Summary of the Edible Crab Fisheries in Devon and Severn IFCA's District

Summary of the Edible/Brown Crab Pot Fishery In North and South Devon

Potting for crustacea within the Devon and Severn IFCA focusses on edible brown crab (*Cancer pagurus*), European lobster (*Homarus Gammarus*) and for molluscs such as Whelks (*Buccinum undatum*). Other species are also caught such as velvet swimming crab and spider crab, normally as a bycatch. Potting with traps targeting cuttlefish also takes place for approximately three months of the year between March and June and occurs in the South Devon part of the District. The potting fisheries in North and South Devon are quite different. In South Devon the brown crab fishery is a one of significant importance nationally in terms of landings, with the ports of Salcombe and Dartmouth having some of the largest landings for this species. Whilst brown crab is the main species targeted in both inkwells and parlour pots or creels, the lobster fishery is also important, and the inshore rocky reefs are the main targeted areas. On the South Coast of Devon the potting fishery is confined to specific spatial areas which are closed to demersal trawling and scalloping. This means that expansion of the pot fishery here is limited although there has been some expansion into areas closed in 2014 in response to Defra's Revised Approach to the management of commercial fisheries in European Marine Sites, and the introduction of MCZs. The brown crab fishery in the North Devon area of D&S IDCA's District tends to part of a tripartite fishery with vessels switching to lobster and whelks at different times of the year. There is limited trawling in this part of the District (maximum of 5 vessels) and therefore there is little conflict with potting gear and therefore gear is spread out over larger areas. Figure 1 shows the landings and values of landings from 2008 to 2018 inclusive, for all Devon ports These data are from MMO annual statistics. The IFCA has not analysed the Monthly Shellfish Activity Data as currently these data are only available electronically up to 2014. D&S IFCA does not undertake shore landings surveys or on-board catch surveys at this time due to the limited number of staff within the IFCA and lack of funding for additional staff and other resources.

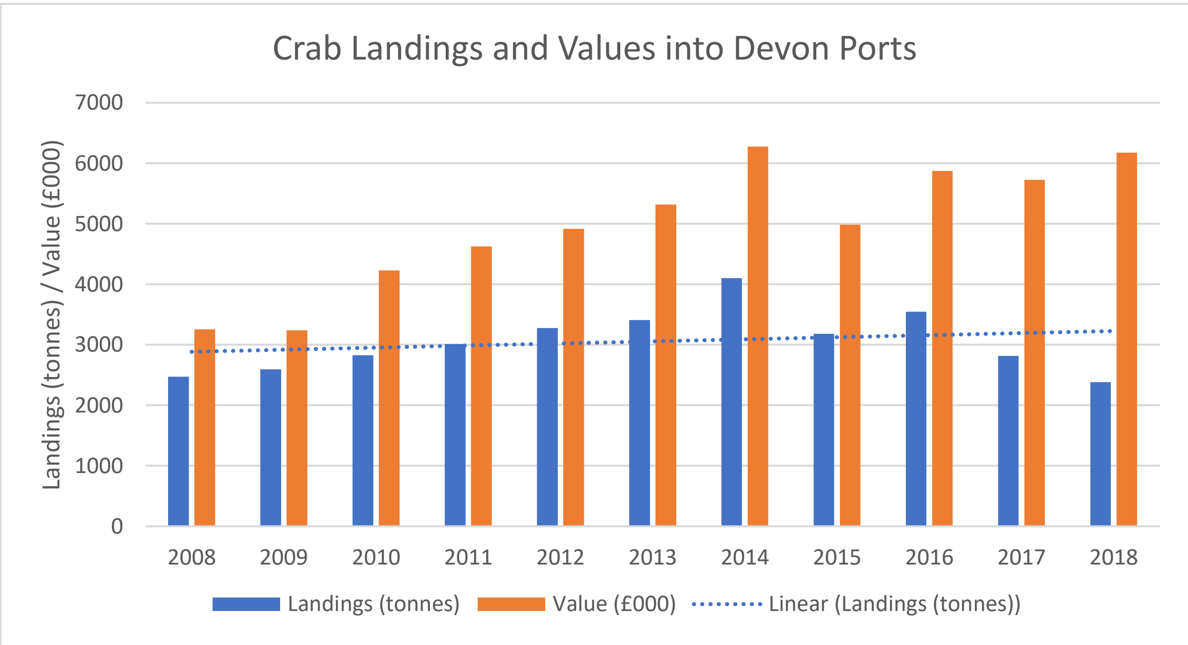

Figure 1 Crab landings and values into Devon Ports between 2008 and 2018 (MMO Annual Statistics)

