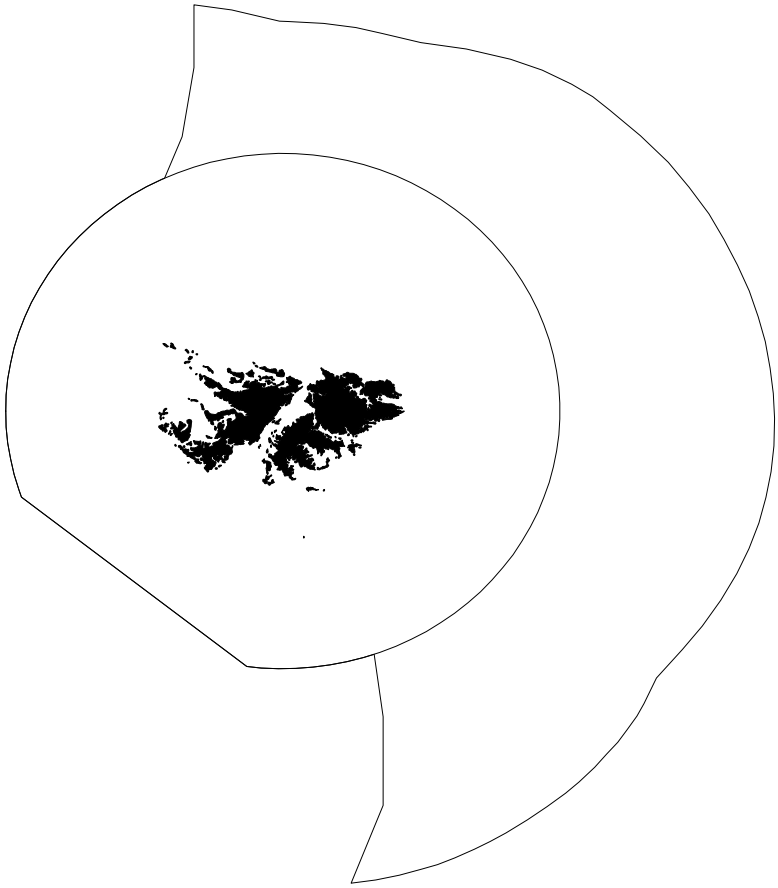
FALKLAND ISLANDS GOVERNMENT



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FOREWORD

1 The Falkland Islands Fishery - 2019

The total annual catch in 2019 (~201,500 t) was close to the average catch for the last decade. *Illex* catch was quite low (43,400 t) due to the below average abundance of the South Patagonian Stock (SPS). Catches of two other main commercial species further improved compared to 2018, attaining record highs for Falkland calamari *Doryteuthis gahi* (~81,900 t) since the middle of 1990s, and those for common hakes (~53,400 t) since the late 1980s. Catches of all other finfish species remained low.

1.1 Illex argentinus – Illex squid

The year 2019 marked the third consecutive year of slow recovery of the SPS after its extremely low abundance observed in 2016. During these three years, the SPS has been mainly represented by early maturing medium-sized squid, abundant in March – early April. The abundance of late maturing SPS has been very low, which resulted in practically no fishing in May – first half of June.

Oceanographic conditions in January 2019 were not favourable for *Illex* migrations into the high seas area of 45 – 47°S. There were no strong warm water inflows and gradients of sea surface temperatures were mainly formed inside the Argentinean EEZ. Despite the presence of a large international fleet in the area with ~350 jiggers and large and small trawlers, catches of *Illex* were sporadic and very low, not exceeding 1 – 2 t per day. According to some unconfirmed reports, Argentinean jigging fleet that worked 50 – 70 miles inside the Argentinean EEZ at the same latitudes as the high seas caught 20 to 30 t per day; an indication that the abundance of *Illex* should be at least at a medium level.

Negative anomalies in SST on the high seas persisted in February, with temperature gradients building up further west from the high seas area. As a result, catches of *Illex* on the high seas were quite poor, with most Falkland-flagged trawlers preferring to catch finfish in the Falkland Islands Conservation Zones (FICZ/FOCZ). In contrast, a warm water inflow appeared earlier than usual in the north-western part of FICZ, bringing *Illex* to Falkland waters. Effectively, the whole jigger fleet started to work within FICZ from 15 February, exploiting mainly the north-eastern part of the inflow. Catches were not stable, with average daily CPUEs ranging from 4 to 17 t per night. Maximum daily CPUE was observed on 24 February – 101 t per night. In the second half of the month, several trawlers also fished for *Illex* within the area exploited by jiggers, and had variable catches

ranging from 10 to 24.6 t per day. As a result, the total monthly catch (11,145 t) in the FICZ/ FOCZ was the highest monthly catch taken in February in the last decade.

Existing oceanographic gradients in the northern part of the Patagonian Shelf Water Inflow in March were quite favourable to aggregate feeding schools of early maturing SPS (ESPS) of *Illex* that had migrated earlier into FICZ. The entire jigging fleet (105 vessels) worked along the 200 m isobaths in the north-eastern part of FICZ and northern FOCZ in March and had variable catches of *Illex*. Average daily CPUE were low, but relatively stable throughout the month, varying from 7 to 12 t of *Illex* per vessel/night. Maximum CPUEs attained 100 t per vessel/night. Almost all vessels (but one) stopped fishing for one day due to a strong storm on 19 March. During the last six days of the month, mean values of jigger catches decreased to 5 – 6 t per vessel/night, as the ESPS *Illex* started to move further north. G-licensed trawlers had reasonable catches of *Illex* when targeting it, up to 15 – 20 t per vessel/day.

The entire jigging fleet carried on working within the FICZ/FOCZ until the middle of April. Catches were quite low during the first two days of the month (average CPUE of 4.5 t per vessel/ night, with some vessels having maximum of 64 t per night). Then the ESPS squid emigrated from the area and catches dropped to 0.5 – 1 t per vessel/night. Some vessels tried to fish for Late maturing SPS (LSPS) in the western part of FICZ, but did not have any significant catches as the LSPS abundance was extremely low. In the middle of the month jiggers started to leave the fishery (mainly Taiwanese vessels), with the rest of them having an average CPUE of 1.1 t per vessel/ night. By the end of the month, only 32 vessels were left fishing within the FICZ/FOCZ. Their fishing was impaired by bad weather, with the majority of jiggers sheltering for up to four days in total during the month. Trawlers had poor catches of *Illex*, usually as a minor bycatch of several hundred kg per day.

The average daily CPUEs were less than one tonne in the first week of May. The poor catches were further exacerbated by bad weather. During four consecutive days (11 – 14 May) the majority of the jigging fleet was sheltering in the vicinity of the islands. The fishing fleet became sparse and the last vessels exited the fishing grounds on 16 May. A total of 111 t of *Illex* was caught during the month making it the second-lowest catch of this squid in the last decade.

Overall, the *Illex* fishery in 2019 was modest with a total annual catch of 43,549 t. This was somewhat lower than the last couple of years. The fishery on the high seas was reported as being poor whilst the Argentine fishery performed better with catches exceeding 90,000 t. As in 2018, there was no reimbursement of licence fees for jigging vessels due to relatively high market price.

1.2 Doryteuthis (formerly *Loligo*) *gahi* – Falkland calamari

Patagonian longfin squid or Falkland calamari (*Doryteuthis gahi*) is a domestic squid resource that has been managed exclusively by the Fisheries Department of the Falkland Islands.

In 2019, a biomass survey for first season recruitment was carried out on-board the fishing vessel *Argos Cíes* from the 8 to 22 February. Fifty-five scientific trawls were taken during the survey, catching 381.5 t of squid. An estimate of 49,618 t of *D. gahi* was calculated for the fishing zone, of which 4,620 t were estimated north of 52 ºS, and 44,998 t were estimated south of 52 ºS.

The first fishing season started on 24th February. As in the previous season, all vessels were required to carry at least a seal observer to monitor the presence and incidental capture of pinnipeds.

Fifteen C–licensed trawlers started the season on opening day; one trawler delayed entry by three days because of bad weather en route. All C–licensed trawlers started to fish in the southern part of the '*Loligo* Box', where the densest aggregations of *D. gahi* had been reported during the pre-season survey. Aggregations were so dense that the vessels effectively fished up to their capacity during all five days of February. Average daily CPUEs varied between 66 and 80.5 t per vessel. On 28 February, when the last 16th trawler joined the fishery, the total daily catch hit a new record of 1,218 t. All vessels had seal observers and fished without Seal Exclusion Devices (SEDs), as there were no interactions observed between seals and trawlers. The total monthly catch of 6,377 t was the record highest catch for February in the last decade.

In March, catches of *D. gahi* were very high and stable throughout the month, with the record high daily mean CPUE of 57.5 t per vessel/day. This was a substantially higher average than observed in any completed season since at least 2006, although catch rates naturally decreased towards the end of a season. For the first eight days of the month, fishing was taken place exclusively in the south of the '*Loligo* Box' (south of 52° S latitude) with average CPUE of 57 t per vessel/day. Then, for the next 18 days, 86% of fishing was taken place in the north as the north finally received a rich recruitment of squid. On 11 March, it was the record highest daily catch in the Falkland fishery – vessels caught 1,358 t of squid with the average daily catch of 85 t per vessel. Fishing was more variable in the last week of March, and mean CPUEs decreased to 38 – 53 t per vessel/day. All *D. gahi* belonged to the Autumn Spawning Cohort, with average individual weights ranging from 29 to 48 g (10.1 to 12.5 cm mantle length [ML]) in the north, and from 29 to 39 g (10.2 to 11.5 cm ML) in the south.

Seal observers were deployed on every vessel of the calamari fleet to observe interactions between the fishing gear and sea mammals and birds. Seal Exclusion Devices were mandated in the north sub-area of the '*Loligo* Box' from 16 March, following two reported fishing mortalities of Southern sea lions, and SEDs were mandated in the south sub-area from 29 March following five reported mortalities of South American fur seals. No further pinniped mortalities were reported during the season after the SED mandates were implemented. The total monthly catch of *D. gahi* attained 26,872 t, which is the record highest catch in March in the last decade.

Excellent performance in the Falkland calamari fishery observed in March continued during April. Catches were slightly lower and averaged 56 t per vessel/day for the month. Maximum daily catch by vessel was reported during the first week of the month – 111 t of squid. Changes in CPUE and individual size averages of squid showed that an immigration event occurred on 1 April in the southern part of the '*Loligo* Box'. Subsequent variations in size and maturity suggested that a further immigration occurred just four days later on 5 April. In the north sub-area, another immigration event occurred on 3 April. As in the southern area, no depletion had been observed. Fishing was closed north of 52°S on 26 April, two days before the directed season end, because of small sizes of the *D. gahi* squid.

Total catch of *D. gahi* in the first season reached 55,586 t, the highest catch in the first season since 1995. The estimated escapement biomass of *D. gahi* remaining after the end of the first season was 86,476 t, with zero risk of overfishing and falling below the threshold limit of 10,000 t.

A biomass survey for second season recruitment was carried out on-board the fishing vessel *New Polar* from 14 to 27 July. Fifty-one scientific trawls were taken during the survey, catching 298 t of *D. gahi* squid. The results of the survey obtained an estimate of 50,880 t of squid present in the

fishing zone, of which 18,516 t were estimated north of 52 ºS, and 32,364 t were estimated south of 52 ºS. This represented the most even distribution between north and south for a second season since 2014.

The commercial fleet (15 vessels) started fishing on 29 July exclusively in the southern part of the '*Loligo* box', where dense concentrations of squid were revealed during the pre-recruitment survey. The abundance of squid there was so high, that all vessels fished up to their production capacity. Mean daily CPUEs were the highest recorded for this fishery, ranging between 83 and 88.5 t per vessel/day, with the maximum daily catch of 137.5 t per day. The total catch of *D. gahi* in July attained 4,512 t, which was the record catch for July since the shortening of the second season and ~700 t over the catch observed in July last year. All trawlers started to work without SEDs, but two seal mortalities that happened during the first day of fishing triggered the obligatory use of SEDs from the second day of the fishery. Seal observers monitored any interaction between the trawls and seals on every vessel of the X–licensed fleet.

Catches of Falkland calamari were exceptionally high for the first six days of August. Then on 7 August, bad weather stopped fishing by all vessels for the day, and catches never recovered. The difference in catches before and after 7 August was so acute that a large and irreversible dispersal of *D. gahi* on that day was inferred, and computationally included in the assessment model. Until the end of the month it was a gradual negative trend in CPUEs, from 46 t during the second week to 17.3 t during the last week of August. The vessels tried to fish in all parts of the '*Loligo* Box', but had approximately similar mean CPUEs everywhere. The size of squid was good with modal length of 12 to 13 cm ML.

Fifteen trawlers fished for *D. gahi* in the beginning of September, but their CPUEs never recovered to the levels observed in the first half of August. Both in the north and south, catches were relatively low, with CPUEs not exceeding 14 – 16 t per vessel/day. The decreasing trend in squid catches forced the Falkland Islands Fisheries Department (FIFD) to put a precautionary note on a possible early closure of the fishery due to the biomass approaching the minimum threshold level of 10,000 t, unless another abundant immigration would appear. That never happened, and the fishery was closed early on 9 September; the first emergency closure in the *D. gahi* fishery since the second season 2015 (the year of the unusual *I. argentinus* ingression).

Total catch of *D. gahi* for the second season was 24,748 t, the highest catch for a season closed by emergency order since at least 2004 and with an overall average CPUE of 39 t per vessel/day. Considering in-zone biomass only at the end of the season, the estimated escapement biomass of *D. gahi* squid remaining after the end of the second season was 9,505 t, with 36.6% risk of overfishing and falling below the threshold limit of 10,000 t. Considering in-zone biomass plus ostensibly dispersed biomass at the end of the season, the estimated escapement biomass of *D. gahi* squid remaining after the end of the second season was 14,757 t, with 6.6% risk of overfishing and falling below the limit of 10,000 t.

An additional 1,574 t of *D. gahi* were reported caught in Falkland fisheries other than C- or X-licensed. The total catch for the year thus attained 81,908 t, making it, for the second year in a row, the highest annual catch since 1995.

1.3 Martialia hyadesi – Martialia squid

No catch of *Martialia* squid was reported within the FICZ/FOCZ.

1.4 Micromesistius a. australis – Southern blue whiting

Southern blue whiting (BLU) is a pelagic species that migrates between Chilean, Argentine and Falkland Islands waters. Spawning grounds are located to the south of the Falkland Islands and at the southern coast of Chile; spawning takes place during September and October. Chilean production of BLU increased from 1987 to 1998 with a subsequent decrease in catch since 1999. Argentine and Falkland Islands BLU catch have a declining trend since the early 1990's. In 1999, the South Atlantic Fisheries Commission recommended a reduction of the fishing mortality on this stock to meet conservation targets. Catches in Argentina were greater than in Chile and the Falkland Islands from 1991 to 2006, and again from 2015. Catches in the Falkland Islands have remained low and a ban of any fishing activity on the Falkland spawning grounds was established for conservation reasons since 2010. The Falkland Islands have the smallest 10-year (2009 – 2018) average contribution (12.6 ± 5.1%) to the total Chilean, Argentine and Falklands BLU production, whereas Argentina and Chile contributed 40.9 ± 16.1% and 46.5 ± 15.4% of the total catch, respectively.

