Marine Management Organisation

Economic analysis of costs and profit for vessels catching Dove Sole in Lyme Bay ICES rectangles 30E6 and 30E7

MMO1337






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Executive Summary

An economic analysis of vessel income and costs was carried out by Seafish for all vessels with recorded landings of Dover Sole from the ICES rectangles 30E7 and 30E6 between 2015 and 2022.

The vessels were grouped based on their home port and gear types used.

All vessel groups show a general increase in average annual operating profit between 2011 and 2017 and a decrease between 2017 and 2020. Most groups show an increase in annual operating profit in 2021 compared to 2020 and an overall increase since 2011. Vessels in the Lyme Bay CIC group (Axmouth, Beer, Lyme Regies and West Bay) however show a continued decline in operating profit in 2021 and their operating profit is now lower than it was in 2011. This reduction is particularly apparent for vessels using fixed nets in the CIC group and is visible to a lesser extent for all categories of vessel using fixed nets.

The average annual operating profit across all under-10m vessels regardless of home port or gear type is relatively stable but after peak in 2016 is only fractionally higher in 2021 compared to 2011.

The data shows that the reduction in average annual operating profit is potentially related to three factors:

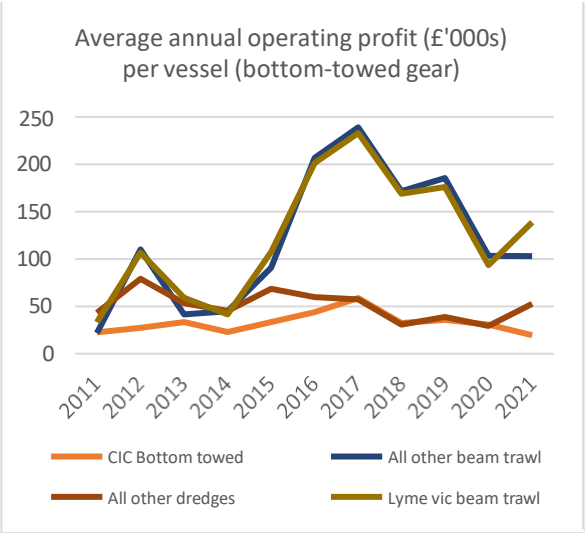
1. A reduction in days at sea – all CIC vessels have seen a reduction in days at sea, with CIC netters experiencing the most significant reduction.
2. Increased operating cost - CIC netters, Lyme Bay vicinity netters, all other netters and all under 10's have all seen an increase in costs when compared to 2011 and 2017. Whereas every other category has seen a decrease when compared to 2017.
3. A reduction in landings per day at sea - The data also shows a significant decrease for all netters, all under 10's and all CIC categories. Whereas some other categories such as Lyme Bay vicinity beam trawlers are trending upwards.