In 2015, D&S IFCA introduced a Potting Permit Byelaw. This byelaw manages the potting fisheries through the introduction of Permits and Permit Conditions and applies to both commercial and recreational potters. Permits cost £20 and last for two years. In 2015, 177 commercial permits and 237 recreational permits were issued. In 2019 there were 180 commercial potting permits and 335 recreational permits issued. The Potting Permit Conditions include the following management measures:

- Minimum Conservation Reference Sizes:
    - Female brown crab – 150mm
    - Male Brown crab – 160mm
    - European lobster – 90mm
    - Spiny lobster - 110mm
    - Spider crab males and females - 130mm
    - Whelk - 55mm (increase to 65mm in November 2020)
    - Ban on landing soft and berried lobsters and crabs
    - Ban on landing v-notched lobsters
- Escape gaps
- Spatial restrictions
- Time restrictions
- Limit of 5 pots to recreational permit holders
- Catch limit of 2 lobsters and 3 crabs for recreational permit holders

In the absence of effort data, in terms of days at sea or pots hauled, the information available is the landing and figures are included in the graphs within this report. The values of the fisheries year on year are also included. From the MMO statistics for Devon as a whole (Figure 1) it would appear that there has been a slight increase over time in landings (from the linear trendline) but fluctuations in landings year on year are evident and indicates a gradual decline in 2017 and 2018. However, the landings for 2008 and 2018 are similar – 2471 tonnes in 2008 and 2382 tonnes in 2018. Landings appear to increase up to 2014 and the drop away back to 2008/2009 figures. 2014 was a peak year with landings reaching 4101 tonnes. 2016 also had slightly raised landings. Due to the lack of effort data landings per unit effort (LPUE) cannot be calculated. The fishery for 2014 followed the extreme cold weather over the winter of 2013/2014. For Devon as a whole, the value of crab landings has increased. In 2008 the value per kilo was approximately £1.30 and in 2018 the value per kilo was £2.60 showing a doubling in value. The main increase has been seen over the past two years. The are many reasons for this – increased demand for crab to the Chinese market is one and the gradual decrease in landings after the peaks in 2014 and 2016 causing an increase in demand and consequential rise in value.

In terms of increases in pot numbers, limited data are available in the D&S IFCA' District. When the D&S IFCA Potting Permits were introduced the data on the number of pots used by permit holders was an optional requirement. The permits issued in 2019 now require this information. However some permit holders have provided this information on each biennial permit issued. Of the 180 commercial permits issued 55 permits holders provided the pot numbers for 2015 and 2019. In 2015 the 55 vessels indicated that they had a total of 5730 inkwell pots and 11365 parlour pots. In 2019 the same 55 vessels indicated they had 6256 inkwells and 12700 parlour pots. Therefore there has been an increase of 526 inkwells used equivalent to a 9.2 % increase for these vessels. For parlour pots the number has increased by 1335 pots equivalent to a 10.5% increase. The 335 recreational permits issued in 2019 may use up to five pots each giving a maximum effort of 1675. However, there is likely to be more recreational effort seasonally, which may go unpermitted.

The following graphs split the landings for the two coasts of Devon. Figures 2-4 show the landings and values for the brown crab pot fishery in North Devon.

