

Shetland Shellfish Stock Assessment Summaries 2025

A report prepared for the Shetland Shellfish Management
Organisation (SSMO)

2026



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Brown Crab Fishery

The brown crab (*Cancer pagurus*) fishery operates year-round, utilising creels to catch crabs in inshore waters. Landings from this fishery consist of targeted brown crab catches as well as incidental catches within a mixed fishery alongside velvet crabs and lobsters. Regulatory measures, including licensing requirements and limitations on creel numbers, are in place to manage the fishery.

Analysis of landings data since 2000 reveals fluctuations in brown crab landings. These fluctuations include a low point of approximately 200 tonnes in 2002 and 2003, and a peak of approximately 600 tonnes in 2014 (Figure 1). Subsequently, landings decreased to around 300 tonnes in 2016 before declining toward approximately 200 tonnes in the most recent years. Similar trends are observed in fishing effort, although the magnitude of change varies. Notably, in 2014, while landings more than doubled relative to 2000 levels, the corresponding increase in effort was not proportional, resulting in an increase in LPUE.

LPUE is a critical metric for fisheries management and has shown periods of stability, with an overall increase since 2000 from around 0.70 kg/creel to approximately 1.10 kg/creel in 2025. However, there was a notable decline below 1 kg/creel in 2019, marking the first such decrease since 2012 (Figure 1). Although LPUE showed some improvement in 2020, it subsequently declined in 2021 (0.80 kg/creel) and 2022 (0.75 kg/creel), falling below the long-term average of 0.87 kg/creel by 2022. LPUE in 2025 decreased to 1.10 kg/creel compared to 2024, but remains above the long-term average.

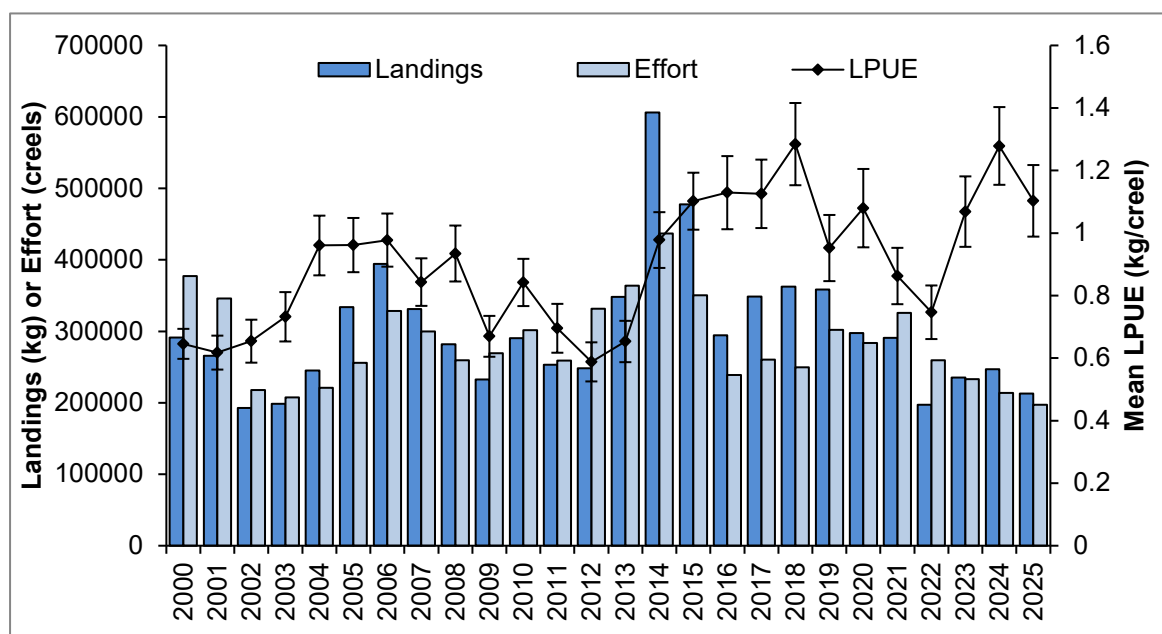


Figure 1 Total brown crab landings (kg), total numbers of creels and the average LPUE obtained from SSMO logbook data with 95% confidence intervals shown.

The geographic distribution of brown crab LPUE, landings and effort remain broadly consistent between years. The highest LPUE continues to be observed to the north and northwest of the Isles where the targeted fishery occurs. In 2025, peak LPUE is slightly reduced and more spatially concentrated in the far northern squares compared to 2024. Landings and effort distributions are similarly consistent, with lower LPUE persisting in the south and east, attributed to incidental bycatch in the velvet crab fishery.

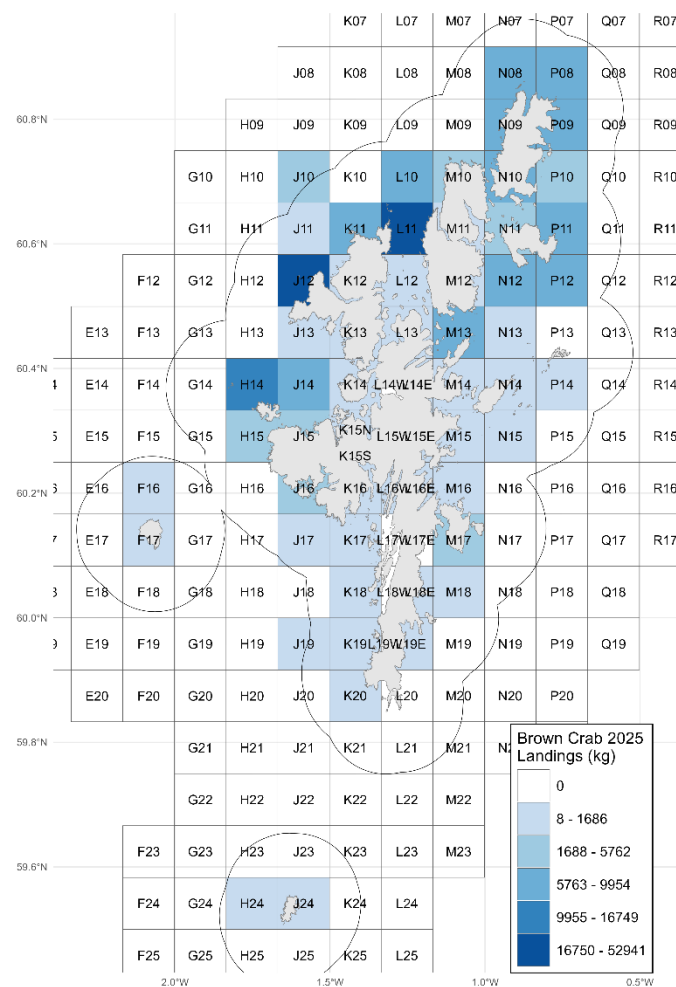


Figure 2 Geographic distribution of brown crab landings per SSMO statistical square in 2025.

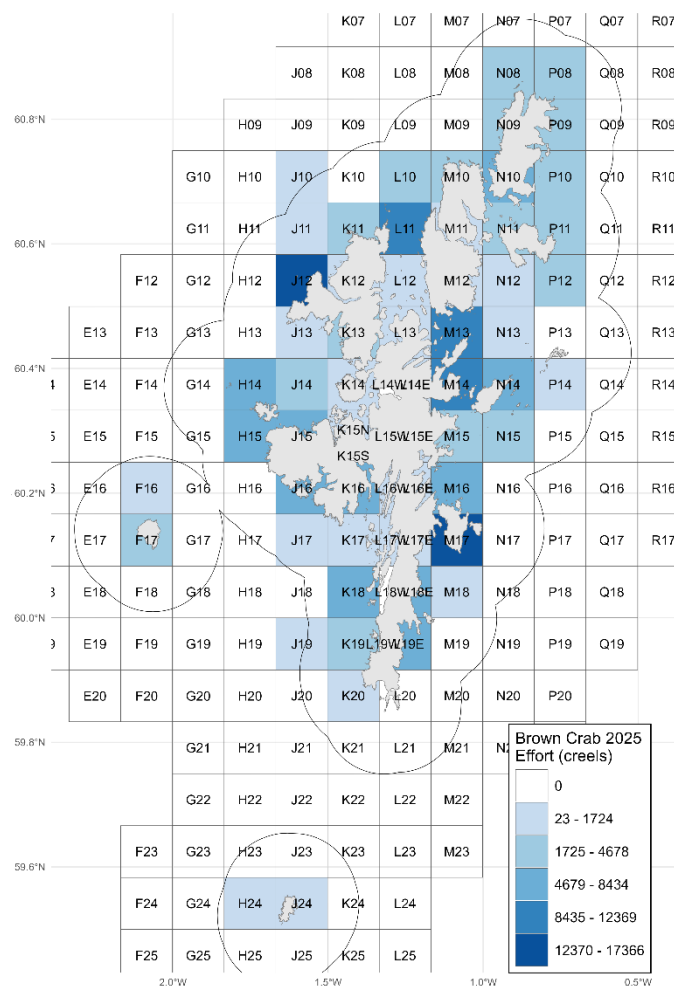


Figure 3 Geographic distribution of brown crab effort per SSMO statistical square in 2025.

