

By: Lead Scientific & Conservation Officer

To: Kent & Essex Inshore Fisheries and Conservation Authority
– 31 January 2020

Subject: **Whelk Permit Byelaw Update**

Classification Unrestricted

Summary:

This paper will provide Members with an analysis of whelk landings data, feedback from the industry, an update on whelk enforcement activity, an update on riddle testing and suggestions for future management.

Recommendations:

1. Members are asked to **AGREE** that the pot limit, the riddle size and the number & size of escape holes remain set at:

Pots – 300 for category 1 permits and 10 for category 2 permits
Riddle – 25mm spacing between bars
Escape holes – 10 @ 25mm per pot
2. Members are asked to **AGREE** to take forward Option 4 and review the requirements and detail of making an emergency byelaw in Agenda item B5, to address issues raised by the industry with the riddling process.

Background

As part of the current Whelk Fishery Permit Byelaw, paragraph 26 requires that the technical permit requirements will be reviewed by KEIFCA no less than every 3 years. Building on the annual review of whelk landings and effort in the district, KEIFCA officers have also worked with the industry to develop and send out a questionnaire (September 2019) and hosted an industry workshop in Ramsgate in December 2019. The focus of this engagement was to discuss current management and review future management options for the whelk fishery. Discussions also looked to address industry concerns over the riddling process and how the requirement for whelks to pass through a 25mm riddle gap is applied.

Review of landings data

The long term picture of MMO landings data (recorded landings in KEIFCA district ports, from vessels fishing inside and outside our district) shows continued and relatively consistent high levels of landings compared to landings prior to 2010 (Fig. 1).

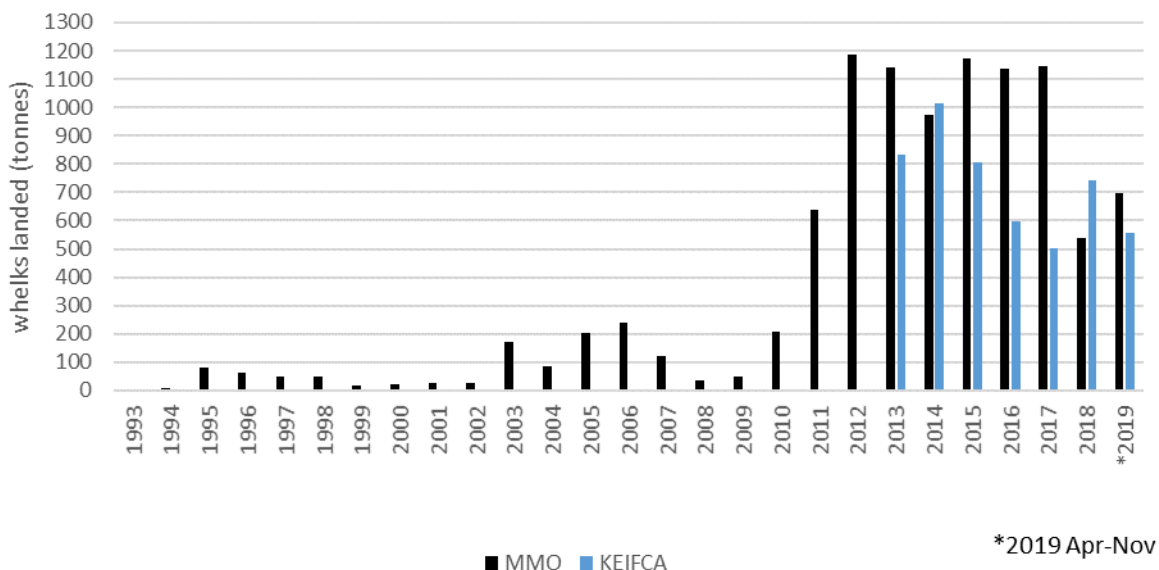


Fig. 1, MMO whelk landings data for KEIFCA district 1993-2019 with KEIFCA’s landings data shown for 2013-2019

Analysis of KEIFCA whelk permit data shows whelk landings from within the district have increased again this year. As can be seen from the graph below, fishing effort (the number of pots set and days fished) has been lower this year than in 2018 but is still greater than since 2016.

