

By: Chief Inshore Fisheries Officer/Lead Scientific and Conservation Officer

To: Kent & Essex Inshore Fisheries and Conservation Authority  
– 30 January 2024

Subject: **Whelk Permit Byelaw Update**

Classification Unrestricted

**Summary:**

This paper will provide Members with an overview of whelk fisheries markets, analysis of KEIFCA whelk landings data over the year 2023 and an update of national whelk management and what it means for KEIFCA whelk fishery 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

**Fisheries Management Plans – how is national picture affecting KEIFCA’s management and workstreams**

DEFRA published the whelk Fisheries Management Plan (FMP) in December 2023 setting out management objectives which may affect the work that the IFCAs do around the English coast. Preceding this, KEIFCA and the AIFCA hosted a workshop in Poole where feedback was gathered from a wide variety of regional regulatory representatives, including authority members, chief fishery officers and scientific officers as well FMP-responsible bodies, such as SeaFish and DEFRA. Collective views on the FMPs were captured and published in advance of FMP publications along with the IFCA FMP website. KEIFCA also provided our own specific consultation response to the whelk FMP.

Within the whelk FMP the shared shellfish principles and whelk fishery management objectives were set out. Shared shellfish principles include the

formalisation of structure and operation of the Shellfish Industry Advisory Group (SIAG) and the associated subgroups to ensure effective representation. Key principles included assessing and developing appropriate management of fishing effort, among others, collectively to promote a thriving and better suite of shellfish fisheries and promote the development of industry and regulator co-management.

Within the whelk specific objectives, key issues were highlighted and KEIFCA will address the highest priority objectives in its long-term research strategy and in turn guide the actions proposed for annual plans. Key objectives include developing a data collection programme, defining key whelk stock boundaries at a suitable scale for assessment and management and assessing CPUE, among others. These management objectives were ranked and discussed in detail at the workshop and KEIFCA has already committed to prioritising the continuation of its catch return and existing data collection programme developed in the aftermath of the mortality event on the North Kent Coast to contribute to these FMP objectives, while meeting local management and fishery needs. This data collection and expansion of the workstream will be furthered in collaboration with the AIFCA and Eastern IFCA within a funded project, Coastal health, livelihoods, and environment: a data and analytical framework for long-term resilience, sustainability, and growth project.

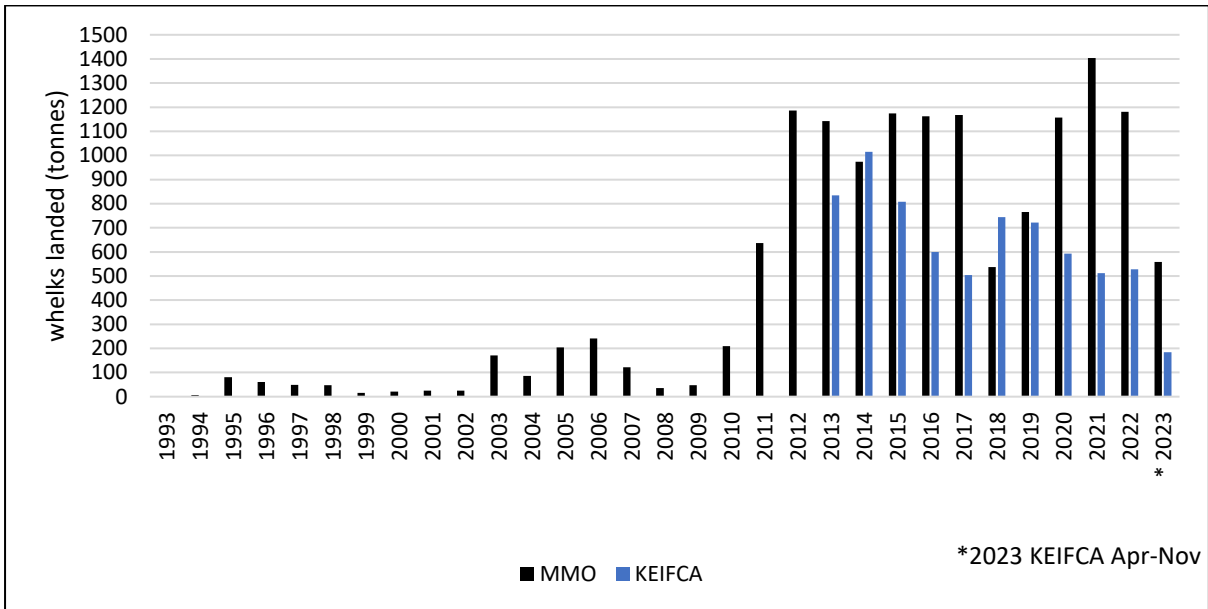
## **KEIFCA annual whelk fishery review**

### **The market**

According to the main buyer for whelks caught in the KEIFCA district, 2023 has been an unusual year. Lynn Shellfish reported that a combination of demand from Europe rather than Korea. Lower availability of whelks may have resulted in a slight increase in prices this year. Whelk prices were higher in 2023 than in the previous two years, at around £1,300 per tonne for most of the year and reached £1,600 per tonne by the end of the year. The Kings Lynn based processor also reported that the east England coast had experienced low whelk catches in 2023, whereas the south coast and Wales had had an exceptionally good year.