Catches of BLU in the Falkland waters have averaged 22,656 t per year since 1987; the maximum catch was observed in 1990 (72,351 t), followed by a constant decrease to reach the lowest catch in 2019. Average annual catch was 3,034 t from 2010 to 2019, and even lower from 2015 to 2019 (2,404 t). In 2019, a total of 518 t of BLU was caught under A–, E–, G–, and W–licences. W–licensed vessels reported the highest catch (495 t), with catches in January (190 t), February (113 t) and August (192 t). Effort ranged from 31 to 2,460 h per month throughout the year. CPUE was 77 kg/h in January, 87 kg/h in February, and 185 kg/h in August. Only 14 t were caught by E–licensed vessels, whereas A– and G–licensed vessels caught 5 t and 4 t, respectively. Most BLU catches occurred to the southwest of West Falkland.

1.5 Macruronus magellanicus - hoki

Hoki, *Macruronus magellanicus*, is one of the most abundant pelagic fish on the Patagonian shelf. Genetic studies and otolith microchemistry analysis suggest connectivity within the Southwest Atlantic, and between the Southwest Atlantic and Southeast Pacific. Hence, it is likely that the same stock is targeted partially in Chilean, Argentine, and Falkland waters. Spawning occurs during the austral winter, mainly in Chilean waters between 43°S and 48°S. Most hoki migrates out of Falkland waters to spawn during winter, although small spawning areas have been detected at the platform edge east of the Falkland Islands. This species is not highly abundant in Falkland waters as the FICZ is at the edge of the species distribution. However, it is targeted mainly by trawlers during spring, summer and autumn in deep waters to the southwest of West Falkland when hoki is relatively abundant in the area.

In Chile, hoki stocks increased towards the year 1998 followed by a steep decline. In Argentina, catches of hoki had an increasing trend from 1987 to 2000; catches were relatively stable during 2000 – 2009, and declined from the year 2010. In the Falkland Islands, catches of hoki averaged 15,125 t per year from 1987 to 2019, with an increasing trend from 1987 to reach a maximum of 26,970 t in 2002, followed by a gradual decline to 7,407 t in 2019. Average annual catch in Falkland waters was 11,662 t over the last ten years (2010 – 2019), whereas it was relatively low over the last five years (6,862 t during 2015 – 2019). The Falkland Islands had the smallest annual con-

tribution (10.7 ± 3.1%) to the total Chilean, Argentine, and Falklands hoki catch during the period 2010 – 2019, whereas Argentina and Chile contributed 49.8 ± 6.4% and 39.5 ± 4.7% of the catch, respectively.

In the Falkland Islands, a total of 7,407 t of hoki was caught under numerous licences during 2019; this is the sixth lowest catch observed since 1987. Greater hoki catches in Falkland waters during 2019 were reported by W–licensed vessels (6,262 t). Most catches were reported during January (3,988 t) and February (1,887 t), and < 200 t were caught per month during the rest of the year. Monthly effort ranged from 31 to 2,460 h throughout 2019, with the maximum efforts in January and February (2,460 and 1,300 h, respectively). Effort was also relatively high from May to September (> 700 h), although catches were < 6 t per month during these months. Maximum CPUE occurred in January and February (1,621 kg/h and 1,452 kg/h, respectively); CPUE was also relatively high in December (1,324 kg/h) and in March (973 kg/h); CPUE remained below 7 kg/h the rest of the year. The second highest catch (941 t) of the year was reported by G–licensed trawlers that fished from February to May, with maximum catches in March (844 t), month with the second highest effort under this licence (2,403 h). The highest CPUE was 351 kg/h during March; CPUE during February, April and May were below 48 kg/h. A total of 176 t was caught by A–licensed vessels, with most hoki caught in February (169 t). Effort in February was 383 h, and the maximum effort was reported in July with 3,067 h. CPUE in February was 441 kg/h, and the rest of the year it was < kg/h. Most catches under W-, G- and A-licences took place to the southwest of west Falkland.

1.6 Merluccius hubbsi, Merluccius australis – Hakes

Two commercial species of hake occur in Falkland waters, common hake *Merluccius hubbsi* and its less abundant congener Patagonian hake *Merluccius australis*. Patagonian hake is more valuable than common hake. However, common hake is between one and two orders of magnitude more abundant than Patagonian hake in Falkland waters, therefore total catches of the former are much more valuable. Both species of hake migrate between Argentine and Falkland Islands waters in the Atlantic. Common hake is more abundant in Argentine waters from November to March during the spawning season and then migrate to their foraging grounds in Falkland waters from March and April. In Falkland waters common hake is most abundant in the northwest of the FICZ north of 51°S and west of 60°W. This area is closed to restricted finfish and skate trawl fisheries during the six months of peak abundance of common hake. Patagonian hake is less abundant in Falkland Islands waters, which are at the edge of their species range, than in the rest of its range. Highest abundance of this species is encountered in deeper waters to the southwest of West Falkland. This species is taken as a bycatch in the finfish trawl fleet as low abundance prevent it from being targeted.

Since 51,489 t of common hake were caught in 1988, total annual catches of common hake have never exceeded 25,000 t, until the year 2018 (27,020 t). However, the 2018 annual catch was dwarfed by a record 53,320 t caught in 2019. Cumulatively, common hake made up over 70% of the teleost catches and was the most abundant species from March to October (inclusively), peaking in June and July (11,417 t and 10,174 t, respectively). Despite spatial restrictions, common hake made up 80, 74, 71, 77, 86, and 74% of catches on W–licensed vessels from May to October, respectively. Record catches in 2019 occurred despite a marked decrease in effort across the fin-

fish fleet relative to previous years, resulting in record CPUEs for March, April, May, July, August, and September on A–licence, and from March to September (inclusively) and November on W–licence. The high CPUEs observed on restricted finfish licence outside the Hake Box (area north of 51°S and west of 60°W, closed to restricted finfish and skate trawl fisheries from May to October) were indicative of greater than expected abundance across the entire finfish area. Furthermore, for reasons currently being investigated, common hake migrated into Falkland waters in March, approximately one month earlier than expected, but two months earlier compared to 2018. Record CPUE for November on W–licence was evidence that common hake continued to be abundant in Falkland waters into November. However, catches for November were below average due to the fleet having run out of fishing days.

In FICZ/FOCZ, hakes were caught primarily in the finfish trawl fisheries: A- (27,197 t; 51%), W- (14,278 t; 27%), and G- (11,205 t; 21%) licences. Lesser amounts were reportedly caught in the '*Loligo*' (C- and X- licences; 215 t; 0.4%), skate (F-licence; 214 t; 0.4%), and *Illex* (B-licence; 25 t; <0.1%) trawl fisheries.

Cumulative catches of Patagonian hake have increased from 71 t in 2018 to 96 t in 2019. However, these catches pale in comparison to their highs in 2016 (531 t) and 2017 (170 t). As a result of vessels targeting grenadiers and corresponding high bycatch of Patagonian toothfish in the southwest of the FICZ, bycatch rules for these species have changed since early 2018 and may explain the significant drop in effort observed in this area since the new regulations have been enacted, resulting in lower annual catches of Patagonian hake.

1.7 Genypterus blacodes – kingclip

Cumulative annual catches of kingclip for 2019 reached 1,712 t; the fifteenth lowest total since 1987 and 375 t less than the long-term average (1987 to 2019). However, 2019 annual catches were the highest since 2015 (2,983 t). In January, June, and July, kingclip catches were the third-highest on record for these months, respectively, and cumulative annual catches to the end of July were the seventh-highest on record. However, from August, effort across the finfish fleet decreased significantly, resulting in the poorest catches on record for October and November, and the second-lowest since 1987 in September. During peak catches (April to July), CPUEs in the finfish fleet were generally average (68 to 80 kg/hr) with kingclip comprising two to three percent of the total catch on these licences. Consistent with previous years, kingclip catches began to peak in April, corresponding to their autumn migration into the FICZ, and were most abundant to the north, northwest, and west of the Falkland Islands during the winter when kingclip visit their feeding grounds in the FICZ. Generally, kingclip remain abundant in the FICZ during the spring months, but given the decrease in effort from August, catches could not be used as a proxy for kingclip abundance during this time. However, CPUEs on A- and W-licences in August and September are amongst the lowest of the past decade, suggesting either an early migration back to their spawning grounds in the Argentine EEZ or kingclip being outcompeted by high abundance of hake during these months.

Kingclip was caught primarily in the finfish fishery: A- (629 t; 37%), W- (604 t; 35%), and G- (443 t; 26%) licences. Lesser amounts were reportedly caught from the '*Loligo*' (C- and X- licences, 10 t; 0.6%), *Illex* (B-licence, 9 t; 0.5%), and skate (F-licence, 5 t; 0.3%) fisheries. In the finfish fishery, while effort on A-licence (11,082 hours) exceeded that of W- (9,518 hours) and G-

(6,608 hours) licences, respectively, annual CPUEs were relatively similar (57, 63, and 67 kg/hr, respectively).

In 2019, similar to catches (5 to 180 t per month of activity; peak in July) of kingclip and effort on A-licences (128 to 3,032 hours; peak in August), CPUEs have fluctuated greatly during the year (23 to 84 kg/hr; peak in July). The patterns have been similar on W-licence where monthly catches have ranged from 1.5 to 122.5 t per month with a peak in June, while effort ranged from 31 to 2,460 hours (peak in January), leading to inconsistent CPUEs (40 to 137 kg/hr; peak in April) when removing months with kingclip catches of less than 10 t (November and December).

1.8 Salilota australis – red cod

Red cod is another commercial by-catch species with a trend of declining catches and abundance in the southwest Atlantic and biological evidence suggests that red cod is decreasing in size and mean age at maturity. For a third consecutive year, red cod annual catches have increased in Falkland waters, but these three years remain among the five lowest cumulative catches on record. The annual cumulative catch in 2019 of 1,767 t ranks fourth lowest and represents approximately 41% of the long-term mean (1987 to 2019) of 4,229 t. Unsurprisingly, catches in September (72 t) and October (26 t) were among the lowest on record and coincide with conservation measures that ban fishing during these months in the spawning area. In recent years, catches have tended to increase in November and December. However, the paucity of fishing effort nearer the end of the year has resulted in poor catches despite CPUEs exceeding 100 kg/hour for November (101 kg/hour) and December (133 kg/hour). In recent years, red cod catches would peak in May once red cod began to aggregate in their feeding grounds in Falkland waters. In 2019, peak catches were in January (310 t) and steadily decreased until June (116 t) before increasing in July (131 t) and August (167 t) prior to the spatial closure due to spawning.

The majority of catches were reported from the finfish trawl fisheries: W- (55%; 962 t), G- (23%; 409 t), and A- (17%; 298 t) licences, with lesser quantities caught in the '*Loligo*' (C- and X-licences; 53 t; 3%), skate (F-licence; 2 t; 0.1%), and *Illex* (B-licence; 0.5 t; <0.1%) trawl fisheries. It should be noted that nearly 42 t (2%) were caught on E-licence during research cruises.

A significant disparity in CPUEs between licences is obvious (A-licence: 27 kg/hr, range of 5 to 186 kg/hr; G-licence: 62 kg/hr, range of 55 to 70 kg/hr; W-licence: 101 kg/hr, range of 44 to 201 kg/hr) and can be explained by vessels on A-licence targeting hake in the Hake Box (area north of 51°S and west of 60°W, closed to restricted finfish and skate trawl fisheries from May to October). This area lies north of red cod feeding grounds and areas of greater abundance of red cod that were targeted by vessels using G- and W-licences.

1.9 Dissostichus eleginoides – Patagonian toothfish

Toothfish is one of the most valuable resources in the Southwest Atlantic. Adult toothfish caught by longliners are certified by the Marine Stewardship Council (MSC) and can be sold as high as US$30/kg. However, by-caught juvenile toothfish in the finfish trawl fisheries, on the continental shelf and shelf break, are not certified and therefore far less valuable; being sold with other white-fleshed fish for less than US$5/kg. One spawning ground is believed to be along the edge of Burdwood Bank with spawning to occur between June and August. Another spawning may be present inside or outside the zone. Eggs hatch in austral spring (September – October) and larvae un-

dergo a pelagic phase during which they are passively carried by the currents until they settle on the shelf in shallow waters in December – January. As the juveniles grow, they migrate to deeper waters. By the time they are 7 to 12 years of age, they have reached the Patagonian slope and deep water plains (> 1,000 m) where they remain. It is during this migration to deeper waters that they are most vulnerable to trawling. Work completed this year by FIFD staff showed that the proportion of recruitment from the two spawning areas onto the Falkland Shelf depends on water temperatures at the time of spawning and current velocities during larval dispersal. It has been estimated in 2017 that the October and November by-catch of toothfish on W-licence was equivalent to the value of over 450 t of longline-caught toothfish in five years. Furthermore, juvenile toothfish are by-caught by the *Doryteuthis* trawl fishery, where most are discarded, thus potentially affecting future recruitment of the species in the longline fishery. At this stage, it remains to be determined how much potential recruitment is taken by this fishery.

For 2019, a total of 1,317 t of toothfish was taken by all fisheries in the Falkland fishing zones (1,049 t [80%] taken by targeted longline fishery, 179 t [14%] under W-licence, 43 t [3.0 %] G-licence, 34 t [3%] A-licence, 7 t [0.5%] C- and X-licences, 1 t [<0.1%] F-licence, and <0.1 t [<0.1%] on B-licence. A further 2 t was taken on E-licence during research surveys.

For a third consecutive year, toothfish catches in the finfish trawl fisheries decreased to reach 258 t in 2019. For a second consecutive year, this amount is below the 300 t allocated to the finfish trawl fisheries (A-, G- and W-licences). This decrease can be attributed, at least in part, to new by-catch measures limiting grenadiers to 10% and Patagonian toothfish to 1.5% of the total daily catch per vessel first introduced in 2018. Amounts above these levels trigger a move on rule with respective grid squares becoming restricted for ten full days. As such, fishing behaviours that led to an increase in toothfish by-catch have been curtailed. However, this system of limiting toothfish by-catch by percentage is not perfect and ways to improve are being investigated and will be presented in 2020. The 7 t reportedly caught in the "*Loligo*" trawl fishery (C- and X-licences) are well below the 30 t allocated to this fishery.

Peak 2019 catches in the finfish trawl fisheries occurred from January to March and coincided with vessels targeting hoki in the southwest of the FICZ (deeper waters). Similarly, CPUEs for the three licences involved in the finfish trawl fisheries peaked during this time (5 to 56 kg/hr on A-licence; 6 to 15 kg/hr on G-licence; 11 to 43 kg/hr on W-licence). Comparatively, annual CPUEs on A-, G-, and W-licences were 3 kg/hr, 7 kg/hr, and 19 kg/hr, respectively. Overall, toothfish by-catch was reported on 288 days in the finfish trawl fisheries with an average of 925 kg/day caught; an increase of 20 kg/day over 2018. Toothfish catches on F-licence were among the lowest on record in 2019, but this coincided with a sharp decrease in effort. Given the depths and areas at which many vessels operate on F-licence, toothfish by-catch in the skate trawl fishery need to be monitored closely in 2020.