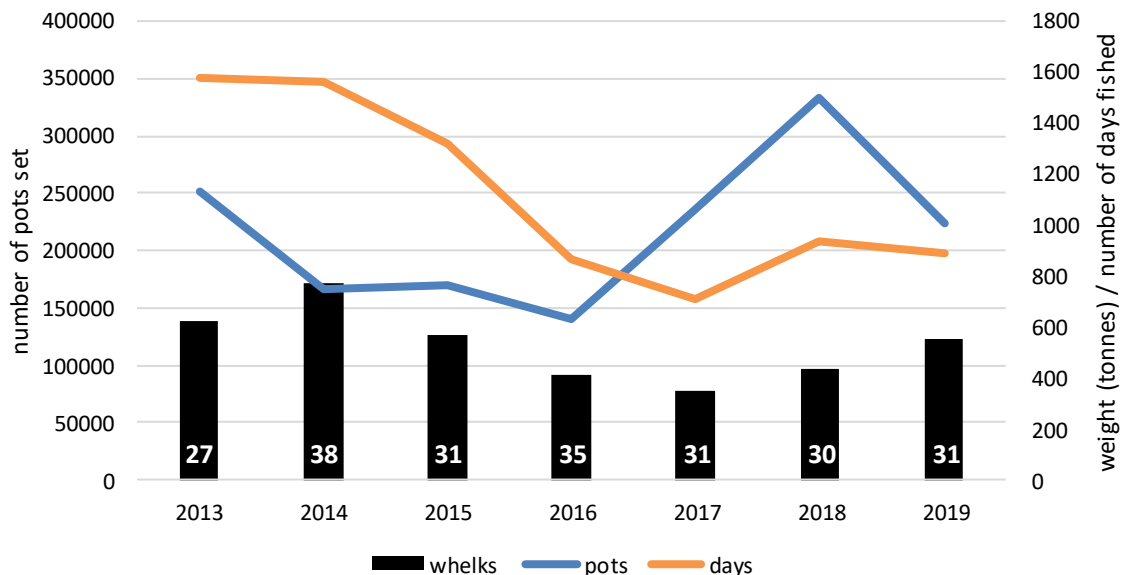


Fig. 2, total weight (tonnes) of whelks landed, the total number of pots set and the total number of days fished during the period April-November in each year from 2013-2019. The white number inside each black bar represents the number of permits issued for that year.

Whelk landings within the district vary both seasonally and spatially. In general terms seasonal variances can be seen during the summer months when the

increase in sea temperature causes whelks to move to deeper, cooler waters and around Nov-Jan when poor weather prohibits or reduces fishing activity. Spatial differences are evident from catch return data as well as Fishery Officer knowledge of fishing activity from shore patrols and port visits.

Spatial variations are shown in figure 3, seasonal differences in figure 4 and figure 5 shows both the seasonal and spatial variations:

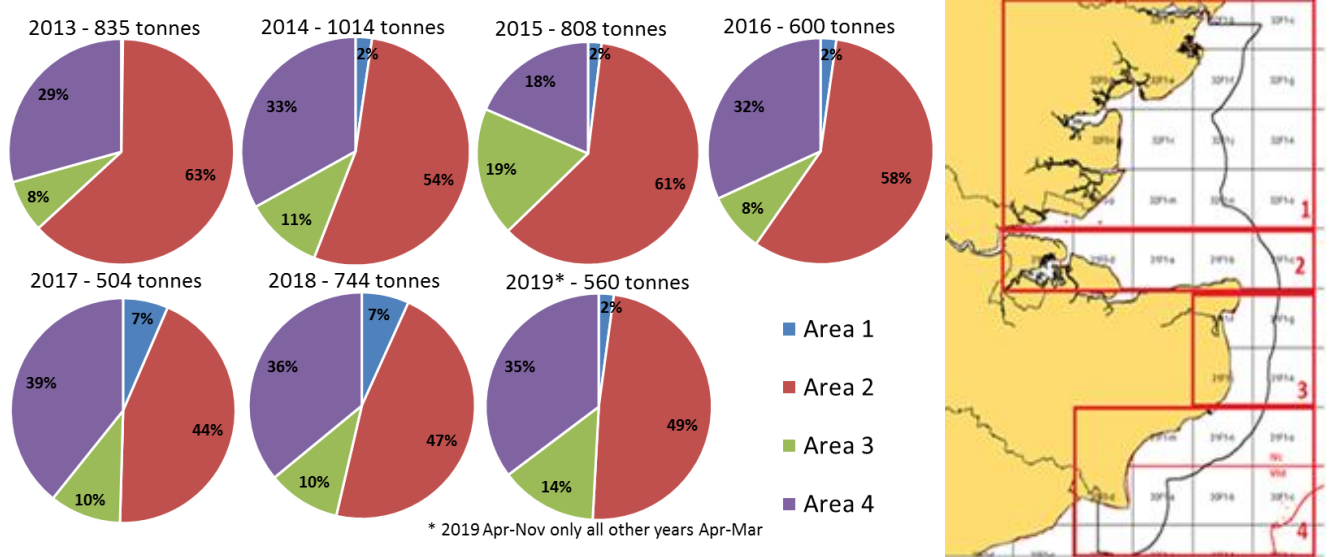


Fig. 3, percentage distribution of whelks landed in the 4 KEIFCA whelk fishing areas 2013-2019

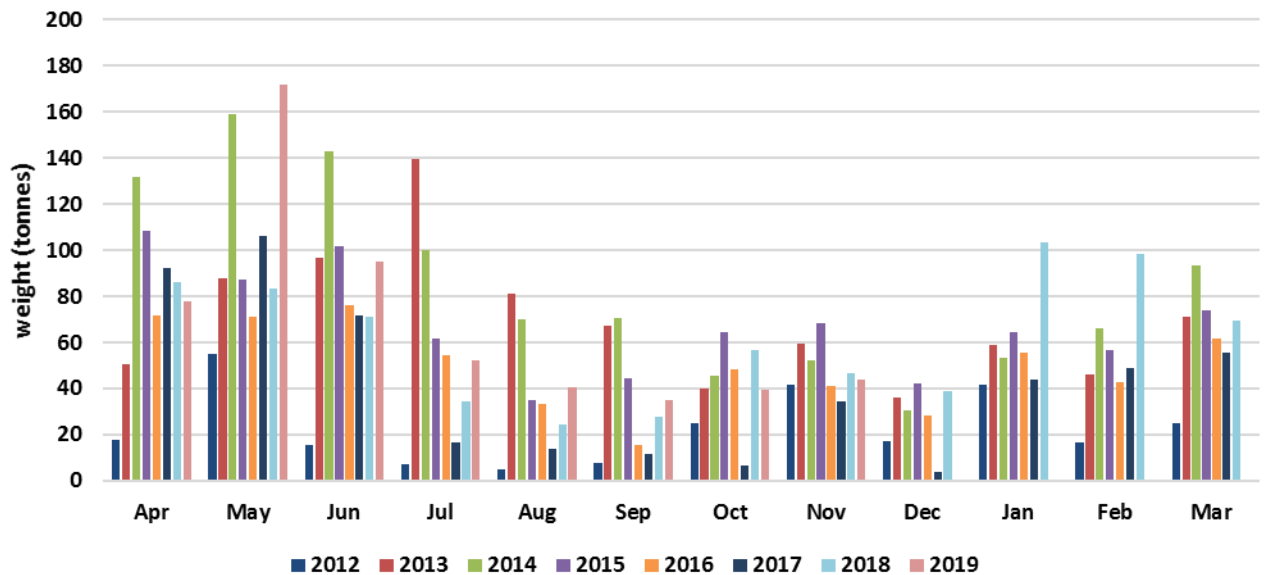


Fig. 4, total weight (tonnes) of whelks landed in the KEIFCA district each month from 2013-2019

