

Overview of Jersey's Bass management strategy.

2017 -2020

**Marine Resources Team
Government of Jersey**

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Introduction

This report summarises the management measures and research operation within the Bailiwick of Jersey between 2017 and 2019 in relation to the European Bass (*Dicentrarchus labrax*), hereafter referred to as Bass.

Background

The Bailiwick of Jersey is a British Crown Dependency whose territorial waters form an enclave within French coastal and EEZ seas, creating a bubble of British marine management within sight of the Normandy and Brittany coastlines. By arrangement with the UK government, the island has managed its own fisheries since the 1960s and in 2015 the British Crown gifted Jersey ownership over its 2,450 km² of seabed. A Fisheries Management Agreement (FMA) with the UK currently regulates some commercial activities including vessel licensing and fishing quotas.

Currently the Jersey commercial fleet consists of *circa* 130 vessels mainly focused on crab and lobster fishing but with a notable scallop, whelk and wetfish component as well. Of primary value amongst wetfish species are Bass, Black Bream and Skate/Ray. The island also has a large recreational fishing sector with a keen interest in fishing for Bass along with Bream, Mackerel and other fish species. Most fishing boats are under 12 metres and operate solely in the waters of Jersey and those of Brittany, Normandy and Guernsey.

Each Jersey commercial fishing vessel is required to submit a daily fishing log sheet to the Government of Jersey Marine Resources team, detailing effort, catch, area fished and metier. This allows a good understanding of spatial and temporal effort within the fishery.

Accurate commercial fisheries data from the log sheets are available from 2007 and these show commercial Bass catches peaking at c. 13 tonnes in 2008 and 2011 (Figure 1a). The primary metiers are fixed gill nets and 'hook and line' (consisting mostly angling but also some long lining and in the past beach set lines), there is also a small mixed trawl fishery that accounts for a quite variable portion of the catch (0.5 – 2.5 tonnes annually).

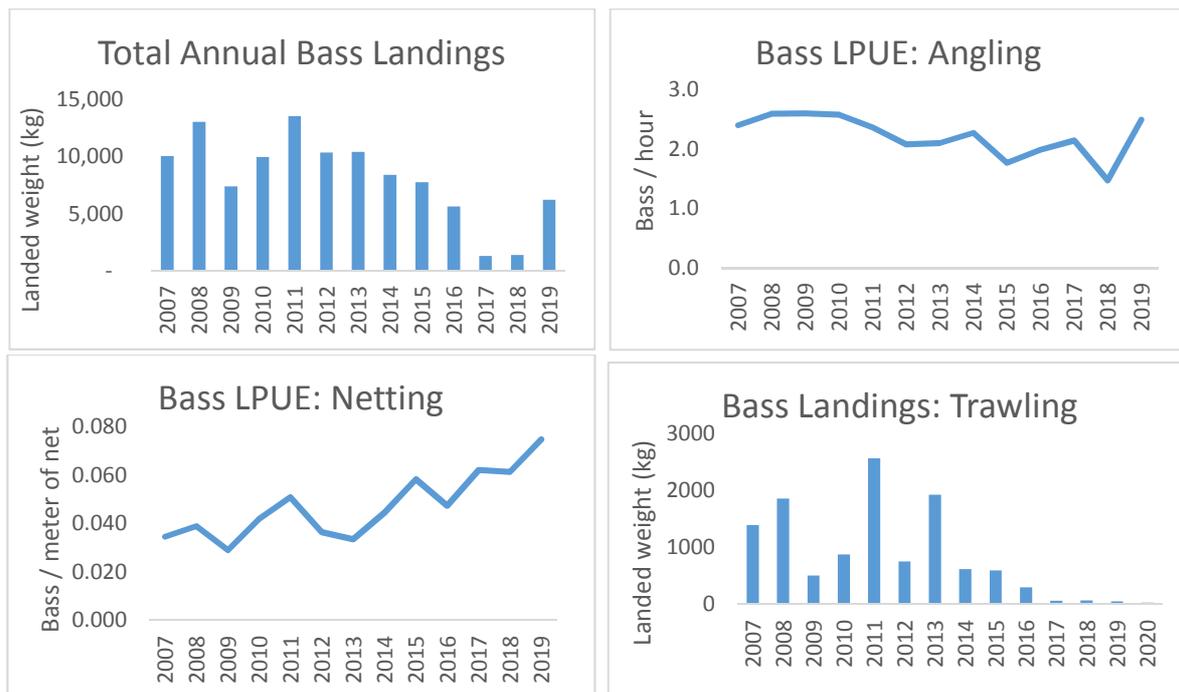


Figure 1. Bass landing statistics, clockwise from top left: (1a) Landed weight (kg) of Bass by Jersey vessels between 2007 and 2019; (1b) Landings Per Unit Effort (LPUE) given for Angling (fish / hour); (1c) Total landings given for Trawling (LPUE not viable due to low number of replicates in some years); and (1d) LPUE given for Netting (fish / meter of net).

