Gouvèrnément d'JÈRRI

MARINE RESOURCES ANNUAL REPORT 2022








INFRASTRUCTURE HOUSING AND ENVIRONMENT
MARINE RESOURCES SECTION
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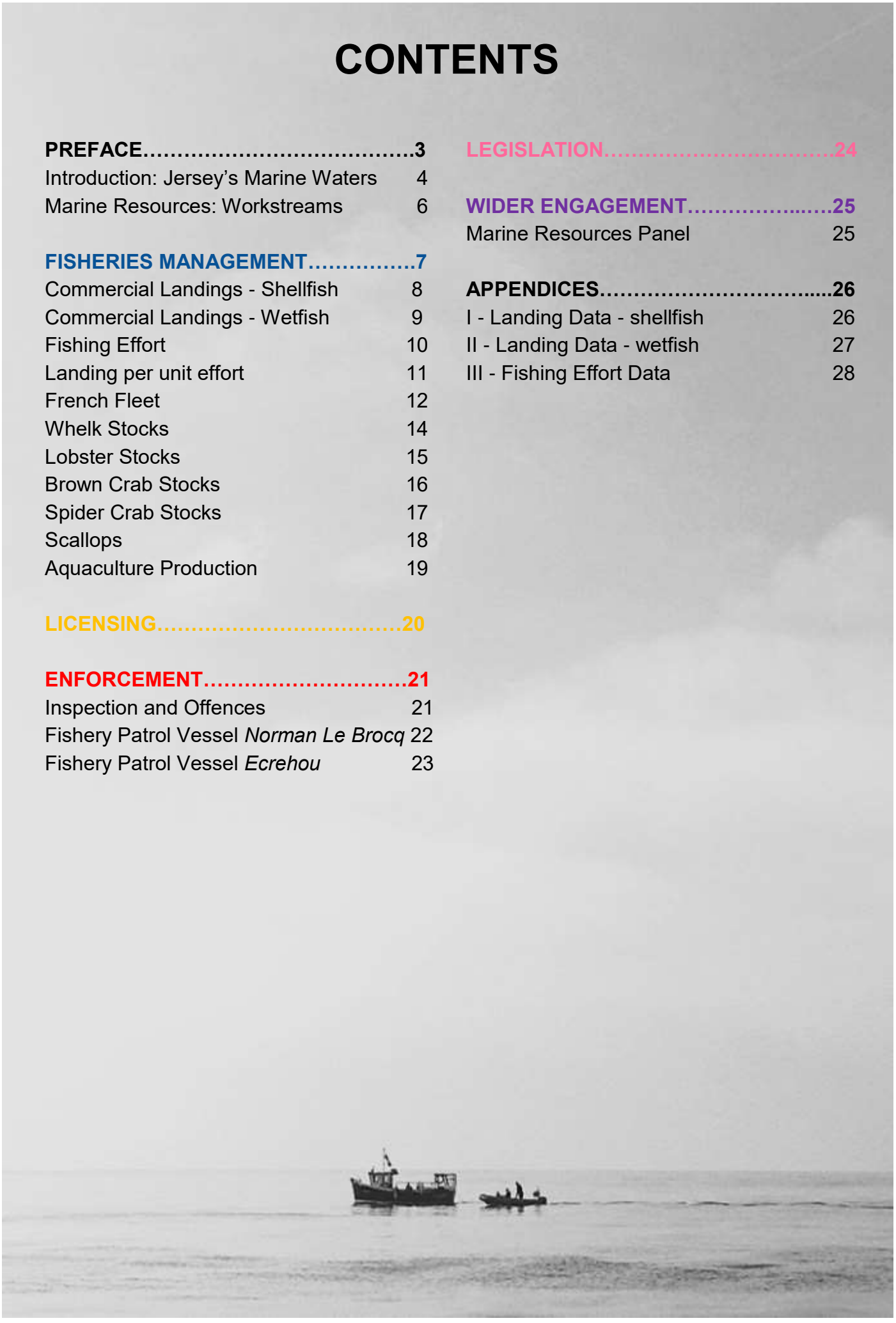


PREFACE

By its nature the management of fisheries and the marine environment is often challenging and subject to the whim of unexpected events. The year 2022 brought its fair share of accomplishments and setbacks but these were overshadowed by the events of 8 December and the sinking of L'Ecume II with the loss of skipper Michael Michieli, Larry Simyunn and Jervis Baligat. This tragic incident shocked islanders and highlighted the real dangers that come with commercial fishing. Words can only ill describe the efforts of the fishing community on that day and in the days that followed.

Compared with the years that preceded it, 2022 saw an easing of Covid restrictions and, while access to the EU export market remains problematic for Jersey, some of the political tension associated with the Trade and Cooperation Agreement eased as discussions moved away from levels of access to the implementation of new arrangements. Separate to this came new challenges as the Ukraine war and a deteriorating economic climate pushed up the price of fuel, equipment and bait. This made operating costs harder to square against the largely static prices being paid for catches. This, when combined with export restrictions and declining stock health in lobster, brown crab and whelk, made 2022 an exceptionally difficult year for Jersey's commercial fishing sector.

The aquaculture sector was able to build business again in 2022 but has also struggled with staffing and continues to experience challenging restrictions and additional expense when exporting their product to the EU. The temporary holding beds established during the Covid-19 emergency remained in use and work towards formalising them as production areas has begun.

Management of the marine environment progressed well during 2022 and included the creation of Jersey's first No Take Zone (NTZ) at Portelet Bay on the island's south coast that will act as a natural laboratory for use by local and visiting researchers. The NTZ has already been studied in detail and over the coming years the Société Jersiaise, Government of Jersey, students and other researchers will document any changes to the site. Additional to this, other student projects undertaken in cooperation with the Government of Jersey have studied fish communities, sea bed habitats, microplastics and environmental stewardship. Three scientific papers came out of this research in 2022 in open access journals, helping to increase the reach of this research.

INTRODUCTION
JERSEY'S MARINE WATERS

The Bailiwick of Jersey consists mostly of marine waters within which reside small parcels of dry land. Jersey's total land area is 120 km^2 but this is dwarfed by the surrounding 2,455 km^2 of territorial sea. This ratio of sea to land sustains the island as it is the oceanographic processes and ecology of the marine environment that underpins our climate, water resources and the key tourism, leisure, agricultural and fisheries economies. To mismanage our seas and oceans is therefore to risk our own well-being.

The island of Jersey has 90 km of coastline which includes dramatic cliffs, wide sandy bays, rocky shores, small harbours and, of course, the port of St Helier. This interface between land and sea has an important influence on Jersey's character and sense of identity. On spring tides the difference between the low and high water marks may be as much as 12 metres. The south, southeast and west coasts have shallow, gently sloping shore profiles, resulting in the island's area expanding by a quarter at low water as up to 35 km^2 of intertidal area becomes accessible by foot. In contrast to this are the north, south-west and north-west coasts which are characterised by steep granite cliffs studded with inlets and caves, and exposed sandy or rocky beaches. Both the inland character of Jersey and its marine environment are much influenced by the great variation in aspect, exposure and ecology of the coastal fringe.

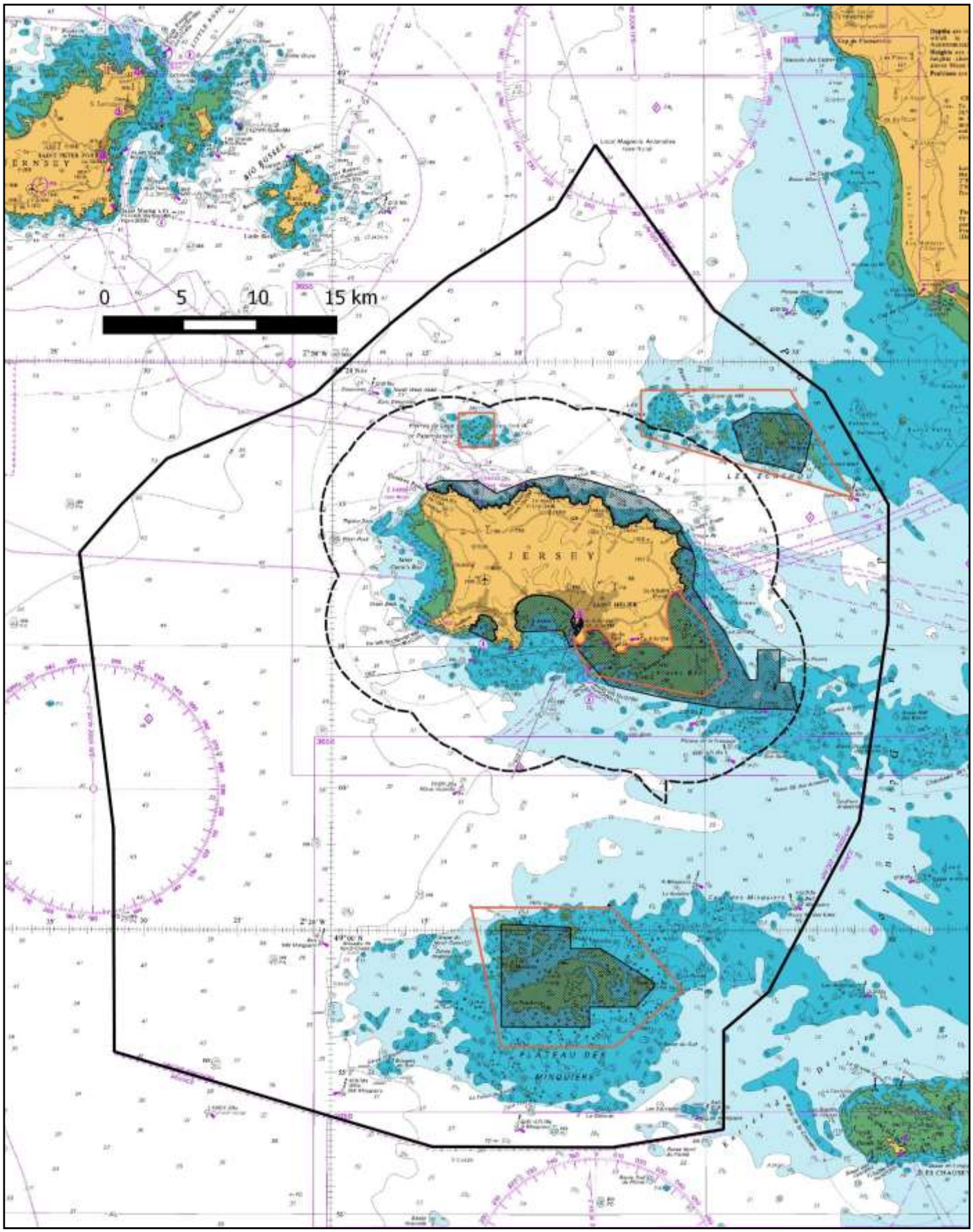
Jersey's marine fauna and flora represents a confluence of northern colder water species and warmer southern ones. Species from the Bay of Biscay reach their northern limit in the Channel Islands and, conversely, there are those found in the UK and North Sea whose southern limit is the Normano-Breton Gulf. The international importance of Jersey's marine ecology is recognised in the 190 km^2 of key habitats that are designated as Ramsar (wetlands of international importance areas) and the 150 km^2 of seabed and marine waters that are Marine Protected Areas under the OSPAR Convention.

The ecology of Jersey's rocky reefs and intertidal sediment flats are unique within Europe. At low water an extensive biologically rich area of seashore is uncovered while subtidally there are kelp forests, seagrass meadows, maerl beds and tide-swept sands and gravels. The offshore reef systems that comprise Les Écréhous, Les Dirouilles, Les Minquiers and Paternosters cover 100s of square kilometres and are internationally recognised as productive but sensitive hotspots of biodiversity.

The seas around Jersey are productive, something which is reflected in the cultural and economic importance of fishing and aquaculture. The fishing industry plays a significant role in island life and reflects an Anglo-Norman culture that goes back many centuries. Fisheries and aquaculture directly support around 180 jobs plus many more in associated industries such as engineering, maintenance, retail, etc. Achieving a sustainable fishery is therefore important and in Jersey waters management occurs through measures that are employed locally and via the Trade and Cooperation Agreement (TCA).

Jersey's marine areas also contain sites of cultural, archaeological and historical significance including prehistoric dwellings, shipwrecks, fortifications, geological exposures, geographic features and fishing artefacts. A number of these are already protected as Sites of Special Interest and currently UK and French archaeologists are studying exciting new finds of possible international significance along the coastline.