### **MMO landings data**

The long-term picture of annual MMO landings data (recorded landings in KEIFCA district ports, from vessels fishing inside and outside our district i.e. up to 12nm) showed relatively consistent high levels of landings in recent years compared to landings prior to 2010 (Fig. 1). However, MMO recorded whelk landings for 2023 are 53% lower than those recorded for 2022. MMO data on whelk fishing effort (pots hauled and days fished) was not available at the time of writing this report.

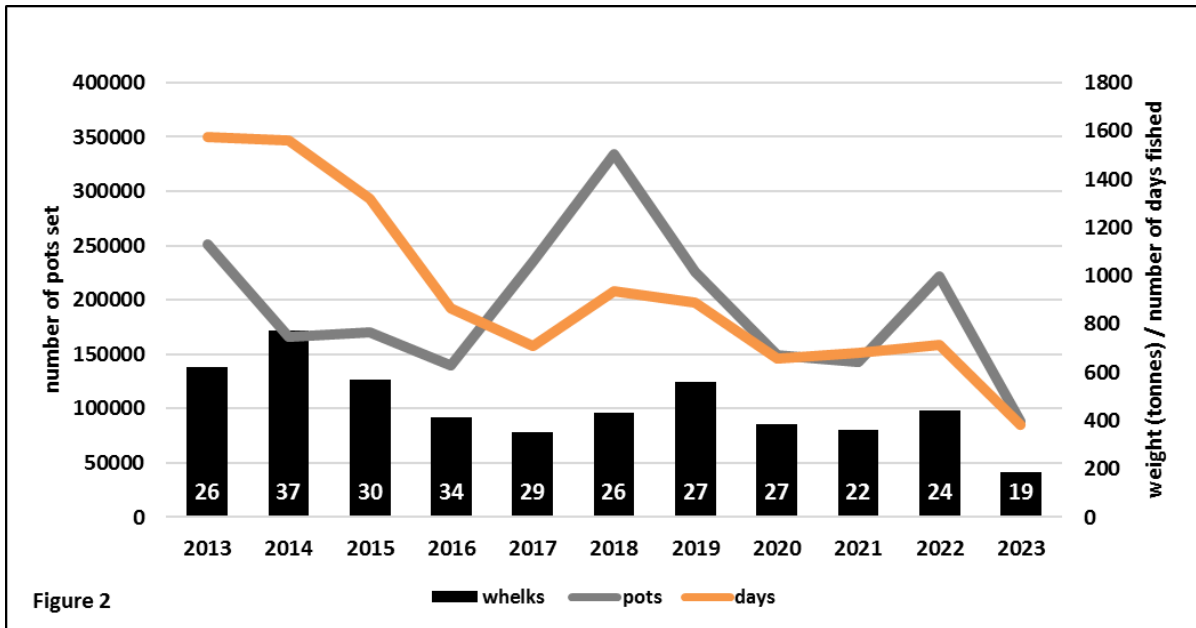


**Figure 1. MMO whelk landings data overlapping KEIFCA district out to 12NM offshore 1993-2023 alongside KEIFCA’s landings data shown for 2013-2023 inside 6NM.**

**KEIFCA district landings**

**Annual landings**

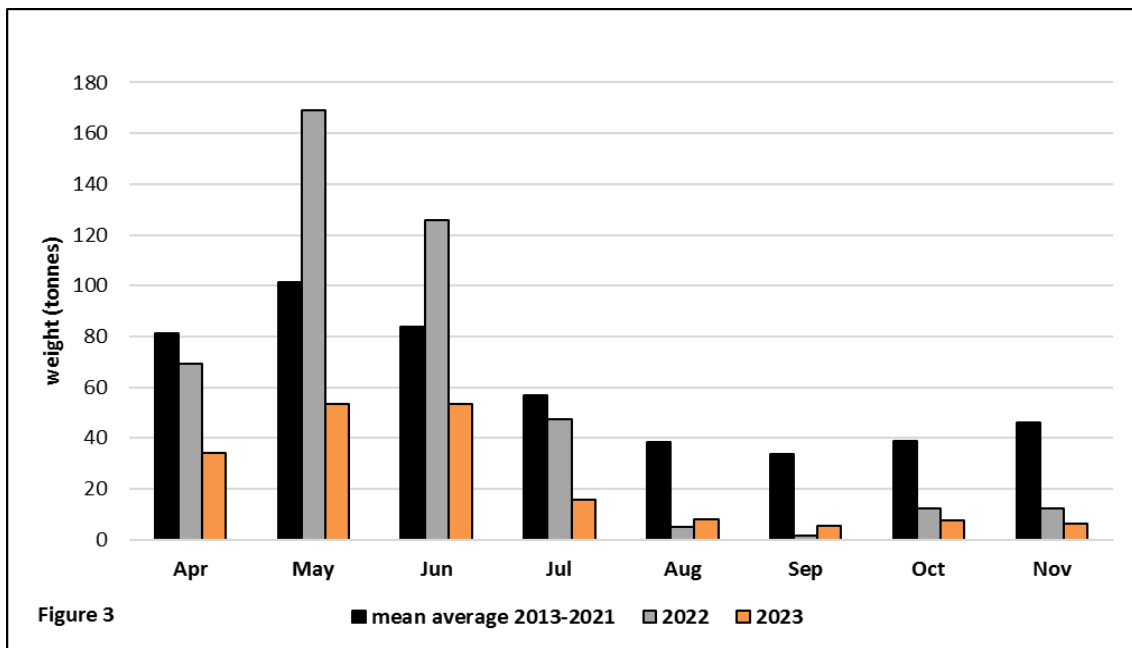
Whelk fishing has significantly reduced within the district this year and as can be seen from Figure 2, all elements of the fishing effort as well as landings are lower in 2023 than in all other years since the whelk permit byelaw was introduced in 2013. Fewer Category One (commercial) whelk permits have been issued so far this year compared to the same period in all previous years.