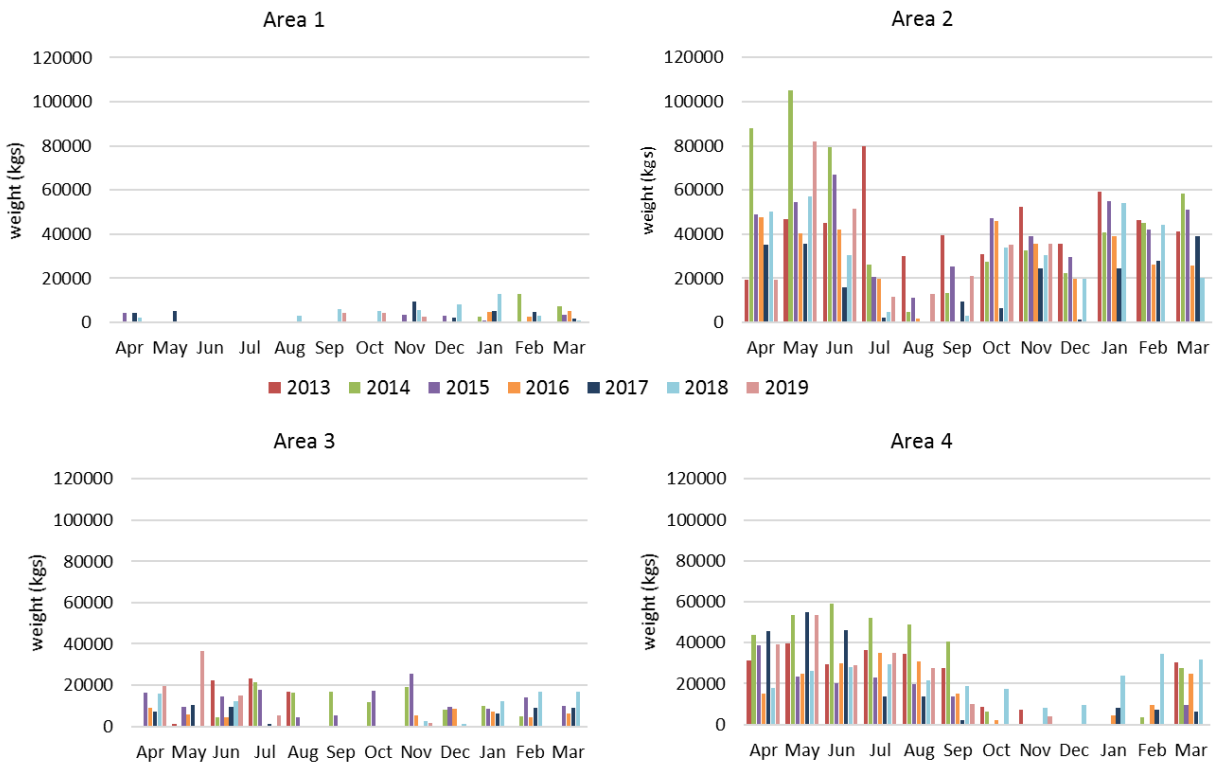


Fig. 5, total weight (kg) of whelks landed in the 4 KEIFCA areas each month from 2013-2019

The permit holders' landings data reveals that both Area 2 (north Kent coast) and Area 4 (south Kent coast) continue to account for over 80% of all whelks caught in the district. From the monthly catch return data received so far for 2019 we know that whelks landed into Whitstable by six permit holders account for 40% of the total landings for the district. In Dungeness there are just three whelk fishermen landing 23% of the district's total catch. Figure 6 below shows the total landings made by each Category One (commercial) permit holder into port from April – November 2019:

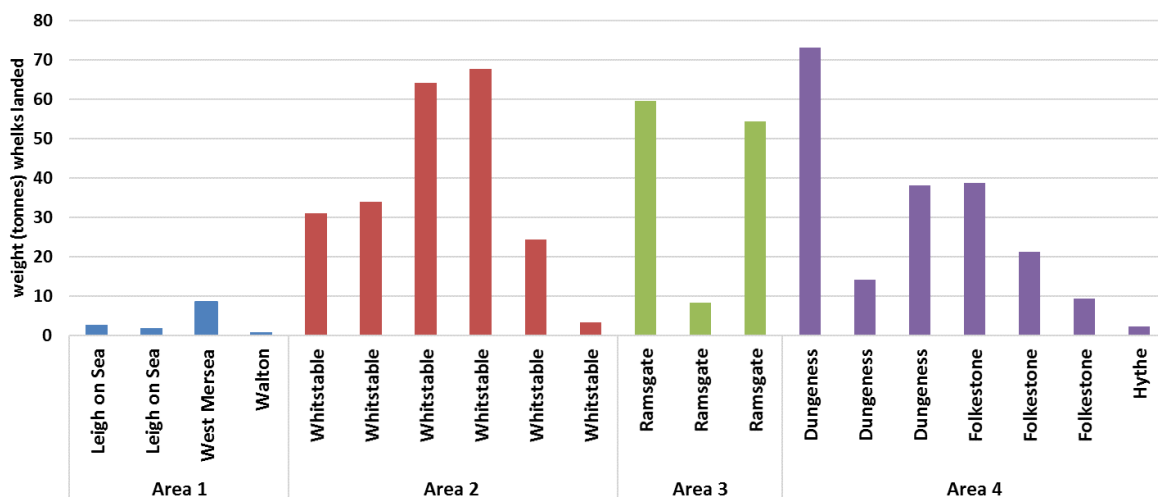


Fig. 6, total weight (tonnes) of whelks landed by each permit holder into ports in the KEIFCA district from April – November 2019

The seasonal and spatial variances in this fishery have already been highlighted, but in addition to these differences is the varying level of fishing activity from

one part of the district to another. Area 1 (Essex coast) accounts for just 2% of whelk landings so far in 2019 with five commercial permits in place. This is in direct contrast to the level of activity and number of permits issued in Whitstable and Dungeness, as detailed above. The table below shows the number of permits issued, the total weight of whelks landed, the number of pots set and number of days fished in each of the four fishing areas:

2019	Area 1	Area 2	Area 3	Area 4
permits issued	5	9	3	9
tonnes landed	12	269	78	197
pots set	5710	100577	29520	89974
days fished	54	376	120	442

Feedback from the local industry

A brief tick box-based questionnaire is sent to all permit holders in December each year and the responses are evaluated. This year's poor response rate of below 20% is possibly due to another questionnaire being sent to all permit holders just 1 month earlier, ahead of the December Stakeholder Workshop. In previous years the response rate has been between 33% - 42%.

Of the six responses received two were from Category 2 fishermen (recreational) and one was from a permit holder who has not fished for whelks so far this year. As just three commercially focused responses have been received it was decided that this was not truly representative of the fleet in general and therefore the summary of responses which is usually presented with this paper has not been included this year. However, the responses have been collated and will be made available to any Members who wish to view them.

Update on whelk enforcement activity

Thirty two whelk permits have been issued in 2019; twenty six Category 1 (commercial) and six Category 2 (hobby). These 26 commercial whelk fishing vessels, 21 of which are Kent-based, rely on whelk fishing for a considerable amount of income. The price of whelks has remained high this year; a value of £1300 per tonne was suggested by a processor in January 2020.

Consistent enforcement of our whelk byelaw is a KEIFCA priority. Seasonal trends, intelligence and gaps in knowledge feed into bi-weekly TCG meetings where enforcement activity is planned.

Sea-going enforcement is vital to inspect working whelk gear and is often done by hauling fleets of pots from the patrol boat. These hauling inspections ensure pots have the required configuration of escape holes, are fitted with current permit tags and have gear surface markers clearly labelled with the PLN of the vessel.



Officers have prioritised boarding inspections of whelk vessels while they are in the process of hauling their own gear, rather than hauling from the patrol vessel. Boarding inspection allows officers to inspect multiple aspects of the whelk byelaw, including the riddle, catch, whelk pots and permit paperwork; all in the presence of the skipper. Aside from the enforcement benefits, having fishermen haul their own gear in the presence of officers for inspection is safer for both officers and fishermen. This is because fishermen are obviously more familiar with how their own gear has been set, and after inspection can ensure the gear is shot back safely in exactly the way they like it. From both boarding and gear hauling inspections, the majority of whelk byelaw offences are detected at sea.

Land-based enforcement has been the focus of review in the last year. Putting officers in the right place at the right time to land small vessels can be challenging, as we currently rely on knowledge of fishing trends, tides and intelligence, and will be greatly assisted by the introduction of IVMS technology in the coming years. An increased number of landing inspections in line with updated legislation and procedures are planned for 2020.