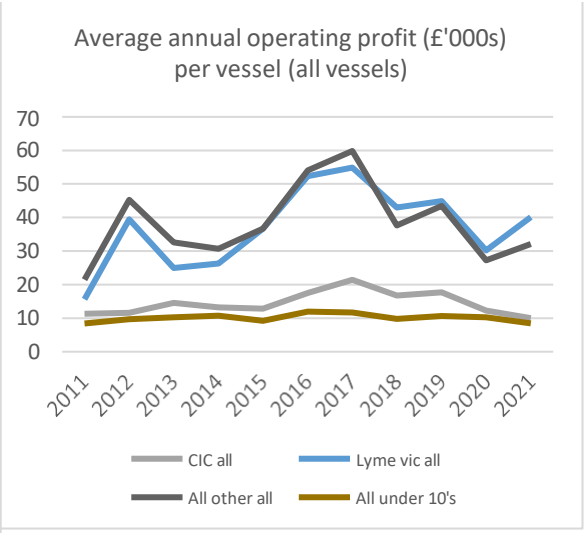
Introduction

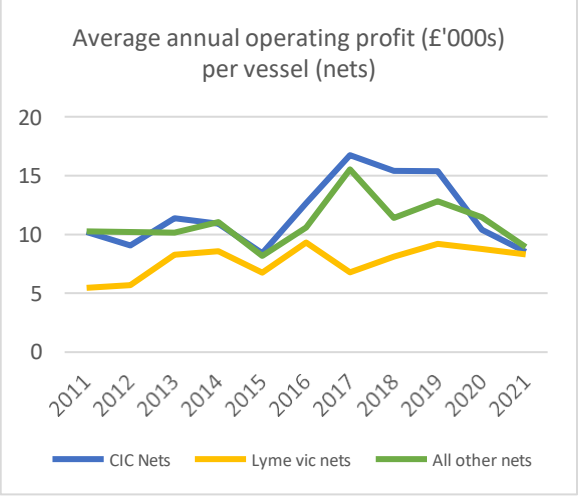
An economic analysis of vessel income and costs was carried out by Seafish for all vessels with recorded landings of Dover Sole from the ICES rectangles 30E7 and 30E6 between 2015 and 2022. The analysis was conducted on the total landings of all species. Vessels were grouped based on their home port and gear types used. Three home port categories were used: 1. Community Interest Company (CIC) made up of 51 vessels from: Axmouth, Beer, Lyme Regies and West Bay 2. Lyme Bay Vicinity: 52 vessels from Weymouth, Portland, Exmouth, Exeter, Teignmouth and Brixham and 3. 123 vessels from All Other Ports: this includes any port that had one or more registered boat catch for Dover Sole in Lyme Bay between 2015 and 2022. This included 31 ports, including ports such as Shoreham, Newlyn, Mevagissey and Plymouth (which accounted for the majority of catches in this category, listed by order of importance).

The data for this analysis has been extracted from a national dataset. Seafish produced the dataset by combining costs and earnings information from vessel accounts provided by vessel owners to the annual Seafish UK Fleet Survey with official effort, landings and capacity data for all active UK fishing vessels provided by the UK Marine Management Organisation (MMO). All values from 2011 to 2020 have been adjusted for inflation to match 2021 values. The full analysis is provided as an annex to this summary report which highlights key findings only.

Figure 1 a,b,c. Average annual operating profit (£000's) per vessel each year (2011-2021) across different vessel groups.







All vessel groups show a general increase in average annual operating profit between 2011 and 2017 and a decrease between 2017 and 2020 (Figure 1 a,b,c). Most groups show an increase in annual operating profit in 2021 compared to 2020 and an overall increase since 2011. This was reflected in the views given by participants in the consultation who highlighted the importance of the fishery and the steady catch limits to their livelihoods and paying crew.

Vessels in the Lyme Bay CIC group however show a continued decline in operating profit in 2021 (£10,000) and their operating profit is now lower than it was in 2011 (£11,300) (figure 1b). This reduction is particularly apparent for vessels using fixed nets in the CIC group (figure1c). Lyme Bay vicinity netters, all other ports netters and all under 10's also show a continued reduction in average annual operating profit into 2021 whereas every other category sees an increase since 2020.

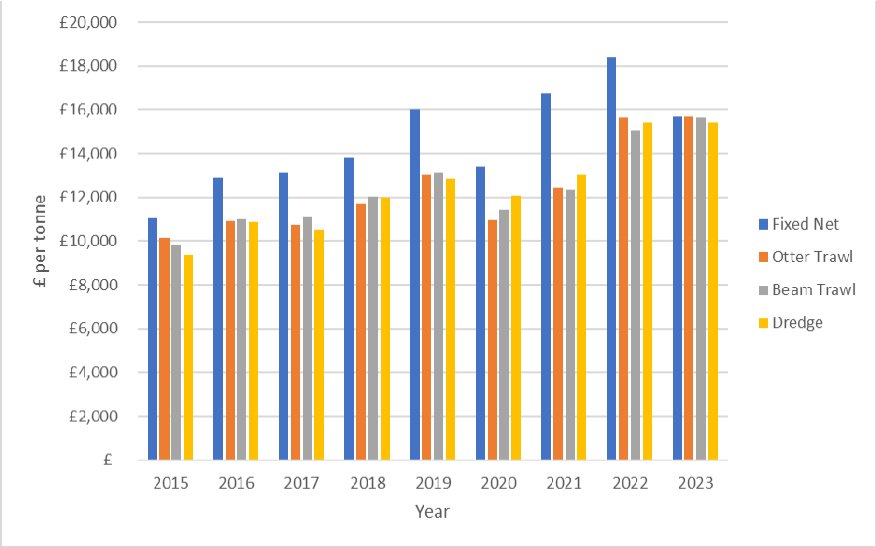
Investigating the cause of the reduction in average annual operating profit: Why are these vessels seeing a reduction in their operating profit?