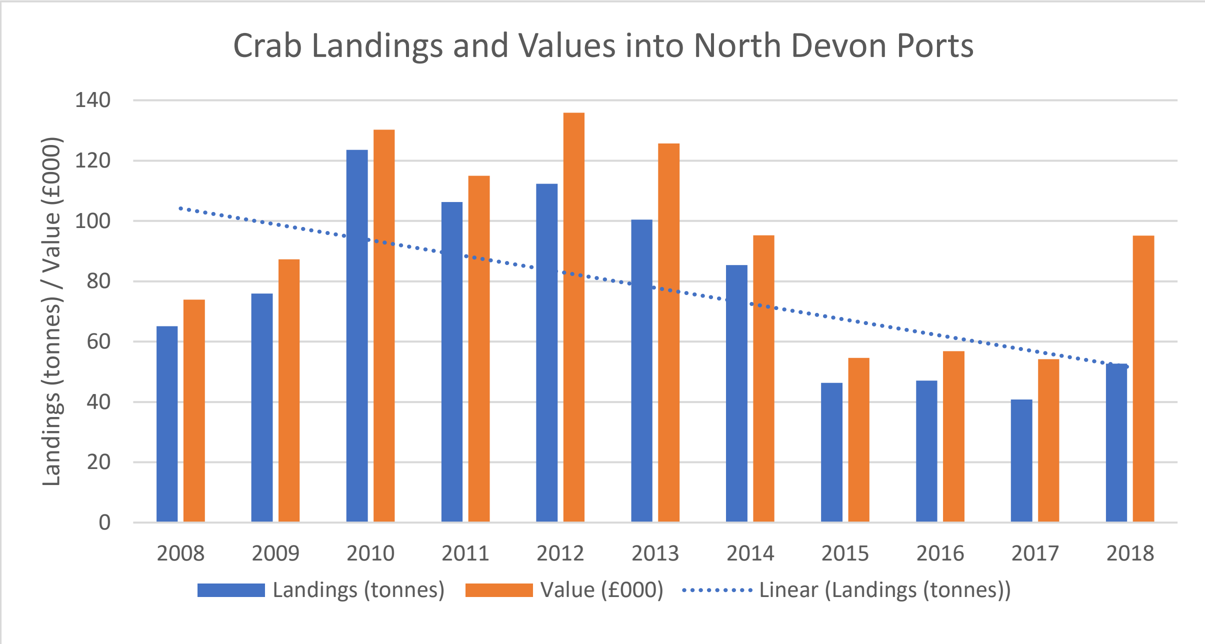

Figure 2 Crab landings and values into North Devon Ports

Figure 2 clearly demonstrates the lower level of landings of crab in North Devon compared to South Devon (figure 6). Cefas indicates, through its stock assessments, that these are two separate stocks - the Celtic Sea stock in the North Devon area and the Western Channel stock in the South Devon area. The landings into South Devon include vivier boat landings which is not the case in North Devon and the number of boats operating out of North Devon ports is significantly less. There are 160 commercial vessels permitted to pot in the South Devon part of the D&S IFCA' District and 20 vessels holding permits to pot in North Devon area out to 6nm.

The North Devon brown crab landings indicate peaks and troughs, with the 2018 landings being 13 tonnes less that in 2008. However between 2010 and 2014 landings were elevated ranging from 123 tonnes in 2010 to 85 tonnes in 2014. The linear trend however indicates an overall decline in landings. The value of crab increased in 2018 but not to the levels of the South Devon crab fishery. Figures 3 and 4 show the landings of brown crab for the over 10m and under 10m vessels into North Devon. The majority of the landings are from the over 10m boats that fish in the Bristol Channel and around Lundy Island. However, for the small ports in North Devon, the fishery is important to the under 10m fleet. Figure 4 compares the landings for the under 10m and over 10m vessels. The over 10m vessels show a decline in 2015 and 2016 whilst the under 10m vessels how an increase at this time. There may be many factors that have influenced the landings and without more data on effort, and whether the larger vessels landed to ports outside Devon, it is not possible to provide an explanation.