Jersey's marine zone can accommodate many activities such as fishing, watersports, tourism, aquaculture, harbours and vital infrastructure. This makes it an area of intense activity especially inshore and at offshore hotspots such as Les Écréhous. To reduce the possibility of conflict or harm to individuals, infrastructure or the environment, close monitoring and management is required. This is a core function of Marine Resources who, in conjunction with other government teams, industry representatives, marine stakeholders and NGOs, oversee the management of Jersey's marine waters. Our objective is to ensure that people can access and enjoy the benefits of Jersey's marine zone without causing harm to themselves, other people, coastal features or to the local marine environment. Pleasing everyone all of the time is never easy but we hope that the balance we maintain between usage, exploitation and conservation of our marine waters is beneficial for the island of Jersey.



Jersey's territorial seas. *The black solid line marks the limit of Jersey's territorial waters. The black dashed line marks the three nautical mile limit from the island's coast. Within this three mile zone Jersey has full control over its marine management; outside of it any measure that may impinge on commercial fishing is subject to the terms of the Trade and Cooperation Agreement (TCA). The hatched zones surrounding Jersey and the offshore reefs are Marine Protected Areas where dredging, trawling and other mobile fishing practices are prohibited. The red solid lines mark the edges of Jersey's four Ramsar (wetlands of international importance) sites.*

MARINE RESOURCES: WORKSTREAMS

OVERVIEW. During 2022 the Marine Resources team consisted of 10 officers whose roles covered a wide range of activities and responsibilities. Some of this work overlaps with other government departments or requires engagement with non-governmental organisations (NGOs). No one role is allocated solely to any individual and all fisheries officers can work across the team's portfolio. While this Annual Report is compiled primarily of key results and highlights from 2022, a summary of some of the roles and responsibilities of the Marine Resources team is given below and illustrated on the page opposite.

FISHERIES MANAGEMENT

Officers undertake a range of duties which assist with the management of the local fishing industry. This includes conducting annual assessments on key commercial stocks, inputting and analysing quarterly commercial statistics, and engaging with wider jurisdictions such as the UK and France with regard to Management Agreements.

ENVIRONMENTAL MANAGEMENT

Environmental management is a growing role that is underpinned by a mixture of monitoring and research. This includes water, shellfish and heavy metal sampling, the monitoring of key habitats and species, plus individual research projects on biodiversity, climate change and the effect of anthropogenic behaviour. We also supervise students and work with other government teams.

ENFORCEMENT

Officers are responsible for ensuring fisheries related laws and legislation are enforced both around the coast of Jersey and offshore. This ranges from angling and low water checks at popular fishing locations, to boarding large commercial trawlers many miles from Jersey's coast. Any enforcement action requires appropriate administration, from interviews under caution, to report writing, and attendance at Parish Halls and/or court.

LICENSING

Officers administrate the licensing of fishing activities which includes the construction and updating of licence conditions. This includes the opening and closure of commercial fishing licences, activity specific permits such as beam trawling and scallop diving, licensing of aquaculture businesses, and administration of other miscellaneous permits, such as scientific exemptions.

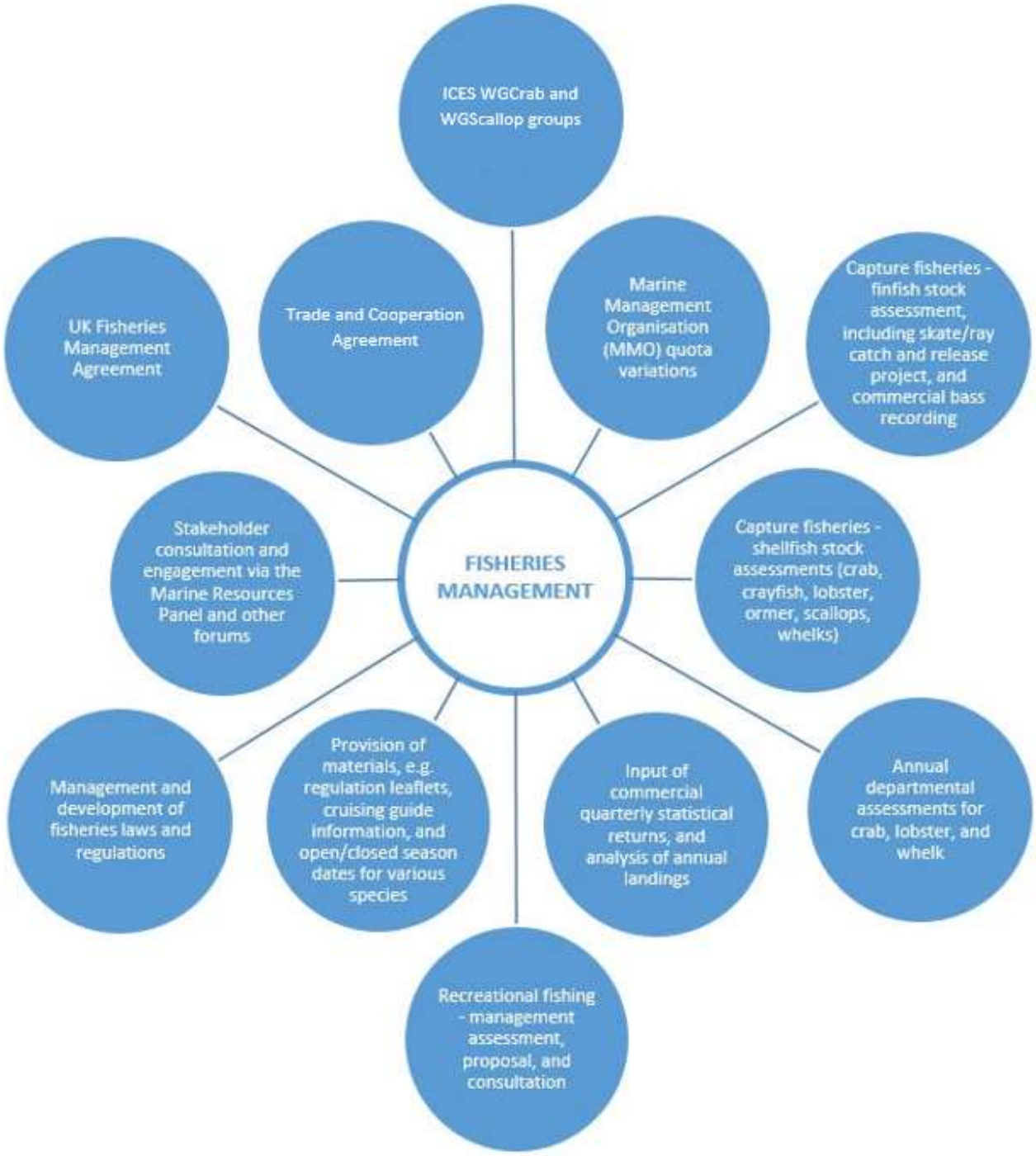
LAWS & LEGISLATION

In addition to enforcement of local laws and regulations, officers are tasked with ensuring all policy and legislation is appropriately maintained. This includes writing and submitting documentation such as law drafting instructions, Ministerial Decisions, and associated communications such as press releases.

WIDER ENGAGEMENT

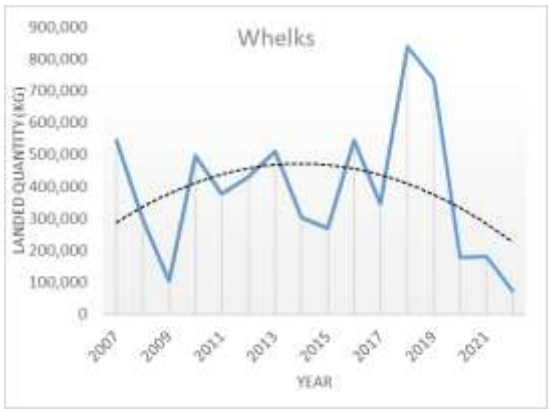
Most of the above work areas includes coordination with other government or government teams, non-governmental organisations and local businesses. The team has a close working relationship with local stakeholders both individually and via the Marine Resources Panel. We also liaise with colleagues in France and draw on local expertise within the Jersey Fisherman's Association, Société Jersiaise and others and from the UK via organisations such as the inshore fishing associations (IFCAs), CEFAS, OSPAR, Marine Stewardship Council, various universities and Blue Marine Foundation.

FISHERIES MANAGEMENT



FISHERIES MANAGEMENT
JERSEY COMMERCIAL LANDINGS - SHELLFISH

(A)



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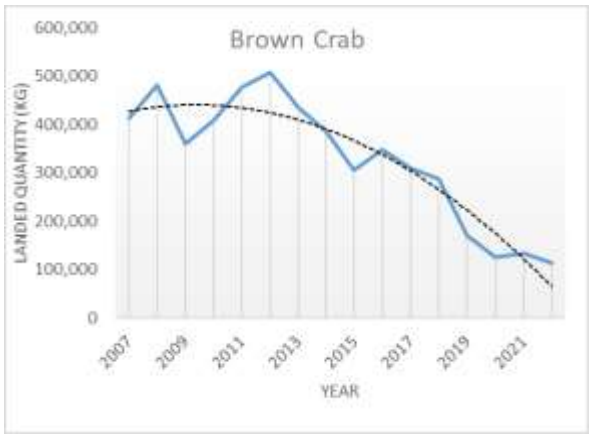

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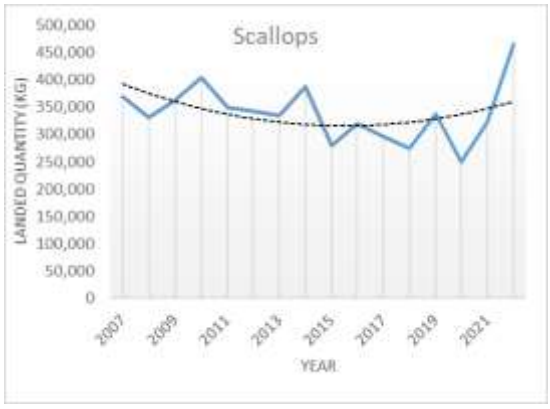

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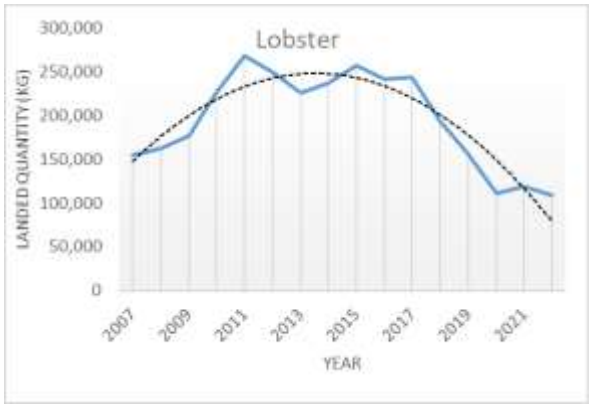

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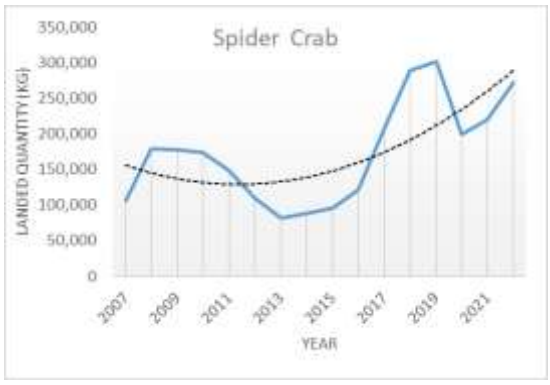

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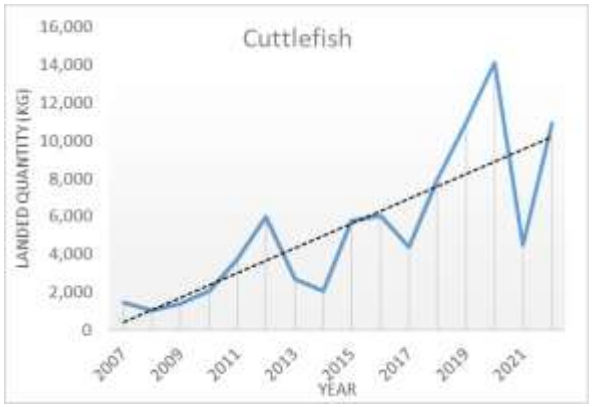


Landed quantities (Kg) of: (A) Whelks; (B) Brown Crab; (C) Scallops; (D) Lobster; (E) Spider crab; (F) Cuttlefish.