One longliner operated in Falkland waters throughout the year (except between May and August when it was in Spain for maintenance) with a total of 205 fishing days on L-licence. Toothfish catches averaged 5.1 t per day in the longline fishery, while CPUE was 3.91 kg/umbrella; the sixth highest annual CPUE in this fishery since 2008. During 2019, monthly CPUE ranged from 2.79 to 5.60 kg/umbrella, peaking in April and May when the longliner was fishing primarily to the south of Burdwood Bank.

The 1,040 t TAC was exceeded by less than 9 t, but since 66 t was carried forward from 2018, 57.6 t will be carried forward to 2020. The catches on L-licence and associated CPUE suggest that there is continued solid recruitment into the longline fishery, showing no signs that it will decrease in the future. However, evidence of poor recruitment in both 2017 (few 0+ fish caught in 2018 and 1+ fish caught in 2019) and 2018 (few 0+ fish caught in 2019) suggest some caution is necessary to protect this recruitment and bycatch levels in the finfish and *'Loligo*' trawl fisheries will need to be monitored closely moving forward.

1.10 Rajidae – Skates

In 2019, a total of 1,496.5 t of skate was caught in the FICZ/FOCZ. This represents the lowest annual total skate catch since 1998, and the second-lowest since skate catches were first recorded in 1989. Both target catch and non-target bycatch decreased in 2019 from the year before, by respectively 480 t and 17 t. Approximately 2.4% of the 2019 total catch (36 t) was harvested as target catch (F–licence). This represents the lowest percentage of target catch since skate licences were issued in 1994. F–licence allocated days decreased substantially in 2019 from the year before, as commercial interest in F–licence shifted among different companies. The actual fishing effort decreased proportionally; in 2019, a total of 27 F–licence fishing days were taken out of 114 days allocated (23.7% licence utilization rate), whereas in 2018 a total of 64 F–licence fishing days were taken out of 258 days allocated (24.8% licence utilization rate). By comparison, licence utilization rates were >50% in 2016 – 2017, and >95% as recently as 2015.

The 2019 target catch was taken by three vessels; one vessel registered in the Falkland Islands (7.1 t in 3 vessel/days; mean CPUE of 178 kg/hr), and two vessels registered in Spain (28.6 t in 24 vessel/days; mean CPUE of 106 kg/hr). The Falklands-registered vessel fished its three F licence days in January. The two Spanish-registered vessels never overlapped in their F–licence effort (i.e., fishing F–licence on the same day), but between them took respectively 16.7%, 25.0%, and 29.2% of effort in April, June, and August, vs. 3.8%, 4.3%, and 51.0% of their F–licensed skate catch. The year 2019 was the first year that no Korean vessel fished skate licence since skate licences were issued in 1994.

The F–licensed Falklands vessel was not the same one as in 2018, and thus was targeting skate for the first time in 2019. This vessel also held finfish A– and W– licences, accounting for 24.4% of its total fishing activity in 2019, and *D. gahi* C– and X–licences, accounting for 73.3% of its total fishing activity in 2019. The F–licensed Spanish vessels held A–, G–, and W– finfish licences, which accounted for 92.2% of their aggregate fishing activity in 2019. Skate licence fishing was thus a minor activity for Falklands- and Spanish-registered vessels in 2019. These three F–licence vessels took 7.8% of the total skate bycatch under finfish licence, compared to the 14.6% of total finfish-licensed effort they accounted for. Finfish vessels that participated in the skate-licence fishery were therefore not predisposed to bycatch more skate. Within finfish trawls, 543 t of skate were taken under A–licence (decrease of 273 t from the year before), 322 t under G–licence (increase of 11 t from the year before), and 508 t under W–licence (increase of 210 t from the year before). Approximately 2% of aggregate finfish skate bycatch was reported discarded. Additionally 25 t of skate were caught in the *D. gahi* fishery, a small increase from last year (17 t). The one F –licensed vessel in 2019 that had also fished *D. gahi* licences reported 5.6% of skate bycatch vs. 6.1% of the effort under *D. gahi* licence, thus a rate of skate bycatch comparable to the average of other vessels in that fishery. A total of 26 t of skate were caught in the toothfish longline fishery,

24 t were caught under experimental licence (which included a skate survey), and 12 t were caught in the *Illex* trawl fishery. Skates caught in the longline fishery were almost entirely discarded (>98%).

In all commercial fisheries, a total of 15,642 skates were identified to 15 species by observers on twelve vessels. In finfish-target trawls, four species represented at least 10% each of the sampled species composition by numbers: *Bathyraja brachyurops* (32%), *Z. chilensis* (26%), *B. albomaculata* (13%), and *B. macloviana* (10%). Five species represented at least 10% each by weight: *Z. chilensis* (34%), *B. brachyurops* (24%), *B. albomaculata* (16%), *B. macloviana* (11%), and *B. griseocauda* (10%). In *D. gahi* trawls, *B. brachyurops* represented 75% of the sampled species composition by numbers, and no other species at least 10%. However, three species represented at least 10% each by weight: *B. brachyurops* (55%), *Z. chilensis* (11%), and *B. scaphiops* (11%). In the longline fishery three species represented all skate bycatch, in varying order. By numbers: *Amblyraja* cf. *georgiana* (64%), *Bathyraja papilionifera* (27%), and *Bathyraja meridionalis* (9%), and by weight: *A.* cf. *georgiana* (81%), *B. meridionalis* (25%), and *B. papilionifera* (5%). No observer cover had been assigned to skate-target trawls, given the low employment of that fishery in 2019.

1.11 Patagonotothen ramsayi – Rock cod

The annual catch fell to an all-time low in 2019 with 950 t of rock cod caught. The largest catch was in the *D.gahi* fishery, 335.8 t. This fishery discarded 99.8% of the catch. Finfish vessels (A-, W- and G-licences) caught 594 t. The highest catch in the finfish targeting fleet was by the W-licences with 279 t, 46 t were discards. Vessels fishing on G-licences caught 207 t and discarded 94 t, whilst A-licensed vessels caught 108 t.

The highest catch was in the first quarter when 641 t were caught, this decreased quarter on quarter to 206 t, then 95 t and finally 6 t in the last quarter.

1.12 Grenadiers (Macrouridae)

There was neither a target fishery nor a research cruise for grenadiers in 2019. Total annual catch of grenadiers was 413 t taken as by-catch during longline (58 t) and finfish (355 t) fisheries. The longliner catch reflected fishing effort, with low catches in the quarters with low effort. In the finfish fishery, the majority of the catch was in the first quarter. This reflects the increased effort in the first quarter in the southwest of the zone with vessels targeting hoki in deeper water. The trawl fishery was split between *Macrourus* spp. (generally *M. carinatus*, with few *M. holotrachys*) and *Coelorinchus* (*Coelorinchus fasciatus*) the trawl fishery discarded 58 t from the 355 t caught. The longliner discarded 45 t from the catch of 58 t.

1.13 Zygochlamys patagonica - Patagonian scallop

No directed scallop fishery in Falkland Island waters occurred in 2019 although 1.7 t were taken as by-catch.

1.14 Eleginops maclovinus - Falkland mullet

Historically, there has been a minor commercial beach seine fishery for Falkland mullet that supplies the domestic market, with fishing occurring only over summer months (Dec-Feb).

1.15 Snow crab (*Paralomis granulosa*)

There is an experimental licence available for snow crabs; this was not used in 2019.

1.16 Others

Butterfish (*Stromateus brasiliensis*), redfish (*Sebastes oculatus*), lobster krill (*Munida* spp.), various other squid and fish as well as jellyfish are included into this category. The total annual catch of each species is shown in table O.7.

2 Fisheries Department research cruises in 2019

In 2019, two research cruises were conducted by the Fisheries Department using the chartered fishing vessel *Monteferro*.

2.1 Demersal biomass survey ZDLM3–02–2019

The regular ground fish survey was conducted from 1 to 23 February 2019 on board the F/V *Monteferro* for the seventh time since 2010, every time concurrently with the first season "*Loligo"* pre –recruitment survey. Since 2011, the same stations were repeated to ease comparisons between years. A total of 83 stations were conducted, each trawl station followed the oceanographic station performed using CTD Seabird-25. During the survey, a total catch of 53 t was taken comprising 120 species or taxa, with red cod, *Illex* and hoki being the main species of the catch.

During the survey, an early migration of the squid *Illex argentinus* to the north-western part of FICZ was revealed. Despite slightly cooler temperatures at the surface compared to the previous 4 years, squid were already quite large (modal size 23–24 cm), at advanced maturity stages (some females were mature at stage V). Another squid, *D. gahi*, was quite abundant everywhere on the shelf; however it did not yet concentrate near productive zones in the north-eastern part of FICZ. Sizes (mode of 9 cm ML) and maturities (mainly stage II) of *D. gahi* corresponded well to the average values characteristic to this time of the year. Dense aggregations of hoki were found to the southwest of the Falkland Islands. The fish was quite small (modal pre-anal length of 22 cm), practically all of them were immature (maturity stage II). Red cod was abundant in the area of the Argentine inflow in the northwest of FICZ. Length-frequency of this fish showed significant amounts of adults (mainly post-spawning). It was also revealed quite an early migration of hakes with the Argentine inflow. The fish was much smaller than usual (modal lengths of 37–39 cm total length [TL]); large specimens were rare. The majority of fish came to the Falkland waters straight after spawning, with adult males being mainly at stage VII, and adult females at stages III and VIII. Kingclip was also smaller than usual, with modal sizes decreased to 47–53 cm TL. The majority of animals were immature. Rock cod occurred practically everywhere on the shelf, with denser concentrations in the northern and southwestern parts of FICZ. The abundance of this fish was however very low, not exceeding 1.2 t/km^2. Size distribution of this fish was close to normal observed during the last several years, with one abundant mode of 15 cm fish (1+ year old), and significant amounts of adults at 25–30 cm TL. Toothfish juveniles and young adults (subadults) were quite abundant in deeper areas of the shelf (southwest and north of FICZ). However, the absence of small recruitment of toothfish in shallow waters may potentially indicate to recruitment failure in 2018 (which was also noted during another research cruise in December 2018). This year the abundance of butterfish *Stromateus brasiliensis* was higher than usual. This fish also migrated

with temperate waters of the Argentine inflow (together with common hakes and *Illex* squid). Migratory schools consisted mainly of adult fish with modal length of 25–26 cm; some fish attained 40 cm TL.

2.2 Joint research cruises with INIDEP – *Illex* (VA0219) and *M. a. australis* (VA0819)

Since the establishment of the South Atlantic Fisheries Commission (SAFC) in 1990 a series of joint research cruises between the Falkland Islands Government Fisheries Department (FIFD) and the Argentine Government's Instituto Nacional de Investigación y Desarrollo Pesquero (INIDEP) have taken place. These cruises have focused mainly on the biology of two straddling species: the Argentine shortfin squid (*Illex argentinus*) and southern blue whiting (*Micromesistius australis australis*). The joint cruises were initiated in 1994 but came to a halt in 2004. In 2019, the cooperation resumed and two joint cruises took place on board the *RV 'Victor Angelescu'*, the first being '*Illex* pre-recruitment' cruise (VA0219) and the second being 'Southern blue whiting spawning stock biomass estimation' cruise (VA0819).

The *Illex* pre-recruitment research cruise ran from February 1st to March 5th and the survey area was bounded by 45 and 51 °S and 59 to 67 °W at depths of 100 to 400 m. The cruise objectives included: (1) confirming the summer distribution and concentrations areas of *Illex*; (2) estimating the biomass and number of recruits of the South Patagonian stock; (3) collecting biological data to assist in stock discrimination; (4) determining the distribution and relative abundance of finfish and elasmobranch species; (5) collecting biological data from finfish and elasmobranchs; (6) collecting environmental data; and (7) collecting benthos to assess its composition. Overall, 86 trawls were conducted, CTD data were obtained at 30 stations, and biological data were recorded for all species included in the agenda of the November 2017 meeting of the SAFC Scientific Sub-Committee. Additionally, otoliths were collected for *Dissostichus eleginoides* (Patagonian toothfish), *Genypterus blacodes* (kingclip), *Patagonotothen ramsayi* (rock cod), and *Salilota australis* (red cod) and statoliths were collected from 941 squid (758 *Illex* and 183 *Doryteuthis gahi*). The survey revealed that in the northern areas of the survey, a mix of summer and winter spawning stocks was encountered, whereas only winter spawning stock of the South Patagonian *Illex* stock occurred in southern areas of the survey. Regarding finfish, no statistically significant differences in size were discernable for rock cod between this research cruise and the concurrent demersal survey conducted in Falkland waters. However, male and female red cod and female kingclip were significantly larger in Falkland waters than in the Argentine EEZ.

The acoustic spawning stock biomass estimation cruise for *M. a. australis* (VA0819) took place between 9 and 17 September. The survey area was to the south of the Falkland Islands between 57.5 and 61.5 °W covering the 100-300 m depth layers (approx. total survey area of 19,513 km^2). The main objectives of this cruise were: to (1) estimate the spawning stock abundance of southern blue whiting, (2) improve the knowledge of its reproductive aspects and biology, (3) verify the drift of the first stages of development (eggs and larvae) in the area to the south of the Falkland Sound, (4) determine the distribution and relative abundance of other finfish species, (5) collect biological data and samples of finfish species (size, weight, sex, maturity, otoliths), (6) obtain environmental data (temperature, salinity, chlorophyll) and (7) collect benthos samples to investigate its composition. In total, 8 trawls, 21 CTDs, 9 box corers and 22 plankton tows were conducted. Acoustic backscattering signals were assigned to species through observations of contemporane-

ous trawl catches or signal comparison. The main species observed in the trawls was *M. a. australis* comprising 97.2% of the total catch sampled, along with minor species such as Falkland sprat (*Sprattus fuegensis*), austral hake (*Merluccius australis*) and Falkland Calamari (*D. gahi*). The acoustic data revealed a spawning 'hotspot' to the south-southwest of the Falkland Islands. Length -distributions for female and male *M. a. australis* revealed that females were larger than males, and also that females were further along the maturation process than males at the same stations. The modal lengths observed for males and females were still below the modal lengths observed during the initial years of the fishery.

2.3 Skate biomass and biological survey ZDLM3-10-2019

A research cruise dedicated to Rajiformes (skates) species was undertaken in October 2019. The objectives of this cruise were to:

- Update our knowledge of the skate species distribution in the northern slope of the continental shelf
- Assess the evolution and changes in the skate assemblage six years after the last dedicated research cruise.
- Collect exhaustive catch / bycatch information , including on teleost and invertebrate species, associated with the skate community
- Collect associated oceanographic data
- Collect individuals of *Psammobatis spp* for genetic and morphometric information
- Assess the catchability rates of the two net settings previously used in 2010 and 2013 to allow an acute comparison of data collected during these cruises.

The cruise took place from 11th October until 25th October, during which 56 trawls (60 minute duration) and 46 CTD deployments were carried out. The survey was divided in two parts: the first 12 days were dedicated to the assessment of the skate species distribution in the north of the FICZ, with a simultaneous characterisation of the fish and invertebrate community at each station. A gear catchability assessment was carried out over the last two days, with eight stations duplicated with two different gear settings (used in similar surveys held in 2010 and 2013).