**Figure 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 2013-2023. The white number inside each black bar is the number of commercial (Category One) permits issued for that year.**

### Long-term monthly landings

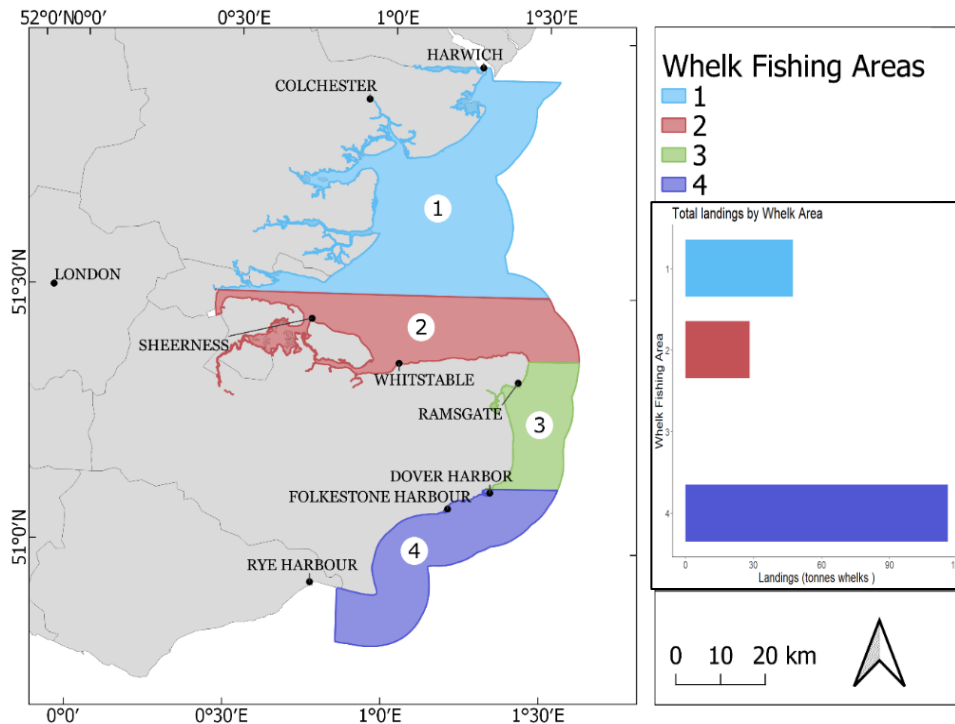
Figure 3 below shows the comparison of April–November 2023 monthly landings against the same period in 2022 and against the monthly mean average of April–November landings from 2013–2021. Compared with the monthly mean average of previous years, landings were lower in every month of this year and lower than each month of 2022 except in August and September. Members will recall that late summer last year was when the fishermen from Whitstable first reported concerns for whelk health and a sudden, significant reduction in their landings.



**Figure 3. Long-term mean monthly total weights (tonnes) of whelks landed Apr–Nov 2013–2021 (black) compared to the total monthly weights (tonnes) landed Apr–Nov 2022 (grey) and 2023 (orange).**

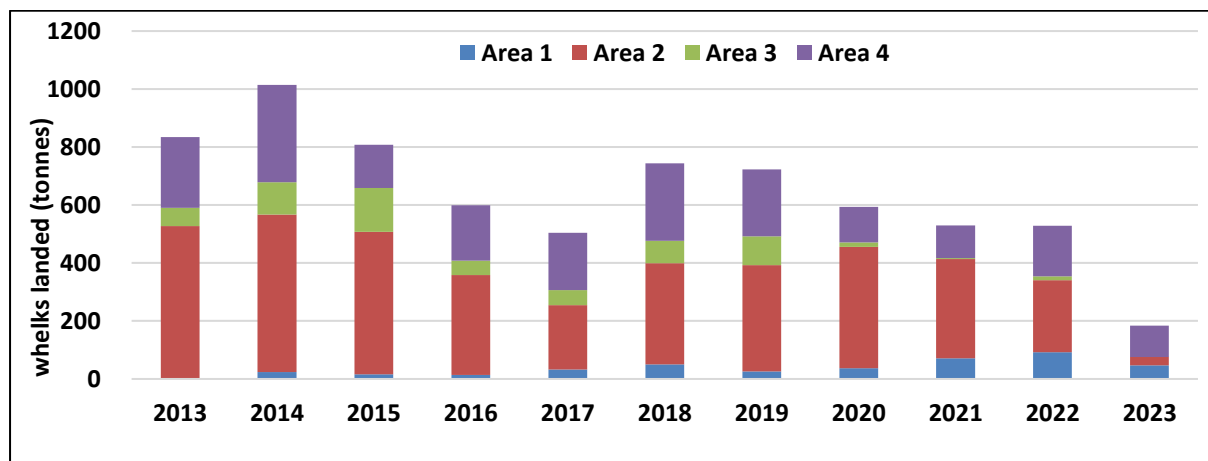
### Geographical distribution of catches

KEIFCA manages the fishery within four Whelk Fishing Areas as shown below (Figure 4), along with the total whelk landings from each Area in the middle right hand panel. The majority of whelks landed (by weight) in the district came from Area 4 in 2023, which used to dominate before 2018 after which Area 2 became the more prominent whelk fishery area in the district (Figure 5). Area 2 suffered a significant whelk mortality event in 2022, and this event is likely to be the driver behind reduced catches from this area in 2022 and 2023, driving down the overall level of catches coming from the district.