According to the social investigation carried out in 2022 and the consultation there are several reasons CIC netters are experiencing a decline in operating profit. Some of these fishers have stopped targeting sole during the season or have reduced their effort. Others explained that their catch per unit effort has reduced, as they continue to the set the same amount of net as, they have done historically but they are catching less. Some put this down to the movement of the stock, getting caught by mobile gear and nets set further offshore, so fewer fish reach the inshore grounds. Others see this as a reflection of the stock depleting due to increase effort in Lyme Bay.

Landed prices – How does landed price vary depending on gear type?

Analysis of the average price per tonne landed (for all species of fish) shows an upwards projection for all vessel categories. Netters and Under 10's generally have higher landed prices than other vessel types. The difference in price per tonne seems to be based on gear category rather than location. For example, CIC nets have an average landed price per tonne of £3,883 whereas for CIC bottom towed gear the average price is £2,787. This is further demonstrated by the fact that each location category shows a smaller degree of variation than the variation within each location. The average landed price per tonne for CIC as a whole is £3,317, Lyme Bay vicinity is £3,083 and all other ports is £2,919 (all based on 2021 figures). This suggests gear type has more of an effect on the average landed price than a vessel's location.

Figure 2 Average landed price of Sole (£ per tonne) for different gear types between 2015 and 2023



As shown in *Figure 2* all vessel types have seen an increase in the price of Sole from 2015 to 2023. The average landed price does differ depending on gear type with fixed nets generally receiving a higher price for Sole (and as above for other fish species) than bottom towed gears. Therefore, the reduction in average annual operating profit is not caused by these vessels getting a lower price for their fish. This was reflected in the MMO's social baseline study and the consultation. There was consensus that the prices of sole were good, and they were a significant pull factor for vessels steaming from different ports to fish in Lyme Bay. However, some under 10m netters raised issues around their dependence on this fishery and the profitability of the fishery to their livelihoods, including concerns that any changes in management could restrict their ability to earn a living (MMO, 2022; Defra, 2023)).

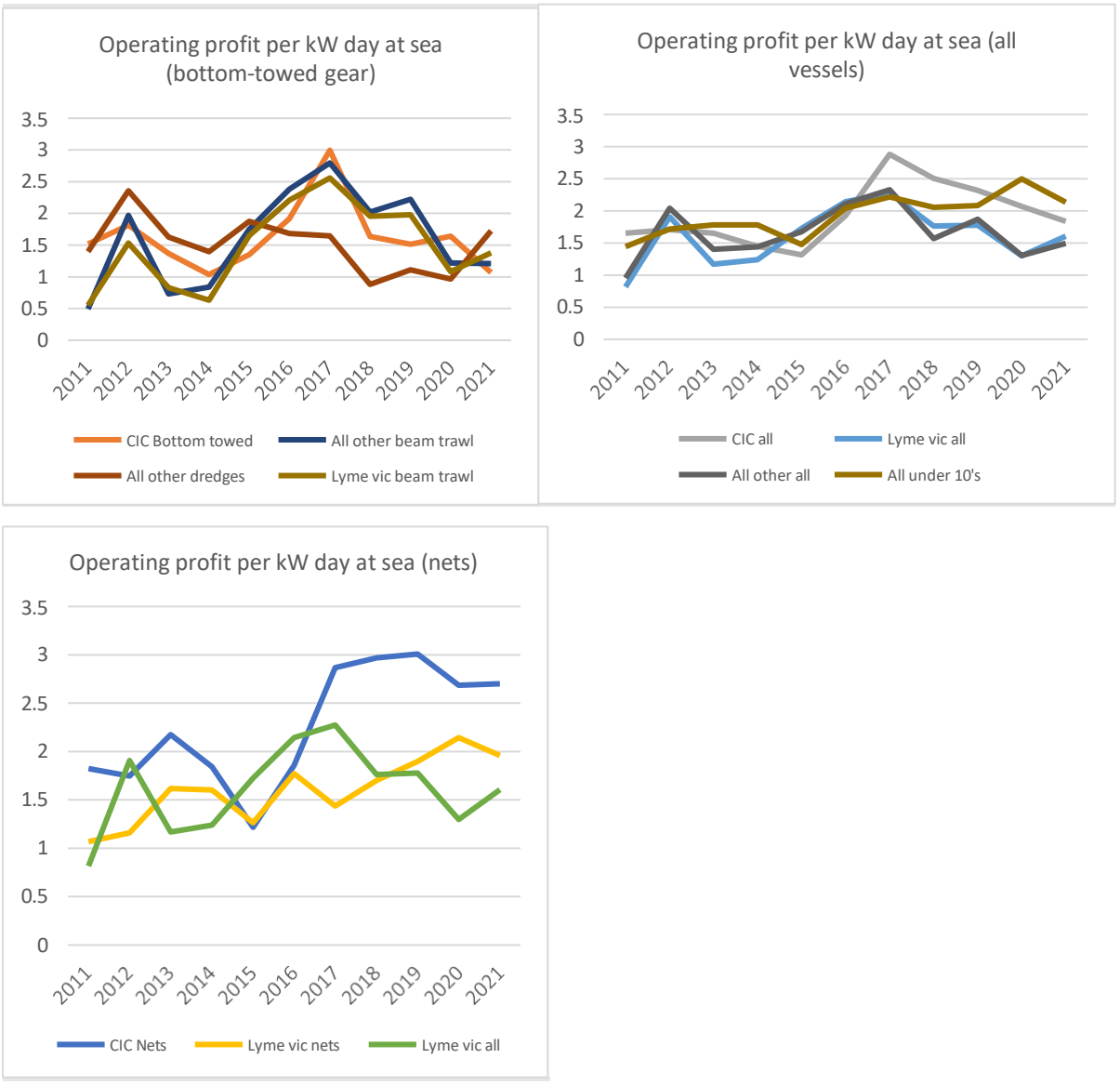
Operating cost - Do different vessel types have higher operating costs?