Altogether, a total of 62,632 kg of marine organisms were caught during this survey including 18,494 kg of skate species, of which 99.98% was sampled. The biology and distribution analyses carried out in 2019 were comparable to those of 2010, and allowed to assess the variability observed in 2013 when most of the species shown decreasing trends, notably in terms of disc-width at 50% maturity. However, the biomass estimates of seven of the thirteen species/complex sampled, including the most abundant ones, appeared significantly lower in 2019 than they were in 2013, with a decrease of the total skate biomass estimated at more than 21% in 6 years, from 25,492 t to 20,045 t in the studied area.

3 Fisheries Department research contracts in 2019

The Falkland Islands Government's financial year runs from 1 July to 30 June and most external research contracts in the Fisheries Department adhered to these start and end dates. Contracts completed by the end of June 2019 are presented below.

3.1 '"Providing satellite sea surface water temperature (SST) data for the area of the Falkland-Patagonian shelf between January and May 2019".

This contract has been carried out by principal investigator Dr. A.M. Sirota of the research company MARSATEC, Kaliningrad, Russia for a number of years already.

SST maps were sent to the Fisheries Department three times a week (Monday, Wednesday, Friday) by e-mail. The SST maps were made in colour using SURFER-7 Software. They were used for monitoring *Illex* distributions during the fishing season.

3.2 'Seasonal and interannual variations in oceanographic conditions on the eastern continental slope and shelf of the Falkland Islands (November 1999 – February 2019)'

This standard oceanographic contract was carried out by principal investigator Dr. A.M. Sirota of MARSATEC, Kaliningrad, Russia.

Seasonal and inter-annual variability of water masses on the eastern shelf (transect P1) and southern shelf (transect P5) were described. Water structure and its variability around the Falkland Island shelf were analysed using the data from research cruises.

4 Seabird and marine mammal bycatch mitigation in the Falkland Islands

4.1 Longlining

Since 2007 the toothfish fishery uses the umbrella system, which reduces both whale (i.e. orca and sperm whale) and seabird direct access to baited hooks and depredation on hooked fish. The umbrellas have been crucial to mitigate seabird mortality during line setting, when birds dive to approach the baited hooks. Taking into account Falkland Islands law regarding the protection of marine mammals, observer coverage and the use of umbrellas, the toothfish fishery has recently been classified by the United States National Marine Fisheries Service (NMFS) as an "exempt" fishery. This means it is fully compliant to the United States new regulations implementing fish and fish products import provisions of the Marine Mammal Protection Act (MMPA), as the longlining operations in the Falkland Islands have a remote likelihood of incidental mortality and serious injury of marine mammals. During toothfish fishing, dedicated seabird and marine mammal observing effort is carried out during hauling every fourth day. In addition, setting observations may randomly occur during the observer's trip. In the last year a total of 285 stations were observed, of which 91 settings (32%) and 16 hauls (6%) were monitored for seabird and marine mammal interactions (Table 1). A total of 1,518 interactions were recorded with ACAP vulnerable seabird species, however no individuals were hooked. Although no seabird mortalities were recorded, entanglements

with the tori line were observed during setting, with one black-browed albatross released by the observer aboard.

4.2 Trawl fishery

4.2.1 Finfish

For the period July 2018 to June 2019, observations of seabird interactions with the demersal finfish fleet were conducted on 39 days, comprising an effective sampling effort of 154 h in 72 stations, which represents 1.6% of the fleet's total fishing day effort. No mortalities were observed, however the occurrence of 75 contacts with possible minor injury were reported for 75 individuals of ACAP-listed species (22 black-browed albatrosses, 52 giant petrels, 2 wandering albatrosses). The rate of contacts with unknown outcomes to real mortalities had been estimated to be about 3 to 1. If we apply this rate to the 75 minor injury contacts observed, 25 of them could have resulted in actual mortalities. Extrapolating this value to the entire year finfish fishing effort, this would equate to 1,523 mortalities (442 black-browed albatrosses, 1,051 giant petrels, 30 wandering albatrosses; Table 1). In addition, three black-browed albatross mortalities were recorded outside seabird dedicated days. Two of them comprised net mortalities during shooting, while the third was related to the warp cable and occurred during hauling. Although there is no accurate mortality estimation, its occurrence is certain and definitely cryptic. Consequently and following the precautionary principle, new possible mitigation measures to be implemented in the finfish fleet are currently being evaluated. Regarding marine mammal interactions, three seal sightings were reported. Seal observations involved South American sea lions following a vessel, eating from the discard chute, and scavenging from the net during hauling. South American fur seals were seen in direct contact with the net while feeding on entangled fish, with two individuals caught during hauling but safely released from deck. Seal mortalities were neither observed nor reported by vessels.

4.2.2 Falklands calamari

The Falklands calamari fishery currently represents the only bottom-trawling fishery in the Southwest Atlantic with full observer coverage and the implementation of SEDs on the entire fleet after two seal mortalities occurred during fishing. As seal mortality levels maintained are negligible for the current population, this fishery is presently being evaluated by the NMFS to be classified as an "exempt" fishery. Currently only trawls operating in waters regulated by the Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR) hold this status. The seal bycatch mitigation program started in September 2017 and since then has been funded by industry, however FIFD Scientific Observers continue to monitor the fishery, with dedicated seabird observations every fourth day. For the reported period 70 seabird stations were monitored by FIFD observers, comprising 130.43 h of effort, which equals to 1.2% of the fleet's total fishing day effort. Seal observers monitor at least three trawls per day (i.e. shooting and hauling) and record seal-gear interactions, behaviour, live SED escapees, live deck releases and incidental mortalities. In addition, external observers daily dedicate one hour for bird scaring lines (BSL) monitoring. For the period July 2018 to June 2019, a total of 5,734 seal stations were observed, representing 97.3% of the fleet's total fishing day effort; BSL monitoring comprised 1,557.6 h of gantry/stern deck observations during trawling. Seal sightings included 13,631 individuals (53.2% South American fur seals), with 62 SED escapees observed during hauling and 55 deck releases. The SED escapees during shooting remains unknown. Twenty-eight seal mortalities were recorded (20 South Ameri-

can fur seals, 8 South American sea lions), of which 17 occurred pre-SED implementation. Post-SED mortalities were mostly related to a faulty SED in one vessel, although mortalities during turns (i.e. SED escape passage blocked) and after propeller contact were also recorded. Regarding mortalities of seabird ACAP-listed species, 65 were recorded (62 black-browed albatrosses, 2 white-chinned petrels, 1 giant petrel), of which 95% were net-related. This follows the trend noticed last year, which cause might be multifactorial. Taking into account the cryptic mortality factor, the estimation of seabird mortalities for the year in this fishery are 195 seabirds (186 black-browed albatrosses, 6 white-chinned petrels, 3 giant petrels; Table 1). However, it is uncertain if the use of this cryptic mortality factor is adequate, as it is to be applied in warp-cable strike related mortalities, not net related ones. Furthermore, black-browed albatross entanglements in oily BSL during trawling and trawl net during hauling were recorded by both FIFD and external observers; probable post-release mortalities are not taken into account in here.

4.2.3 Skate

No observations were carried out on the 64 skate fishing effort days for the period.

4.2.4 Illex

For the reoprted period 10 stations were monitored within 5 seabird days, comprising 19 h of effort, which equals to 12.5% of the *Illex* bottom-trawling total fishing day effort. No mortalities were observed, however 96 possible minor injury contacts were recorded (73 black-browed albatrosses, 4 wandering albatrosses, 19 giant petrels). Applying the cryptic mortality factor, 32 of the observed contacts could have resulted in actual mortalities. Extrapolating this value to the entire year of Illex trawling effort, this would equate to 256 mortalities (195 black-browed albatrosses, 10 wandering albatrosses, 51 giant petrels) Table 1).

Table 1 Observer coverage and ACAP-listed seabird species estimates of mortality per fleet.

Longlining					
Effort (stations)	Effort (h)	Fleet coverage (%)	Minor injury contacts	Nº mortalities observed	Estimated mortalities
285	NA	38	0	0	Negligible
Finfish					
72	154	1.6	75	3*	1,523**
Falklands calamari					
5,804	1,688.3	98.5	0	65	195
Illex (bottom-trawling)					
10	19	12.5	96	0	256**
Total mortalities:					
				68	1,974
*Recorded outside seabird dedicated days; not used in mortality estimation. ** Precautionary number, calculated based on observed possible minor injury contacts.					

As cryptic events like seabird mortalities cannot be detected with low observing effort (< 4%);, an accurate estimation of mortalities for the finfish fleet cannot be made. However, *possible minor injury* contacts were used as a mortality proxy, being seabird mortality numbers in finfish and *Illex* fleets fully *precautionary*.

4.3 Improvements to seabird and marine mammal mitigation

The Seabird NPOA-T 2019 was published in December 2018. Mitigation measures for both seabirds and marine mammals continue to evolve.

4.3.1 Fixed aerial array (FAA)

In June 2019, a total of 13 out of 16 vessels of the Falklands calamari fleet had been fitted with FAAs. All vessels had added an extra distal streamer curtain, fully enclosing the proximal water zone astern the vessel, which prevents seabirds to enter the dangerous area with exposed cables while trawling. As a result, warp cable interactions are uncommon, even in bad weather conditions when warp cables are laterally exposed. Three vessels had incorporated weighted streamers, with very good results. Two vessel trips by the Seabird and Marine Mammal Scientific Officer were carried out to evaluate the FAAs, which resulted in suggested improvements to industry.

4.3.2 Discard management

No changes have occurred in the trawler fleet.

4.4 Compliance

According to observer reports, only one vessel targeting *Illex* was found trawling without using tori-lines in bad weather conditions. This caused the occurrence of several heavy contacts which the observer described as possible eventual mortalities. It is planned for captains to have an induction to good practices, with a focus on net cleaning, FAA's streamer maintenance and discard management. Hopefully, this will improve overall compliance.

4.4.1 Discarding regulations

High standards continue to be recorded among the fleet, although occasional late halts to discard may occur.

4.4.2 Net cleaning

Despite net cleaning has improved and is usually carried out respecting medium-level standards, seabird species have already learned to forage in the fishing gear. High levels of seabird interactions were recorded even while shooting brand new nets and entanglement in FAA's oily streamers also occurred. Novel net-mortality mitigation strategies will be explored.

5 Falkland Islands Fisheries Observer Programme

Fisheries Observers collect position data, catch/effort and biological data, conversion factor data, and seabird/mammal interaction & mortality data from all fleets and all fisheries occurring in the FICZ/FOCZ and, opportunistically, on the high seas surrounding the Falkland Islands waters. Observers also take part in the research cruises conducted regularly by the FIFD and participate in various scientific projects on land according to the needs of the scientists of the FIFD. Periods at sea typically vary between two and six weeks in duration. All data collected are entered into a database at sea, and a detailed trip report completed after each period at sea. These internal reports are also shared with respective ITQ holders and vessel operators.

Monitoring effort over the last 4 years (2016-2019) is summarized in Table 2. There has been a net percentage-decrease in FIFD observer coverage in 2019, explained by two main circumstances: a reduction of the observer staff from 7 to 6 members as the seabird observer position has been replaced by a land-based scientific officer one, and the high mobilisation of observers on research cruises – including a joint research cruise with Argentina. The amount of data collected has consequently been reduced when compared to 2018, but the strategy has been adapted to maintain the collection of data essential to the Fisheries management and to reduce the number of duplicates. As of previous years, external observers were mandated on the fleet fishing for Falkland calamari under C– and X–licence, these two seasons having therefore an observer coverage of 100%. This year, the fishing effort of trawlers targeting mainly finfish under A–, G– and W–licence has greatly increased by 19.5%. However, the number of jiggers targeting Illex has been lower than during 2018, all in all remaining relatively high when compared to 2016. Skates-targeting trawler effort (F–licence) has dropped again significantly, F–licence effort being used by vessels only on punctual basis – preventing observer coverage for this licence. Finally, the longliner (L–licence) fishing effort has stayed comparable to those of previous years, as it has been the case for observer coverage which shown a slight decrease in terms of percentage but remained close to the target of 50 % of overage per year.

Table 2 - Observer coverage for 2016 - 2019 FICZ / FOCZ

	2016			2017			2018			2019		
Licence	Fishing Days	Obs days		Fishing Days	Obs days		Fishing Days	Obs days		Fishing Days	Obs days	
A/G/W	2350	243	10.3%	1770	241	13.6%	1752	236	13.4%	2176	171	7.9 %
B	1714	6	0.4%	6055	86	1.4%	7513	51	0.7%	6424	69	1.1 %
C/X	2024	207	10.2%	1997	282	14.1%	1953	173	8.9%	1589	134	8.4 %
F	152	29	19.1%	133	26	19.5%	64	7	10.9%	27	-	-
L	197	98	49.7%	191	106	55.5%	185	123*	66.5%*	206	96	46.6 %
S	4	4	100%	0	0	0%	4	0	0%	0	-	-
E surveys	53	53**	100%	90	90**	100%	60	60**	100%	69	69**	100%**
Totals	6494	640	9.9%	10236	931	9.1%	11531	650	5.6%	13491	539	4.0%

*Observed day numbers include two tagging trips. The actual observed days and percentage of coverage are 105 d and 56.6%, respectively.
**As several observers are embarked simultaneously on the same cruises, the real observer days for E–licence is 194 d in 2019.

In 2019, there were 23 observer trips on commercial vessels, two Falkland calamari *D. gahi* pre-recruitment surveys and four research cruises including a joint *Illex* pre-recruitment survey with Argentina. Table 3 provides an updated four year summary of individual specimens sampled for size/sex/maturity and optionally weight/otoliths/statoliths. Four-year totals of less than 150 specimens per species were grouped into “Others”. Data of the joint *Illex* pre-recruitment survey with Argentina are not included in Table 3.