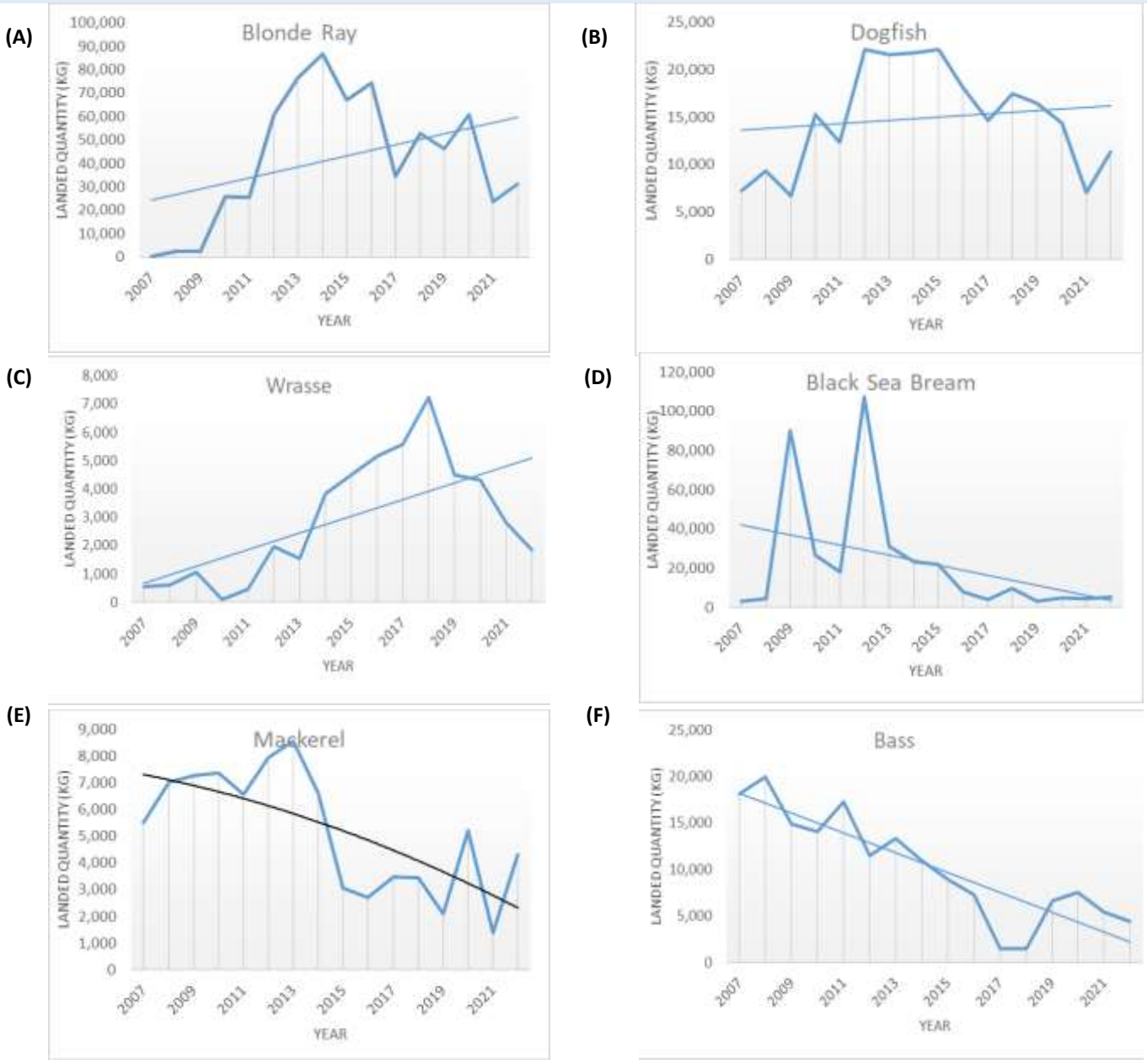
A CLOSER LOOK. Jersey's commercial fishery is economically dominated by shellfish especially lobster and crab which form around 70% (by financial value) of landings. Whelks and scallops are also important at around 22% of landed value with wetfish and other species, such as cuttlefish and Bass, forming the remaining 8%.

Recent trends in the species' landed weight are mixed. The annual landed weight for lobster and brown crab is declining which, given their economic dominance, is a major concern. In contrast, spider crab and scallop landings have increased steeply due to their abundance. Additionally cuttlefish landings have also increased over the last few years, perhaps in response to increased prices and declines in other key stocks.

Lobsters, brown crab, spider crab, and whelks are discussed in more detail later in this section**.** In addition to the main stocks listed above, other species landed by Jersey boats includes: cockles; velvet swimming crab; squid; ormers; queen scallops; crayfish; praire and prawns. See Appendix I for more details**.**

FISHERIES MANAGEMENT

JERSEY COMMERCIAL LANDINGS - WETFISH



Landed quantities (Kg) from 2007 to 2022 of: (A) Blonde Ray; (B) Dogfish/catsharks (all species)); (C) Wrasse; (D) Black Sea Bream; (E) Mackerel; (F) Bass.

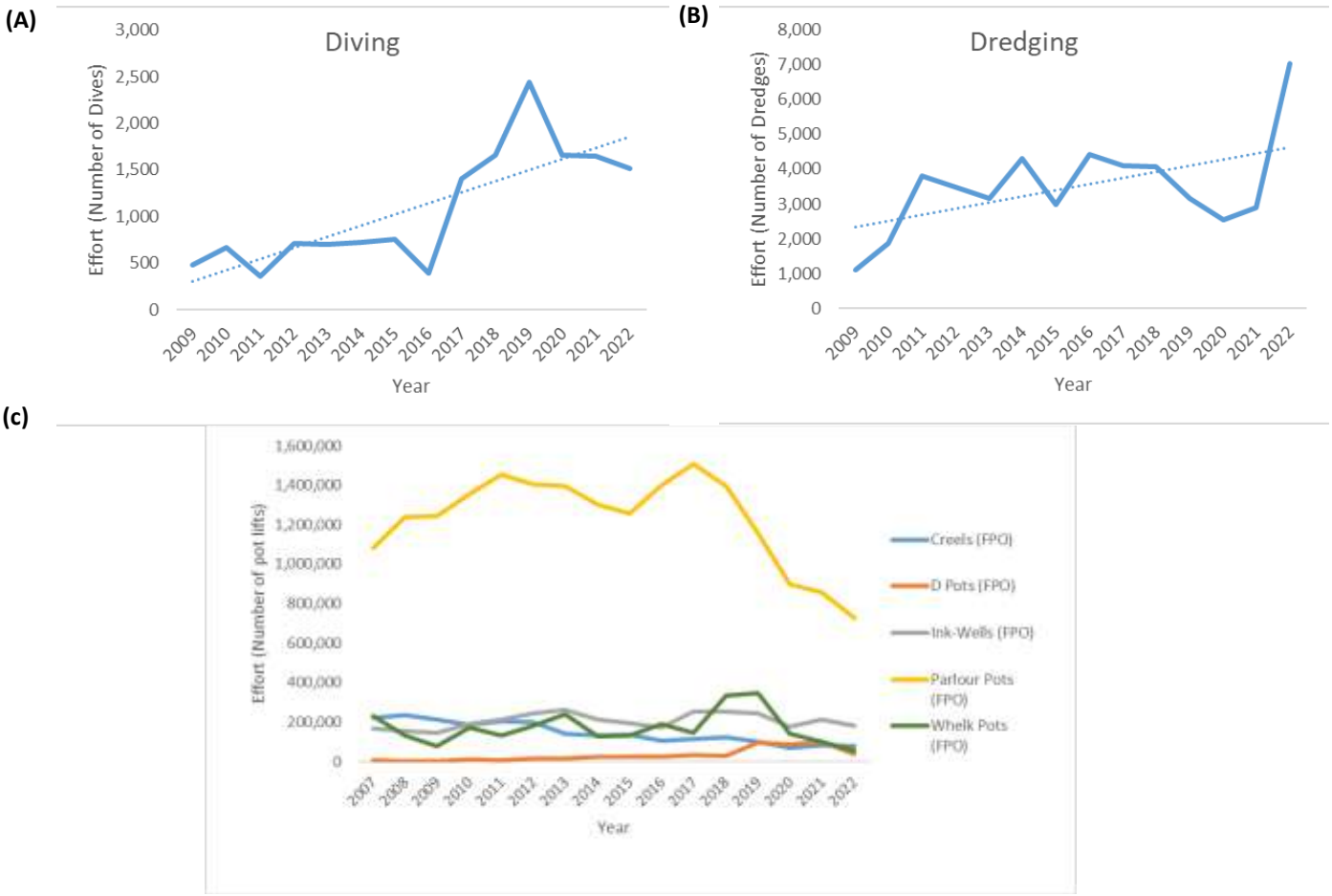
A CLOSER LOOK. Jersey's commercial wetfish industry is relatively small and has recently suffered from problems related to stock health, logistics, markets and designated quota. The local fishery is mostly low impact (hook and line, etc.) and several species are targeted but often in quite low numbers (see Appendix II).

Annual landings are variable often because of individual vessels entering or leaving the fishery or from regional factors (such as overfishing) that occurs outside of Jersey waters. External influences are important to wetfish stocks because of their mobility, migratory patterns and reproductive habitats. Local wetfish trends are monitored by Marine Resources but the island's fishery is dwarfed by that of other fleets within the English Channel and so Jersey often follows guidance issued from external organisations such as ICES, the EU and UK.

Key wetfish species are subject to local research, usually by members of the Marine Resources team. This has included a ray-tagging project, a commercial recording scheme for bass (see 'Bass Stocks' page) and the acoustic tagging of wrasse.

FISHERIES MANAGEMENT
JERSEY FISHING EFFORT

FISHING METHODS. Jersey's commercial fishing fleet uses a range of fishing techniques with all vessels being obliged to record their effort level in daily logsheets. For example, fishers targeting wetfish such as bass are required to record the number of hours fished (if angling), the number of hooks used (if long lining) or the length of net used (if netting). Knowing the level of effort expended when fishing is important as trends in landed weight will vary due to weather, fleet capacity, regulations, etc., and so catches cannot be used on their own to judge the health of a stock. However, catches combined with fishing effort will give a better indication of the health of individual stocks.



Fishing effort from 2009 to 2022 for selected metiers. A) Diving, measured by number of dives. B) Dredging, measured in number of tows. C) Lobster and crab potting measured by number of lifts for D-pots, ink-wells, creels and parlour pots. Additional measured metiers not illustrated here include angling, netting, long lining, low water fishing and trawling.

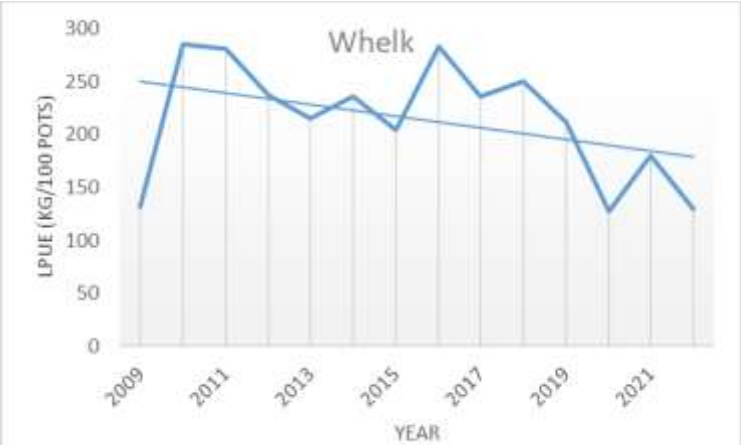
A CLOSER LOOK. Potting remains the dominant metier across the island's commercial fleet. This is to be expected given the importance of crab and lobster to the overall fishery. Although a variety of different pot types are used, parlour pots account for the majority of fishing effort for crab and lobster. The number of pot lifts (and therefore parlour pot usage) has been declining since 2017 which probably reflects stock decreases for both brown crab and lobster plus the economic impact of Covid and poor weather over the last few winters.

Although not displayed here, netting for fish has also decreased in recent years. This is probably a reflection of bass fishing restrictions, this being a target species for netters. Overshadowing all fisheries activity has been the Covid-19 pandemic which resulted in key markets closing with a corresponding decrease in fishing effort for key species such as crab, lobster, whelks and scallops. However, a local demand for fresh fish, often sold direct from the boat, seems to have increased the use of longlines and rod and line fishing.

The full data set can be found in Appendix III**,** which contains further details on metiers such as dredging, low water fishing, long lining, and trawling.

