitlement where future management conditions could be implemented. However, stakeholders pointed out the importance of how new entrants could enter the fishery and that permits could not be sold and should not have a monetary value attached. These will need very careful consideration and wide consultation before such a system is introduced. Officer considered that if a permit system is introduced that is should not be limited and potentially follow the Welsh model where effort is controlled by annual and monthly catch limits. Officers would suggest that any system introduced should not be called a permit system. Using the term 'permit' should be avoided as it is likely to cause confusion between IFCAs' permit (which many IFCAs have in place) and a national entitlement.

In Annex 1, the Evidence Statement, data show there has been an overall decline in the number of vessels landing whelks between 2016 to 2021 from 292 to 254. When a longer time frame was considered there was some variability and higher numbers of vessels recorded in 2011 (294 vessels), an overarching 22% increase is observed between 2008 and 2016 from 240 to 293 vessels. There is then some fluctuation between 2016 and 2018 (286 vessels), before a slight decline (11%) between 2018 and 2021 (254 vessels). When landings were considered in Annex 1 there was an overall decline from 12,773 tonnes in 2016 to 12, 070 tonnes in 2021 with a slight increase in 2019 and 2020. On the face of the evidence outlined in the Annex there does not appear to be a huge increased in landings or vessels entering the fishery. Whilst the FMP highlights that anecdotal evidence suggest an increase in effort, this needs to be determined in light of any stock assessment (which has not been undertaken and a methodology has not been determined) and more information on actual catch and landings per unit effort. However, the Precautionary Objective of the Fisheries Act 2020 could be applied to the introduction of some form of management to ensure stock sustainability in the light of limited stock assessment data. It is difficult to understand whether other measures rather than a limited permit system have been considered in the management of whelk fishing effort.

**Task 2:** Establish measures to protect whelk spawning stock through seasonal closures. Whilst regional variations in peak spawning periods are likely to exist around the English coast, there is evidence that significant volumes of whelk are removed during periods that coincide with spawning. Protecting stocks during spawning will allow individuals a greater chance of reproducing successfully and should improve stock viability when combined with additional effort restriction measures. Seasonal closures may also act as a temporary limit on fishing effort. Additional effort control measures will also need to be considered alongside the seasonal closures so that the benefits of a spawning closure can be best realised if there are no excessive/compensatory increases in fishing patterns and effort.

The purpose of this management measure is to reduce fishing effort to:

- • Protect individuals during periods of reproduction (copulation and spawning/egg laying); and
- • Reduce overall fishing mortality.

Implementing a closed season, in combination with additional effort control measures, could contribute to conditions that increase the likelihood of strong recruitment of juveniles into the fishery. In turn, this should improve catches (volume and/or stability) and improve fishing efficiency over the medium- to long-term.

Officers would be supportive of this intervention if it is applied nationally both inside and outside the 6nm limit. This could be implemented through a licence variation. Officers agree that implementing a closed season linking to spawning times would remove fishing pressure at this key time, allowing individuals to reproduce and spawn successfully. The FMP states that this intervention aligns with the Precautionary Objective of the Act but also it will support the Sustainability Objective.

D&S IFCA has undertaken research, as have other IFCAs, on the breeding/spawning period. Reports on research were published by D&S IFCA in 2015 and 2019. The research indicates that spawning takes place overwinter largely between November and February, with increases in whelk gonadal size prior to this when copulation is likely to place. This supports the information highlighted in the FMP.

## Longer Term Management Measures

Gear Design measures

The FMP identifies that research is needed to understand the efficacy and application of gear design measures as pot design and escape hole configurations, to minimise catches of undersize whelks. The FMP states that effective use of escape holes is based on understanding the regional whelk shell morphology and biology (linked to effective use of MLS) to ensure that gear design measures a) afford appropriate protection to stocks and b) do not disproportionately impact fishers in certain areas.

Officers are aware that many IFCAs have regulations in place such as for size of escape holes and maximum pot size. Officers support the premise that such technical measures can play an important role in protecting juveniles prior to recruitment to the fishery.