Table 3 - Fish, squid, skate and invertebrate specimens sampled by observers & scientists

Species name	2016-2019	%	2016	%	2017	%	2018	%	2019	%
Doryteuthis gahi	397,205	37.25%	114,330	40.33%	142,397	38.40%	72,257	33.58%	68,221	34.67%
Patagonotothen ramsayi	180,469	16.93%	44,750	15.78%	69,254	18.68%	35,454	16.48%	31,011	15.76%
Merluccius hubbsi	97,264	9.12%	22,020	7.77%	27,646	7.46%	22,472	10.44%	25,126	12.77%
Illex argentinus	76,410	7.17%	12,502	4.41%	27,677	7.46%	21,441	9.96%	14,790	7.52%
Dissostichus eleginoides	50,771	4.76%	13,513	4.77%	25,508	6.88%	6,901	3.21%	4,849	2.46%
Salilota australis	34,864	3.27%	11,642	4.11%	9,618	2.59%	6,088	2.83%	7,516	3.82%
Bathyraja brachyurops	27,306	2.56%	9,556	3.37%	8,335	2.25%	6,423	2.99%	2,992	1.52%
Macruronus magellan-icus	25,363	2.38%	7,383	2.60%	7,014	1.89%	6,447	3.00%	4,519	2.30%
Bathyraja albomaculata	20,367	1.91%	7,251	2.56%	7,284	1.96%	2,552	1.19%	3,280	1.67%
Genypterus blacodes	19,360	1.82%	4,613	1.63%	4,514	1.22%	4,322	2.01%	5,911	3.00%
Zearaja chilensis	15,524	1.46%	7,590	2.68%	2,133	0.58%	4,699	2.18%	1,102	0.56%
Micromesistius australis	13,725	1.29%	5,291	1.87%	4,019	1.08%	3,178	1.48%	1,237	0.63%
Bathyraja griseocauda	10,348	0.97%	4,203	1.48%	2,723	0.73%	1,209	0.56%	2,213	1.12%
Coelorinchus fasciatus	9,787	0.92%	1,475	0.52%	2,377	0.64%	4,033	1.87%	1,902	0.97%
Amblyraja doellojuradoi	9,461	0.89%	1,664	0.59%	2,740	0.74%	2,049	0.95%	3,008	1.53%
Bathyraja macloviana	8,426	0.79%	1,718	0.61%	2,199	0.59%	2,867	1.33%	1,642	0.83%
Macrourus holotrachys	8,325	0.78%	2,569	0.91%	1,461	0.39%	1,190	0.55%	3,105	1.58%
Champsocephalus esox	7,412	0.70%	253	0.09%	6,359	1.71%	594	0.28%	206	0.10%
Antimora rostrata	5,306	0.50%	1,104	0.39%	1,638	0.44%	1,491	0.69%	1,073	0.55%
Stromateus brasiliensis	5,051	0.47%	92	0.03%	852	0.23%	360	0.17%	3,747	1.90%
Bathyraja scaphiops	4,443	0.42%	1,484	0.52%	1,276	0.34%	904	0.42%	779	0.40%
Cottoperca gobio	3,559	0.33%	452	0.16%	1,811	0.49%	659	0.31%	637	0.32%
Notophycis marginata	2,988	0.28%	199	0.07%	408	0.11%	2,277	1.06%	104	0.05%
Bathyraja cousseauae	2,873	0.27%	669	0.24%	1,099	0.30%	363	0.17%	742	0.38%
Patagonotothen tessella-ta	2,501	0.23%	739	0.26%	1,271	0.34%	142	0.07%	349	0.18%
Psammobatis spp.	1,708	0.16%	369	0.13%	171	0.05%	857	0.40%	311	0.16%
Bathyraja multispinis	1,413	0.13%	609	0.21%	304	0.08%	329	0.15%	171	0.09%
Gymnoscopelus nicholsi	1,294	0.12%	421	0.15%	757	0.20%	100	0.05%	16	0.01%
Iluocoetes/Patagolycus	1,194	0.11%	979	0.35%	209	0.06%	6	0.00%	0	-
Onykia ingens	1,141	0.11%	309	0.11%	101	0.03%	728	0.34%	3	<0.01%
Sprattus fuegensis	1,139	0.11%	230	0.08%	685	0.18%	207	0.10%	17	0.01%
Merluccius australis	961	0.09%	476	0.17%	289	0.08%	129	0.06%	67	0.03%
Schroederichthys bivius	741	0.07%	132	0.05%	152	0.04%	1	<0.01%	456	0.23%
Sebastes oculatus	500	0.05%	141	0.05%	189	0.05%	73	0.03%	97	0.05%
Squalus acanthias	500	0.05%	202	0.07%	35	0.01%	101	0.05%	162	0.08%
Pseudocyttus maculatus	456	0.04%	1	<0.01%	434	0.12%	20	0.01%	1	<0.01%
Allothunnus fallai	452	0.04%	179	0.06%	134	0.04%	132	0.06%	7	<0.01%
Congiopodus peruvianus	357	0.03%	64	0.02%	103	0.03%	190	0.09%	0	<0.01%
Bathyraja magellanica	352	0.03%	78	0.03%	208	0.06%	32	0.01%	34	0.02%
Zearaja argentinensis	326	0.03%	145	0.05%	46	0.01%	95	0.04%	40	0.02%
Cottunculus granulosus	265	0.02%	119	0.04%	63	0.02%	83	0.04%	0	<0.01%
Amblyraja cf. *georgiana*	182	0.02%	53	0.02%	82	0.02%	19	0.01%	28	0.01%
Brama dussumieri	172	0.02%	29	0.01%	123	0.03%	18	0.01%	2	<0.01%
Others	6,595	0.62%	399	0.14%	536	0.14%	262	0.12%	5,291	2.69%
Total	1,066,267		283,502		370,832		215,169		196,764	

6 Fishing Effort and Catch Limits

Total Allowable Effort (TAE) and Total Allowable Catch (TAC) were set and published by the FIG Fisheries Department for the 2020 calendar year.

7 Participation in Scientific Workshops, Conferences and Symposia in 2019

7.1 Johan Hjort ICES Symposium

The Johan Hjort anniversary symposium was held in Bergen, Norway, from 12 to 14 June 2019. A. Arkhipkin presented a paper titled 'Cephalopods: fisheries science, stock assessment and management in the fast lane', by A. Arkhipkin, A. Winter, and R. Roa-Ureta. A. Winter presented a poster titled 'Science and management in the Falkland Islands: A small territory with a large industrial fishery', by A. Winter and A. Arkhipkin.

7.2 ICES Annual Scientific Meeting - 2019

Annual Scientific Meetings are organised by the International Council for the Exploration of the Seas (ICES). In 2019, the meeting was held in Gothenburg, Sweden between 24 and 28 September. Participants from FIFD: A. Arkhipkin with one report presented: 'Uncontrolled high seas fishery threatens the sustainability of one of the most abundant resources in the Southwest Atlantic, squid *Illex argentinus*'. J. E. Ramos, in collaboration with A. Winter and A. Arkhipkin presented a report: 'Stock assessment of data-poor fisheries species in Falkland Islands waters'

8 Publications from scientific work carried out in FIG Fisheries Department in 2019 (or in collaboration with FIG personnel)

8.1 Peer-reviewed publications (appeared in 2019)

Baylis, A.M.M., Orben, R.A., Arkhipkin, A., Barton, J., Brownell, R.L. Jr., Staniland, I.J., Brickle, P. 2019. Re-evaluating the population size of South American fur seals in the South Atlantic and conservation implications. *Aquatic Conservation: Marine and Freshwater Ecosystems*, **29** (11), 1988-1995.

Beer, A., Ingram, T., Randhawa, H.S. 2019. Role of ecology and phylogeny in determining tapeworm assemblages in Rajiformes (skates). *Journal of Helminthology.* **93**: 738–751.

Benmeslem, K., Randhawa, H.S., Tazerouti, F. 2019. Description of a new species of rhinebothriidean tapeworm from the skate *Dipturus batis* in the Mediterranean Sea. *Journal of Helminthology*. **93**: 589–600.

Bennett, J., Jorge, F., Poulin, R., Randhawa, H.S. 2019. Revealing trophic transmission pathways of marine tapeworms. *Parasitology Research.* **118**: 1435–1444.

Bennett, J., Randhawa, H.S. 2019. Diet composition of New Zealand's endemic rough skate, *Zearaja nasuta*. *New Zealand Journal of Marine and Freshwater Research*. **53:** 162–168.

Jenny, D., Fuchs, D., Arkhipkin, A.I., Hauff, R.B., Fritschi, B., Klug, C. 2019. Predatory behavior and taphonomy of a Jurassic belemnoid coleoid (Diplobelida, Cephalopoda). *Scientific Reports, Nature*, **9** (1): 7944.

Jones, J.B., Pierce, G.J., Brickle, P., Shcherbich, Z.N., Arkhipkin, A.I. 2019. 'Super-bull' males: What role do they play and what drives their appearance within the *Doryteuthis gahi* Patagonian shelf population? *Marine and Freshwater Res*., https://doi.org/10.1071/MF18285

Jones, J.B., Pierce, G.J., Saborido-Rey, F., Brickle, P., Kuepper, F.C., Shcherbich, Z.N, Arkhipkin, A.I. 2019. Size-dependent change in body shape and its possible ecological role in the Patagonian squid (*Doryteuthis gahi*) in the Southwest Atlantic. *Marine Biology*, **166**: 54.

Laptikhovsky, V., Arkhipkin, A., Lipiński, M.R., Markaida, U., Murua, H., Nigmatullin, C.M., Sauer, W.H.H., Hoving, H-J. T. 2019. Iteroparity or semelparity in the jumbo squid *Dosidicus gigas*: a critical choice. *J. Shellfish Res*., **38**: 375-378.

Lee, B., Cockroft, K., Arkhipkin, A.I., Wing, S.R., Randhawa, H.S. 2019. Age, growth and mortality estimates in for the ridge-scaled grenadier *Macrourus carinatus* (Günther, 1878) in the south-west Atlantic. *Fisheries Research*, **218**: 174-185.

McKeown, N.J., Arkhipkin, A.I., Shaw, P.W. 2019. Genetic analysis reveals historical and contemporary population dynamics in the longfin squid *Doryteuthis gahi*: implications for cephalopod management and conservation. *ICES Journal of Marine Science*, **76** (4): 1019–1027.

Ramos, J.E., Pecl, G.T. 2019. Climate Change. Marine range shifts in SE Australia. *Austral Ecology*. Available at: https://www.ecolsoc.org.au/hot-topics/climate-change-marine-range-shifts-se-australia

Sauer, W., Gleadall, I.G., Downey-Breedt, N., Doubleday, Z., Gillespie, G., Haimovici, M., Ibáñez, C.M., Katugin, O.N., Leporati, S., Lipinski, M., Markaida, U., Ramos, J.E., et al. 2019. World Octopus Fisheries. *Reviews in Fisheries Science & Aquaculture*. doi: 10.1080/23308249.2019.1680603

8.2 Technical reports

Arkhipkin, A., Lee, B., Goyot, L., Ramos, J.E., Chemshirova, I., Roberts, G., Costa, M., Blake, A. 2019. Cruise Report ZDLM3-02-2019: Demersal biomass survey. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands. 44 pp.

Farrugia, T.J., Winter, A. 2019. 2018 stock assessment report for Patagonian toothfish. Fisheries Report SA-2018-TOO. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands. 37 pp.

Farrugia, T.J., Winter, A. 2019. Stock assessment for bigeye grenadier, SA-2018-GRH. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands.18 pp.

Farrugia, T.J., Winter, A. 2019. Alternative stock assessments for Patagonian toothfish, Fisheries Report SA-2019-TOO. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands. 30 pp.

Goyot, L., Derbyshire, C., Jones, J., Tutjavi, V., Winter, A. 2019. *Doryteuthis gahi* stock assessment survey, 2nd season 2019. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands. 20 pp.

Iriarte,V. 2019. Assessment Report ZDLZ-04-2019: Seabird & Marine Mammal Bycatch Mitigation. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands. 11 pp.

Iriarte, V. 2019. Assessment Report ZDLO1-04-2019: Seabird & Marine Mammal Bycatch Mitigation. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands. 13 pp.

Iriarte,V., Zawadowski, T. 2019. Cruise Report ZDLM3-10-2019: Finfish SED trials. *Tech. Rep. FIG Fisheries Dept*., Stanley, Falkland Islands. 18 pp.

Ramos, J.E., Winter, A. 2019. Stock assessment of Southern blue whiting (*Micromesistius australis*) in the Falkland Islands. SA–2019–BLU. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 51 pp.

Ramos, J.E., Winter, A. 2019 Stock assessment of hoki (*Macruronus magellanicus*) in the Falkland Islands. SA-2019-WHI. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 47 pp.

Ramos, J.E., Winter, A. 2019. February trawl survey biomasses of fishery species in Falkland Islands waters, 2010–2019. SA–2019–08. Fisheries Department, Directorate of Natural Resources, Falkland Islands Government, Stanley, Falkland Islands. 46 pp.

Ramos, J.E., Winter, A. 2019. Stock assessment of Kingclip (*Genypterus blacodes*) in the Falkland Islands, 2017–2018. Falkland Islands Fisheries Department, Directorate of Natural Resources. Stanley, Falkland Islands. 21 pp.

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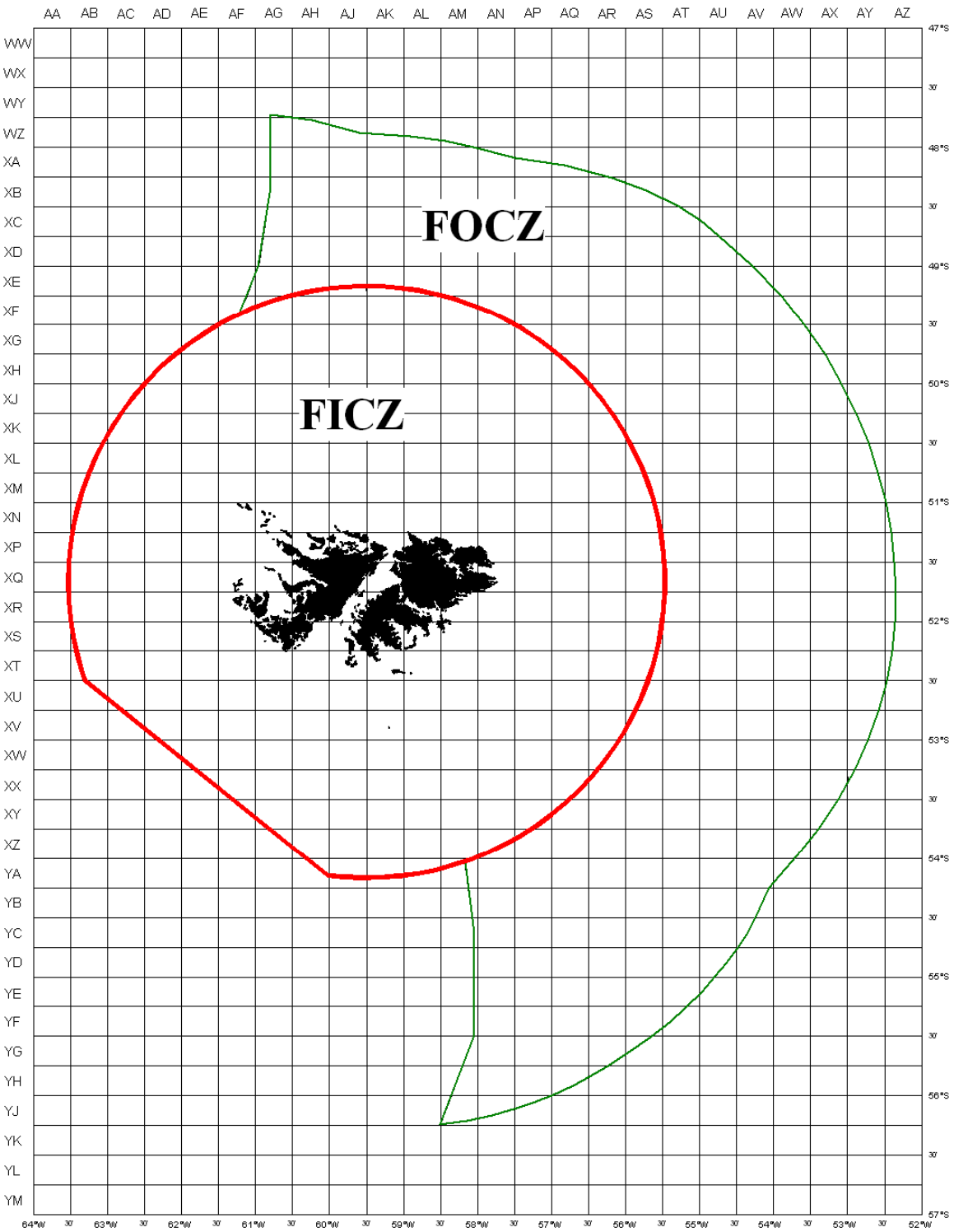
Figure A.1 Chart of the Falkland Islands Interim Conservation and Management Zone (FICZ) and Falkland Islands Outer Conservation Zone (FOCZ)