FISHERIES MANAGEMENT
JERSEY LANDING PER UNIT EFFORT

LANDING PER UNIT EFFORT (LPUE) is a commonly used index for assessing the relative health of commercial fisheries. Landings may change for reasons other than a decrease in stock such as market variability, number of active vessels (particularly so for a small fleet) or individual fishing preferences. By taking into account the effort required to catch a given weight for a species, an index of the stock performance is achievable. For example, in 2015 100 pots deployed off the Jersey coast would catch approximately 15 kg of lobster but by 2020 the same 100 pots could only catch 9 kg. This suggests that the density of legally-sized lobster has decreased and that the underlying stock may have decreased. Although somewhat crude, LPUE is widely used as a ready means of monitoring stocks. Closure of markets led to lower landings and less effort from 2020 to 2022

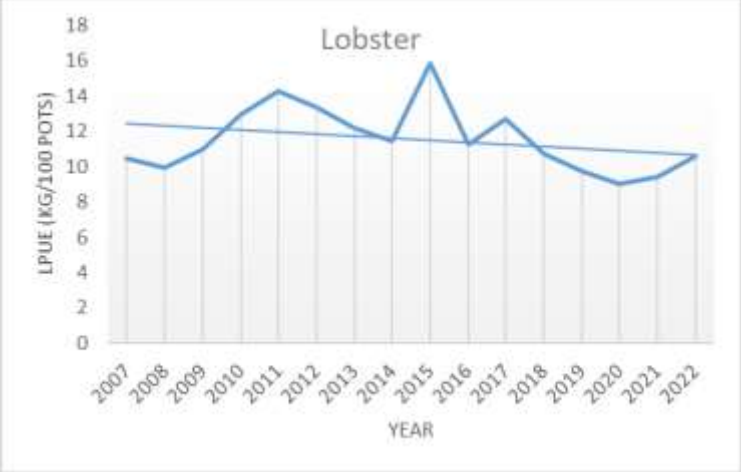


Whelk Peak year (2010): 284 kg/100 pots.

Lowest year (2020): 126 kg/100 pots.

Change: -42%

Status: Steep decline since 2016.

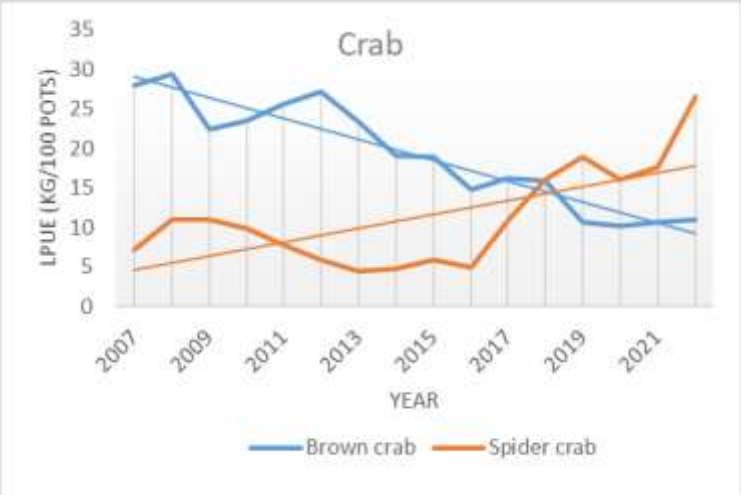


Lobster Peak year (2015): 15.8 kg/100 pots.

Lowest year (2020): 8.99 kg/100 pots.

Change: -43%

Status: Moderate to steep decline since 2015. LPUE has remained stable over last several years.



Brown Crab Peak (2008): 29 kg/100 pots.

Lowest year (2020): 10.2 kg/100 pots.

Change: -65%

Status: Severe decline since 2012.

Spider Crab Peak (2022): 26.52 kg/100 pots.

Lowest year (2013): 4.46 kg/100 pots.

Change: +594%

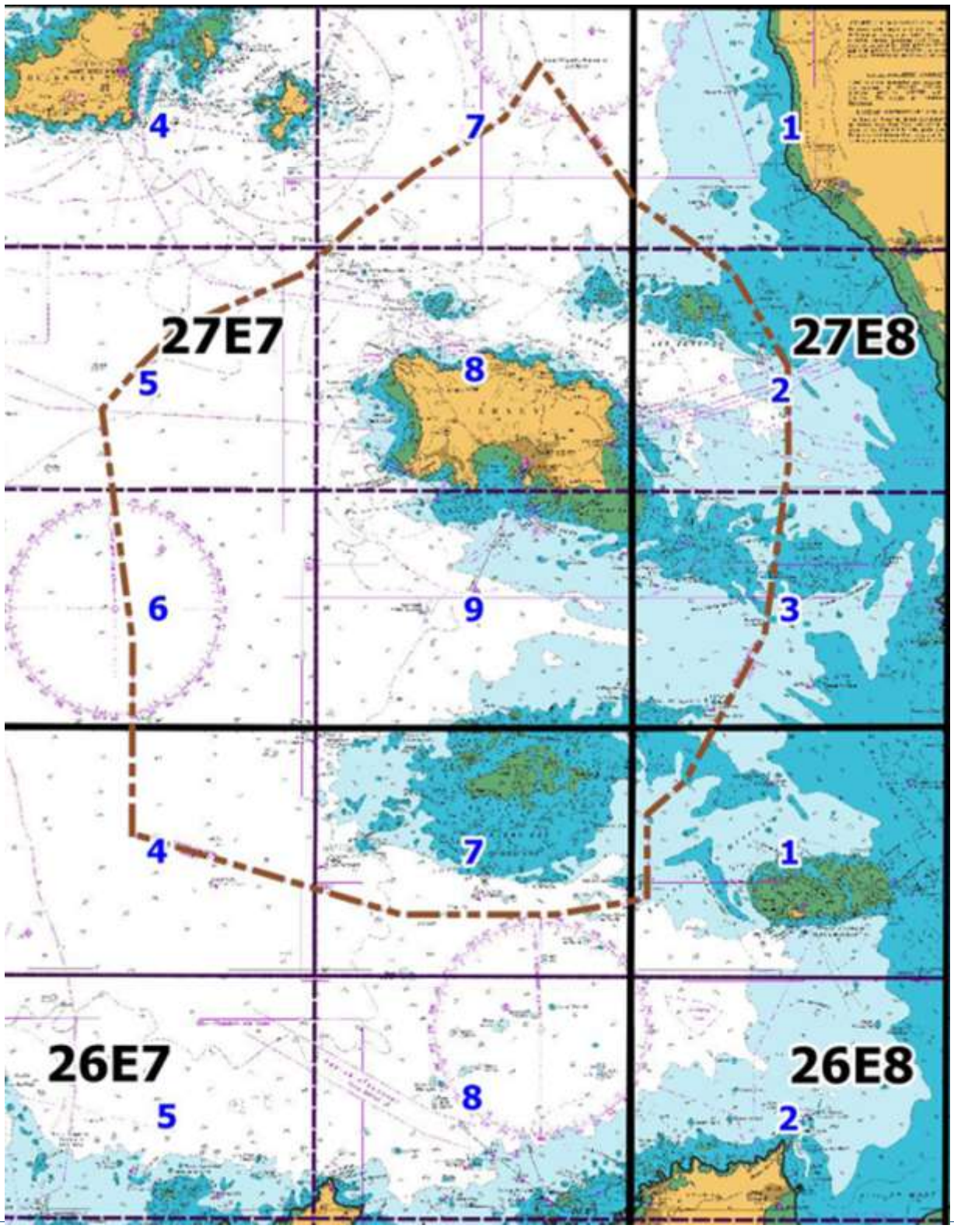
Status: Sustained rise since 2016.

Landing Per Unit Effort (LPUE) for A) Whelk, B) Lobster, C) Brown Crab, D) Spider Crab. LPUE of crab and lobster is calculated using a combined total for creels, D-pots, ink wells, and parlour pots. LPUE for whelk is calculated using just whelk pots.

FISHERIES MANAGEMENT
FRENCH FLEET

During 2021, Jersey underwent the process of registering French vessels (based on track records) to fish within Jersey territorial waters. As of the end of 2022, 135 licences and 2 temporary licences have been issued. A licence condition of these licences is that all landing data for fishing undertaken in Jersey waters is submitted within 48 hours of landing.

Any vessel fishing within Jersey waters must submit details including: date fished, measure and type of metier used, area fished and weight of species landed (Kg). The below chart illustrates the areas fishable within Jersey territorial waters, the black refers to FAO (Food and Agriculture Organisation) area codes and the blue to area codes assigned by Marine Resources.



FISHERIES MANAGEMENT
FRENCH FLEET

There has been a generally good acceptance by French fishing vessels to provide log book data. However, as negotiations continued to take place during 2021 data was not available throughout the year. This resulted in 2022 being the first full year for which landing data was provided. Whilst the below illustrations have been produced, there will be instances where the data shown does not represent a full year. This could be due to vessels being sold, replaced or periods of not reporting.

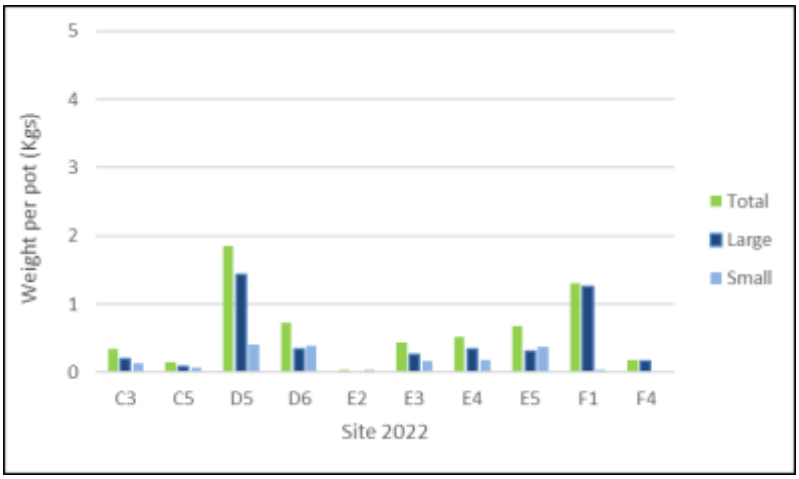
Throughout 2022, 87 vessels have submitted just over 3,100 log sheets. This represents approximately 7,400 fishing days.

Quantities (tonnes) landed by French vessels in 2022. The Weights of less than 10 tons are not included.

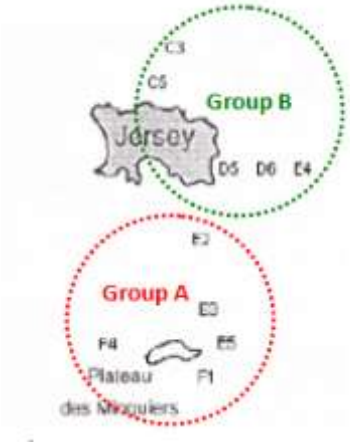
FISHERIES MANAGEMENT
WHELK STOCKS

WHELK TRIALS. An annual study of whelk (*Buccinum undatum*) catch per unit effort (CPUE*) is conducted each February. Several strings of baited whelk pots are deployed for 24 hours to the north, east and south of Jersey. When the pots are hauled the whelks are graded into 'small' (under 50 mm minimum size) and 'large' (above minimum size) and then weighed. The results are used to measure changes in whelk density at key locations. These trials have been run annually since 1996 and represent a valuable dataset. * CPUE differs to LPUE as all sizes of animals caught are recorded rather than those landed that are above MLS only.

CPUE (Weight (Kg) whelks per pot) from 1996 to 2022 with a two year moving average trend line on the 'large' (> MLS) group.



Weight (Kg) of whelks per pot, 2022. Results for Total, Large (above 50mm MLS) and Small (below 50mm MLS).



Location of sample sites.

RESULTS. Overall, the CPUE in 2022 was 0.62 kg per pot. This was a 0.78 kg decrease on the CPUE recorded in 2021. The 'large' size group in 2022 was 0.2 kg, a noticeable decrease on 2021 and significantly below the 1998–2002 average of 2.64 kg. The 'small' size group decreased from 2022 to 0.44 kg per pot.

A CLOSER LOOK. Compared with 1996 to 2007, the recent CPUE level is low but comparable with recent years. The whelk fishery is intensively fished and the local stock is subject to certification (through Normandy) by the Marine Stewardship Council. Their audit for 2019 (and a 2018 Ifremer assessment) raised concern around the long-term sustainability of the local fishery. This concern is justified, as noticeable decreases in the two year moving average can be observed since 2017. Ongoing research is underway with results due in early 2024.

Whelks ready for measuring

FISHERIES MANAGEMENT
LOBSTER STOCKS

LOBSTER TRIALS. Since 2004 an annual survey has been conducted to monitor changes in the size and structure of the lobster population in Jersey waters. The trials are conducted in May and June at three different locations using parlour pots without escape gaps to retain juveniles. The equipment used and sites sampled remain the same, allowing comparison over time. Other data is collected through quayside measurements and via the submission of catch log sheets.