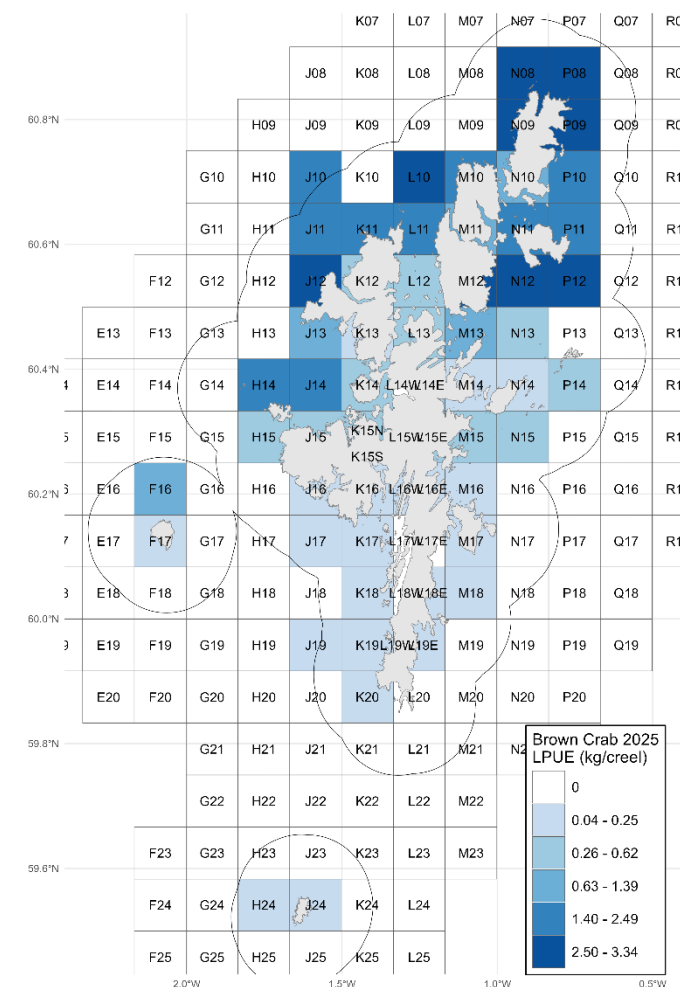


Figure 4 Geographic distribution of brown crab LPUE per SSMO statistical square in 2025.

King Scallop Fishery

The king scallop fishery is a dredge fishery, comprised mostly of vessels under 12m. The fishery is governed by gear limitations, a night-time curfew, and spatial management measures aimed at protecting vulnerable seabed habitats. SSMO logbook data indicate a steady increasing trend in scallop landings since 2000, reaching a peak of 5.3 million scallops in 2022 (Figure 1).

Mean LPUE has shown a general upward trend since 2000, though early increases in both landings and effort may partly reflect improving compliance with data collection protocols rather than genuine stock trends. A notable surge in LPUE occurred in 2008, reaching approximately 35 scallops per dredge hour, followed by a period of stabilisation before a further increase to a peak of approximately 45 scallops per dredge hour recorded between 2022 and 2024 (Figure 1). Landings peaked at 5.3 million scallops in 2022, declining modestly in 2023 and 2024, before a more pronounced reduction in 2025 to approximately 3.9 million. Notably, LPUE in 2025 remained relatively stable despite the decline in landings.

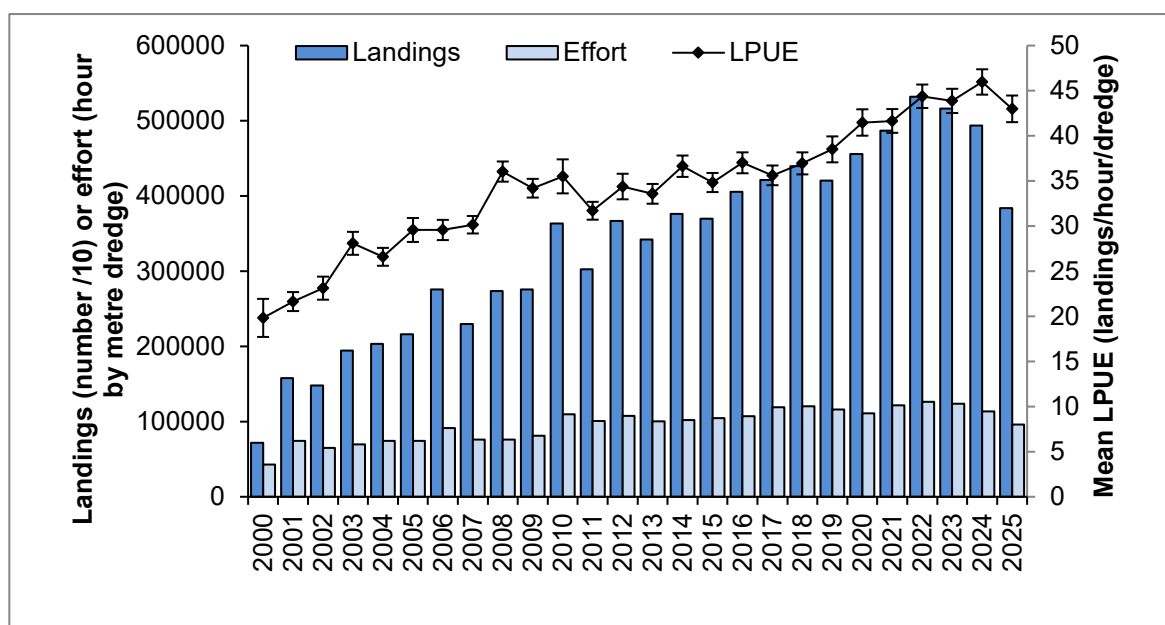


Figure 1 Landings of king scallops (displayed in numbers /10), effort (number of hours by dredge), and mean LPUE (number of scallops caught/hour towed by dredge). LPUE displayed with 95% confidence intervals.

In 2025, the scallop fishery predominantly targeted key fishing areas around Unst and north Yell, extending south along the east coast through the Whalsay and Fetlar areas as far as Bressay, with additional activity concentrated in the South Mainland (Figures 2-3). Areas of highest landings and effort remain concentrated around Unst and north Yell, consistent with previous years. High LPUE was recorded in the South Mainland and, notably, around the west Mainland in 2025, areas where fishing effort remains comparatively low (Figure 4). The spatial distribution of the fishery remains broadly consistent with previous years, though interannual variation in the relative contribution of individual areas is observed. Given this spatial spread, further research to better understand regional variations in LPUE remains a priority.

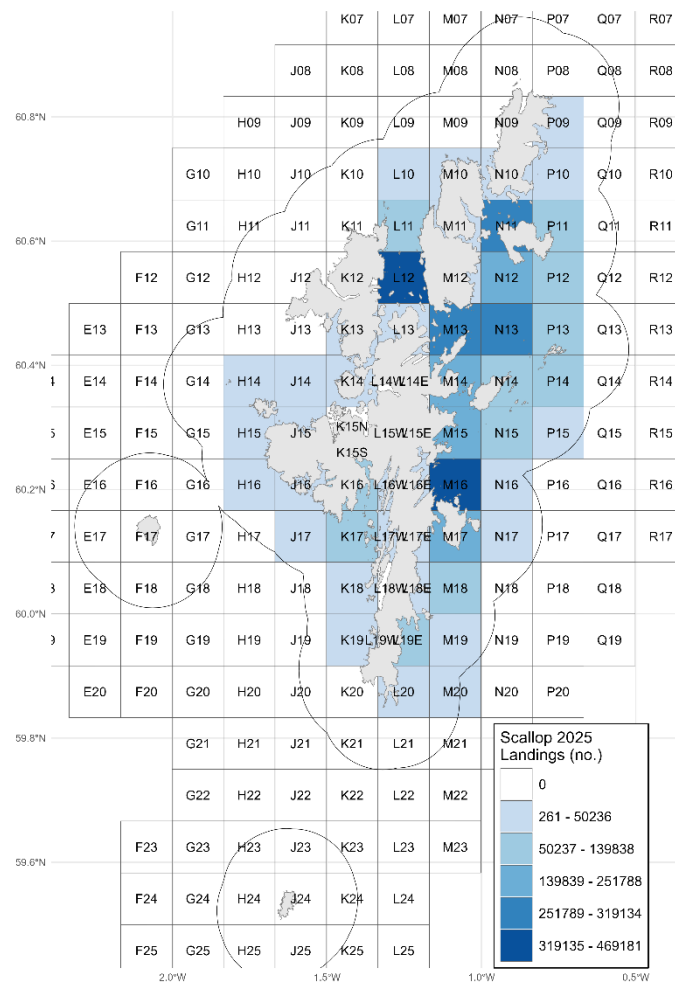


Figure 2 Geographical distribution of scallop landings per SSMO statistical square in 2025.