The data for total operating cost per kW day at sea shows that vessels in the CIC ports generally have lower costs. However, it is worth noting that costs have increased for all groups in 2021 when compared to 2020. Additionally, while CIC netter costs are still lower than other categories, they have seen a sharp percentage increase in costs as have other net vessels. For CIC netters, costs are up 35% since 2011 and 8% since 2017. Lyme bay vicinity netters (up 50% since 2011 and 38% since 2017), all other nets (up 17% since 2011 and 9% since 2017) and all under 10's (up 13% since 2011 and 4% since 2017). Whereas every other category has seen a decrease or only a small increase in costs when compared to 2011 and 2017. Therefore, this could contribute to the reduction they are seeing in average annual operating profit. But as other vessel categories saw an increase in costs in 2021 compared to 2020 it is not the only reason the CIC netters profit is decreasing as they currently still have lower costs than other categories. This could be because some costs such as port fees and certain maintenance are likely to be fixed

regardless of the days at sea and so as the days at sea go down these costs are spread proportionately over fewer days. As vessel costs (excluding fuel, crew and fishing costs) shows almost no reduction despite the reduction in days at sea. These fixed fees were not mentioned in the consultation or the social baseline study in 2022 which did not focus on collecting economic data. Further data gathering may be needed to understand this better.

On the other hand, skippers and owners of larger vessels highlighted the importance of these vessels for employment (crew) and the significant running costs.

Figure 3 a,b,c. Operating profit per kW day at sea each year (2011-2021) across different groups of fishermen



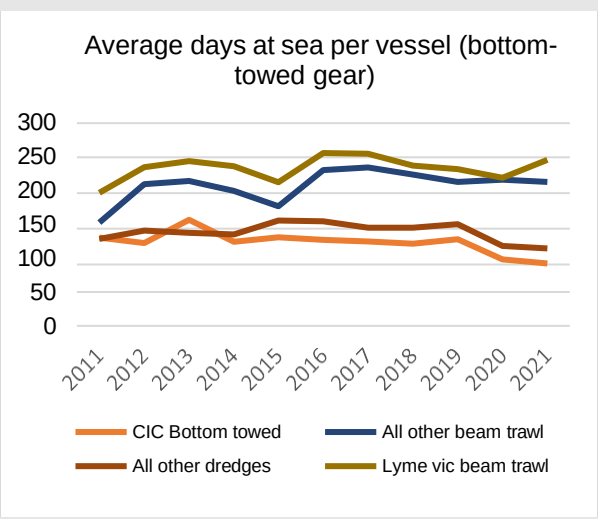
When comparing this set of data (Figure 3) to the first set of data (Figure 1 average annual operating profit per vessel) most categories of vessel follow a similar trend i.e. they peak and dip at similar times. However, 'CIC nets' show a different pattern as do the categories 'all netters' and 'under 10s' (but to a lesser extent). For these vessel categories operating profit per kW day at sea shows an upward or level trend but average annual profit per vessel is trending down. Data suggests the reduction is possibly related to two reasons, a reduction in days at sea and/or a reduction in landings per KW/day at sea.