RESULTS

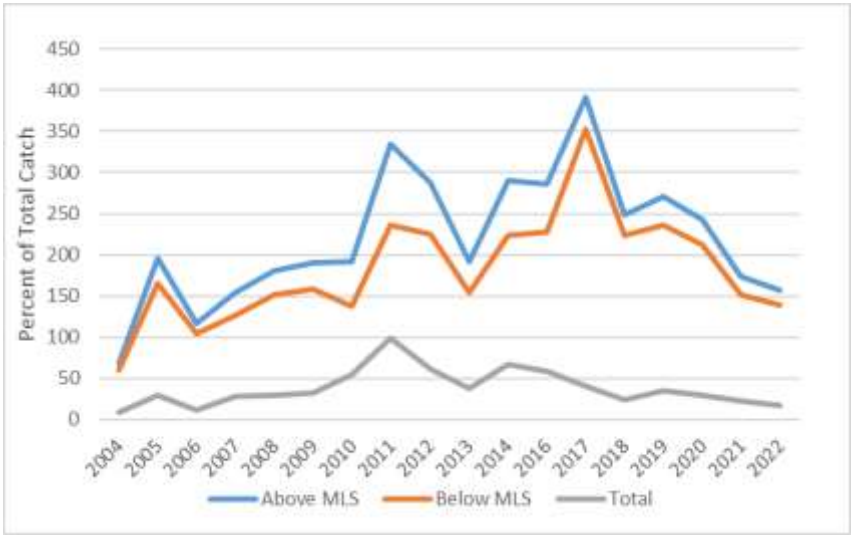
For 2022, 150 pot hauls were conducted, giving a total of 157 lobsters caught. This equated to an average of 1.04 lobsters per pot.

When broken down into above and below minimum landing size (MLS), the 2022 MLS results produced 17 above minimum landing size (MLS: 87 mm), with 139 individuals below MLS.

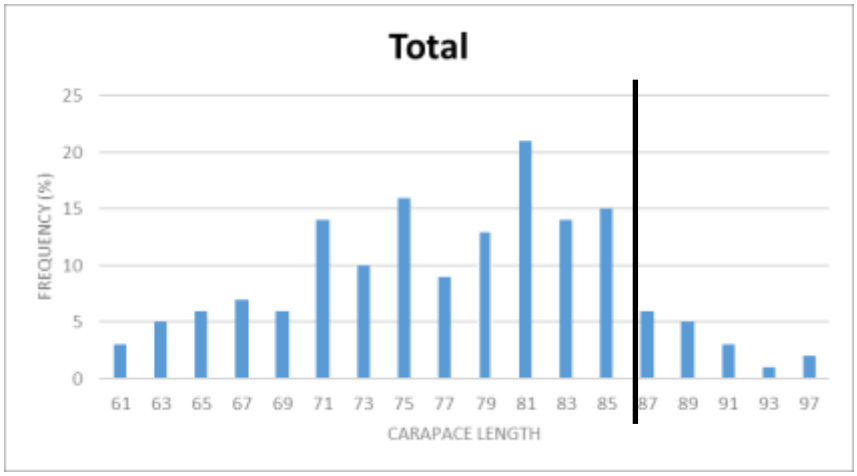
The largest lobster landed measured 98 mm carapace length, with an average size of 77.9 mm.

A total of 109,101 Kg of lobster was landed commercially. When number of pot lifts (1,026,322* for 2022) is taken into account, this equates to 10.6 Kg of sized lobster per 100 pots.*

* Pot types included in this total are creels, D-pots, ink-wells, and parlour pots.



Number of lobsters year. Total, above MLS (87mm) and below MLS.



Carapace length frequency distribution for 2022 in rounded 2 mm classes. The black line indicates the MLS of 87 mm.

A CLOSER LOOK. There is concern about declining lobster landings and since 2018 an enhanced monitoring regime has been in place with 100s more measurements being taken annually.

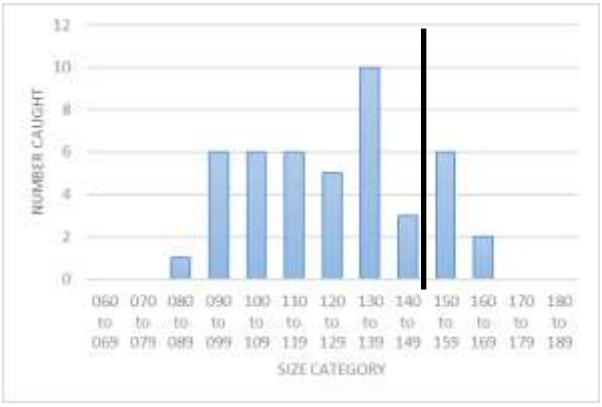
In 2019 a Lobster Working Group was formed through the Marine Resources Panel which included fishers, merchants and Marine Resources. The group proposed new management measures such as increasing the minimum size, reducing pot allocations, mandatory escape gaps and recreational bag limits. These proposed measures have been accepted by the Marine Resources Panel but were placed on hold in 2020 following the arrival of Covid-19. The situation continued to be monitored 2022.

Measuring a lobster

FISHERIES MANAGEMENT
BROWN CRAB STOCKS

CRAB TRIALS. During the annual lobster trials, details and measurements are taken for all crab species caught in the pots. This is primarily brown crab (*Cancer pagurus*) and spider crab (*Maja brachydactyla*) but other smaller species may also be caught.

A CLOSER LOOK



Size distribution (in 10 mm classes) for brown crab carapace width in 2022. Black line = MLS of 150 mm.

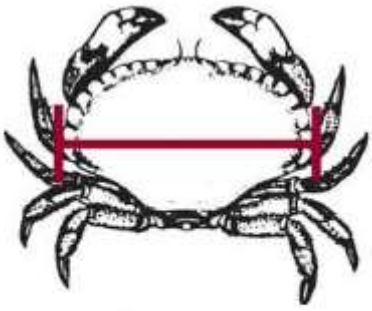
The commercial fishery for brown crab has seen landings decrease severely since 2012. This is also reflected in Jersey's trial data with the decline in CPUE since 2014 continuing. The lowest ever recorded CPUE was in 2020 at 0.3 kg per pot.

The decline in brown crab catches is also being experienced in France, Guernsey and the southern UK. This phenomenon is of regional concern and is being jointly investigated by marine managers in Jersey, France and the UK. Jersey has also joined a UK Brown crab working group and is a member of the ICES Crab Working Group.

ADDITIONAL MANAGEMENT MEASURES

COMMERCIAL. The 150 mm MLS (previously 140 mm) came into force in 2019. This has now also been reflected across the recreational sector.

RECREATIONAL. Brown crab above legal size are rarely caught onshore but are still caught in pots by recreational fishers. During 2020, a recreational bag limit of five brown crabs per person or, if fishing from a recreational vessel, five brown crabs per boat came into force. These measures mirror those of other European countries and are part of a range of bag limits designed to safeguard recreational stocks for future generations.



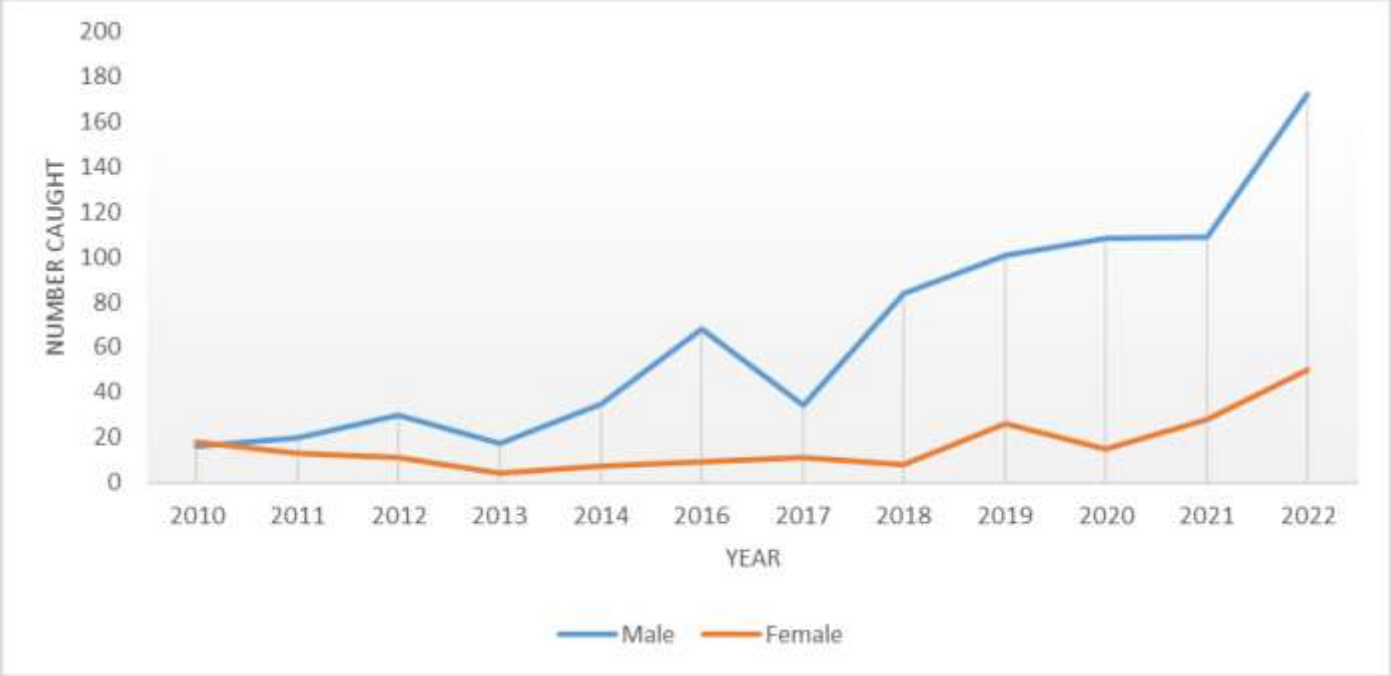
ICES WGCRAB

In 2022 the annual ICES WGCRAB meeting was held in Wales. It was attended by representatives from Jersey, France, England, Ireland, Scotland, Norway, Greenland, Newfoundland, Isle of Man, and the Orkney Islands.

The meeting allows fisheries managers to compare their landings and other datasets and to discuss the latest trends, research and management measures. It is a useful forum in which to exchange and compare information and to learn about North Atlantic fisheries.

Discussions and presentations in 2022 focused on stock assessment methodologies and the reaction of species to changes in environmental conditions such as sea temperature. The ongoing brown crab recruitment crisis continued to be a topic of interest with evidence of its effects now being felt in the southern Irish Sea. The theory of this being linked to warming seas (possibly through disease or breeding) remains the subject of active research including on Jersey.

FISHERIES MANAGEMENT
SPIDER CRAB STOCKS

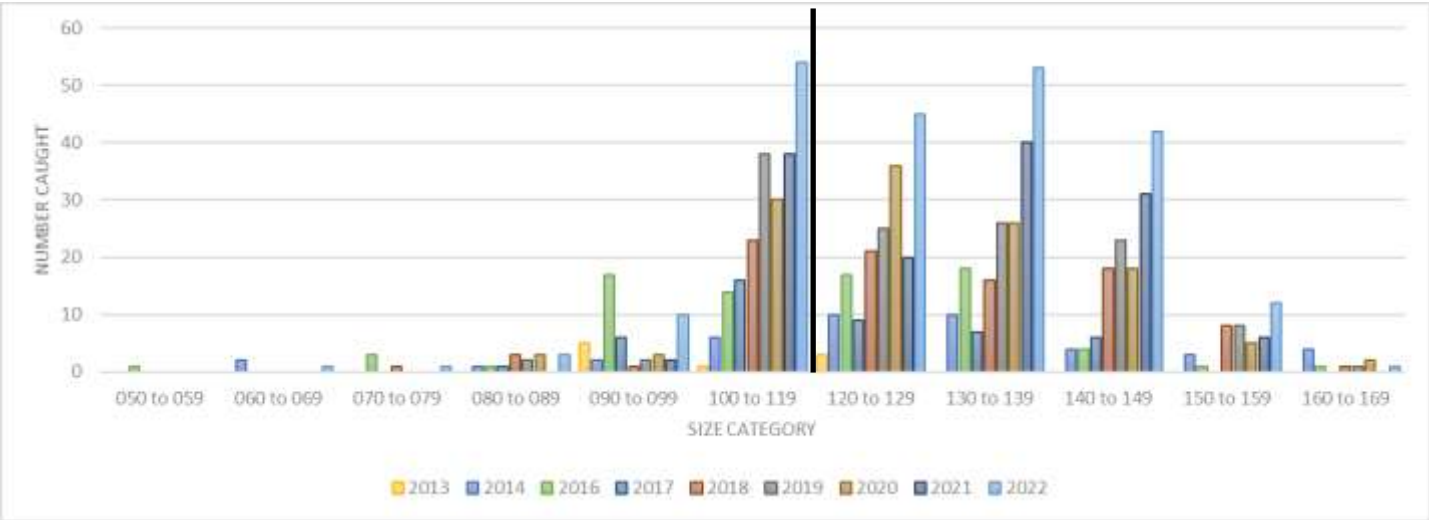


Spider crab annual potting survey results displaying the number of male and female spider crabs caught annually since 2010.