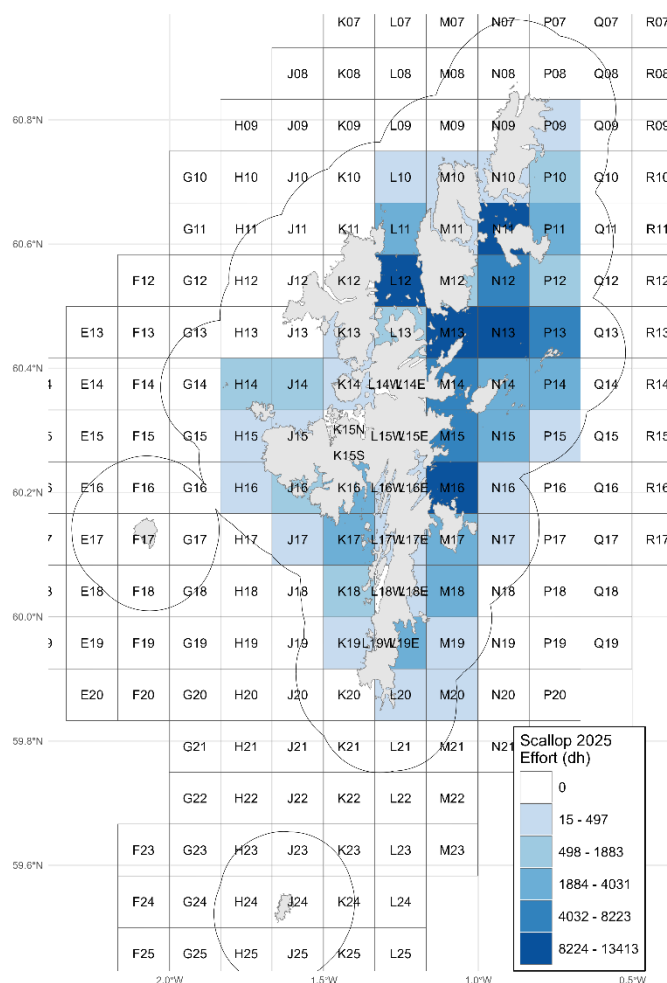


Figure 3 Geographical distribution of scallop effort (dredge hours) per SSMO statistical square in 2025.

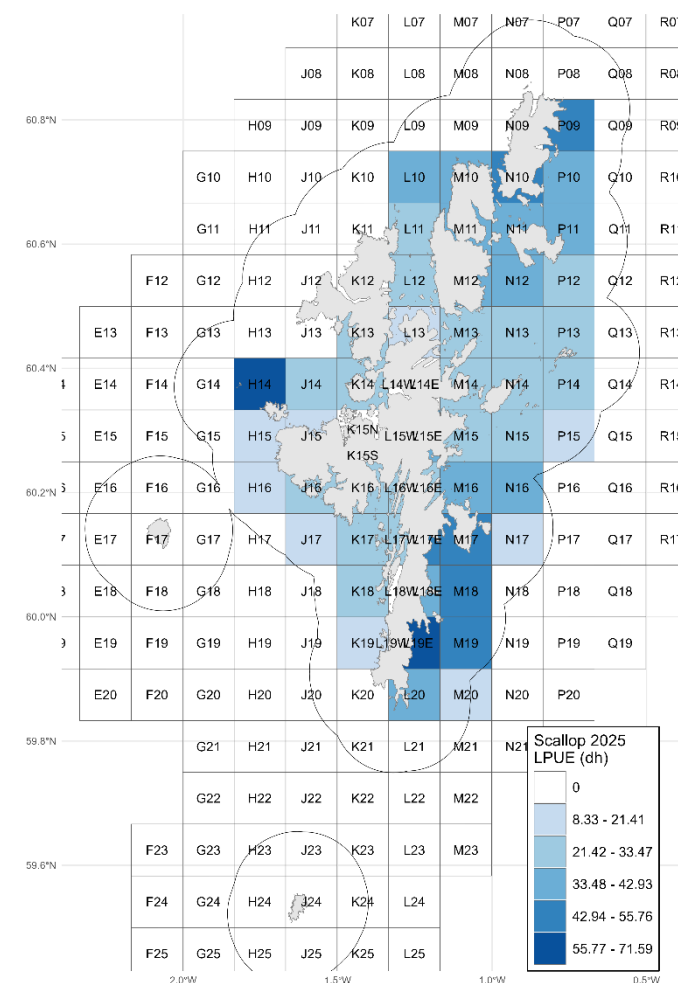


Figure 4 Geographical distribution of scallop LPUE per SSMO statistical square in 2025.

Velvet Crab Fishery

The creel fishery for velvet crab (*Necora puber*) around Shetland was established in the late 1980s. This fishery heavily relies on overseas markets and therefore depends on vivier operators for transporting live crabs. Issues have historically arisen when landings exceeded market demand and/or vivier capacity. Currently, vivier operators prioritise maintaining a regular supply, although less so during September/October when catch quality diminishes in the months following the moult period. The fishery is regulated via creel limitations and closures during the summer peak of the moult season when crabs are soft.

Since the implementation of the regulating order in 2000, effort and landings have shown variability (Figure 1), initially increasing to a peak in both landings and effort in 2009. This was followed by a period of decline, with increases observed from 2018 to 2021. A peak in landings per unit effort (LPUE) was observed in 2007, with LPUE declining until 2013 (Figure 1) before stabilising over the following decade. In recent years, LPUE has shown a sustained increasing trend, reaching 0.68 kg/creel in 2025, the highest value recorded in the time series and well above the long-term average of 0.46 kg/creel.

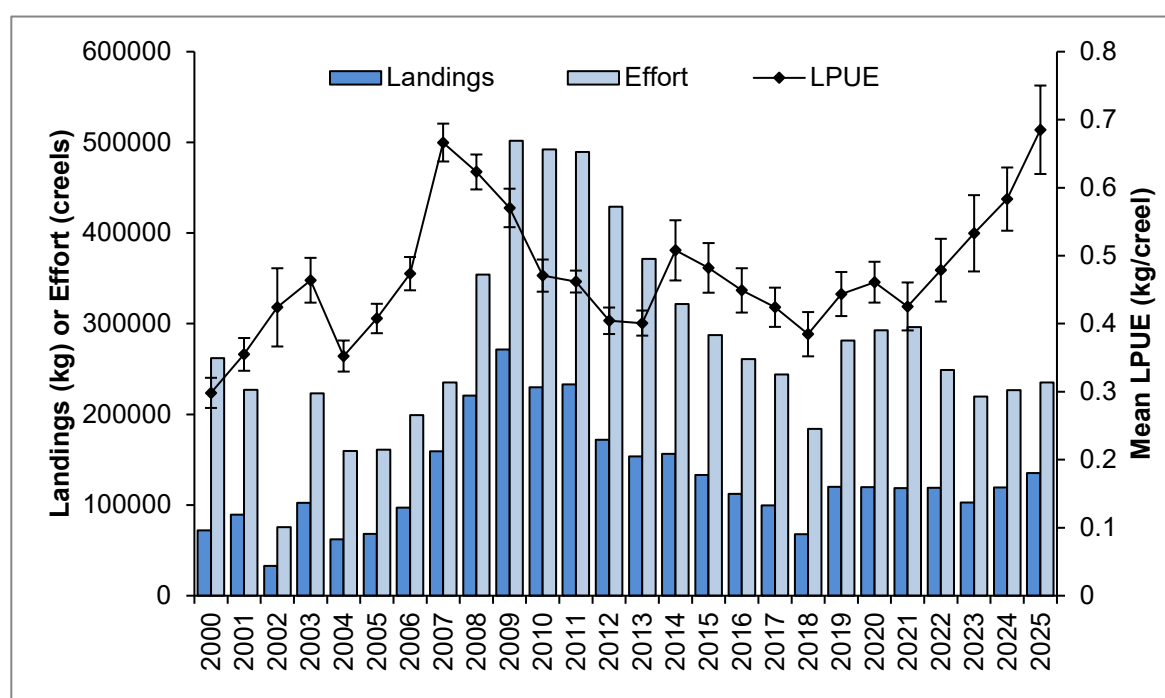


Figure 1 Total velvet crab landings (kg), total numbers of creels and the average LPUE obtained from SSMS logbook data with 95% confidence intervals shown.