MLS Variations

The FMP proposes some research is required to inform any increase in MLS and on the appropriate scales. The FMP states that there is incomplete data and variations in the size of sexual maturity (SMO) of whelk for different stocks around the English coast. It suggests that different areas will continue to require a local approach that considers the variable size and growth rates of whelks, and that there is also the need to have a coordinated approach in inshore and offshore waters and harmonisation of MLSs, where appropriate, will be considered.

Officers have the view that some increase in MLS should be implemented nationally across the fishery even if there are some variation in size of sexual maturity as identified by Cefas in their national study in 2014. In this study Cefas analysed whelk samples from 12 areas around the coast of England. The mean SOM was 62.7mm. Whelks, from all sites sampled apart from one at Portsmouth, had a SOM was over 50mm and for nine of the sites the SOM was over 55mm. An earlier study in 1998 showed that for 11 sites studied the SOM was above 55mm apart from one site at Selsey. These studies confirm that there are spatial variations in SOM associated with different stocks and/or stocklets, but that an increase in MLS up to 50mm or 55mm nationally would protect some of the spawning stock and have little impact on the fishers involved in the Whelk fishery. Further research is welcomed to support a national

increase in MLS which may indicate an even higher MLS is more appropriate. The FMP states that 'if a single MLS is implemented across all stocks it could unnecessarily restrict fishing activity in some areas and fail to protect juvenile whelks in others'. However, Officers believe that an increase to 50 or 55mm would protect more of the whelk stocks around the coast and if undertaken in a phased approach (as undertaken in D&S IFCA's District) the fishing industry would feel less of the immediate impact. The FMP states that 'to move this measure forward a bespoke MLS increase for one stock in one area could be introduced as a pilot scheme to test these challenges'. However, no detail is given of which area under consideration.

Catch Limit

This longer-term consideration will utilise existing data and address gaps to inform evidence-based management action. The Evidence and Research Plan address the data and knowledge gaps in particular relating to stock assessment design and implementation, stock boundaries, catch per unit effort calculation, independent and dependent fisheries data collection. Thess will be used to consider whether introducing catch limits could implemented.

Officers welcome further data collection on this fishery in particular stock assessments to determine safe biological limits for fishing mortality and the current status of the stocks. Once such information is available catch limits may be appropriate, should the stock status be below spawning stock biomass, exploitation rates are high and above MSY.

Pot Limit

To consider such a measure the FMP outlines that data on current fishing effort in offshore waters should be collected. These data would include number of pot hauls, pot design, soak times and whelk catchability due to different baist and seasons. The FMP also highlights how IVMS may be used to provide a proxy of pots number haled in the future. The FMP also considers harmonisation of pot design and capacity so that if limits were introduced circumventing the limitations (through the deployment of larger or more efficient pots) could be prevent.

Officers welcome the consideration of the use of IVMS and AI to support data collection, and further down the line, to aid monitoring and enforcement of measures introduced. Officers also appreciate that further data are required to investigate catch and landings per unit effort, number of pots currently deployed and their design, and to consider the implementation of this measures. The Evidence and Research Plan details all the areas of research which will support this longer-term measure.

## Additional Officers' Observations on the Whelk FMP

Another area that needs further evidence is the effort of the vivier vessels and what proportion of the catches apply to these vessels, particularly those that sit within the 12-15m sector of the fleet. In Annex 1 the 8.01m to 10m vessels landed 49.52% of whelk landings, signifying the importance of the whelk fishery to the small inshore vessels. However, the next largest sector for landings in this year was the 12.01m to 15m vessels with 22.37% of the landings. There is no differentiation between the day boats and vivier boats within these data. Many of the 15m and under vivier vessel which target crab also target whelk and Officers believe it would be useful to see the landing of these vessel compared to the similarly sized day boats ad a determination of their effort, impact on stocks and how this has changed over time.

Whilst Objective 6 of the FMP outline potential actions regarding the review of whelk fisheries with other fisheries, in particular the provision of brown crab as bait in the whelk fishery. Officers are disappointed that there is no early intervention in the FMP that supports the prohibition of using brown crab (soft shelled or hard shelled) as bait. If included it would support the early intervention in the Crab and Lobster FMP to prohibit the use of soft-shelled

crab as bait. Officers believe this is an important early intervention as sources of alternative bait will need to be found to enable whelk fishers to replace the use of crab as bait.