THE JERSEY SPIDER CRAB fishery has been highly variable between years due to changes in stock abundance and density. For example, in 2013 landings totalled 81 tonnes but by 2019 this had increased to over 310 tonnes. However, for 2020 this decreased to just under 200 tonnes, perhaps due to Covid-19 and market demand. Around 75% of the Jersey catch comes from lobster pots with the remainder being primarily from netting. The Bay of Granville area produces over half of all European spider crab landings especially by French vessels operating to the south and west of the island using benthic tangle nets.

The spider crab has a complex life cycle and during the spring and summer, animals will migrate from deeper to shallower waters. The English Channel is at the northern edge of its range and so colder winters are thought to markedly affect the summer population. It is therefore possible that a series of milder winters since 2013 have led to increased landings.

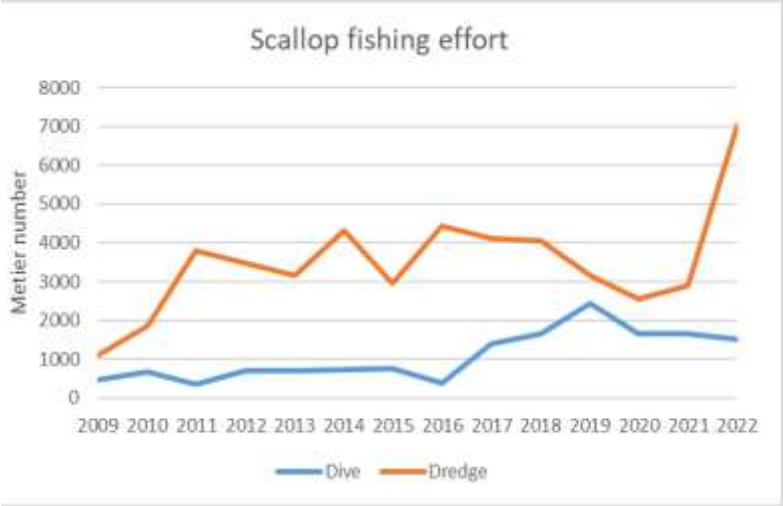
Spider crab are less economically important than lobster but will occupy the same pots as they are attracted to the same bait. Local data suggest that spider crab abundance is not correlated with lobster catches but nonetheless the recent upsurge in the local spider crab population is being monitored in relation to the local environment and potting industry.

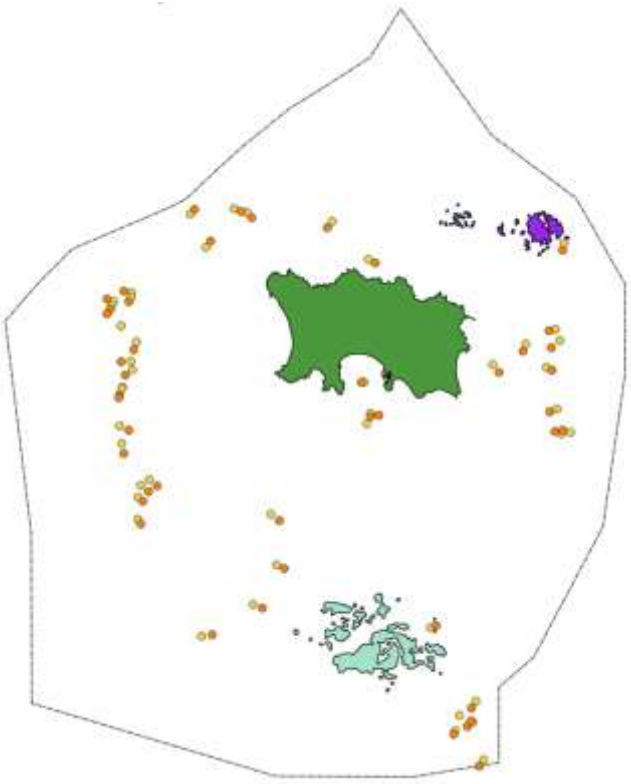


The size distribution (in 10 mm classes) of spider crab carapace length since 2013. The black line = MLS of 120 mm.

FISHERIES MANAGEMENT
SCALLOPS

THE SCALLOP FISHING INDUSTRY represents around 8% of Jersey's annual fishing economy with annual landings (combined for diving and dredging) usually being between 250 and 350 tonnes. In recent years catches from diving have increased substantially with annual totals beginning to approach those obtained by the more traditional dredging metier.





Historically, scallops have not been subject to the same degree of monitoring as whelk, crab and lobster in Jersey waters. To address this an initial broad scale scallop survey was carried out in the spring of 2021 to build a baseline picture across Jersey waters and to inform the future regular survey.

The survey sampled 40 sites using a method matched to that of the Normandy survey. Juvenile and mature scallops were counted and measured from each tow with shell damage and bycatch also recorded. The survey results along with a bycatch assessment will be published in an upcoming scallop species report.

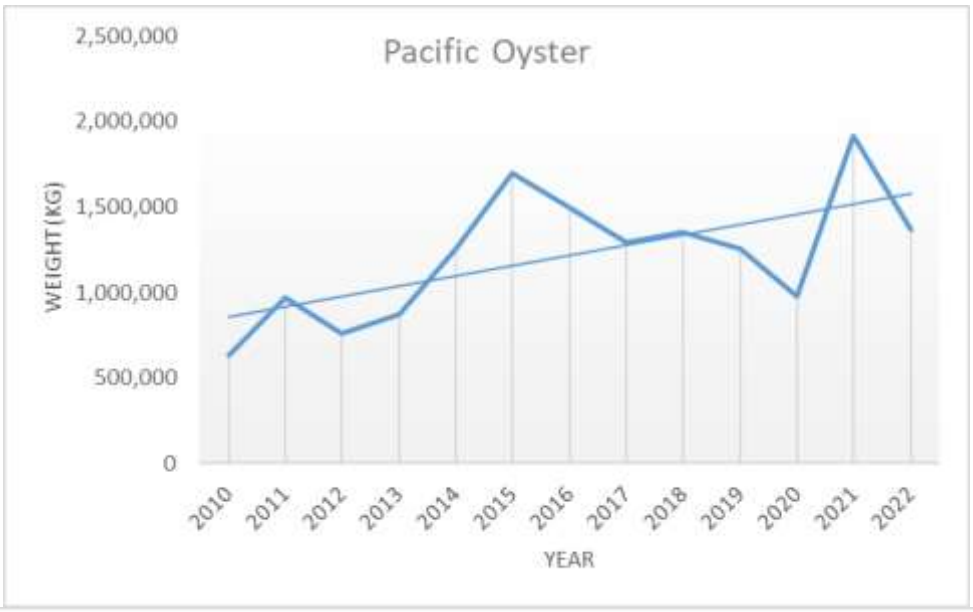
Building on this baseline, an annual survey using both fixed monitoring points and randomised sampling will be conducted each autumn in line with French studies to provide a comparable dataset for the region. The output of this study will, over time allow for population modelling and more informed fishery management.

The management of scallop stocks is complex partly due to its varied stakeholders who have differing needs and objectives. Modelling stocks includes quantifying, managing and balancing levels of fishing effort by vessels from Jersey, Normandy and Brittany as well as between dredgers and divers to ensure that the resource is being fished at sustainable levels and with appropriate access for different sectors of the fleet. A recent additional factor for consideration is the increased popularity of dived scallops. Many scallop divers now display the Jersey Hand Dived logo on their boats and product packaging.

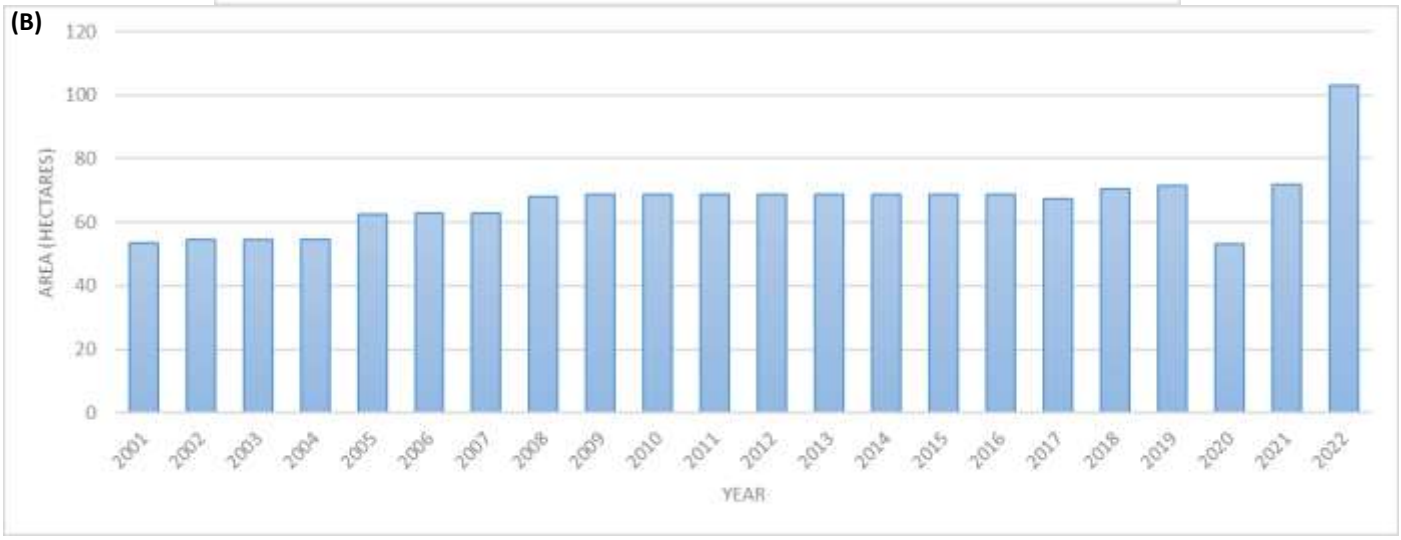
FISHERIES MANAGEMENT
AQUACULTURE PRODUCTION

JERSEY'S AQUACULTURE INDUSTRY. Production remains focused on the Pacific oyster (*Crassostrea gigas*) and mussels. King scallops are farmed subtidally at one site. Production has remained steady over recent years, however the area of seashore occupied by aquaculture concessions has increased. The island's main aquaculture area is in Grouville Bay (224 hectares) and is covered by a single planning consent held by the Government of Jersey.

(A)



(B)



(A) Production weight (Kgs) of farmed Pacific Oyster. (B) Intertidal aquaculture areas (hectares).

Oyster beds in Grouville Bay

LICENCING
JERSEY FISHING VESSELS

JERSEY'S FISHING FLEET. Any vessel exploiting fish or shellfish stocks in local waters on a commercial basis requires a fishing licence. The Jersey fishing vessel licensing system is aligned directly with that of the UK and as such contributes to the stabilisation of fishing effort at a European wide level.

2022 SUMMARY

During 2022, 9 licences opened and 19 closed.

There was a loss of 10 licenced fishing vessels taking the total for 2022 to 114.

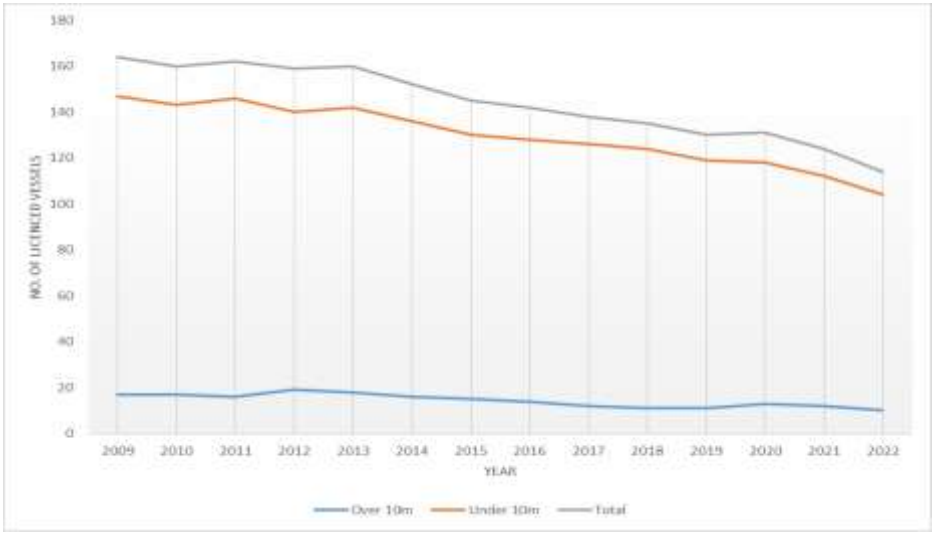
There are 10 over 10 metre vessels and 104 under 10m vessels.