The local picture of falling Bass catches between 2013 and 2016 is a reflection of the wider regional situation as noted in 2015 and 2016 by the International Council for the Exploration of the Seas (ICES) report on the species. Following these reports and moves made by the European Union (EU) Jersey also began to introduce a new management regime to reduce the exploitation of Bass.

Stock Assessments

In January 2015, following warnings from ICES of a need for an 80% catch reduction, the EU agreed measures to close out winter pelagic trawling in order to protect aggregation and spawning grounds. This was followed in February with an increase in the Minimum Landing Size (MLS) from 36 cm to 42 cm to meet the species' L50 target, the size at which 50% of the population should have had the opportunity to reproduce at least once. (NB: Jersey still uses Minimum Landing Size regulations as a change to Minimum Conservation Reference Sizes has not yet been made.)

Despite these steps, in June 2016 ICES published data showing that northern European Bass stocks (those north of the 48°N latitude) had been fished down to the point where they had likely reached their spawning stock biomass limit (B_{lim}). The ICES report (ICES, 2016) urged EU nations fishing this northern stock to take strong steps to conserve the species for 2017 and beyond. The report specifically advised that no direct fishing of wild caught bass should take place during 2017 and only a limited bycatch allowance should be made.

In 2016 it was put forward by ICES that, should fishing pressure be allowed to continue, a total stock collapse seemed probable with any recovery being unlikely due to the reduced potential for viable spawning aggregations (ICES, 2016).

Jersey Management Measures

In December 2016 the EU published a new set of measures for the management of Bass stocks in 2017. Primary among these were a two-month spring closure (February and March) to cover the Bass spawning season, limiting Bass fishing to those boats with a track record on the species and the restriction of netting to a bycatch only fishery. A six-month zero bag limit was placed on the recreational sector.

Jersey would normally replicate such measures but following a series of meetings between Marine Resources and fishing industry representatives, Jersey chose to enhance the new European measures. Modifications were made where it was agreed more stringent measures were desirable to reduce catch levels in line with ICES advice. The objective was to conserve local Bass stocks while allowing a limited coastal boat-based fishery to supply the residential and tourist market. A need for better data was also identified as crucial for strong management. These measures were brought into force in early 2017 and have since been further developed in collaboration with commercial and recreational fishers.

2017 Jersey Measures

Jersey aimed to develop regulations to follow and support the decision taken by the EU to protect spawning stocks and reduce juvenile mortality. To this end a commercial permitting scheme was established based on an individual's track record of Bass catches. The permit only authorised hook and line fishing and all netting was limited to bycatch only with a cap set at 3% by weight of the total catch. A tagging scheme for harvested Bass was also introduced to promote the marketing and sale of local line caught fish. Jersey also introduced enhanced recreational management measures. An overview of measures is laid out in Table 1.

| 2017 Measure | EU/UK* | Jersey |
|---|--|--|
| Feb & March closure | Introduced | Introduced |
| Hook and Line Fishery limited to boats with track record | Record tied to hull, track of one bass in qualifying period required. | Record tied to the Fisher, track record of at least one annual catch of 250 kg from qualifying period required to qualify. |
| Annual quota | Annual quota of 10 tonnes given. | Annual quota of one tonne given. |
| Bass catch recording | No | Daily sheets mandatory (quantity & size) |
| Static netting | 250 kg/month bycatch only | 3% bycatch limit |
| Trawls / seines | 3% bycatch limit | 3% bycatch limit |
| Recreational bag limits | Jan to June = zero fish bag limit July to December = one fish bag limit | Year round zero fish bag limit |
| Beach set Nets & Hooks | N/A | Prohibited |

Table 1. Comparison of Bass management measures for the UK and Jersey for 2017.

*UK data from MMO Bass guidance, 2017.