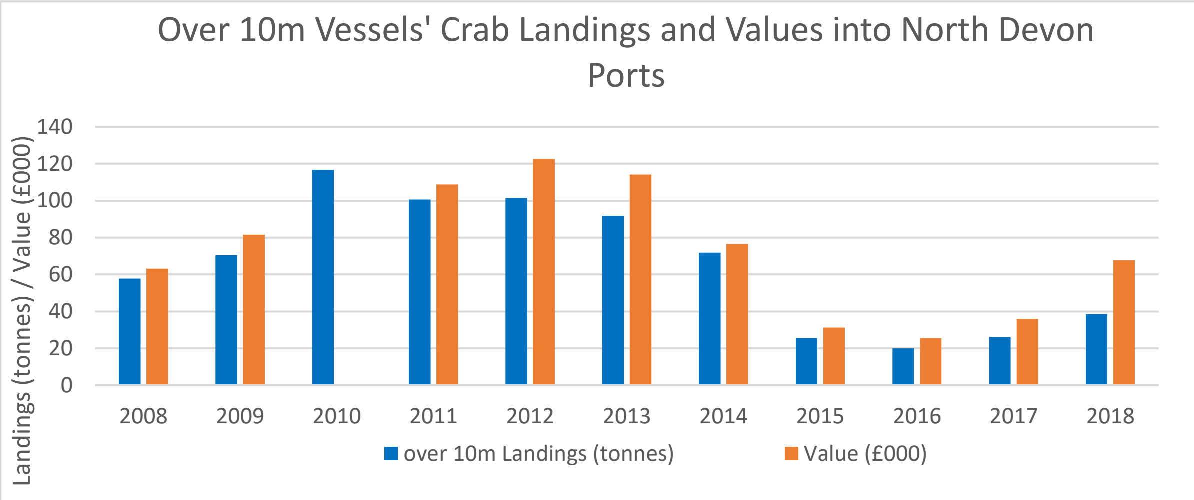

Figure 3 Over 10m Vessels' Brown Crab Landings into North Devon ports

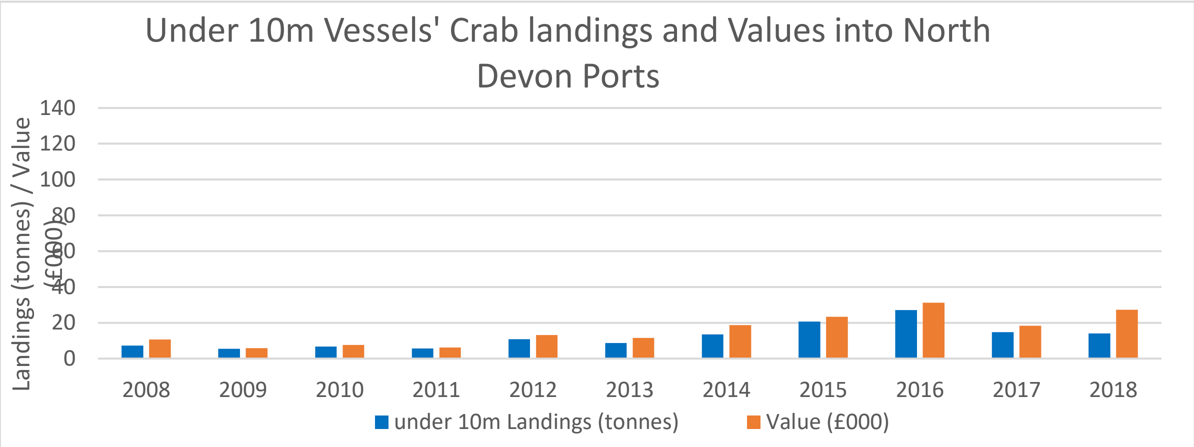

Figure 4 Under 10m vessels' Brown Crab Landings into North Devon Ports

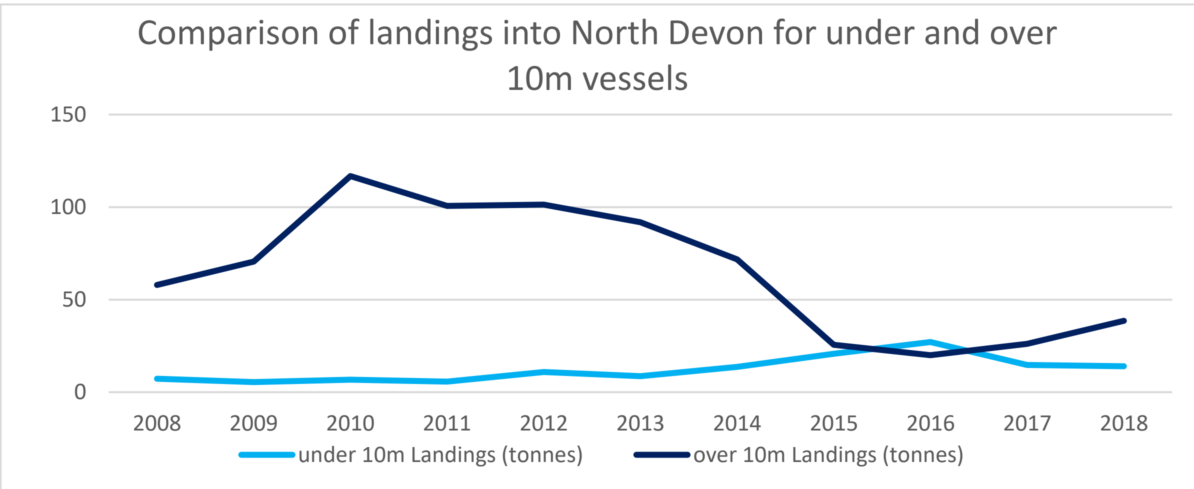

Figure 5 Comparison of Landings into North Devon Ports for under 10m and over 10m vessels

The brown crab landings into South Devon ports show some fluctuations with the landings for most years ranging between 2300 and 3300 tonnes. The peak landings were seen in 2014 as previously mentioned, with landings reaching almost 4000 tonnes. The landings for 2008 and 2018 are almost identical at approximately 2300 tonnes. Effort levels are needed to assess LPUE and CPUE to allow for more in-depth analysis of the data. Values clearly show the doubling of price per kilo of brown crab landed. Much of the brown crab landed into South Devon goes for processing or export, with a large proportion going to the Chinese market.

Whilst the majority of the landings are made by over 10m vessels the crab pot fishery is of significant importance to the under 10m vessels.