In the 2019 fishery a total of five whelk byelaw offences were detected which were serious enough for KEIFCA to launch full investigations. These included illegal gear configurations, pots set without permit tags, and catch offences for ineffective riddling and retaining under size whelks. In addition to these, there were a number of minor offences detected and dealt with by notices and verbal warnings. In most cases, significant breaches of the byelaw were dealt with by means of issuing a financial penalty (£250 or more depending on value of catch).

Update on whelk riddle project

Use of various riddles - KEIFCA has been reviewing the way the whelk permit fishery is managed and enforced, including modifying the way they inspect catches of whelks in Kent and Essex. A fish box sized laser cut flat riddle has been used by officers for several years to check catches. In 2018, KEIFCA researched and purchased their first rotary riddle from Solent Engineering. This was taken to all parts of the district to show fishermen and has since been used as an enforcement tool.



New battery powered rotary riddle – due to issues including size and ease of use, KEIFC acquired a second rotary riddle in 2019 which was designed and built by Sutton workboats in Sussex. The reason for this was to improve the way KEIFCA officers carried out whelk inspections. This riddle is considerably smaller than KEIFCA's original Solent Engineering rotary riddle and it requires a 12V battery to power the riddle as opposed to a large, heavy hydraulic petrol powerpack. The Sutton rotary riddle drum alone is 40% smaller than the Solent riddle and along with the frame weighs 58kg compared to around 100kg for the Solent engineering riddle. The Sutton riddle has total speed control using a dial and the frame is made from fibre glass to reduce the weight.



Benefits of new riddle - the main benefit is that the new Sutton engineering riddle can be transported in the back of the KEIFCA Hilux truck whereas the Solent engineering riddle must be towed on a trailer. Since KEIFCA have been using the rotary riddles for enforcement and demonstrations in the district, many fishermen have been purchasing rotary riddles to use on their vessels for whelk fishing to help speed up their riddling process and make sure they are complying with the byelaw.

Whelk workshop 2019 - on the 5th December 2019, a meeting was held with KEIFCA whelk permit holders. There were 3 different type of whelk riddles at the workshop including a rotary riddle, flat riddle with round bars and a flat laser cut riddle with flat bars. The fishermen put whelks through each of the riddles to look at their effectiveness and check whelk maturity. Most fishermen liked the idea of using rotary riddles but space on the boat seemed to be the biggest limiting factor along with cost to purchase the riddles.



Future riddle work - KEIFCA has been liaising further with Sutton workboats to design a riddle that is even more compact and just as effective for fishermen and KEIFCA officers to use. Also discussed at the whelk workshop was a vibrating flatbed riddle which would potentially take up less space and cost less than the rotary riddle. This method is used for whelk fishing in Canada and KEIFCA have been in discussion with Newfoundland fisheries and Sutton workboats about these types of riddles.



Future plans for whelk research

In 2020, KEIFCA will begin a PhD project in collaboration with the University of Essex looking at the sustainability of the common whelk fishery in the district. The project will look to explore the growth and maturation rates of the common whelk across the district. This information alongside catch data will be used to develop a greater understanding of population dynamics and harvest rates for this species. The project will also investigate how variations to the onboard fishing and sorting process affect the size profile of retained catch and identify possible methods for developing an indicative future stock model based on discard data. The spatial distribution and intensity of fishing effort within the district, stock distribution and possible future changes will be investigated, and appropriate management strategies explored. The project also has the potential to explore the use of novel technologies to collect data on discards and determine total allowable catch (TAC) limits.

Outputs for the project in 2020 will include the continuation of data gathering to complement the current EMFF dataset. The data from the EMFF study will be analysed to answer questions relating to the whelk's life history and sampling areas will be extended across the district to include Dungeness, Folkestone and

Ramsgate in addition to Whitstable and Essex. As part of the whelk workshop, many fishermen noted the presence of discrete patches of smaller whelks in the district. In order to identify the cause of this phenomenon and whether these whelks are maturing at a smaller size, fishermen will provide samples from these areas for further analysis. Alongside this work, onboard observations of the fishing process will take place to see how fishing method effects catch rates.