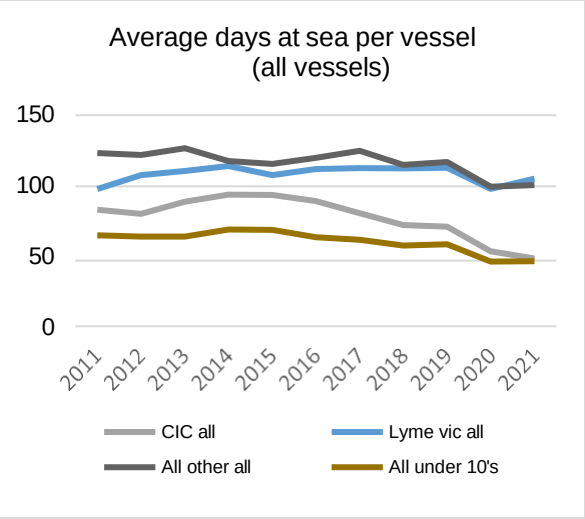
1. A reduction in days at sea

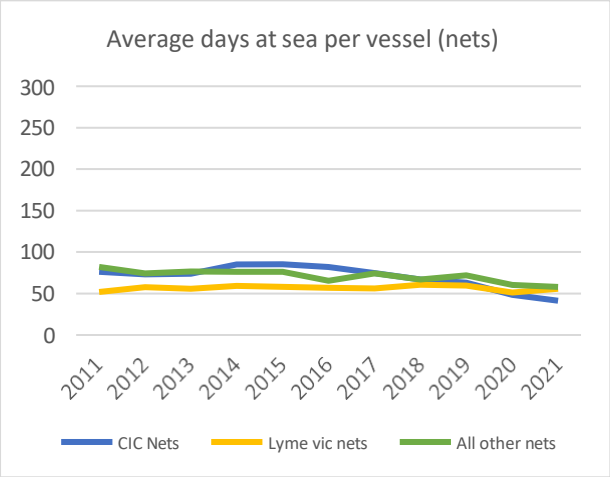
Days at sea for CIC netters is down 20% from 2011 and 43% from 2017. No other category has seen such a level of reduction, and some have even seen increases in days at sea. This was reflected in the MMO Social Baseline Report (MMO, 2022) and consultation, CIC netters explained how stressful and difficult netting for sole has become since the increase in catch limits. Due to the volume, length and sometimes lack of gear marking, it can be hard to find a safe space to shoot nets. Some static gear fishers felt deliberately targeted by mobile gear and the cost of gear loss made the fixed netting unprofitable. Others were concerned about ghost fishing, when gear is lost and, the impact of the effort on the stock.

It is however noticeable that all CIC categories, not just CIC netters, see a continued reduction in days spent fishing at sea in 2021. This may be due to the same reasons as above, that gear loss and damage is expensive and time consuming for fishers from all sectors. Some non-CIC fishers felt that the grounds were not as good as they used to be for sole fishing and were seeing smaller and fewer soles, and this may be a factor in the reduction of time spent at sea.