**Figure 4. The four whelk areas in the KEIFCA district, showing the total annual landings by whelk Management Area on the right-middle panel.**

The long-term spatial variation of whelk landings is shown in Figure 5 below as the proportional contribution of each of the four Whelk Fishing Areas to the total whelk landings per year from 2013-2023. The spatial distribution of landings in 2023 is markedly different from previous years, with a very low level of whelks landed from Area 2 and the near absence of whelks from Area 3.

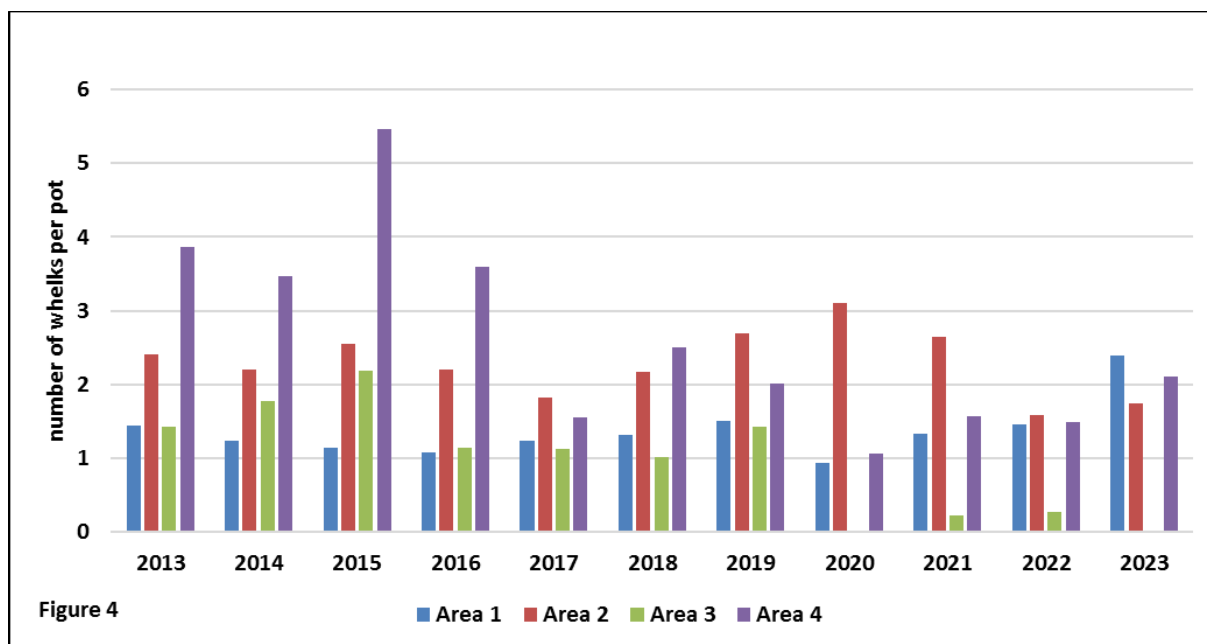


**Figure 5. Proportion of total weight (tonnes) of whelks landed each year 2013 – 2023 in each of the 4 whelk fishing areas in the KEIFCA district (Note 2023 landings are from period April – November only).**

### Catch Per Unit Effort

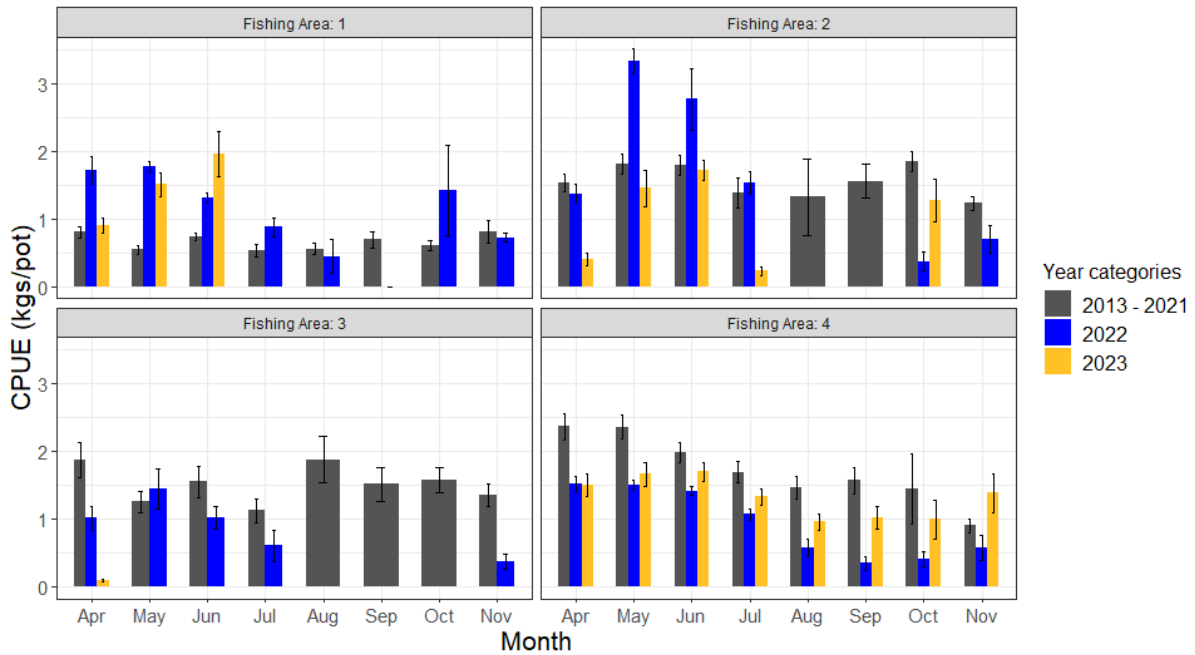
A key metric for fisheries managers to consider in addition to the total weight of landings, is the catch per unit of effort (CPUE, sometimes reported as LPUE) i.e. how many whelks are caught per pot per fishing trip. This is particularly important