3-year review of the Whelk Fishery Permit Byelaw Technical Permit Requirements

The status of the whelk fishery in KEIFCA district is annually examined in a standing January agenda item paper, where landing and effort statistics are reviewed as well as feedback from the industry in the form of an annual economic and management options questionnaire. This annual review process allows the appropriateness of management measures relative to the stock levels to be discussed and if necessary, management measures to be altered depending on the evidence available. This process has also helped identify and prioritise research and evidence needs as well as focus efforts on key areas where the fishery can be improved like the development of riddle designs.

In addition to the normal annual review KEIFCA officers have worked with members of the industry to develop and run a whelk management questionnaire where questions were primarily written by members of the local fishing industry. The aim of the questionnaire was to get input into how the whelk fishery in the KEIFCA district is managed in the future. Answers from the questionnaire helped structure and focus the industry workshop held on the 5th December 2019 (Appendix 1) and were discussed in the workshop.

Working closely with the local industry a lot of effort went into developing the workshop so that it was as practical as possible, allowing discussions in small and large groups. As part of the meeting the fishermen and KEIFCA officers used whelks that were caught from Whitstable a week earlier and trialled a range of riddle designs to illustrate the similarities and differences in how different riddles (mechanical rotary riddle; a flat bed, laser cut riddle; and a flat bed, round bar riddle) sorted the same catch and how consistent this sorting process was.

In addition, the whelks that were being sorted in this process had been separated into sizes classes before the meeting and then into the appropriate ratio of breeding to non-breeding whelks. The whelk shells in the non-breeding group were then painted red e.g.

9 in 10 or 90% of whelks between the size range of 41-42mm are non-breeding or immature whelks and painted red

1 in 10 or 10% of whelks between the size range of 67-68mm are non-breeding or immature whelks and painted red.

All the whelks were then mixed back together prior to riddling.

Although labour intensive this illustration helped show in very practical terms what research from Bangor University has found out with respect to size and maturity ratios, as well as how effectively the riddling process sorts whelks that are likely to have bred from those that have not.

In the afternoon session the workshop discussed the results of the riddle trials, and the questionnaire as well as how the inspection process could be improved. Notes of this meeting are provided as Appendix 2.

GROUP DISCUSSIONS AND CONCLUSIONS

Further research is required to answer questions about the size and maturity of whelks in the district.

- Fishermen noted that there are specific areas in the district where they consistently find only small whelks and suggested further research is needed to determine whether they are nursery areas, or if whelks there are maturing at a smaller size.
- Fishermen offered to collect samples and have KEIFCA Science Officers onboard to collect samples for maturity & age testing.

ACTION: 1) KEIFCA to carry out research into known areas of small whelks

The KEIFCA byelaw requirement to riddle whelks using 25mm bar spacing is to protect the non-mature stocks, NOT to sort >45mm whelks.

- After the presentation, the group discussed "what is sizeable?". EU regulation states sizeable = >45mm. However, KEIFCA byelaw (paragraph 21) states that *"All whelks within a catch must be graded for size. As part of this procedure all whelks must be passed over or through a riddle constructed of parallel bars with a minimum spacing between bars which a gauge, the size of which is set in a whelk permit, will pass through."*

Consistency of landings & enforcement is important to industry & regulator

- The industry expressed its concerns over inconsistencies when riddling at sea in all weather conditions, often single-handed versus two or more Fishery Officers riddling on quayside.
- The industry believed an improved, consistent riddle design would be the foundation to successfully protect fishermen and provide IFCA with fair and even management.
- The introduction of a minimum length measurement was discussed, as it is easier to be consistent measuring length than width.
- The Industry suggested a potential increase in MLS, but with a tolerance.
- The Industry was urged to form a whelk association.

ACTION: 1) KEIFCA to consider introducing a minimum shell length

2) Industry to form a whelk association to work with KEIFCA to design an improved riddle suitable for all whelk vessels

Following the meeting a flyer summarising the meeting was sent to all the permit holders and industry stakeholders as well as a consultation document (Appendix 3).