Marine Resources Jersey gathers commercial catch and effort data from all Jersey fishing vessels (collated quarterly) dating back to 2007. This dataset allows a detailed assessment of the Bass fishery and its value to each boat in the fleet. On examination of landings it was decided that only boats demonstrating an economic dependence on the species should be allowed to continue to target the Bass stock. The cut off point for this was set at 250 kg (c. £2,000) in any of the three qualifying years (2014 to 2016) meaning 12 boats qualified. Of these 12 fishing vessels, two were mobile gear vessels covered under separate management measures, leaving a total of 10 'hook and line' permits to be issued to be valid from 1 April 2017.

Permitted fishermen were required to complete daily bass catch sheets, tallying fish catch into 5 cm size brackets and noting if the fish was retained for sale, returned alive, or discarded dead. These recording forms had to be submitted within 48 hours of landing. Fishermen were also encouraged to make use of Jersey's new online logbook system.

The decision was also taken that the 250 kg/month gill net bycatch allowed in the EU had the potential to be used as a loophole to target Bass via netting. To prevent this, gill net fishing was set at the same 3% bycatch limit as for UK mobile gear boats (trawling and seine netting).

With the island's dense population and highly fishable coastline, there is an active recreational fishing sector and so to further decrease the pressure on Bass stocks it was decided that a catch and release only fishery should be enacted for 2017. As this measure differed from both the UK and France, good publicity was needed to ensure visiting anglers were aware of the catch and release only policy. As a further step, the predominantly recreational practice of setting nets and lines of hooks (trots / ground lines) in the intertidal zone was closed off. Both these fishing methods show a low survivability of undersize bass and bycatch.

These measures were run for the latter nine months of 2017 resulting in a limited but high-profile Bass catch. Line caught fish were tagged with a mouth and gill tag that carried the boat name and the wording 'Jersey Line Caught Bass' along with a local provenance mark: Genuine Jersey. Local media promotion of the low impact local fishery proved to be beneficial in supporting sales (Image 1). Fishmongers reported successfully using the tags to promote locally caught bass over imported farmed fish. Security tags supplied by Universeal UK were chosen as a low cost, tamper proof and easy to fit solution that could not be reused post sale to mislabel other fish. As Jersey does not have 'buyers and sellers' regulations this was felt an important step to ensure provenance.

Image 1. Gill tagged 'Genuine Jersey Line Caught Bass' The tag also displays the port letter and name of the boat the fish was caught from.



2018 Jersey Measures

A review of Jersey management measures was conducted at the end of 2017 following the December EU fisheries meeting. The majority of measures were maintained moving into 2018 with only minor changes to replicate UK reductions in the trawling bycatch allowance. The UK move to a zero recreational bag limit for Bass was already in place in Jersey so no change was required.

In September 2018 the EU reverted to a recreational bag limit of one fish per angler, per day. Following discussions with local fishers, a review of the data gathered to date and on the basis of updated EU post-release mortality evidence, Jersey followed suit in October 2018 and allowed a one fish per day bag limit to match neighbouring French and Bailiwick of Guernsey waters.

In the autumn of 2018 the Jersey Fishermen's Association (JFA) put forward proposals for a limited reopening of the gill net fishery, proposing that the island give a targeted quota to match levels available to UK netters (although in the UK this is only a bycatch limit). After consideration by the Marine Resources Panel (a local marine stakeholder group) this level of fishing effort was not deemed appropriate although it was agreed that a study looking at the efficiency and impact of gill netting should be conducted. Five of the ten permit holders were given permission to net as part of the study albeit with strict limitations and reporting requirements. These included:

- 48 hours' notice was to be given to Marine Resources before netting commences
- A maximum 12-hour soak time
- A maximum 600 metre net per person up to 1,200 metres per boat
- A minimum mesh size of 100 mm
- Enhanced reporting requirements including listing all bycatch (retained, returned and discarded dead)
- Gill nets and hook and line fishing equipment not to be carried on board at the same time

The fishery opened for an initial one-month trial in December 2018 but, due to prolonged poor weather, just three fishing trips were achieved. The results from these seemed promising but insufficient for any analysis so the trial was extended to cover January 2019 to allow a review before the February and March closure.

2019 Jersey Measures

Based on the 2018 outcomes it was agreed that the netting trial should continue into 2019 post the February and March closure period and that it should be extended to all 10 permitted fishing vessels. Fishers raised a concern of reaching their 1 tonne limit with netting. It was agreed that because not all permits were in use and weekly monitoring was possible through the catch reporting forms an extra 500kg would be allowed for up to 4 boats if needed. As the capacity to fish is limited by the capacity of the local market there was confidence that this would not create a 'race' to fill quota. No other major regulatory changes were enacted for the 2019 season.