The spatial distribution of fishing activity in 2025 is broadly similar to that observed in previous years. As can be seen from the maps (Figures 2-4), the areas of highest effort and landings, concentrated around the south and east Mainland, are not those with the highest LPUE, which is observed around the north Mainland, North Isles, west Mainland, and Skerries to the east. This could indicate that fishing pressure is influencing stock availability in higher-effort areas. Nevertheless, the sustained increase in LPUE suggests the fishery is currently in a positive state.

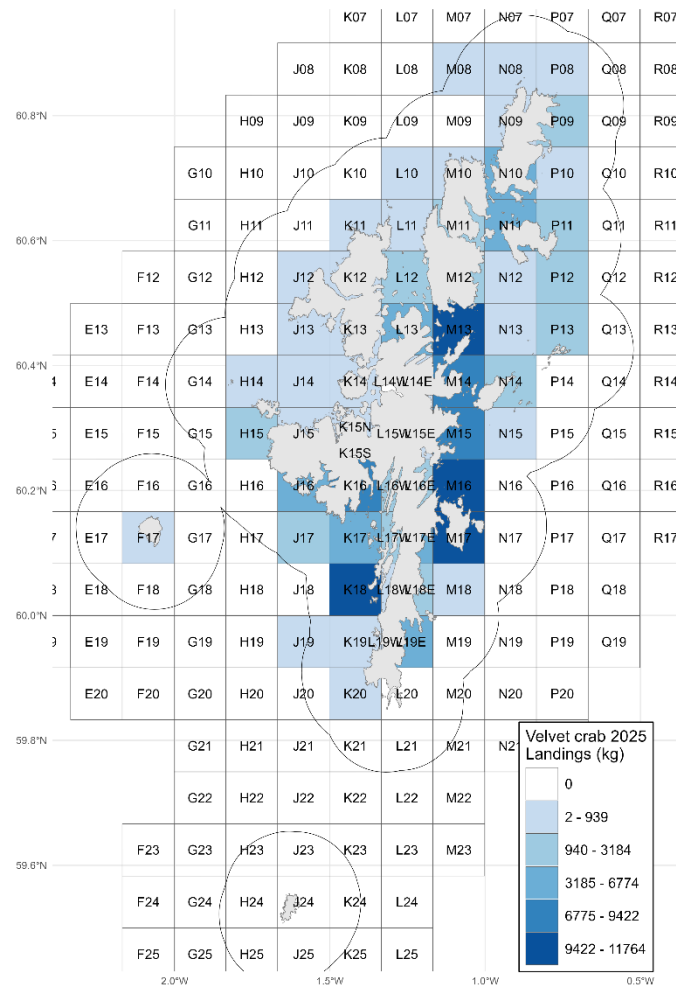


Figure 2 Geographic distribution of velvet crab landings per SSMO statistical square in 2025.

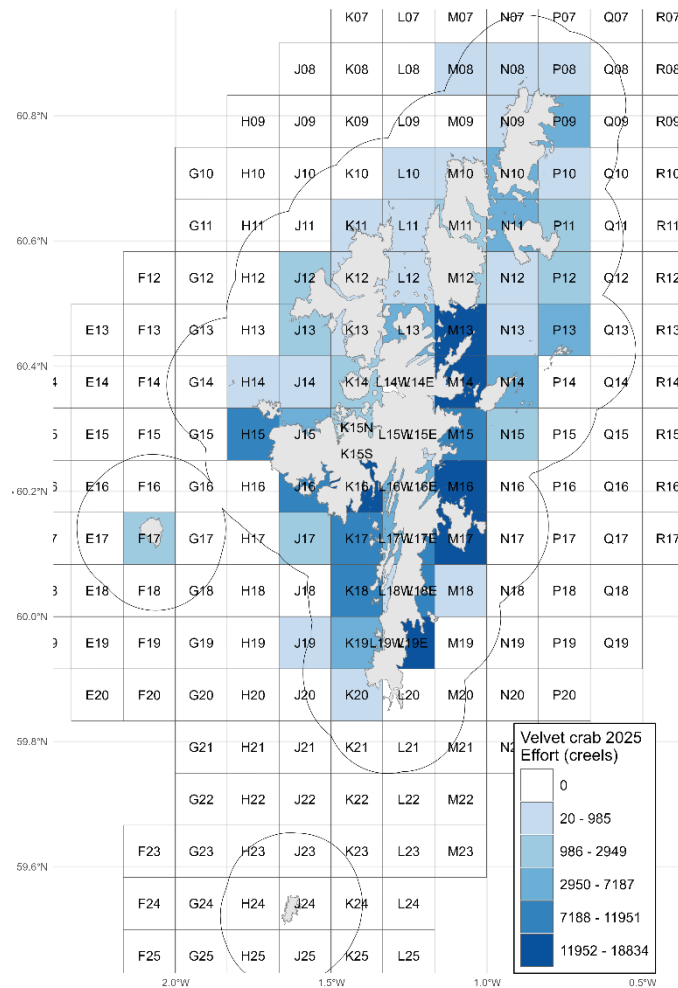


Figure 3 Geographic distribution of velvet crab effort per SSMO statistical square in 2025.

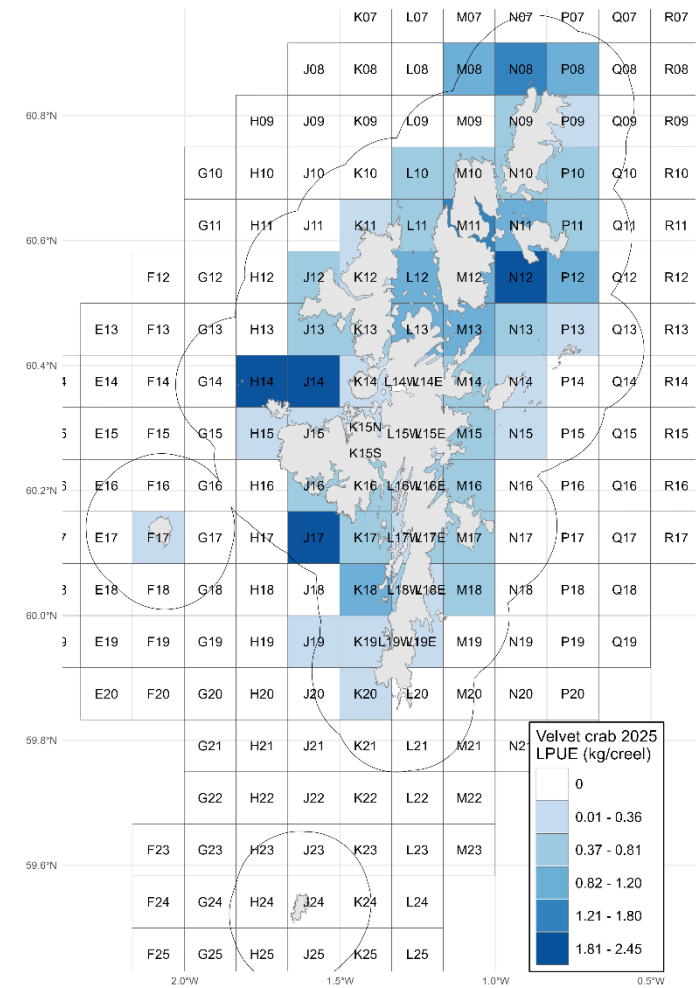


Figure 4 Geographic distribution of velvet crab LPUE per SSMO statistical square in 2025.