Figure 4 a,b,c. Average days at sea per vessel





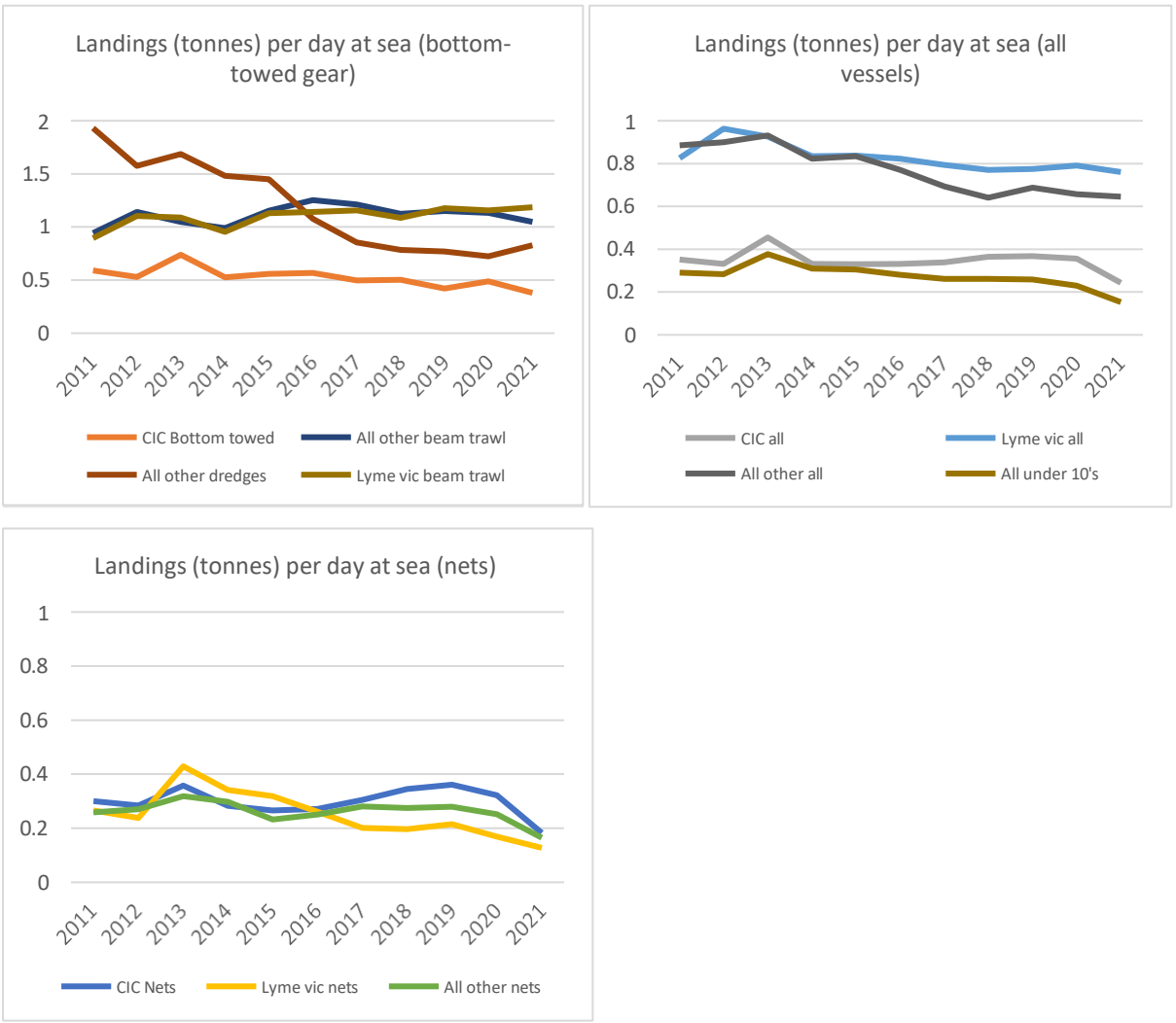


2. A reduction in landings per kW day at sea

All CIC categories show a large reduction in landings per kW day at sea as do Lyme

Bay ‘vicinity netters’, ‘all netters’ and ‘all under 10s’ for 2021 when compared to 2020. All other categories show either a much smaller decline or show an upward trend. The data shows that this is to an extent due to a reduction in landings and this can be further confirmed by analysing landings per day at sea but worth noting that vessel power has generally increased over time for all vessel categories.

Figure 5 a,b,c. Landings (tonnes) per day at sea sea each year (2011-2021) across different groups of fishermen



Landings per day at sea data also shows a significant decrease for all netters, all under 10’s and all CIC categories. Whereas some other categories such as Lyme Bay vicinity beam trawlers are trending upwards.

Conclusion

The data shows a clear reduction in average annual profit per vessel for all CIC vessels and all netters (Figure 1b and c). It is noteworthy that these same categories have also experienced a reduction in days spent at sea and a reduction in landings per day at sea (Figure 4,b,c and 5b,c).

In simple terms, this means these categories of vessels (all CIC vessels and all netters) are going to sea less often and are catching less when they do. The

combination of these factors has contributed to a sharp reduction in average annual operating profit per vessel.

Additionally, these same categories of vessel are experiencing a greater % increase in operating cost per kW day at sea. It is possible that the increase in operating cost per kW day at sea is driven by the reduction in days at sea as other categories are not experiencing the same increase in percentage.
This is because some costs such as port fees and certain maintenance are likely to be fixed regardless of the days at sea and so as the days at sea go down these costs are spread proportionately over fewer days.

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