The number of shellfish entitled vessels remaining decreased by 7 to 73.

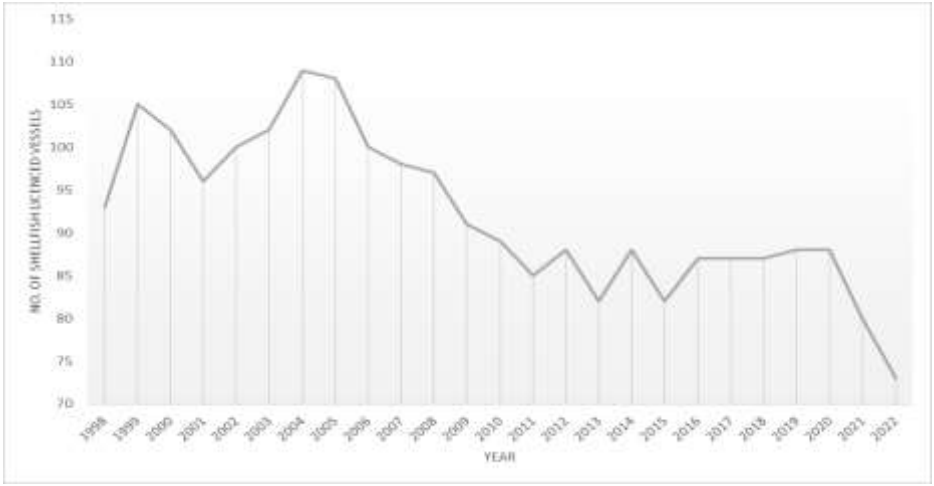
Combined engine capacity is 9,292kw and tonnage 406.53.

In addition to Jersey licenses, at the end of 2022 135 French licenses had also been issued. 89 over 10m vessels and 46 under 10m vessels. A combined engine capacity of 22,476 KW and tonnage of 2,573GT.

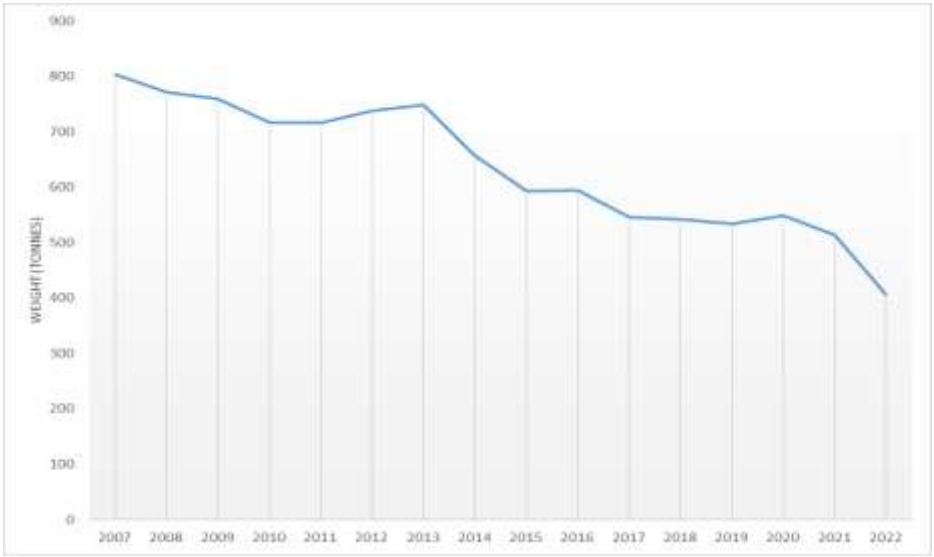
Right: The total tonnage of the Jersey fleet between 2006 and 2022.



Above: The number of licenced Jersey vessels (by length (m)) between 2009 and 2022.



Above: The annual number of shellfish entitled vessels between 1998 and 2021.



ENFORCEMENT
INSPECTION AND OFFENCES

OUR ROLE. Fisheries officers carry out routine inspection checks along our island's coast, from piers and low water areas on-island, to offshore reefs and to the limits of our shared fishing zones. Officers regularly board local and French vessels, both recreational and commercial. Checks are conducted to ensure fishing regulations are adhered to, such as minimum landing sizes, open/closed seasons and compliance with fishing zones. (See also 'Offences'.)

During 2022, Marine Resources officers began development of a new digital recording app. This is currently in development and expected to be rolled out during 2023.

2022 saw the relaxation of a large number of covid restrictions especially in relation to overseas travel and social distancing. This has allowed inspection work to return to pre-covid levels and is reflected in increased checks both at sea and on land.


Officers boarding Cap Pillar

IN NUMBERS. In 2022 a total of **349** inspections checks were conducted by Marine Resources officers. This is similar to a standard year, the return to normal recflecting a reduction of covid 19 restrictions.

Of these inspections, **60%** were shore based, including angling inspections and low-water checks on the beach. **88** boardings at sea were conducted (excluding gear checks). A majority of our checks were conducted during work hours whilst **36**% took place outside of government core work hours (09:00 - 17:00) or at weekends.

The number of inspections, separated by type. The checks are dominated by boardings at sea, low water and angling checks usually on piers or headlands.

** 'Landings' including both at St Helier, and across other outlaying harbours such as those along the north coast.*

*** 'Other' includes activities such as gear inspections and premises checks.*

OFFENCES. The year 2022 produced 33 recorded offences against Jersey and French fishers from the recreational and professional sectors. Offences included fishing out of season, undersized animals and unmarked fishing gear. Outcomes varied from written warnings to fines**.** Several cases were still being processed at the start of 2023.

ENFORCEMENT
FISHERY PATROL VESSEL *NORMAN LE BROCQ*

THE BOAT. The *Norman Le Brocq*, built in 1997 with an overall length of 15.1m and a cruising speed of 18-20 knots, has a primary role in fisheries patrols, enforcement, and research work. As a Government of Jersey asset, she is also available for tasks by other departments, such as Customs and Immigration, Police, and the Ambulance Service. She carries an additional vessel - the 'SeaRider' - an Avon 5.4m RIB used for close operations such as boarding commercial vessels.

During 2022 the FPV *Norman Le Brocq* clocked up 301 hours at sea across 70 days and a total of 2,820 nautical miles. This figure excludes a period at the end of the year (November to December) when the vessel was having work carried out. Duties at sea included:

TASK*	COUNT	NOTES
Patrol	13	Patrols can range from round-island inshore patrols of local vessels, to offshore patrols of local and French vessels, to joint patrols with French authorities in local and French waters. Also included in this count are cable patrols.
Research	50	The large number of research trips was a combination of Departmental annual research projects in addition to assisting masters research.
Delivery	10	Delivery trips this year were made to facilitate the refit tenure and included final delivery to the boatyard
Training	8	Regular training requirements include man overboard situations, on-board fire drills, and practice of salvage pump scenarios.

* note that often multiple tasks are combined in one trip. E.g. patrols will usually be undertaken before and / or after deliveries or research.

Fishery Patrol Vessel 'Norman le Brocq'

ENFORCEMENT
FISHERY PATROL VESSEL *ECREHOU*

THE BOAT. The Ecrehou, built in 2020 with an overall length of 6.8m and a crusing sped of 25-30 knots has an important role within the fisheries team in fisheries patrols and enforcement. As part of the Goverments of Jersey's assets she is available to other departments including Customs and Immigration and the Police. Her primary purpose is to act as a rapid response vessel to allow officers to quickly reach anywere within Jersey territorial waters.

Over the course of 2022, the Marine Resources team clocked up 27 days at sea consisting of 113 hours running time. During this time trips to sea ranged from 2 to over 8 hours in length. Nearly 1400 Litres of fuel was used. Due to inclement weather, most trips to sea were undertaken during the Summer period.

TASK*	COUNT	NOTES
Patrol	17	Patrols can range from round-island inshore patrols of local vessels, to offshore patrols of local and French vessels, to joint patrols with French authorities in local and French waters. Also included in this count are cable patrols.
Research	6	The large number of research trips was a combination of Departmental annual research projects in addition to assisting masters research.
Delivery	6	Delivery trips entailed drop off and pick up of Officers attending meetings in Granville and St Malo. They are often combined with patrols, both local and joint.
Training	2	Regular training requirements include familiarisation and routine training.

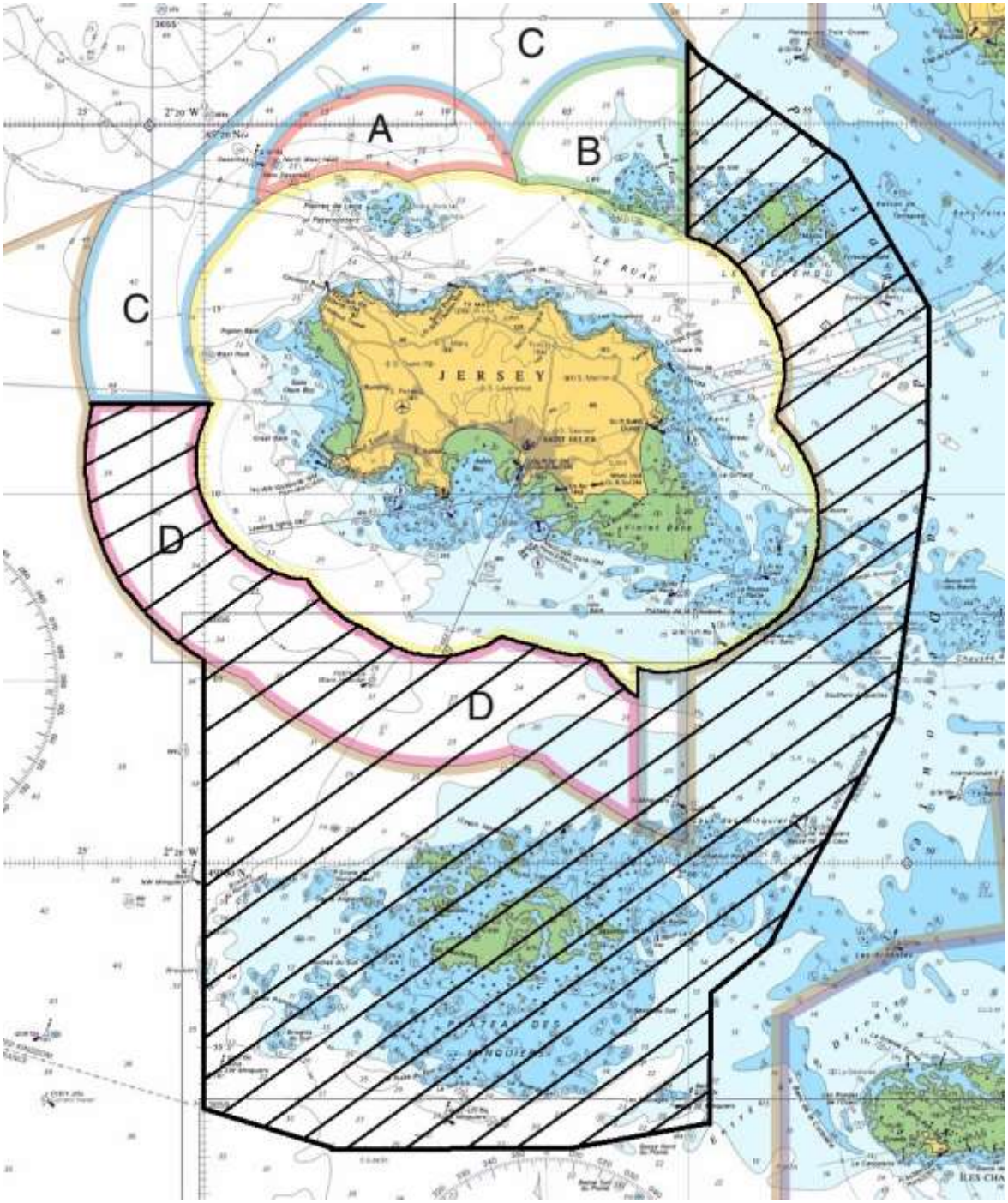
* note that often multiple tasks are combined in one trip. E.g. patrols will usually be undertaken before and / or after deliveries or research.

Fishery Patrol Vessel 'Ecrehou'

LEGISLATION
LAWS AND REGULATIONS

Spider Crab

The Bay of Granville Agreement oversaw a seasonal management measure which prohibited the targeting of new shelled spider crab during the autumn months. This is now undertaken on a regular basis via legislation. Start and end dates for this closed season are yet to be decided. Should dates remain undecided then the default closure is from the 1 September to 15 October. For 2022 the closed season was set to the default dates of 1 September to 15 October.