This chart is illustrative NOT definitive

Introduction

Table A.1 Abbreviations for vessel types used in the tables

FIFD Code	Vessel type
CO	Combination (trawler - jigger)
JI	Jigger
LO	Longliner
PO	Potter
TR	Trawler

Table A.2 Abbreviations for species names used in the tables

FIFD Code	FAO Code	Scientific name	Common name
BAC	SAO	*Salilota australis*	Red cod
BLU	POS	*Micromesistius australis*	Southern blue whiting
COX**	PAT	*Patagonotothen spp*	Rock cod
GRX**	RTX	Macrouridae	Grenadiers
HAK***	HKP	*Merluccius hubbsi*	Common hake
KIN	CUS	*Genypterus blacodes*	Kingclip
ILL	SQA	*Illex argentinus*	Illex squid
LOL	SQP	*Doryteuthis gahi*	Falkland Calamari
MAR	SQS	*Martialia hyadesi*	Martialia squid
OTH	MZZ/SKX	Osteichthyes/Chondrichthyes	Others
PAT	HKX / HKN	*Merluccius spp /australis**	Austral Hake
RAY	SRX	Rajidae	Skates and rays
TOO	TOP	*Dissostichus eleginoides*	Patagonian toothfish
WHI	GRM	*Macruronus magellanicus*	Hoki
ZYP	ZYP	*Zygochlamys patagonica*	Scallop

* - *Merluccius spp.* until 2005; *M.australis* since 2006

** - since 2006, before - in OTH; *** - since 2006, before - in PAT

Table A.3 Abbreviations for fishing fleets used in the tables

ISO Alfa-2 code	ISO Alfa-3 code	Fishing Fleet
AU	AUS	Australia
BG	BGR	Bulgaria
BZ	BLZ	Belize
CB*	KHM	Cambodia
CL	CHL	Chile
CN	CHN	China
DE	DEU	Germany
EE	EST	Estonia
ES	ESP	Spain
FK	FLK	Falkland Islands
FR	FRA	France
GH	GHC	Ghana
GR	GRC	Greece
IS	ISL	Iceland
IT	ITA	Italy
JP	JPN	Japan
KR	KOR	Korea
NA	NAM	Namibia
NL	NLD	Netherlands
NO	NOR	Norway
NZ	NZL	New Zealand
PA	PAN	Panama
PL	POL	Poland
PT	PRT	Portugal
RU	RUS	Russia
SH	SHN	Saint Helena
SL	SLE	Sierra Leone
TG	TGO	Togo
TW *	TWN	Taiwan

* - Cambodia is coded as CB for these statistics and Taiwan as TW.

Table A.3(b) Abbreviations for fishing fleets used in the tables

ISO Alfa-2 code	ISO Alfa-3 code	Fishing Fleet
UA	UKR	Ukraine
UK	GBR	United Kingdom
US	USA	United States of America
UY	URY	Uruguay
VC	VCT	Saint Vincent
VU	VUT	Vanuatu

Table A.4 Licence types, target species and periods of application 1989 - 2019

	Licence	Target species	Period of application
First Season			
	A	Unrestricted finfish	1989—2007
	B	*Illex* squid	1989 - 1992
		Illex and *Martialia* squid	1993 -
	C	Falkland Calamari (*Loligo*)	1989 -
	F	Skates and rays	1995 –2007
	G	*Illex* squid and restricted finfish*	1997 -
	W	Restricted finfish**	1994 –2007
Second Season			
	R	Skate and rays	1994 - 2007
	X	All species	1989 - 1990
		Falkland Calamari (*Loligo*)	1991 -
	Y	Unrestricted finfish	1989 –2007
	Z	Restricted finfish**	1989 –2007
All year			
	A	Unrestricted finfish	2008-
	F	Skates and rays	2008-
	E	Experimental fishery***	1996-
	L	Toothfish (Longliners)	mid 1999 -
	S	Blue Whiting and Hoki	1999 -
	W	Restricted finfish**	2008-

* The 'G' licence was introduced in 1997. It represents a combination of the 'B' Illex squid licence and 'W' restricted finfish licences. It is limited to trawlers using nets with a minimum mesh size of 90 mm.

** Restricted finfish - Main target species:
Patagonotothen ramsayi - Rock cod—*PAR*
Micromesistius australis - Southern blue whiting - BLU
Macruronus magellanicus - Hoki - WHI.

*** Experimental fishing licences 'E' are issued on an occasional basis to denote exploratory or experimental fishing activities. The 'E' licence included long-liners fishing for toothfish up to mid 1999, when the 'L' licence was instituted for this activity. In 2006 the 'E' licence was used to cover access to the *Loligo* fishery during the monitoring activities undertaken by single vessels. The Scal-lop fishery, exploratory trawl fishery for grenadiers and longline fishery for kingclip have also been operating on an E licence.

Table A5 Register of ITQ holding in January 2019

	FISHERY									
Quota Owner	**Finfish**	**Scallops**	**Squid Jig or Trawl *Illex argentinus***	**Squid *Loligo gahi* (Summer)**	**Skate**	**Squid & Restricted Finfish**	**Restricted Finfish Pelagic**	**Restricted Finfish**	**Toothfish Longline**	**Squid *Loligo gahi* (Winter)**
Argos Group Ltd.	8.15%			18.75%		11.22%		2.00%		18.75%
Beauchene Fishing Co. Ltd.	3.10%			12.97%				1.88%		12.97%
Bold Ventures Ltd						15.30%		22.21%		
Byron Fishing Ltd	2.28%					10.36%		19.97%		
CFL									100.00%	
FIG							70.00%			
Fortuna Ltd	24.96%			27.53%	29.20%	14.18%	30.00%	4.28%		27.53%
J K Marine Ltd.					36.80%			0.86%		
Pioneer Seafoods Ltd	7.86%					2.52%				
RBC Ltd.	38.33%			10.45%		15.63%		4.01%		10.45%
Seafish (Falklands) Ltd.				4.40%				15.94%		4.40%
Seaview Ltd.				14.34%						14.34%
Southern Cross Ltd.	4.18%			11.56%		7.71%		10.42%		11.56%
Sulivan Shipping Services Ltd	11.14%				34.00%	23.09%		18.43%		
Total	100.00%			100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Note:

Scallops and Squid Jig/Trawl have yet to enter quota system.

The catch entitlement generated by the ITQ held by the Crown (FIG) in the Restricted Finfish Pelagic fishery is leased to Fortuna Ltd.

Licences

Table B.1 Licence allocations by licence type and year

LICENCE	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
A	40	33	17	13	4	10	5	5	4	9	11
B	161	144	170	165	156	164	120	113	92	79	86
C	46	38	16	20	21	22	17	19	15	14	17
E	8	5	-	2	1	6	6	5	6	9	8
F	-	-	-	-	-	-	4	5	-	-	-
G	-	-	-	-	-	-	-	-	19	27	30
L	-	-	-	-	-	-	-	-	-	-	-
R	-	-	-	-	-	9	10	11	10	2	8
S	-	-	-	-	-	-	-	-	-	-	2
W	-	-	11	16	14	30	29	28	9	16	21
X	23	20	19	23	30	27	23	24	21	20	18
Y	70	17	15	6	5	10	9	6	11	8	8
Z	24	35	40	46	43	47	60	43	36	27	34
	372	**292**	**288**	**291**	**274**	**325**	**283**	**259**	**223**	**211**	**243**

LICENCE	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
A	10	6	6	6	8	9	11	11	23	21	22
B	109	116	125	122	90	71	43	56	44	21	76
C	17	16	17	16	16	16	16	16	17	17	18
E	5	1	1	8	8	12	8	6	4	7	5
F	4	1	9	4	7	4	-	1	8	8	8
G	16	19	19	24	17	12	20	18	23	27	23
L	3	6	6	8	5	4	6	6	2	1	1
R	7	9	8	10	11	11	11	10	-	-	-
S	3	3	4	3	4	2	2	2	3	4	3
W	11	13	10	23	25	17	21	14	27	30	30
X	15	19	17	18	18	16	16	17	19	18	17
Y	4	8	8	12	9	12	16	18	-	-	-
Z	27	18	18	22	23	18	24	25	-	-	-
	231	**235**	**248**	**276**	**241**	**204**	**194**	**200**	**170**	**154**	**203**

LICENCE	2011	2012	2013	2014	2015	2016	2017	2018	2019
A*	29	29	31	29	26	22	28	27	20
B	94	100	99	106	106	104	106	109	106
C	17	18	17	17	16	17	18	17	16
E	5	6	8	5	8	4	13	6	5
F**	7	8	8	8	8	8	7	6	5
G	25	25	25	22	21	22	18	18	17
L	1	1	2	2	1	1	3	1	1
R	-	-	-	-	-	-	-	-	-
S	1	3	1	1	1	1	-	1	-
W***	27	25	28	26	28	26	22	24	25
X	17	16	16	17	16	17	16	17	17
Y	-	-	-	-	-	-	-	-	-
Z	-	-	-	-	-	-	-	-	-
	223	**231**	**235**	**233**	**231**	**222**	**231**	**226**	**212**

* - A + Y since 2008 ** - F + R since 2008 ** *- W + Z since 2008

Licences

Table B.2 Licence allocations by fishing fleet and year

FISHING FLEET	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
AU	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-
BG	9	14	8	6	2	-	-	-	-	-	-	-	-	-	-	-
BZ	-	-	-	-	-	-	1	-	-	-	2	5	2	1	3	1
CB												2	1	1	1	1
CL	1	1	-	3	2	8	8	4	3	2	3	1	1	1	1	2
CN	-	-	-	-	-	-	-	-	-	2	4	9	20	25	21	7
EE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
ES	99	72	66	74	74	108	100	69	52	64	76	41	45	48	46	48
FK	7	4	2	3	3	8	19	37	32	43	49	47	55	48	80	71
FR	-	-	-	-	-	5	3	4	2	2	2	1	-	-	-	-
GR	5	3	-	-	-	-	-	-	-		-	-	-	-	-	-
HN	-	-	2	3	4	7	8	2	-		-	-	-	-	-	-
IS	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-	-
IT	7	3	2	5	6	3	2	-	-	-	-	-	-	-	-	-
JP	95	82	77	63	30	36	13	11	19	40	20	21	16	22	14	7
KR	30	32	42	55	60	86	105	112	98	48	71	84	67	70	62	59
NA	-	-	-	-	-	-	-	-	3	1	2	-	-	-	-	2
NL	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NO	-	2	-	-	-	-	-	1	1	-	-	-	-	-	-	-
NZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
PA	-	-	5	4	3	3	2	3	1	1	2	-	-	2	2	2
PL	68	53	40	21	8	8	4	2	-	-	-	-	-	-	-	-
PT	7	7	4	4	3	4	8	4	-	-	-	1	-	-	-	-
RU	-	-	-	-	-	1	-	-	-	-	-	-	1	-	6	-
SC	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
SL	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-
TW	32	17	39	49	77	43	8	3	3	2	4	16	22	26	33	34
UK	11	1	1	-	1	3	2	5	3	3	5	3	3	3	4	4
UR	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
US	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
UY												-	1	1	2	2
VC												-	1	-	-	-
	372	**292**	**288**	**291**	**274**	**325**	**283**	**259**	**223**	**211**	**243**	**231**	**235**	**248**	**276**	**241**

Licences

Table B.2 Licence allocations by fishing fleet and year

FISHING	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
BZ	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
CB	-	-	-	-	-	1	1	2	1	-	-	-	-	-	-
CL	-	1	2	1	-	1	-	-	-	2	-	-	2	-	-
CN	3	2	4	-	-	-	-	-	-	-	-	-	-	-	-
DE	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
EE	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
ES	36	59	65	59	61	55	61	63	67	64	64	59	54	52	48
FK	73	69	62	54	55	58	58	57	60	52	52	49	61	60	53
GH	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
JP	2	1	1	1	1	1	1	1	-	-	-	-	-	-	-
KR	43	42	41	38	21	34	35	35	36	36	35	32	32	32	30
NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PA	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-
RU	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
SH	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
SL	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-
TW	34	10	19	13	8	45	61	67	65	71	71	73	73	75	73
UK	6	4	4	4	6	4	4	4	4	4	5	4	5	3	4
UY	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
VU	2	-	-	-	-	1	2	-	2	4	4	4	4	4	4
	204	**194**	**200**	**170**	**154**	**203**	**223**	**231**	**235**	**233**	**231**	**221**	**231**	**226**	**212**

Table B.3 Licence 'A' (Unrestricted finfish - first season, 1999-2007; both seasons since 2008) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	11	15	17	19	17	15	14	17	16	12
FK	10	12	11	11	11	10	7	10	10	7
KR	-	1	-	-	-	-	-	-	-	-
UK	1	1	1	1	1	1	1	1	1	1
	22	**29**	**29**	**31**	**29**	**26**	**22**	**28**	**27**	**20**

Licences

Table B.4 Licence 'B' (Illex squid) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CB	1	1	2	1	-	-	-	-	-	-
FK	-	1	-	-	-	-	-	-	-	-
KR	27	29	30	31	31	31	27	29	30	29
SL	2	-	1	-	-	-	-	-	-	-
TW	45	61	67	65	71	71	73	73	75	73
VU	1	2	-	2	4	4	4	4	4	4
	76	**94**	**100**	**99**	**106**	**106**	**104**	**106**	**109**	**106**

Table B.5 Licence 'C' (Patagonian squid) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	1	2	2	1	2	1	2	3	2	1
FK	16	14	15	15	14	14	14	14	14	14
UK	1	1	1	1	1	1	1	1	1	1
	18	**17**	**18**	**17**	**17**	**16**	**17**	**18**	**17**	**16**

Table B.6 Licence 'E' (Experimental) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	1	-	-	-	-	-	-	-	-	-
DE	-	-	1	-	-	-	-	-	-	-
ES	-	1	-	-	-	1	-	-	-	-
FK	3	4	5	8	5	5	4	12	6	5
KR	-	-	-	-	-	1	-	-	-	-
RU	1	-	-	-	-	-	-	-	-	-
UK	-	-	-	-	-	1	-	1	-	-
	5	**5**	**6**	**8**	**5**	**8**	**4**	**13**	**6**	**5**