European Lobster Fishery

While there is some targeted creel fishing for lobsters (*Homarus gammarus*), they are primarily caught as bycatch in the crab fisheries, which are regulated via creel limitations. Data from SSMO logbooks depict an initial decline in lobster landings from 2000 to a low of around six tonnes in 2005 (based on a mean lobster weight of 0.8 kg; Figure 1). Subsequently, there was a period of increase to 36 tonnes in 2017, followed by a decrease to just below 25 tonnes from 2018 to 2022, before a further decline to approximately 14 tonnes in 2023. Landings have since recovered, reaching approximately 28 tonnes in 2025. The rise in landings observed between 2007 and 2017 coincided with increased observations of undersized lobsters entering the fishery.

Effort, calculated as the total number of creels fished where lobsters were recorded in the landings data, has exhibited a general decrease since peaking in 2009, with 2025 effort among the lowest recorded in recent years (Figure 1). LPUE showed a notable decline between 2017 and 2019, potentially indicating a return to lower levels of recruitment following the high numbers of smaller lobsters reported between 2007 and 2017. LPUE has since increased, and in 2025 reached approximately 19 kg/100 creels, the highest value in the time series. This elevated LPUE coincides with reduced effort and should be interpreted with caution until trends are confirmed in subsequent years.

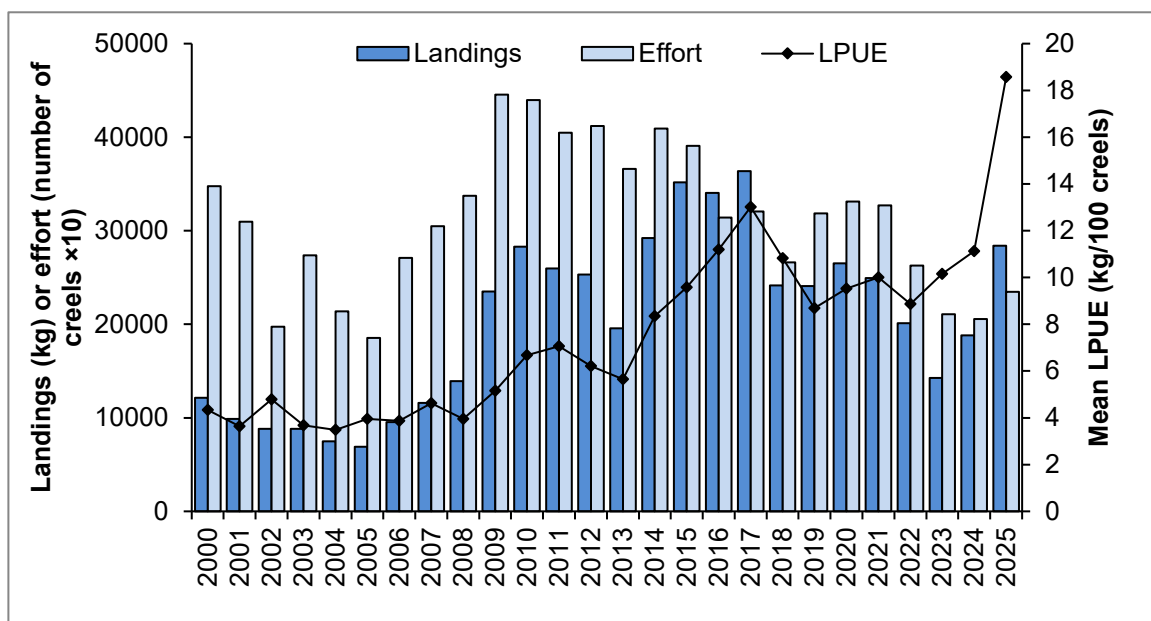


Figure 1 Total European lobster landings (kg), total numbers of creels and the average LPUE obtained from SSMO logbook data with 95% confidence intervals shown.

The lobster fishery is widespread (Figures 2-4) with landings and effort highest off Scalloway and around Lerwick. Areas of highest LPUE are observed around the North Isles and Northwest Mainland. Whilst overall distribution remains similar between years, inter-annual variation results in fluctuations around Foula and Fair Isle. For some areas there is a limited amount of fishing activity and therefore data, and this can inflate the mean LPUE values, as is seen around Fair Isle.

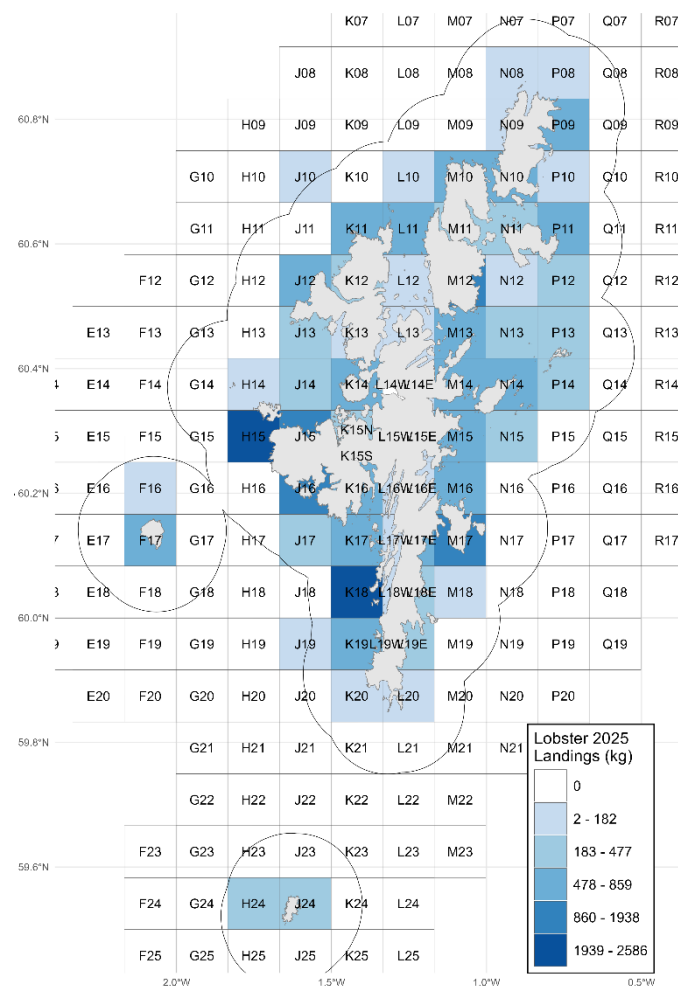


Figure 2 Geographic distribution of European Lobster landings (kg) per SSMO statistical square in 2025.

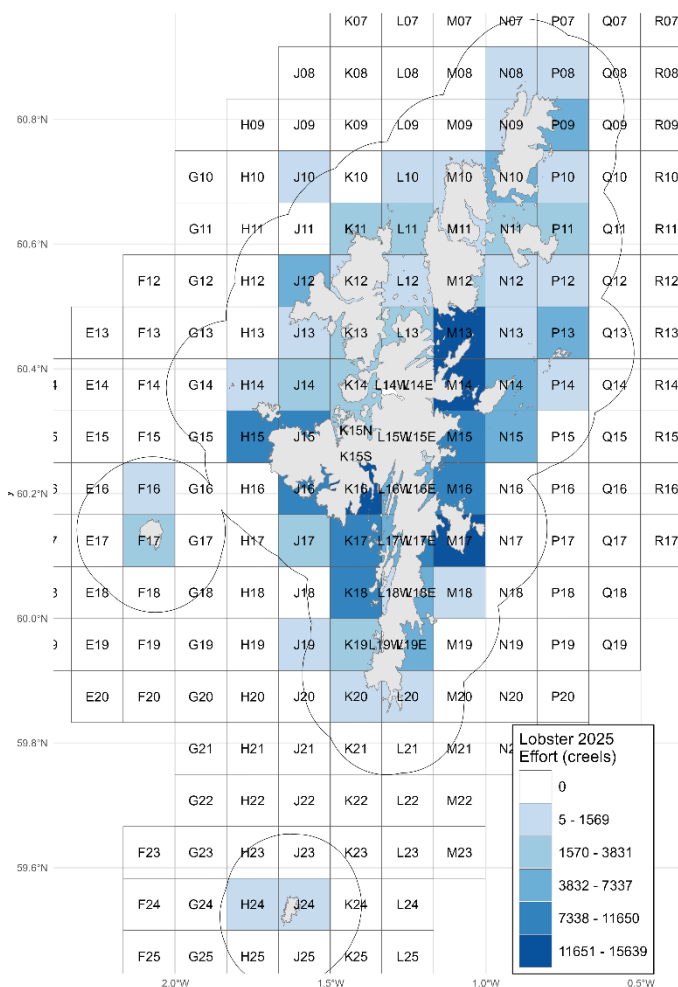


Figure 3 Geographic distribution of European Lobster effort (creels) per SSMO statistical square in 2025.