when the fishery has experienced a reduction in landings as a reduced CPUE could indicate that the stocks have been fished at an unsustainable level. Figure 6 below shows that in 2023 CPUE for this fishery appears relatively stable over the longer period, except for Area 3 which has been low since 2020, and again exceptionally low in 2023. The low level of fishing effort in Area three is a consequence of the few fishers working the area switching over to different fisheries in 2023 but still operating in the area. We are not currently concerned about this decrease in fishing effort but will be in more regular contact with local fishers to get a better understanding of this behaviour. A small uplift in CPUE was recorded for all other areas in 2023 compared to 2022. The relative stability of CPUE suggests that stock levels are relatively stable however the reduction in overall effort is concerning.



**Figure 6. Mean annual CPUE levels for the 4 whelk fishing areas in the KEIFCA district 2013-2023**

A further breakdown of fishing effort into monthly means by Area (Figure 7), shows slightly higher CPUE levels in 2023 than in 2022 in Area 2, following the significant mortality event in 2022, particularly during November when the fishery traditionally starts to pick up after the slow summer season (typical of the area). We will be monitoring catch returns closely over the coming months to keep track of catch levels and work with fishers to understand the problems and recovery around this fishery.



**Figure 7. Long-term mean monthly CPUE (kg/pot) landed in each whelk management area between April -Nov for long-term (2013 – 2023) in grey, 2022 in blue and 2023 in yellow.**

### Fishing licenses

Eleven commercial whelk permits are in place this year in Area 2, yet only 15% of the total landings came from the north Kent coast in 2023. In contrast, Area 4 (south Kent coast) had its highest level of landings since 2018 (Figure 6), and with only three commercial permit fishers, caught almost 60% of the total whelks landed in the KEIFCA district.

Landings from Area 1 (Essex coast) accounted for 26% of the total whelk landings in 2023 with just two commercial permits issued to fishers from that part of the district. However, one new permit holder based in Queenborough (Area 2) who fished in Area 1 during the first 3 months of this permit year and a Whitstable (Area 2) based fisherman caught whelks in in Area 1 in April and May, before moving back to his usual fishing grounds in June. Again, fishers from Area 2 have had to fish further afield following the whelk mortality event in 2022. As previously mentioned, there has not been any commercial whelk fishing in Area 3 in 2023. 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:

2023	Area 1	Area 2	Area 3	Area 4
permits issued	2	11	3	3
tonnes landed	47	28	0	108
pots set	20360	15445	30	52780
days fished	80	69	3	232

## **Whelk compliance**

Consistent enforcement of the whelk permit byelaw is a seasonal priority on the KEIFCA Compliance Risk Register, with most effort between autumn to spring each year. Patrol teams monitor activity and gather intelligence, concentrating on any report or instance of non-compliance with the permit byelaw. The current intelligence picture informs bi-weekly Tactical Coordination Group (TCG) meetings where whelk enforcement taskings are assigned.

In 2023 officers were tasked with boarding and gear hauling inspections at sea, and landing inspections on shore. Following best available intelligence to target non-compliance, KEIFCA enforcement teams conducted 15 inspections of whelk fishing vessels in 2023. Compliance overall was good, with only two minor infringements for retaining small quantities of undersize whelks which were dealt with by means of verbal warnings. Another permit holder was issued an Official Written Warning for using an unpermitted skipper and retaining a small quantity of undersize whelks, in excess of the 5% tolerance. Overall, gear inspection compliance has improved dramatically with no recorded offences in 2023.

## **Neighbouring IFCA district comparisons**

Sussex IFCA has a larger whelk fishery than KEIFCA with 61 commercial licenses, compared to our 19, and landing as much as 600 000 kg per year in recent years. Sussex IFCA also report lower than long term average landings in the district, like KEIFCA, especially during 2023, with fishers limiting the netting period to winter and spring owing to lower reported incidence of whelk, suspected to be related to elevated water temperatures. Compliance levels were reported to be relatively good, comparable to that in KEIFCA.