Licences

Table B.7 Licence 'F' (Skates and rays) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	4	3	4	4	4	6	5	2	3	4
FK	-	-	-	-	-	-	-	3	2	1
KR	4	4	4	4	4	2	3	2	1	-
	8	**7**	**8**	**8**	**8**	**8**	**8**	**7**	**6**	**5**

Table B.8 Licence 'G' (Illex squid and restricted finfish) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	17	18	21	21	20	20	18	16	15	15
FK	6	7	4	4	2	1	4	2	3	2
	23	**25**	**25**	**25**	**22**	**21**	**22**	**18**	**18**	**17**

Table B.9 Licence 'L' (Toothfish Longliners) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	1	-	-	2	-	-
FK	1	1	1	2	1	1	1	1	1	1
	1	1	1	2	2	1	1	3	1	1

Licences

Table B.10 Licence 'S' (Blue Whiting and Hoki - surimi vessels) allocations by fishing fleet and

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	1	-	-	-	-	-
FK	2	-	2	1	-	1	1	-	1	-
JP	1	1	1	-	-	-	-	-	-	-
Grand Total	**3**	**1**	**3**	**1**	**1**	**1**	**1**	**0**	**1**	**0**

Table B.11 Licence 'W' (Restricted finfish) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	20	20	18	21	19	20	19	15	15	15
FK	6	5	5	5	5	6	4	5	8	8
KR	3	1	1	1	1	1	2	1	1	1
UK	1	1	1	1	1	1	1	1	-	1
	30	**27**	**25**	**28**	**26**	**28**	**26**	**22**	**24**	**25**

Table B.12 Licence 'X' (Patagonian squid - second season) allocations by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	2	2	1	1	2	1	2	1	1	1
FK	14	14	14	14	14	14	14	14	15	15
UK	1	1	1	1	1	1	1	1	1	1
	17	**17**	**16**	**16**	**17**	**16**	**17**	**16**	**17**	**17**

Licences

Table B.13 Annual revenue (Pounds sterling) by licence type

LICENCE	1989	1990	1991	1992	1993	1994	1995	1996
A	537,775	485,949	300,154	191,586	119,854	537,775	485,949	300,154
B	22,723,027	20,698,011	20,961,399	20,865,023	14,301,237	17,440,342	10,867,548	12,176,224
C	4,028,578	5,077,665	3,286,308	2,904,346	3,558,704	3,305,953	3,473,536	3,915,269
E	3,000	1,000	-	12,308	12,303	163,607	196,725	107,022
F	-	-	-	-	-	-	74,214	117,243
G	-	-	-	-	-	-	-	-
L	-	-	-	-	-	-	-	-
R	-	-	-	-	-	140,664	431,363	446,767
S	-	-	-	-	-	-	-	-
W	-	-	113,412	169,895	206,682	413,290	500,679	842,504
X	377,917	613,764	572,085	959,803	1,466,992	2,046,655	2,173,149	2,297,557
Y	939,594	291,531	285,700	187,767	199,798	180,825	164,690	174,748
Z	391,332	774,666	841,843	1,222,974	1,207,635	1,335,812	1,920,068	1,536,543
	29,001,223	**27,942,586**	**26,360,901**	**26,513,702**	**21,073,205**	**25,690,547**	**20,348,929**	**21,977,242**

LICENCE	1997	1998	1999	2000	2001	2002	2003	2004
A	191,586	186,858	247,467	264,667	153,200	229,589	312,757	239,533
B	12,189,748	9,578,864	9,349,734	14,609,416	16,408,604	15,504,408	12,122,222	2,926,562
C	3,489,634	3,694,139	3,840,651	4,063,638	4,515,400	4,495,703	1,446,088	1,509,446
E	180,956	460,752	471,163	190,113	0	0	34,500	56,925
F	-	-	0	83,714	41,311	218,114	85,855	156,778
G	654,702	900,493	1,321,513	755,274	1,001,852	1,176,222	1,085,814	558,859
L	-	-	0	237,250	581,856	581,856	493,873	581,855
R	429,579	73,733	452,362	252,959	405,492	221,071	240,511	263,006
S	-	-	326,903	980,410	914,033	792,191	895,352	1,237,335
W	590,818	868,281	872,436	418,455	303,832	268,804	515,383	905,319
X	1,745,260	2,157,595	1,802,191	1,596,130	2,014,142	1,759,362	1,804,098	2,090,748
Y	284,846	327,707	235,446	276,522	375,871	384,723	434,158	407,128
Z	1,474,175	1,329,126	1,262,615	1,051,854	969,460	920,040	995,807	978,825
	21,296,309	**19,577,548**	**20,182,480**	**24,780,401**	**27,685,053**	**26,552,083**	**20,466,419**	**11,912,319**

LICENCE	2005	2006	2007	2008	2009	2010	2011	2012
A*	160,585	296,901	428,227	1,129,012	1,129,011	1,129,012	1,129,012	1,129,012
B	2,441,087	4,509,716	6,151,234	4,430,958	0	798,205	8,996,154	9,522,332
C	1,534,994	1,763,009	1,734,547	1,939,301	1,939,301	1,939,301	2,133,230	2,133,230
E	84,150	95,600	-	-	-	-	-	-
F**	49,701	-	7,699	274,579	247,121	247,121	247,121	247,121
G	374,079	909,945	627,065	769,004	769,004	845,900	845,900	845,900
L	533,368	579,782	907,704	760,700	760,700	760,700	836,770	836,770
R	405,720	285,453	278,912	-	-	-	-	-
S	449,067	525,669	554,748	543,770	543,770	181,257	181,257	181,257
W***	524,877	488,818	506,479	1,219,240	1,219,240	1,341,160	1,341,160	1,341,160
X	2,510,109	3,263,140	3,263,140	4,242,081	4,242,082	4,242,082	4,242,082	4,242,082
Y	650,185	656,810	459,542	-	-	-	-	-
Z	834,434	1,026,697	474,296	-	-	-	-	-
	10,552,357	**14,401,541**	**15,393,593**	**15,308,645**	**10,850,229**	11,484,738	19,952,686	20,478,864

Licences

Table B.13 Annual revenue (Pounds sterling) by licence type (continue)

LICENCE	2013	2014	2015	2016	2017	2018	2019
A	1,129,012	1,129,012	1,129,012	1,129,012	1,129,012	1,129,012	1,129,012
B	10,597,284	10,616,032	11,208,479	3,346,467	11,093,286	11,247,526	12,325,740
C	2,133,230	2,133,230	2,133,230	2,133,230	2,133,230	2,240,100	2,352,105
E	-	-	-	-	-	-	
F	247,121	247,121	247,121	247,121	247,121	247,121	222,409
G	845,900	845,900	845,900	845,900	845,900	761,300	761,300
L	836,770	836,770	836,770	836,770	836,770	920,500	966,525
S	181,257	60,419	60,419	60,419	60,419	60,419	60,419
W	1,341,160	1,341,160	1,341,160	1,341,160	1,341,160	1,207,000	1,146,650
X	4,242,082	4,242,082	4,242,082	4,242,082	4,242,082	4,454,000	4,676,700
	21,553,816	**21,451,726**	**22,044,173**	**14,182,161**	**21,928,980**	**22,266,978**	**23,640,860**

* - A + Y since 2008; ** - F+R since 2008; *** - W + Z since 2008;

Catch summary tables

In the following tables a "-" sign means there was no catch, "0" means the catch has been rounded to 0.

Table C.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
CO	59,069	46,211	27,896	17,669	1,151	4,807	3,222	1,569	811	274	
JI	195,476	94,743	160,754	149,557	144,189	62,874	62,717	73,128	150,732	79,837	254,026
LO	-	-	-	131	10	2,855	1,901	992	1,241	1,787	2,077
TR	172,270	143,561	115,853	147,601	106,257	126,262	177,332	119,303	77,542	128,976	120,935
	426,814	**284,516**	**304,503**	**314,957**	**251,605**	**196,798**	**245,172**	**194,991**	**230,326**	**210,874**	**377,038**

VESSEL TYPE	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
JI	182,925	146,066	13,001	101,754	1,661	7,775	81,766	157,637	100,348	3	11,645
LO	2,092	1,684	1,754	1,832	2,076	1,791	1,622	1,539	1,511	1,254	1,061
PO	-	-	-	-	-	-	295	85	-	-	2
TR	134,089	117,449	86,224	105,511	99,361	117,551	129,832	142,907	168,193	152,386	196,463
	319,107	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**	**153,643**	**209,171**

VESSEL TYPE	2011	2012	2013	2014	2015	2016	2017	2018	2019
JI	73,577	84,619	139,137	291,770	332,862	2,303	63,849	51,341	41,538
LO	1,406	1,222	1,477	1,367	1,258	1,160	1,126	1,083	1,162
PO	-	-	6	7	5	-	-	0	-
TR	150,496	180,194	123,975	157,825	128,363	108,032	103,225	124,204	153,538
	225,479	**266,035**	**264,595**	**450,969**	**462,487**	**111,495**	**168,174**	**176,628**	**196,238**

Table C.2 Total catch (tonnes) of all species by year

SPECIES	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
BAC	2,814	2,778	2,880	7,055	6,224	4,043	9,084	6,925	4,649	8,121	9,313
BLU	43,468	72,326	50,491	34,078	24,900	38,697	39,154	23,539	26,296	31,483	28,564
ILL	224,022	102,417	174,745	160,016	145,185	66,996	64,122	79,724	149,763	84,993	266,201
KIN	977	850	949	1,952	1,643	899	1,985	1,682	1,392	2,217	2,602
LOL	118,720	82,990	53,817	83,384	52,279	65,757	98,417	61,374	26,122	51,559	34,866
MAR	-	4	141	1	33	-	5,803	111	2,099	-	29
HAK	16,480	11,900	6,759	4,070	3,029	1,414	1,988	1,649	1,554	-	-
PAT	-	-	-	-	-	-	-	-	-	3,502	4,224
RAY	1,749	1,500	6,923	8,108	8,523	5,542	5,432	3,475	3,320	1,077	4,785
TOO	236	208	980	912	393	2,963	2,069	685	1,208	2,103	2,988
WHI	13,313	7,553	4,499	14,188	8,506	10,064	15,603	13,813	13,006	22,378	18,765
OTH	5,036	1,989	2,317	1,192	890	423	1,514	2,015	916	3,443	4,701
	426,814	**284,516**	**304,503**	**314,957**	**251,605**	**196,798**	**245,172**	**194,991**	**230,326**	**210,874**	**377,038**

Table C.2 Total catch (tonnes) of all species by year (cont'd)

SPECIES	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BAC	6,551	3,896	2,617	2,285	2,781	2,467	3,472	5,195	4,076	5,120	3,129
BLU	23,371	25,735	24,908	20,798	28,554	17,047	20,532	22,204	13,209	10,395	6,471
COX	-	-	-	-	-	8,641	21,012	30,386	60,601	58,236	76,451
ILL	189,709	150,631	13,411	103,375	1,720	7,937	85,622	161,506	106,189	44	12,111
KIN	1,875	1,625	1,224	1,275	1,841	1,936	2,822	3,592	2,227	3,390	3,639
LOL	64,493	53,560	23,712	47,422	26,835	58,813	43,064	42,003	52,260	31,474	66,543
MAR	-	147	1	31	24	-	-	4	-	0	-
HAK	-	-	-	-	-	-	8,410**	11,909*	8,806*	13,049	13,606
PAT	3,069	1,978	1,678	1,967	1,926	2,735*	23***	-	-	0	0
RAY	3,853	4,309	3,364	3,988	5,151	5,698	4,683	5,669	3,861	5,873	5,891
TOO	2,318	1,754	1,793	1,707	2,002	1,677	1,568	1,520	1,429	1,418	1,404
WHI	19,831	19,471	26,970	23,815	25,905	16,723	19,769	16,669	15,908	23,404	19,227
GRX	-	-	-	-		778	800	629	943	965	455
ZYP	-	76	59	685	1,279	1,358	1,161	14	6	13	3
OTH	4,037	2,018	1,242	1,748	5,080	1,309	578	869	536	263	241
	319,107	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**	**153,643**	**209,171**

SPECIES	2011	2012	2013	2014	2015	2016	2017	2018	2019
BAC	4,210	4,629	5,164	3,467	3,340	3,143	1,379	1,654	1,767
BLU	3,940	1,596	2,698	3,612	2,790	5,415	2,309	992	518
COX	55,705	63,510	32,435	56,693	29,086	7,039	2,520	2,213	950
ILL	79,264	87,002	142,619	306,111	357,722	2,360	67,445	54,405	43,398
KIN	3,867	3,510	3,977	2,881	2,983	1,612	1,632	1,445	1,712
LOL	34,675	70,894	40,168	48,702	30,317	46,447	64,676	79,996	81,908
MAR	-	-	-	10	0	0	0	-	0
HAK	9,904	10,489	12,308	14,875	21,054	23,363	15,589	27,021	53,320
PAT ***	0	0	0	-	14	531	170	70	96
RAY	6,970	6,655	5,932	5,555	6,393	5,906	3,189	1,994	1,503
TOO	1,560	1,311	1,422	1,297	1,227	1,499	1,519	1,259	1,317
WHI	22,979	15,867	16,849	7,392	6,845	11,562	4,053	4,438	7,407
GRX	2,062	225	517	216	367	2,335	3,273	484	413
ZYP	11	0	0	1	1	8	4	4	2
OTH	331	347	506	155	347	274	414	654	1,929
	225,479	**266,035**	**264,595**	**450,969**	**462,487**	**111,495**	**168,174**	**176,628**	**196,238**

* - *Merluccius spp*,

** - *M.hubbsi*,

*** - *M.australis*

Catch summary tables

Table C.3 Total catch (tonnes) by month and year

MONTH	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
January	2,475	.	5,128	5,217	3,723	9,149	7,810	5,217	7,918	7,687	6,605
February	30,652	26,620	19,493	21,028	6,789	13,273	28,800	15,782	8,660	19,942	29,626
March	89,952	74,890	88,553	96,826	39,900	52,894	46,084	49,887	29,199	47,799	98,631
April	131,835	56,338	83,954	79,745	79,365	27,654	49,391	48,971	60,718	63,064	104,827
May	73,998	28,475	32,258	24,303	51,777	18,914	21,514	19,526	68,234	22,936	73,790
June	11,913	1,017	112	107	437	2,002	1,786	1,211	10,474	2,821	12,665
July	5,265	2,437	2,538	223	1,577	2,172	2,937	1,418	2,625	1,596	2,313
August	24,987	13,196	14,895	22,415	20,227	18,151	25,736	16,451	10,019	13,012	13,364
September	26,143	33,653	21,075	26,933	16,111	19,569	25,540	13,562	8,668	11,157	11,853
October	14,221	17,836	13,123	19,839	11,891	16,105	14,486	8,315	7,960	7,778	9,857
November	8,909	19,119	9,832	10,736	11,056	8,805	11,881	7,406	8,381	6,395	7,138
December	6,463	10,934	13,542	7,585	8,751	8,111	9,205	7,245	7,470	6,689	6,370
	426,814	**284,516**	**304,503**	**314,957**	**251,605**	**196,798**	**245,172**	**194,991**	**230,326**	**210,874**	**377,038**