Area closed to Spider nettings.

WIDER ENGAGEMENT
MARINE RESOURCES PANEL

OVERVIEW. The Sea Fisheries Advisory panel was set up in the 1970s to address fishers concerns about overexploitation, neighbourhood agreements with France and local conservation issues. From the beginning its membership included key professional and amateur stakeholders with an interest in the marine environment. This diverse membership encouraged a holistic approach to management. Today this has since been renamed Marine Resources Panel and continues to offer advice, knowledge and opinion on a range of maritime issues. Membership includes representatives from:

- The boat owning communities
- Jersey Aquaculture Association (JAA)
- Jersey Fishermen's Association (JFA)
- Jersey Recreational Fishermen Association
- Société Jersiaise
- Jersey Inshore Fishermen's Association (JIFA)
- Jersey merchants
- Marine Resources team

The following were matters handled by the MR Panel during 2022:

AQUACULTURE

Holding beds	Discussion of whether temporary holding beds were to become permanent. to accommodate changes in market uptake due to Covid and Brexit situation.
Scallop concession renewal	A license for a local scallop concession area came up for renewal. It was recommended to renew this.

CAPTURE FISHERIES

Research projects	The Panel received an update regarding 2022 research projects including habitat sampling, cetacean monitoring, whelks, blue fin tuna, blue carbon assessment and individual species assessments (brown crab, scallops, bream, bass and lobster).
TCA	Nature and extent was discussed. As of end of 2022 this process was ongoing, concern was expressed on the potential implications for direct landings into France.
Law drafting	An update on the status of the iVMS was given, expected rollout in summer 2023.
Fisheries closure	The potential closure of the whelk fisheries were discussed. Following discussion, ongoing dialogue was preferred.
Marine spatial plan (MSP)	The scope and timeline of the MSP was discussed. Extensive stakeholder engagement would be integral to this process.

Minutes of all meetings are available online at gov.je.

APPENDIX I
COMMERCIAL LANDINGS: SHELLFISH

These figures are for commercial landings by Jersey vessels and are in kilogrammes. They are correct as of November 2023.[3]

SPECIES	Latin name	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Dog cockles	*Glycymeris glycymeris*	1395	1370	1338	0	0	0	0	80	137	61	85945
Brown Crab	*Cancer pagurus*	507056	436120	386031	305807	348500	310353	287252	170941	126424	133691	113055
Crayfish	*Palinurus elephas*	47	7	33	46	121	2	11	6	4	22	0
Cuttlefish	*Sepia officinalis*	5989	2689	2065	5773	6053	4372	7934	10971	14104	4494	10955
Green Crab	*Carcinus maenus*	0	0	0	0	0	0	20	1236	0	0	0
Velvet Crab	*Necora puber*	247	319	297	258	218	296	287	317	180	112	4
Lobster	*Homarus gammarus*	249163	225994	237229	256921	241460	243150	193503	155374	111289	118344	109101
Octopus	*Octopus vulgaris*	0	0	0	0	22	2	2	0	3	30	325
Ormer	*Haliotis tuberculata*	230	89	10	23	277	0	7	643	809	633	18
Praires	*Venus verrucosa*	0	0	0	0	210	0	0	0	2960	6528	400
Prawns	*Palaemon serratus*	69	1	116	0	26	3	29	0	24	6	6
Queen Scallops	*Aequipecten opercularis*	0	0	0	0	300	150	0	0	0	0	0
Scallops [1, 2]	*Pecten maximus*	342786	335332	387331	280018	319731	296741	275021	337986	249203	322505	465031
Spider Crab	*Maja squinado*	110298	81645	87727	95519	121751	208828	289229	301743	199293	220288	272138
Squid	*Loligo vulgaris*	63	421	239	631	480	498	631	389	297	1356	720
Whelks	*Buccinum undatum*	430368	512058	303701	268921	544237	345980	838926	735443	179440	182095	72272

Notes:

1. Includes dredged and commercially dived scallops.

2. Includes 1,020 kg of queen scallops for the year 2010.

3. Marine resources have become aware of a potential error in one of the databases. This may lead to minor variations in some of these figures. These have been corrected and any differences were minor.

APPENDIX II
COMMERCIAL LANDINGS: WETFISH

These figures are for commercial landings by Jersey vessels and are in kilogrammes. They are correct as of November 2023.

Species	Latin name	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Blonde Ray	*Raja brachyura*	60657	76488	86747	66848	74170	34370	52655	46343	60801	23685	31103
Dogfish	*Scyliorhinus* spp.	11761	10104	8525	2367	6354	9730	7154	6634	7769	4315	1301
Wrasse	*Labridae spp.*	1957	1543	3823	4485	5169	5588	7248	4502	4321	2825	1850
Black Sea Bream	*Spondyliosoma cantharus*	107173	31253	23141	21858	7869	3823	9847	3052	4796	4328	5202
Lesser Spotted Dogfish	*Scyliorhinus canicula*	10258	11443	12796	19494	10735	3600	9500	7590	4860	2410	8326
Mackerel	*Scomber scombrus*	7945	8564	6639	3077	2714	3476	3436	2100	5227	1388	4307
Conger Eels	*Conger conger*	2093	1979	1635	1075	2550	2753	3194	2069	1649	1301	1152
Pollack	*Pollachius pollachius*	9227	8445	6327	4663	2452	2300	1689	1066	1673	677	1161
Smooth Hound	*Mustelus* spp.	14636	17587	10927	25200	8280	1803	5070	3340	2178	3635	13365
Whiting	*Merlangius merlangus*	252	495	3024	2804	1012	1624	1391	787	746	549	784
Brill	*Scophthalmus rhombus*	2336	3414	4172	3971	1843	1584	1393	1629	1711	654	494
Bass	*Dicentrarchus labrax*	11537	13366	10929	8960	7306	1483	1476	6649	7542	5421	4383
Bull Huss/Greater Spotted Dogfish	*Scyliorhinus stellaris*	139	46	426	223	1042	1323	859	2238	1700	343	1771
Plaice	*Pleuronectes platessa*	2421	2702	2159	2156	1427	1245	803	936	647	362	645
Turbot	*Scophthalmus maximus*	2070	2468	2035	2331	924	1186	680	543	652	234	317
Grey Mullet	*Mugil cephalus*	1527	2552	2378	2199	2416	789	932	2154	2975	1899	2000
Dover Sole	*Solea solea*	1279	2382	1093	1007	951	755	1594	696	672	504	451
Angler Fish/Monkfish	*Lophius piscatorius*	41	348	844	1226	576	477	258	466	601	253	377
Red Gurnard	*Chelidonichtys cuculus*	2707	2839	2899	2683	2866	438	1940	1243	1304	179	414
Sand Sole	*Pegusa lascaris*	706	595	1052	1192	831	434	379	234	1109	158	129
Tope	*Galeorhinus galeus*	660	429	290	345	2599	280	181	40	306	153	324
Pouting	*Trisopterus luscus*	1085	1480	850	1100	910	261	870	332	469	977	2003
Red Mullet	*Mullus surmuletus*	698	323	235	128	182	194	133	254	235	235	159
Snipe / Garfish	*Belone belone*	1	100	4	13	35	138	42	18	0	1	3
Horse Mackerel	*Trachurus trachurus*	185	190	148	269	0	114	191	28	280	92	31
Undulate Ray	*Raja undulata*	0	0	0	0	40	65	960	1702	95	159	2620
Lemon Sole	*Microstomus kitt*	11	0	1	0	0	61	57	0	31	11	53
Grey Gurnard	*Eutrigla gurnardus*	0	0	0	0	26	46	48	6	51	815	186
Trigger Fish	*Balistes capriscus*	1	0	5	3	3	43	0	2	3	5	11
Ling	*Molva molva*	572	374	331	184	37	30	0	3	93	20	0
Sand Eels	*Ammodytidae* spp	13	19	17	5	30	22	31	8	31	43	51
Cod	*Gadus morhua*	8	2	459	28	55	20	25	194	10	1	3
Gilt-head Bream	*Sparus aurata*	550	7	0	0	120	18	20	254	562	266	191
Thornback Ray	*Raja clavata*	238	25	13	10	190	10	21	76	0	650	910
Sea Trout	*Salmo trutta*	2	0	6	0	1	1	0	0	1	6	3
Historic - Skate/Ray	*Raja* spp.	0	0	13	0	0	0	0	0	0	0	0
Small-eyed Ray	*Raja microocellata*	1478	823	489	1187	0	0	10	5	0	0	0
Porbeagle Shark	*Lamna nasus*	0	0	0	0	0	0	0	0	0	0	0
John Dory	*Zeus faber*	5	65	5	6	28	0	64	49	433	50	14
Shad	*Alosa sapidissima*	0	0	0	0	135	0	0	5	0	46	11
Spurdog	*Squalus acanthias*	0	8	5	0	0	0	0	0	0	0	0
Herring	*Clupea harengus*	40	0	0	0	0	0	0	2	4	5	2
Flounder	*Paralichthys dentatus*	3	0	0	0	2	0	0	0	0	0	0
Haddock	*Melanogrammus aeglefinus*	0	0	0	0	0	0	44	0	0	0	0
Saithe	*Pollachius virens*	0	0	0	0	0	0	0	0	0	0	2

APPENDIX III
COMMERCIAL FISHING EFFORT

These effort figures are for commercial landings by Jersey vessels . They are correct as of November 2023. Nets are measured in metres, angling in hours, static gear and dredges in number of and trawls measured in length of foot rope/beam.

GEAR NAME	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Diving	711	700	723	758	393	1407	1659	2436	1656	1653	1510
Dredge	3472	3171	4318	2970	4418	4106	4058	3164	2539	2891	7021
Angling	3845	6400	2752	2768	2042	2403	2818	2105	2950	2317	2954
Long Lines	9911	7491	1168	2200	3972	909	2518	8200	13000	6910	5110
Low Water	0	0	2	2	0	0	0	40	100	74	125
Gillnet 090 - 099	132240	191278	141060	109196	106245	32703	21165	1571	7884	4325	29520
Gillnet 100 - 119	24756	11700	15820	6570	8140	22322	16100	51095	85545	66806	54295
Gillnet 120 - 219	6640	6750	2200	8360	11800	3574	5900	3400	1000	4140	4720
Historic Gill Net	0	0	0	0	0	0	0	0	0	0	0
Historic Mesh	0	0	0	0	0	0	0	0	0	0	0
Historic Tangle 100	0	0	3	0	0	0	0	0	0	0	0
Historic Tangle 120	0	0	0	0	0	0	0	0	0	0	0
Historic Tangle 130	0	0	0	0	0	0	0	0	0	0	0
Historic Tangle 90	0	0	0	0	0	0	0	0	0	0	0
Historic Trammel	0	0	0	0	0	0	0	0	0	0	0
Seine Netting 080 - 099	0	1500	0	0	0	0	0	0	0	0	0
Tangle 220+	31630	55521	82040	113070	60720	50232	76579	56570	62249	106931	83087
Trammel 090 - 099	6150	37450	1704	8136	9600	11173	360	0	0	5159	0
Trammel 100 - 119	14000	9800	20800	28900	19301	13009	7500	6791	8102	0	2000
Trammel 120 - 219	23060	0	11060	1000	2638	416	1190	13001	11493	4012	0
Trammel 220+	3800	5300	24202	6640	0	8117	13600	19142	2100	3700	
Cuttlefish Pots	837	626	653	1080	1131	972	3648	4626	3959	1834	3347
Fish Traps	235	320	268	437	331	143	0	18	0	0	118
Green Crab Pots	0	0	0	0	0	0	0	0	0	0	0
Prawn Pots	0	440	0	0	24	96	631	0	75		0
Whelk Pots	181775	238773	129053	131786	192215	146561	336190	348213	141444	101055	55760
Creels	200393	141078	133786	139041	105776	114810	122412	99435	72015	83260	77006
D Pots	14934	15768	25037	26584	24206	33357	29148	95069	89472	100629	39601
Ink-Wells	245721	261830	211559	195921	174760	254333	255074	242795	177773	21223	182517
Parlour Pots	1403837	1397155	1300286	1258174	1398436	1509818	1397108	1157461	898472	856808	727198
Beam Trawl 080 - 099	0	0	0	12	60	0	0	0	0	0	0
Otter Trawl Bottom 080 - 099	3090	2062	1262	3320	2040	994	1335	1206	1415	606	2460
Otter Trawl Mid-water 080 - 099	0	1036	555	1245	585	12	28	0	0	16	100
Pair Trawling Bottom 080 - 099	0	44	0	0	0	0	0	0	0	0	0
Pair Trawling Mid-water 080 - 099	4140	0	909	340	0	0	0	0	0	0	0