Eastern IFCA reported unusually high whelk landings in 2022, and then a slight contraction of the fishery in 2023, but still above the long term average for their district. The number of licensed fishers appears to be relatively stable over the long-term in Eastern IFCA. Seasonal landings patterns are remarkable similar to that recorded in KEIFCA and Sussex IFCA – with higher fishing effort in winter and spring, months and lowest levels during late summer and early autumn.

See Annex for respective reports from Sussex and Eastern IFCAs.

## **Whelk study partnership with Essex University**

KEIFCA have partnered with Essex University in December 2022, to study the effects of water temperature on whelks, specifically assessing the stress in the animals including mortality, effects on egg laying and respiration and oxygen consumption at different temperatures. (Following the whelk mortality event in 2022, and in addition to work already reported on as detailed in the 2022 November Authority paper. The experiments are currently underway, but early observations indicate that there were higher levels of mortality, suppression in egg laying and clear differences in oxygen consumption at higher temperatures. We look forward receiving more feedback over the coming months and will relay results to fishers and the Authority.



## **KEIFCA Management recommendations**

After considering the most recent landings and catch data, the current assessment of market demand, and the benefit to the industry of continuity, it is recommended that the current measures are maintained for the 2024/25 permit.

Current technical management measures:

- Pots – 300 for category 1 permits and 10 for category 2 permits
- Riddle – 25mm spacing between bars
- Escape holes – 10 @ 25mm per pot

### **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.

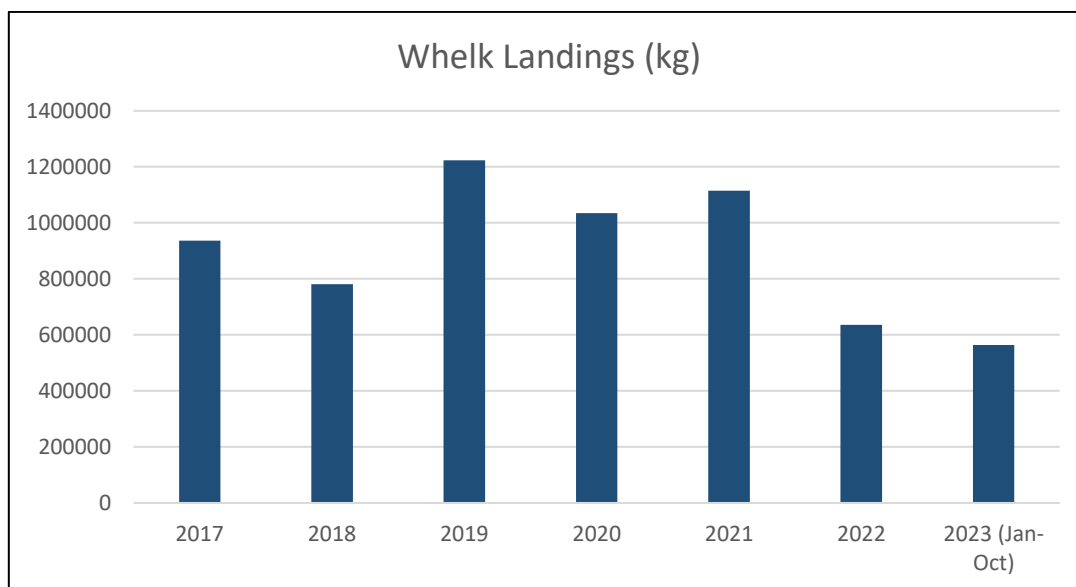
Escape holes – 10 @ 25mm per pot

## Annex 1: Neighbouring IFCA district reports on landings

### Sussex IFCA

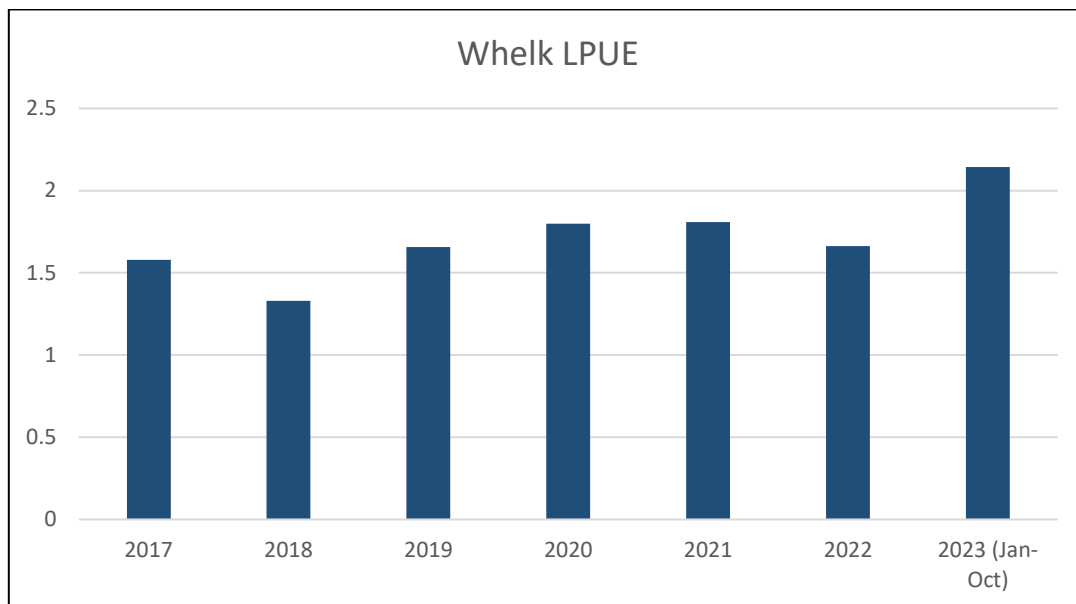
#### 1. Landings, fishing effort and number of fishers

There are currently 98 active shellfish permits (61 commercial and 37 recreational), of which 57 have an allocation of whelk tags (41 commercial and 16 recreational). Total landings (tonnes) and total effort (pots) from the commercial fleet in Sussex were down in 2022 compared to 2021, and this trend looks set to continue for 2023, as landings in November and December are generally modest.