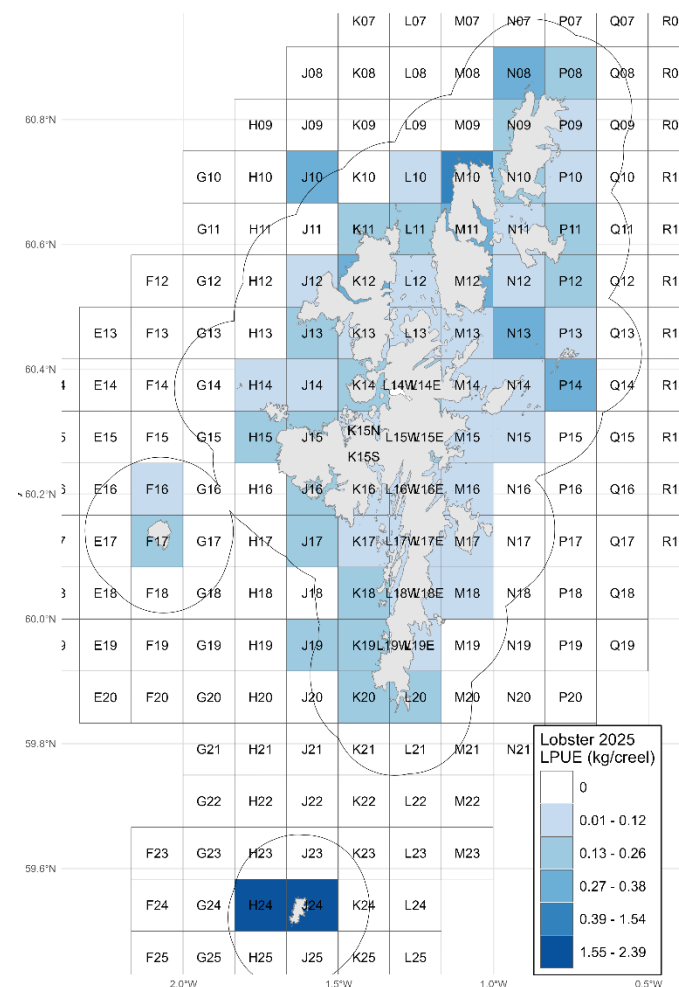


Figure 4 Geographic distribution of European Lobster LPUE (kg/creel) per SSMO statistical square in 2025.

Green Crab Fishery

The green crab (*Carcinus maenas*) fishery is characterised by its sporadic nature, with landings occurring predominantly as incidental bycatch in the velvet crab (*N. puber*) fishery. Both landings and effort exhibit considerable fluctuation (Figure 1). Peak landings were recorded in 2002, followed by a decline until 2008, after which landings stabilised at approximately 20 tonnes annually. Landings subsequently fell to 1.7 tonnes in 2017, remaining relatively stable from 2018 to 2024.

In 2025, reported landings increased notably, attributed to targeted fishing to supply green crabs as bait for the wrasse fishery, with wrasse used for sea lice control in salmon aquaculture. This activity has not previously been recorded in the green crab fishery and is not representative of the wider fishery due to the use of larger parlor creels. The associated LPUE data (12-20 kg/pot) are therefore not included in this summary nor the main LPUE time series.

LPUE declined from approximately 1.8 kg/pot in 2000 to around 0.2-0.3 kg/pot by the mid-2000s, remaining broadly stable at this level, with the exception of a drop to 0.1 kg/pot in 2017. Excluding the targeted fishery for bait, the 2025 LPUE of approximately 0.5 kg/pot aligns closely with the long-term average of 0.46 kg/pot. Interpretation of LPUE remains challenging given the opportunistic nature of the fishery; nevertheless, it serves as a useful indicator of annual change.

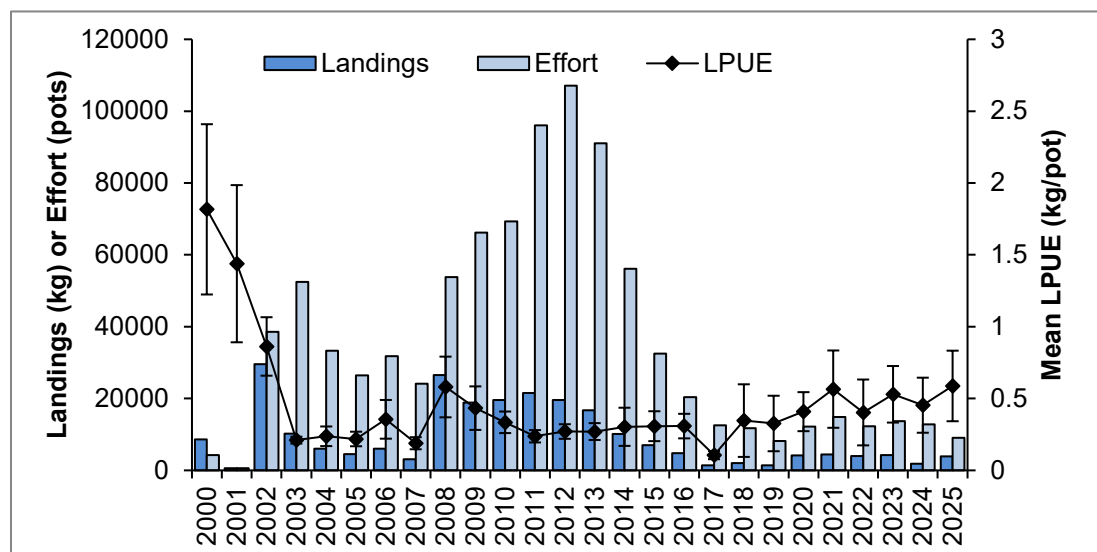


Figure 1 Total green crab landings (kg), total numbers of pots, and the average LPUE obtained from SSMO logbook data with 95% confidence intervals shown.

Reported landings of green crabs are sporadic with high values around west mainland and around Bressay (Figures 2-4). However, due to the widespread distribution of this species and the incidental nature of the fishery, the spatial pattern of landings is unlikely to accurately reflect the true overlap between green crabs and the fishery. Irregular reporting and the resulting uncertainty in data consistency continue to limit the scope for quantitative stock assessment of the green crab fishery.

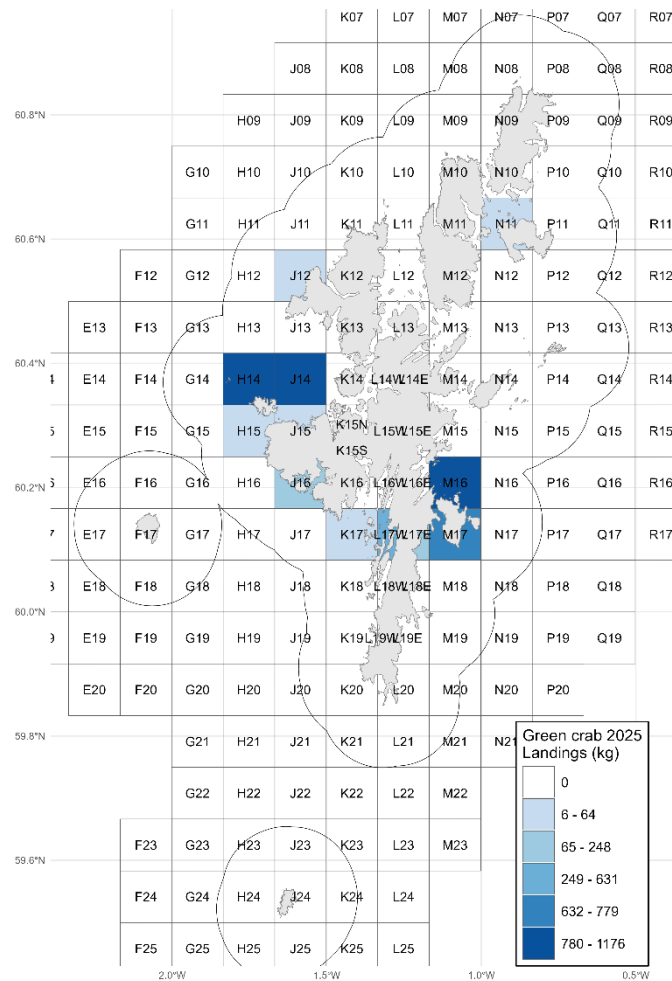


Figure 2 Geographic distribution of green crab landings per SSMO stat square in 2025.