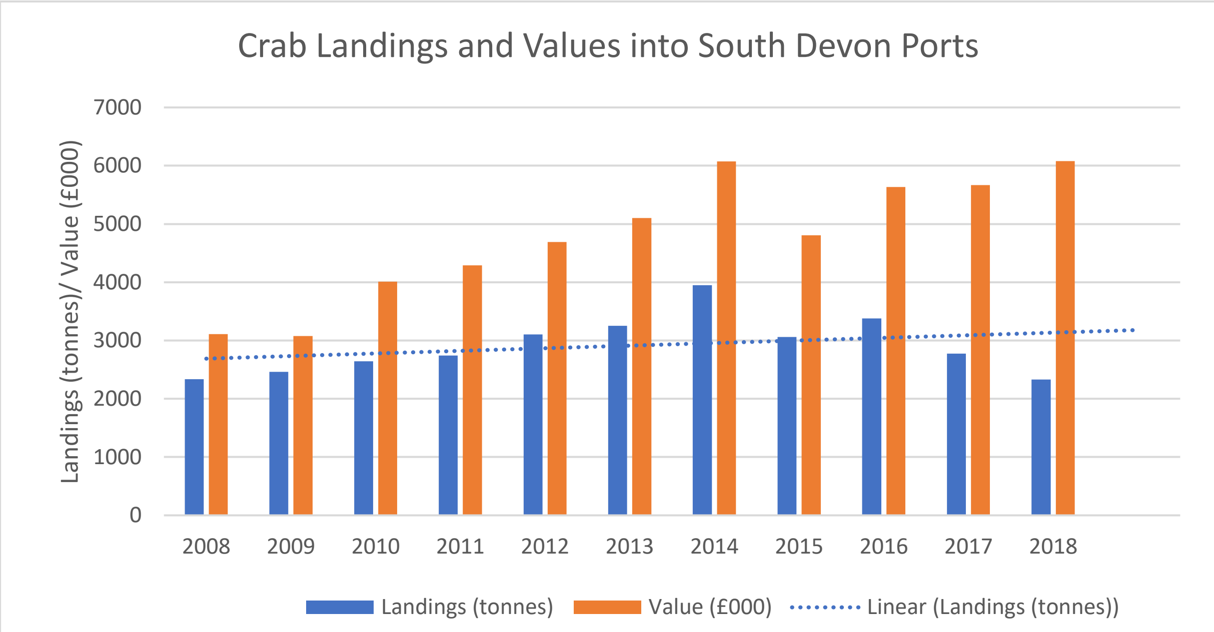

Figure 6 Crab Landings and Values into South Devon Ports

Figure 9 compares the landings of both sectors of the fleet and they appear to show similar trends unlike the North Devon fishery.