Addressing the concerns raised at the meeting

The feeling from the industry at the meeting was that while a riddle will sort whelks of different sizes there is substantial variance even when the same riddle set up is used. In practice this means that the same batch of whelks could be passed over the same riddle multiple times but come up with slightly different results each time in the whelks that had been retained and those that had passed through the riddle. This in turn has led to a high level of frustration, and

at times aggression, from the industry with KEIFCA and its officers as well as a loss of faith in the management system and the Authority.

Following the meeting officers reviewed the different options that could be used to address these issues;

Option 1) Do nothing and maintain current inspection process and legislation

Based from feedback from the industry since the summer, feedback at the workshop and feedback from officers carrying out the inspections; maintaining the status quo is not really an option as the overall assessment is that if this issue is not going to be quickly addressed KEIFCA officers relationship with the industry will continue to deteriorate, and most likely levels of compliance, as goodwill is lost.

Option 2) Develop a non-legislative gentlemen's agreement/ code of practice

KEIFCA officers could work with the industry to develop an agreement/code of practice that KEIFCA and the permit holders would sign up to and develop a voluntary landing size, associated tolerance and method of inspection. While this approach could work in theory there is no regional whelk association to help draw up such an agreement and while we really appreciate members from the industry coming to the meetings or replying to questionnaires engagement levels are generally low (less than 40% of the industry). Without overwhelming industry support and engagement voluntary measures can quickly unwind.

In addition to this, one of the key areas of feedback from the fishing industry and from officers inspecting the catch was the need for a clear, fair, easy to understand process that everyone can use. Developing byelaw wording that applies equally to everyone and has clear consequences if not met helps meet this requirement.

Option 3) Develop a new permanent byelaw

Working with the industry to develop a new byelaw would seem the most appropriate option as it would help meet the requirements to create a clear, fair, easy to understand process. Unfortunately, while this can be a medium or long-term aim it will take a minimum of 12-18 months for such legislation to come into force. The view from the industry, KEIFCA officers and the workshop was that this is an issue that needs to be immediately addressed and that some form of swift action needs to be taken from the workshop. If this issue is not going to be quickly addressed, KEIFCA officers' relationship with the industry will continue to deteriorate and most likely levels on compliance, as good will is lost.

Option 4) Develop an emergency byelaw

Section 157 of the Marine and Coastal Access Act 2009 outlines the ability of an IFCA to make an emergency byelaw. This power can be used when the Authority considers that there is urgent need for the byelaw and that the need to make the byelaw could not reasonably have been foreseen.

As described in the previous options both the industry leaders and KEIFCA officers regard that this is an urgent issue that need to be addressed, especially in the light of a permanent byelaw taking well over a year to come into force.

Over the last two years, KEIFCA officers and the industry have been working towards a technological solution of increasing consistency and reducing variation in the whelks that will pass through a riddle. Time and money have been

invested in first buying and using a mechanical riddle and then developing a 'mark 2' riddle with an improved design, more accurately controlled cylinder rotation speed, reducing the weight and size (so it can be moved about more easily) and powered by a standard car battery.

While all these improvements have helped it was the conclusion of both the officers and the industry at the workshop that even when the 'mark 2' riddle was used there is a level of variance which was significant. The fact that the same riddle could be used but would produce slightly different results each time, led those involved in the meeting to the conclusion that there is a limit to how efficiently a riddle can sort whelks and an unforeseen situation has occurred where we need to find a different approach to address the reliability concerns raised by the industry.

Conclusions and recommendations

From weighing up the different options taking the process forward of making an emergency byelaw would best address the issues raised by the industry. As the matter is regarded as urgent KEIFCA officers have already started to take the necessary steps of completing an initial impact assessment and drafting emergency byelaw wording. If the Authority members agree to take forward option 4, it would be within the discussions of agenda item B5 that the Authority members would review the requirements and detail of the emergency byelaw and if members were minded make an emergency byelaw.

Recommendations:

Members are asked to **AGREE** that the pot limit, the riddle size and the number & size of escape holes remain set at:

Pots – 300 for category 1 permits and 10 for category 2 permits

Riddle – 25mm spacing between bars

Escape holes – 10 @ 25mm per pot

Members are asked to **AGREE** to take forward option 4 and review the requirements and detail of making an emergency byelaw in Agenda item B*, to address issues raised by the industry with the riddling process.