**Figure 8. Chart outlining total annual whelk landings (weight in kgs) in the Sussex district from 2017 - 2023.**

Landings per unit of effort (LPUE) may have increased from 2022, with an increase from 1.62 kg in 2022 to 2.17 kg in 2023. However, it is important to note that the 2023 dataset is incomplete as we are awaiting the submission of landings data for November and December, and the seasonality of LPUE (lower in November and December), will likely bring this average down.



**Figure 9. Chart showing LPUE (weight in kgs) in the Sussex district from 2017 - 2023.**

## **2. Fishing behaviour**

Many of the regular inshore whelk fleet who net during the summer months continued netting inshore well into the autumn/winter months, whereas others have decided to continue to pot outside the district. Anecdotally this is due to the decreased incidence of whelk on the inshore ground as a result of the slightly higher than usual water temperature late in 2023.

## **3. Compliance**

In 2023, Sussex IFCA issued two warnings to fishers for gear related offences – escape holes below 25mm and using pots with no tags/expired tags. A warning was also issued to a vessel with a 23mm whelk riddle in use. Vessels may only use a 25mm riddle when fishing inside the district.

There were no offences reported relating to Minimum Conservation Reference size (MCRS) at sea, with nine targeted patrols on whelk potting vessels conducted in the year. Landing inspections on potting vessels and market inspections also saw no issues with MCRS (45 mm). Warnings issued for catch return submissions have stabilised, with the majority of fishers now completing and sending in returns. Compliance with the submission of catch returns has improved since the introduction of an online reporting system for fishers to use in 2021.

## **Eastern IFCA**

Due to staff changes and recent recruitment & training at Eastern IFCA they were not able to provide a 2023 update report for the whelk fishery in their district. They did however send some updated graphs which are shown below:

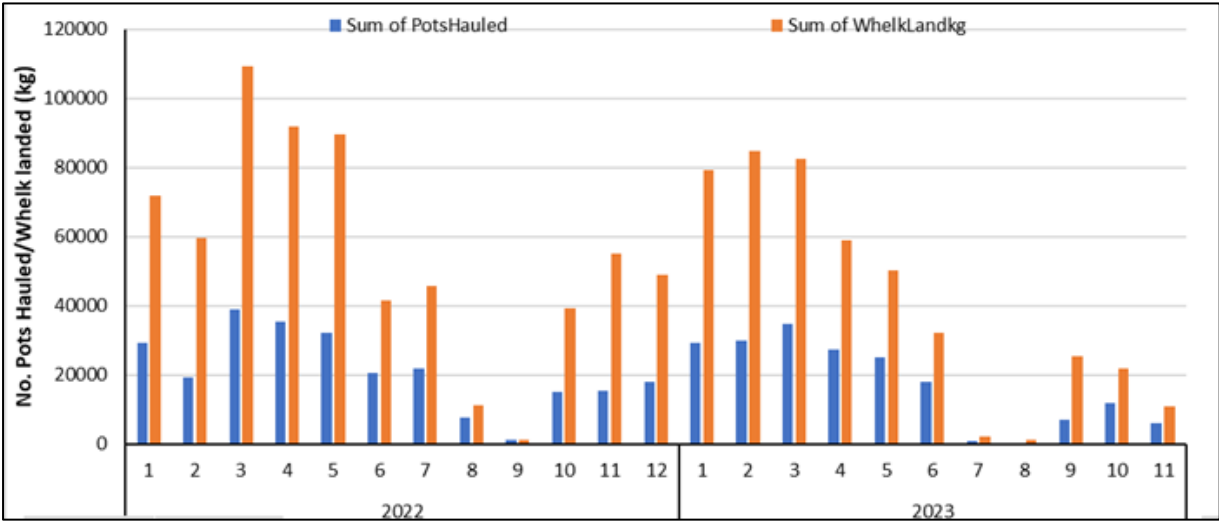


Figure 10. Comparison of total number of pots hauled and total weight (kgs) of whelks landed in the EIFCA district in 2022 and 2023.