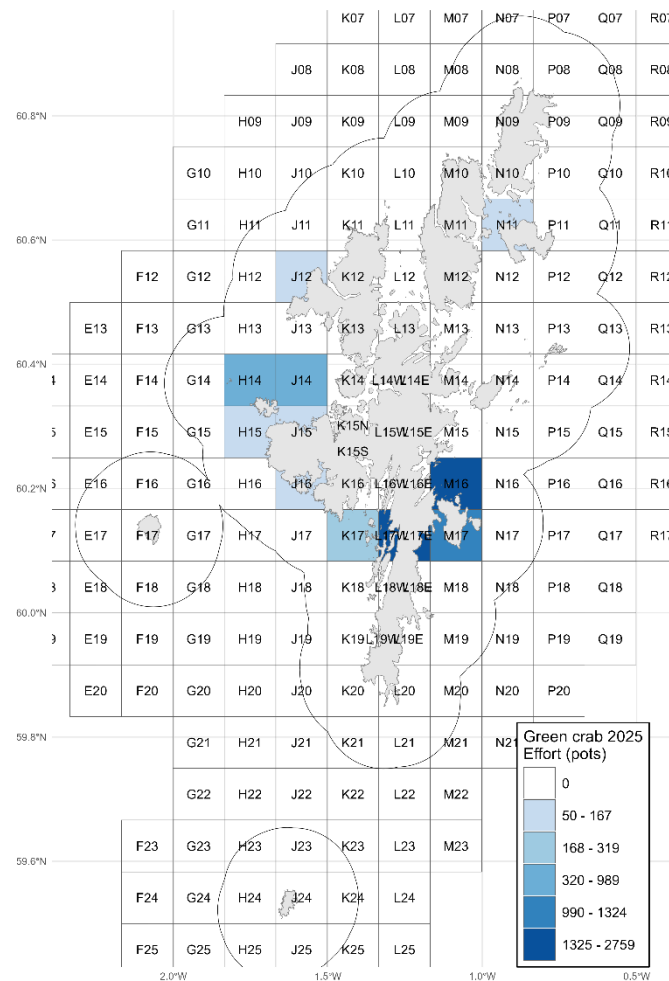


Figure 3 Geographic distribution of green crab effort per SSMO stat square in 2025.



Figure 4 Geographic distribution of green crab LPUE per SSMO stat square in 2025.

Queen Scallop Fishery

The Shetland queen scallop (*Aequipecten opercularis*) fishery comprises of some limited targeted fishing, with the majority of landings resulting from bycatch in the king scallop fishery (*Pecten maximus*). Local processing of queen scallops is minimal, and market conditions are believed to be the primary driver of the fishery, influencing both effort and landings.

Historically, the queen scallop fishery held greater significance in Shetland. Since the recording of data via SSMO logsheets, annual landings have fluctuated between one and 38 tonnes, reflecting the irregular nature of the fishery (Figure 1). The overall trend in queen scallop landings around Shetland declined between 2000 and 2015, with a slight peak in 2016 when landings exceeded 14 tonnes. Landings have since remained below 5 tonnes annually from 2018 to 2024, with no landings recorded in 2025 (Figure 1). From 2008 to 2020, there was minimal targeted queen scallop fishing, until a notable increase was recorded in 2021. Targeted landings have since fluctuated between 0.4 tonnes and 2.7 tonnes in 2022 and 2024, respectively.

The mean landings per unit effort (LPUE) from targeted fishing have exhibited variability, partly due to the sporadic nature of the fishery and significant variations in LPUE between vessels. Consequently, drawing conclusions from LPUE data is challenging.

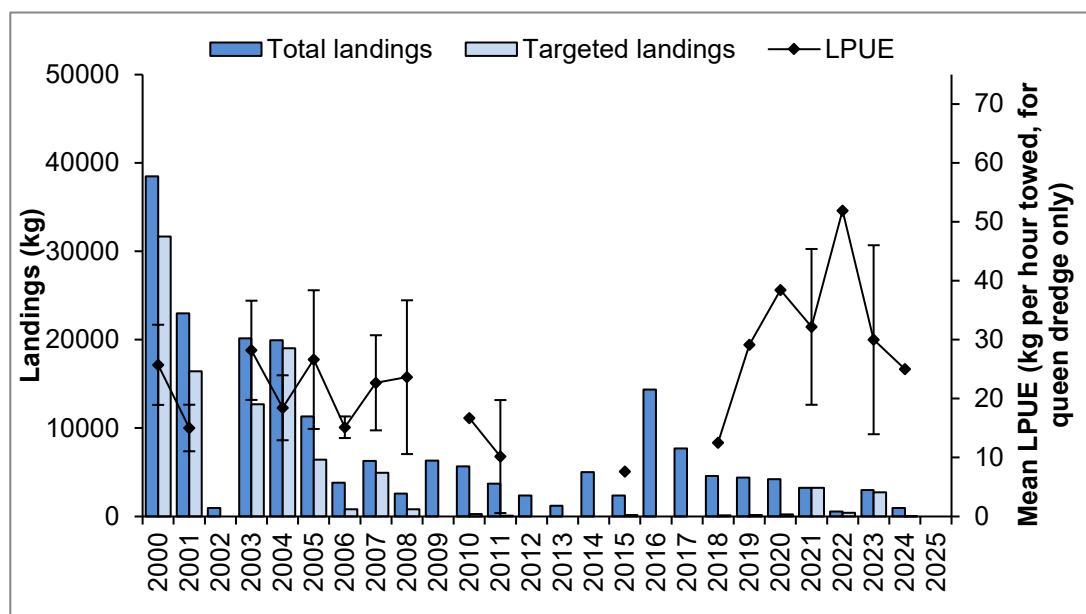


Figure 1 Total queen scallop landings, and the mean LPUE (catch per hour per dredge) obtained from SSMO logbook data with 95% confidence intervals shown.

Common Whelk Fishery

Traditionally, whelks (*Buccinum undatum*), locally known as buckies, were primarily fished in the western region during the closure of the velvet crab fishery in the summer months. However, in recent years, the fishery extended its target season from February through September and is now subject to closure from 1st July to 31st January during the whelks' breeding season. The fishery employs pots for harvesting, with a local minimum landing size of 75mm, in contrast to the national MLS of 45mm.

From 2000 to 2006, landings and effort exhibited variability, with landings around 200 tonnes. This period was followed by decreased fishing activity, resulting in low landings until 2015 (Figure 1), largely influenced by shifts in market access. Subsequently, landings fluctuated between 200 and 460 tonnes between 2016 and 2021, with a prominent peak observed in 2020 at 460 tonnes. Since 2021, landings have remained at approximately 250-340 tonnes through to 2025.

Landings per unit effort (LPUE) showed an overall increasing trend since 2005 and reached its highest recorded value of approximately 2.8 kg/pot in 2024. However, LPUE declined in 2025 to approximately 2.2 kg/pot, falling back toward levels observed in 2020-2022.

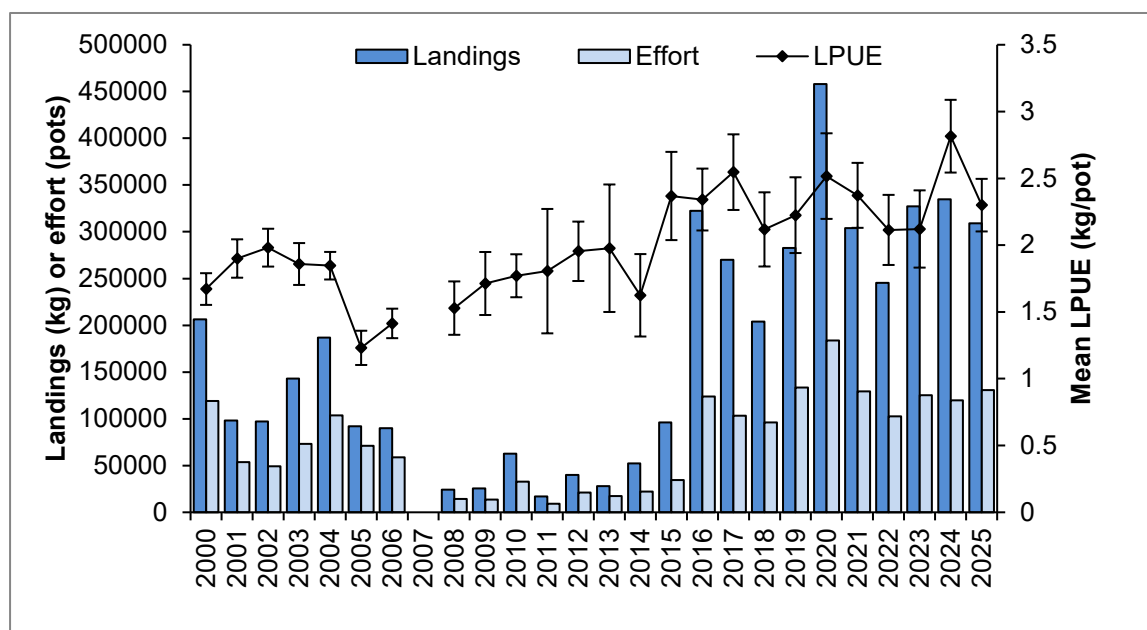


Figure 1 Total whelk landings (kg), total numbers of creels, and the average LPUE obtained from SSMO logbook data with 95% confidence intervals shown.