Regarding catch reporting, the fishers identified a concern that the below MLS 5cm size brackets were resulting in some inaccurate measuring and rough estimation, due to the restriction of working in tide on a small boat and trying to return undersize fish quickly. This problem was particularly acute on

netting boats where significantly more fish were coming over the side in a short period and the processing time to measure and record was thought to be resulting in lower survivability. It was agreed to increase the bracket size to 10 cm and align them to the MLS of 42 cm. To support accurate measurements, bass measurement boards (Image 2) were issued to each permitted fishing vessel which were colour coded to match the reporting sheet size categories (Appendix 1).

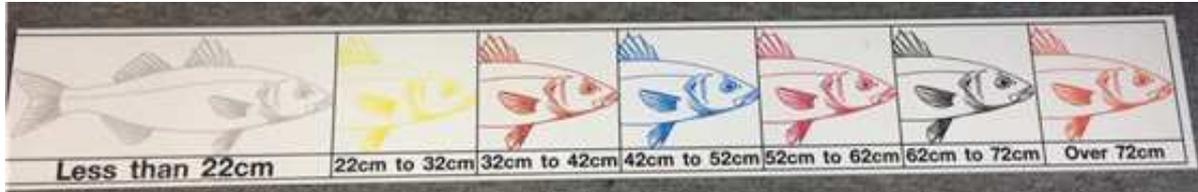


Image 2. Bass measuring board. Measurements split into reporting size categories and colour coded to match (see Appendix 1).

While this change in size category would make data comparison with previous years difficult it was agreed that it was important to make the change to ensure the highest possible accuracy from fishers, even if at a lower resolution, and to reduce mortality rates.

Summary: 2017 to 2019

When considering the management measures and data gathering undertaken between 2017 and 2019, the Marine Resources team believe that positive steps have been taken to support the recovery of local Bass stocks. In some areas the Jersey measures have been more restrictive than Europe and the UK and in others more relaxed. So far the measures seem to have struck something of a balance between providing an income to a small number of Bass dependent fishers, gaining vital catch data and supporting stock regeneration. Reporting requirements have provided fisher gathered data that can be used for the future management of the fishery.

Within the recreational sector no offences were recorded for the unlawful retention of Bass when the bag limit was at zero or at one fish per day. Marine Resources officers conducted regular checks on key fishing spots from early morning to late evening throughout the year to encourage compliance. Across the fisheries and aquaculture sectors 530, 485 and 384 inspections were carried out for 2017-19 respectively. The higher number of checks in 2017 and 2018 is partially due to a significant increase in recreational angling checks to enforce catch and release recreational Bass fishing.

The local market responded positively to the promotion of a lower impact Bass fishery with a renewed demand for locally caught bass and a reported reduction in imported farmed Bass. Sales of other species, such as Black and Gilthead Bream, Pollack and Mullet remained popular with merchants expressing an interest to see the supply of a variety of locally caught fish continue.

2020 Independent Netting Study

During 2020 and 2021 Marine Resources will be conducting a scientific gill netting study to better understand catch composition and survivability from a range of mesh sizes. This will be undertaken with support from the fleet and should help with the selection of a mesh size best suited for Bass netting in Jersey. The research follows similar work by CEFAS and will also look at parameters such as

post-release mortality, seasonal morphological change and any effect from different netting techniques.

Objectives

- To record the size of fish (length, 3 point girths, weight) caught by a selection of mesh sizes (100, 108, 110, 112 mm) in the coastal waters of Jersey and to identify any seasonal variability.
- To gain a better understanding of post-release mortality of line caught and short soak net caught fish.
- To look at changes in fish morphology and weight in contrasting seasons to better understand the catchability of fish by mesh size over the seasons.

Three sets of netting trials will be carried out throughout 2020 and 2021. These are autumn 2020 (October/November), winter 2020/2021 (December/January) and spring 2021 (April/May). Each mesh size (100 mm, 108 mm, 110 mm and 112 mm) will be deployed six times for each season and for a set soak time. Upon hauling, any live fish will be transferred to an aerated live well where they will be assessed for a varying time period to look at recovery and vitality. All fish will be measured (length and three girth measurements) and weighed before processing or release.

In all months where netting does not take place, a target of 50 fish will be measured on board permitted hook and line fishing boats to fully understand morphological changes across the year.

This study should help infill current knowledge gaps and allow an informed decision to be made on the viability of a sustainable Bass netting fishery for Jersey.

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