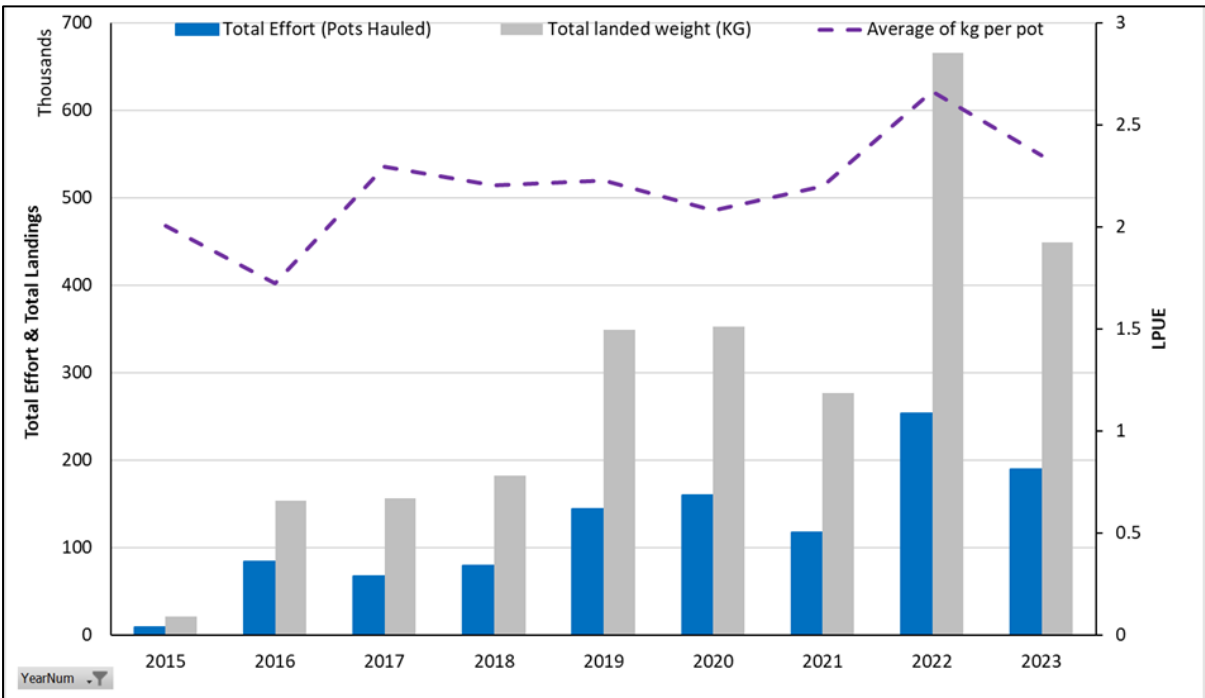
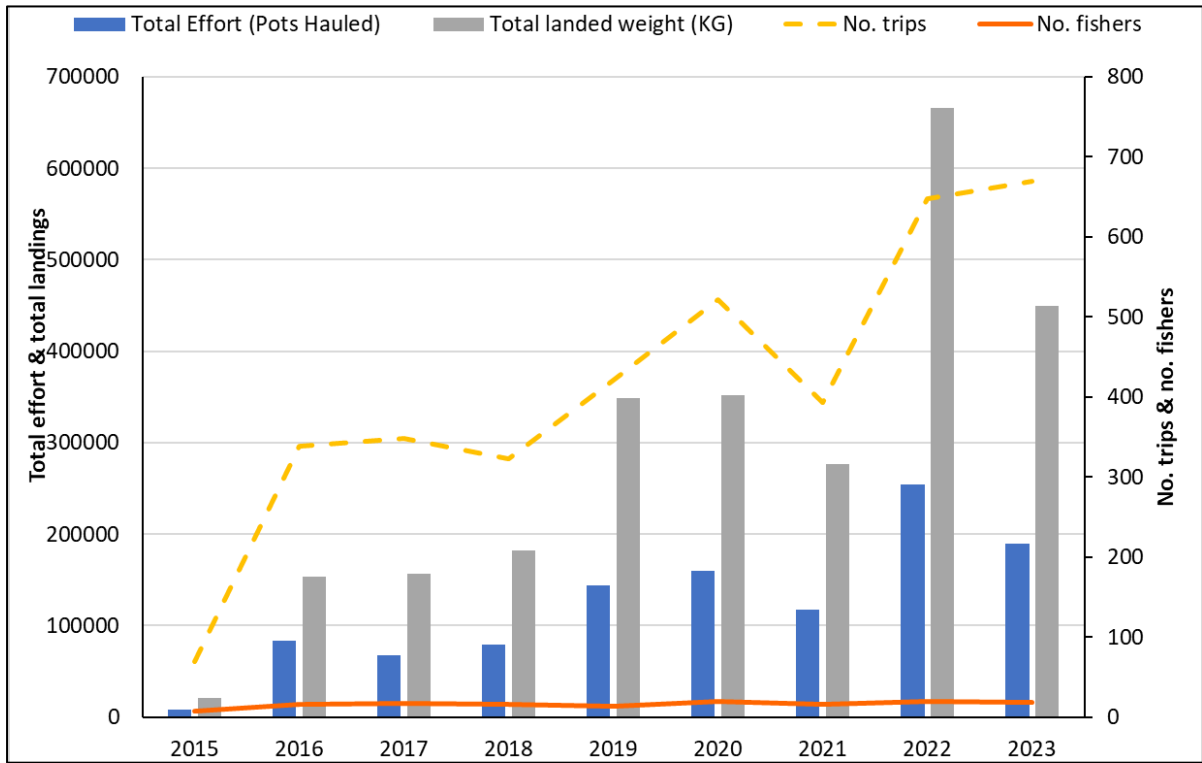


Figure 11. Total annual whelk landings (weight in kgs), total number of pots hauled and mean average weight (kgs) of whelks per pot (LPUE) for 2015 – 2023.



**Figure 12. Total annual whelk landings (weight in kgs), total number of pots hauled, total number of trips made and total number of fishers for 2015 – 2023.**