The areas with the highest LPUE continue to be consistently observed around Yell and Fetlar in 2025 (Figures 2-4), mirroring the distribution of historical landings and effort. The spatial pattern remains stable, with elevated LPUE concentrated in the northern and northeastern squares and lower values recorded in more southerly areas. Whelks, being highly substrate-dependent, tend to aggregate in distinct patches, rendering them susceptible to localised overfishing.

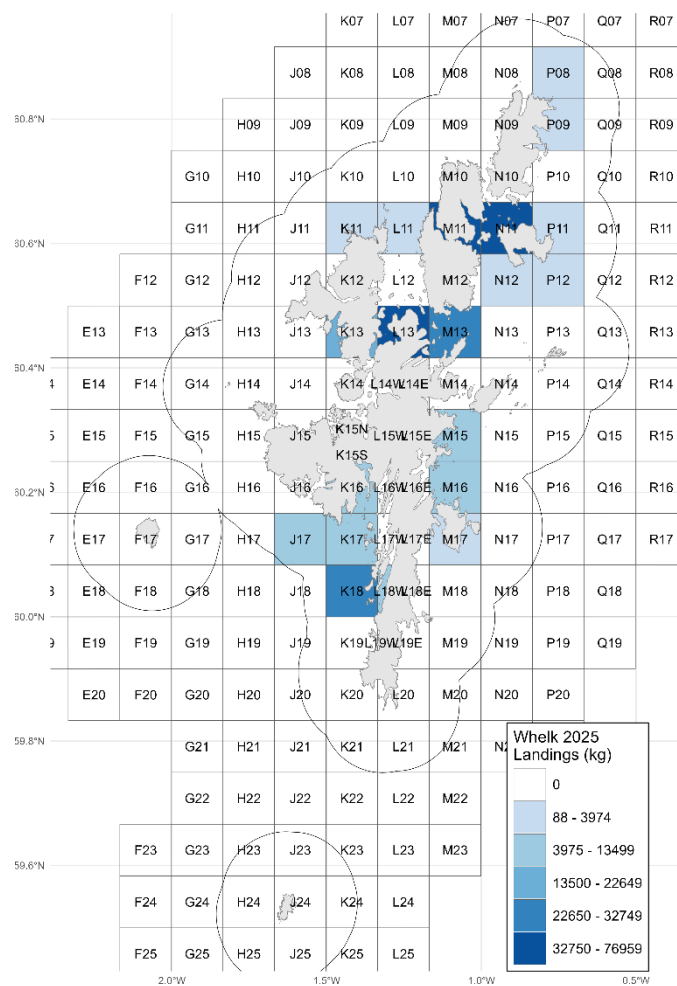


Figure 2 Geographic distribution of whelk landings per SSMO stat square in 2025.

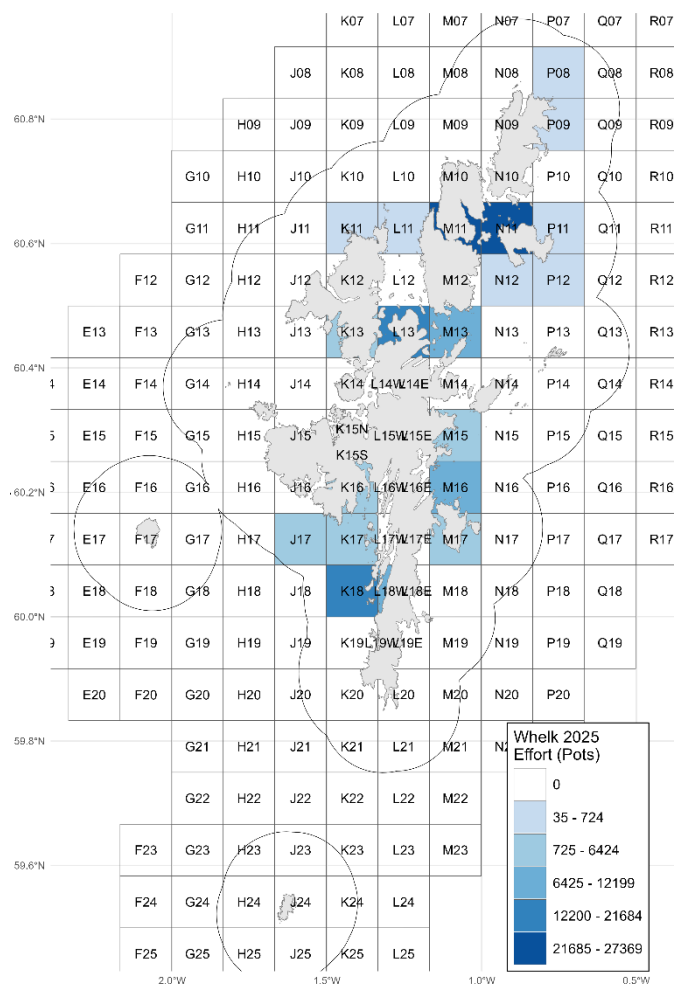


Figure 3 Geographic distribution of whelk effort per SSMO stat square in 2025.

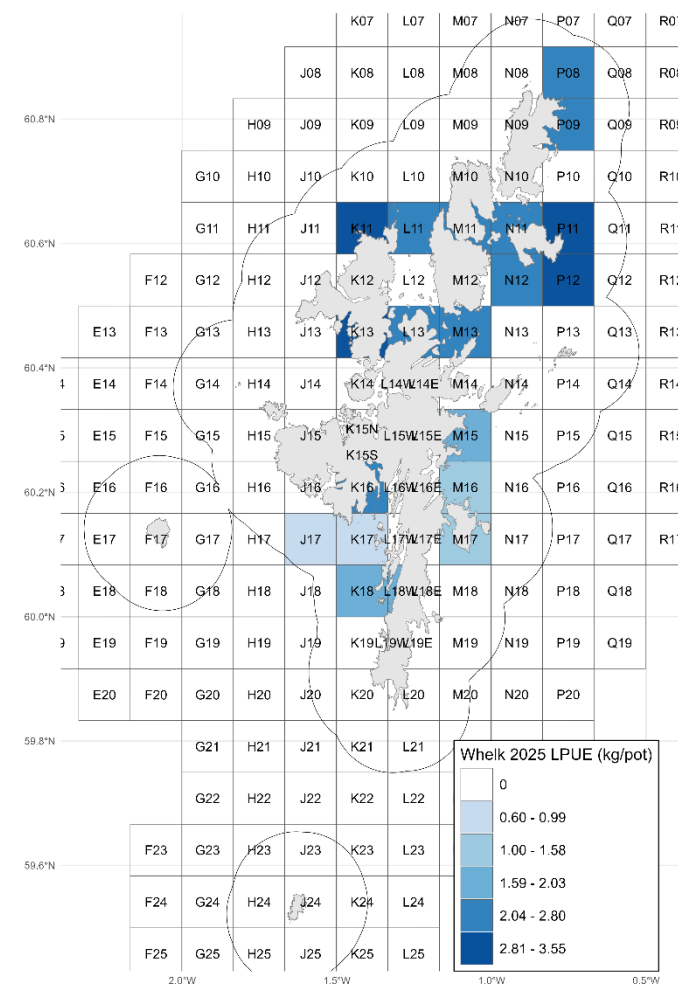


Figure 4 Geographic distribution of whelk LPUE per SSMO stat square in 2025.