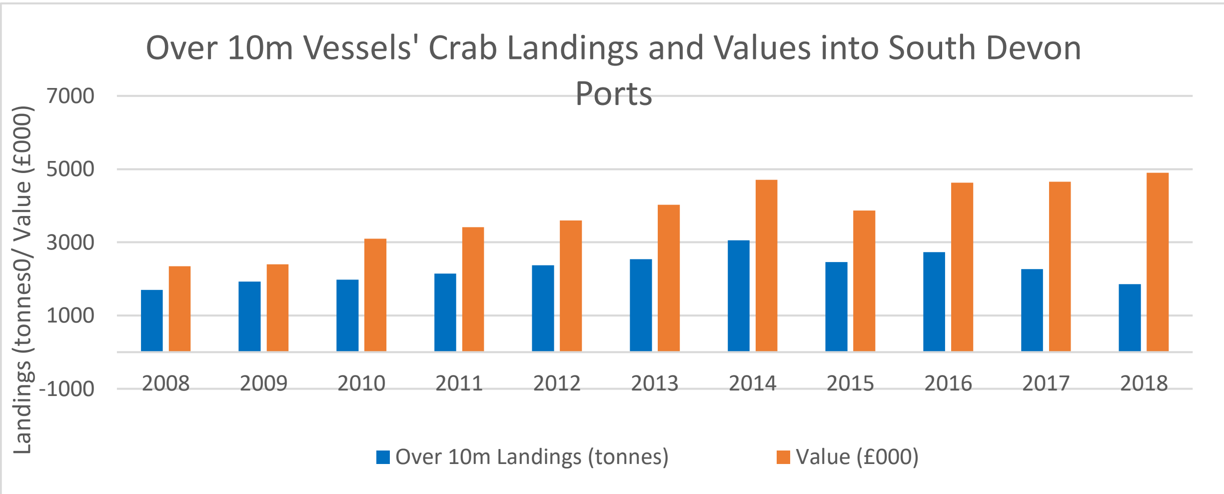

Figure 7 Over 10m Vessels' Brown Crab Landings into South Devon Ports

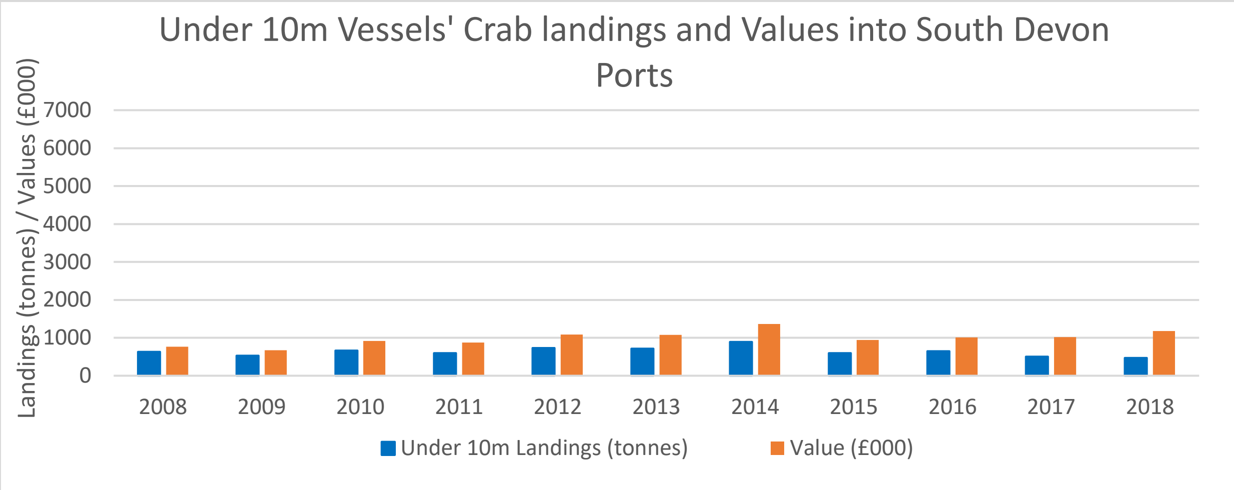

Figure 8 Under 10m Vessels' Brown Crab Landings into South Devon Ports

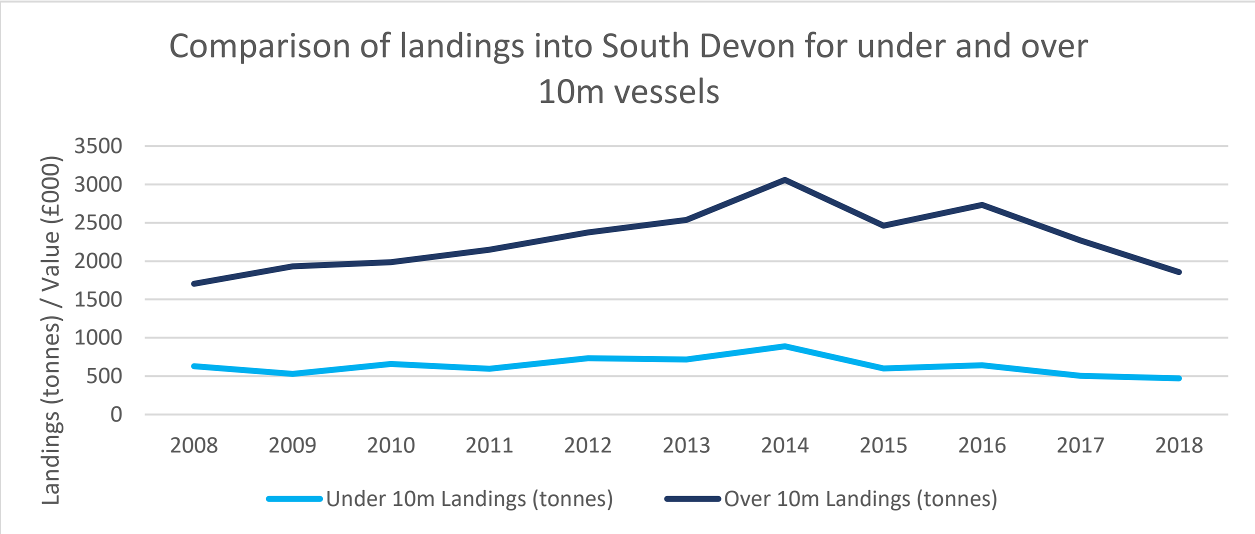

Figure 9 Comparison of Landings into South Devon Ports for under 10m and over 10m vessels

Recommendations:

The Brown Crab fishery in Devon is nationally significant, with large landings and values. The data available currently to D&S IFCA are the landings data displayed here. Further effort data are required to understand the LPUE and CPUE. Further analysis of the MSAR data is also required. Up to date digitised MSAR data from 2015 to date would help D&S IFCA understand better the level of effort and true trends in the pressure on the stock. Greater analysis of the over 10m data is also needed. D&S IFCA will consider gathering further data through its Permit conditions, and through on-board surveys and landings data during 2020/2021 to try and fill these gaps.