MONTH	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
January	5,213	6,497	3,536	5,881	2,901	1,712	2,181	2,381	4,072	3,804	2,742
February	47,924	10,926	12,306	16,612	9,405	7,562	10,867	11,142	14,326	12,427	12,883
March	94,536	81,574	17,335	91,036	15,081	27,436	48,141	40,210	38,998	20,338	40,981
April	63,840	71,936	13,811	37,830	11,292	10,581	46,987	86,244	65,736	18,753	30,748
May	48,684	38,621	15,504	5,680	4,930	3,870	28,058	69,293	46,779	17,809	16,803
June	2,854	2,199	1,473	1,385	727	712	1,840	8,694	16,356	5,955	6,948
July	2,502	1,299	253	877	6,771	11,786	10,168	12,356	10,254	14,481	17,796
August	16,528	17,380	11,863	21,491	14,344	22,575	23,414	26,175	20,967	16,506	28,251
September	16,874	15,306	5,751	14,513	10,571	17,115	15,654	20,049	23,084	15,139	22,304
October	8,333	12,413	5,668	8,831	13,552	11,010	13,520	14,000	15,444	13,499	12,286
November	7,306	4,933	8,638	3,981	8,412	9,646	8,895	9,768	9,967	9,328	9,881
December	4,513	2,112	4,841	980	5,114	3,113	3,790	1,856	4,070	5,605	7,548
	319,107	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**	**153,643**	**209,171**

MONTH	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	4,973	625	3,758	142	217	3,458	497	127	5,091
February	11,110	17,747	8,684	4,136	18,848	10,231	2,901	6,360	21,490
March	75,786	75,158	39,918	84,249	132,218	15,693	51,813	59,604	60,532
April	37,109	54,366	72,662	155,782	164,810	19,478	53,614	34,512	33,790
May	18,678	26,086	68,741	102,399	89,798	9,302	9,674	11,339	12,895
June	8,222	7,749	7,817	23,929	11,276	4,871	2,359	4,525	10,860
July	15,423	13,019	8,022	16,834	6,453	6,614	6,794	9,823	15,145
August	18,736	30,540	18,437	22,030	14,286	19,333	16,881	28,271	26,964
September	13,130	19,041	20,021	18,973	9,711	13,089	14,890	14,534	7,850
October	10,381	12,185	8,966	10,816	5,224	6,788	5,145	4,869	1,107
November	6,693	5,829	4,275	8,682	3,761	1,281	2,800	964	130
December	5,237	3,689	3,294	2,997	5,885	1,357	806	1,699	385
	225,479	**266,035**	**264,595**	**450,969**	**462,487**	**111,495**	**168,174**	**176,628**	**196,238**

Catch summary tables

Table C.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	6	7	5	-	-	0	-
400-599	98	761	936	1,245	2,579	-	-	-	-	-
600-799	16,299	30,329	35,335	42,597	69,018	55,821	5,025	11,143	9,264	10,503
800-999	23,756	61,453	71,471	102,421	213,020	264,132	21,482	58,509	48,284	44,226
1,000-1,499	78,975	68,654	76,217	69,032	102,123	90,293	31,278	34,371	44,012	56,903
1,500-1,999	46,090	38,032	44,253	27,628	35,706	28,176	29,271	32,893	35,624	44,539
2,000-2,999	37,934	21,060	37,005	21,246	26,848	24,061	24,364	31,258	39,445	40,067
>2,999	6,018	5,225	816	428	1,681	-	70	-	-	-
	209,171	**225,513**	**266,033**	**264,604**	**450,983**	**462,488**	**111,490**	**168,174**	**176,628**	**196,238**

Table C.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	730	2,831	936	1,720	2,823	640	980	-	122	-
45-49	11,903	12,256	16,447	18,793	25,519	24,364	4,186	5,227	5,525	1,827
50-54	12,015	23,916	30,234	32,464	58,004	44,182	8,065	9,347	9,006	12,116
55-59	23,450	37,177	40,142	46,226	65,129	65,313	8,481	16,819	13,010	19,087
60-64	26,009	37,730	43,878	48,833	71,260	72,552	12,110	14,748	18,039	23,841
65-69	55,724	50,627	56,227	48,495	92,152	102,163	29,818	43,196	44,090	47,489
70-79	53,350	42,939	57,385	55,973	119,367	140,424	33,393	61,539	61,687	67,774
80-89	9,688	6,480	8,790	5,509	7,152	5,776	6,457	9,707	11,514	10,930
>89	16,301	11,556	11,993	6,591	9,576	7,074	7,999	7,590	13,634	13,173
	209,171	**225,513**	**266,033**	**264,604**	**450,983**	**462,488**	**111,490**	**168,174**	**176,628**	**196,238**

Table C.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	2	-	-	830	7	5	-	-	478	-
1,000-1,199	730	1,797	936	1,714	2,816	635	980	-	621	493
1,200-1,399	3,748	6,975	9,397	12,327	17,228	14,155	23	2,434	1,989	1,446
1,400-1,599	19,155	34,656	37,546	40,149	65,903	55,975	11,893	15,235	13,860	19,552
1,600-1,799	14,060	13,842	15,531	20,933	37,281	36,051	4,155	5,580	2,936	2,744
1,800-1,999	65,587	72,033	80,486	71,511	106,547	95,240	34,438	36,171	33,859	45,919
2,000-2,499	35,584	46,105	51,715	57,991	121,199	138,870	16,116	34,129	31,266	29,225
2,500-2,999	4,138	10,517	13,894	22,235	48,833	75,132	4,877	23,329	24,009	21,311
3,000-3,999	44,567	25,394	39,107	24,208	29,982	26,662	26,714	33,228	47,142	55,226
>3,999	21,599	14,193	17,421	12,705	21,185	19,764	12,294	18,068	20,438	20,321
	209,171	**225,513**	**266,033**	**264,604**	**450,983**	**462,488**	**111,490**	**168,174**	**176,599**	**196,238**

Catch summary tables

Table C.7 Total catch (tonnes) by fishing fleet and year

FLEET	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
AU	-	-	-	-	-	-	-	-	-	3593	3,711
BG	13,503	22,369	21,888	8,981	2,976	-	-	-	-	-	-
BZ	-	-	-	-	-	-	585	-	-	-	4,511
CL	1,150	1,884	-	3,145	1,514	5,223	9,997	6,638	8,199	8849	5,491
CN	-	-	-	-	-	-	-	-	-	1177	7,301
ES	82,345	65,908	57,605	87,763	58,143	67,191	89,284	40,842	20,510	40307	35,909
FK	781	5,853	1,470	1,846	1,978	5,906	27,184	31,520	17,117	43578	39,131
FR	-	-	-	-	-	1,945	7,369	4,600	1,545	4177	2,381
GR	4,960	3,121	-	-	-	-	-	-	-	-	-
HN	-	-	1,712	2,761	3,681	2,976	2,833	850	-	-	-
IS	-	-	-	-	-	-	-	214	268	-	-
IT	10,391	4,547	2,409	2,923	2,142	1,181	218	-	-	-	-
JP	125,567	60,028	93,652	68,325	39,510	39,916	25,583	24,870	46,060	56992	57,971
KR	51,133	32,996	61,614	72,489	65,228	42,987	63,236	73,861	129,546	45082	207,795
NA	-	-	-	-	-	-	-	-	303	676	746
NL	4,587	3,369	-	-	-	-	-	-	-	-	-
NO	-	1,384	-	-	-	-	-	319	210	-	-
PA	-	-	2,425	4,027	1,060	598	459	706	-	1098	61
PL	74,039	64,765	43,878	32,996	12,442	11,178	8,861	3,262	-	-	-
PT	9,143	6,430	3,268	1,548	1,809	2,512	5,157	1,052	-	-	-
RU	-	-	-	-	-	39	-	-	-	-	-
SC									1,252	-	-
SL	-	-	-	1,150	822	373	-	-	-	-	-
TW	37,529	10,479	12,590	27,002	59,853	13,497	2,323	1,901	3,013	1734	8,771
UK	11,685	1,383	1,992	-	445	1,255	2,083	4,357	2,302	3575	3,259
UR	-	-	-	-	-	21	-	-	-	-	-
UY	-	-	-	-	-	-	-	-	-	36	-
	426,814	**284,516**	**304,503**	**314,957**	**251,605**	**196,798**	**245,172**	**194,991**	**230,326**	**210,874**	377,038

FLEET	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BZ	6,729	2,581	136	2,788	42	61	-	2,285	-	-	-
CB	2,768	1,204	33	857	17	-	-	-	-	-	94
CL	2,749	8,014	9,252	6,490	9,752	-	2,131	3,948	1,640	-	-
CN	11,641	18,838	1,203	12,652	99	99	3,555	8,575	-	-	-
EE	-	-	-	-	226	-	1,427	-	-	-	-
ES	30,732	29,170	23,972	20,169	22,488	24,559	42,057	56,187	72,152	80,267	88,060
FK	62,947	59,820	35,732	60,596	43,320	71,204	65,255	65,809	76,969	58,549	93,191
FR	2,053	-	-	-	-	-	-	-	-	-	-
GH	-	-	-	-	-	-	1,244	-	-	-	-
JP	41,737	27,913	14,485	18,923	15,062	11,230	12,049	9,042	8,820	7,443	6,018
KR	128,940	86,587	12,637	53,677	6,008	10,076	61,748	101,162	81,267	3,317	9,407
NA	-	-	-	-	1,181	-	-	-	-	-	-
NZ	-	-	-	69	-	-	-	-	-	-	-
PA	-	-	-	-	-	194	585	1,254	-	-	-
PT	66	-	-	-	-	-	-	-	-	-	-
RU	-	228	-	6,891	31	-	-	-	-	-	2
SL	-	-	-	-	-	-	-	-	-	-	178
TW	23,243	25,380	1,190	22,057	866	3,106	18,554	49,985	24,353	-	5,808
UK	5,501	3,564	2,279	3,238	2,703	5,100	3,742	3,923	4,850	4,067	6,271
UY	-	81	61	690	1,303	1,369	1,169	-	-	-	-
VC	-	1,820	-	-	-	-	-	-	-	-	-
VU	-	-	-	-	-	120	-	-	-	-	142
	319,107	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**	**153,643**	**209,171**

Table C.7 Total catch (tonnes) by fishing fleet and year, continued

FLEET	2011	2012	2013	2014	2015	2016	2017	2018	2019
CB	1,144	1,695	1,468	-	-	-	-	-	-
CL	-	-	-	1,729	-	-	276	-	-
ES	77,895	84,914	59,011	81,264	68,438	48,165	34,020	35,018	63,580
FK	62,196	85,829	60,473	67,685	52,458	55,263	63,892	84,051	85,444
JP	4,745	109	-	-	-	-	-	-	-
KR	26,310	32,786	52,216	107,343	101,309	2,743	17,902	13,440	9,929
RU	-	-	-	-	-	-	-	-	-
SL	-	340	-	-	-	-	-	-	-
TW	48,540	55,327	86,147	178,389	223,339	2,058	45,209	36,518	30,687
UK	2,861	5,033	2,968	3,528	3,749	3,184	4,212	4,902	5,090
VU	1,821	-	2,322	11,044	13,195	77	2,664	2,669	1,507
	225,513	**266,033**	**264,604**	**450,983**	**462,488**	**111,490**	**168,174**	**176,599**	**196,238**

Illex argentinus—Illex squid

Table D.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JI	11,645	73,577	84,619	139,137	291,774	332,863	2,297	63,807	51,360	41,538
TR	466	5,688	2,383	3,481	14,348	24,861	57	3,638	3,012	1,860
	12,111	**79,264**	**87,002**	**142,619**	**306,122**	**357,724**	**2,355**	**67,445**	**54,372**	**43,398**

Table D.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	-	-	1	-	-	-	1	0	-	-
February	134	987	9,247	195	7	13,918	77	9	3,814	11,145
March	9,847	60,836	40,558	20,910	66,670	110,741	2,055	29,892	34,124	29,345
April	2,128	17,382	29,213	57,455	137,647	153,163	199	33,121	14,647	2,796
May	1	59	7,959	59,361	87,696	75,544	19	4,415	1,785	111
June	-	0	23	4,695	14,007	4,352	2	8	1	-
July	-	-	-	2	94	6	0	0	0	0
August	-	-	-	2	1	0	0	0	0	1
September	0	-	-	0	0	1	0	0	0	0
October	1	-	0	-	-	-	1	0	-	-
November	-	0	-	-	-	-	-	-	-	-
December	-	0	-	-	-	-	0	0	0	-
	12,111	**79,264**	**87,002**	**142,619**	**306,122**	**357,724**	**2,355**	**67,445**	**54,372**	**43,398**

Table D.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CB	94	1,144	1,695	1,468	-	-	-	-	-	-
ES	187	2,035	509	2,798	9,527	9,809	46	2,800	1,545	1,161
FK	67	2,828	572	650	2,870	11,889	12	278	946	163
KR	5,635	22,892	28,554	49,236	104,257	98,584	162	16,491	12,695	9,878
SL	178	-	340	-	-	-	-	-	-	-
TW	5,808	48,540	55,327	86,147	178,389	223,339	2,058	45,209	36,517	30,687
UK	-	4	6	0	36	909	-	3	0	0
VU	142	1,821	-	2,322	11,044	13,195	77	2,664	2,669	1,507
	12,111	**79,264**	**87,002**	**142,619**	**306,122**	**357,724**	**2,355**	**67,445**	**54,372**	**43,398**

Table D.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	98	761	936	1,245	2,579	-	-	-	-	-
600-799	4,173	21,395	24,365	35,080	61,707	49,495	72	7,625	4,897	3,601
800-999	6,679	46,325	54,022	85,758	192,671	246,467	2,036	49,872	37,118	27,906
1,000-1,499	1,064	8,428	7,576	19,714	46,916	49,307	233	9,251	11,892	11,620
1,500-1,999	96	1,184	102	821	2,131	5,474	11	691	438	268
2,000-2,999	-	1,173	1	0	119	6,981	2	6	27	4
>2,999	-	-	-	-	0	-	-	-	-	-
	12,111	**79,264**	**87,002**	**142,619**	**306,122**	**357,724**	**2,355**	**67,445**	**54,372**	**43,398**

Table D.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	98	871	936	1,245	2,579	-	-	-	-	-
45-49	1,268	5,096	6,637	11,610	19,372	18,956	16	2,938	2,987	1,827
50-54	3,285	16,605	18,971	24,447	49,123	35,478	23	4,884	2,928	2,148
55-59	2,757	20,557	21,552	30,728	54,795	56,002	355	10,839	5,925	4,048
60-64	2,236	17,115	19,929	29,740	49,074	56,735	232	9,354	6,958	7,472
65-69	2,068	12,850	13,351	21,415	54,216	76,182	742	17,352	16,152	13,014
70-79	399	5,283	5,626	23,434	76,947	110,597	986	22,074	19,395	14,885
80-89	-	503	-	-	6	1,637	1	1	0	0
>89	-	384	-	0	11	2,137	1	2	26	3
	12,111	**79,264**	**87,002**	**142,619**	**306,122**	**357,724**	**2,355**	**67,445**	**54,372**	**43,398**

Table D.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	98	761	936	1,245	2,579	-	-	-	621	493
1,200-1,399	947	5,208	6,132	9,847	14,863	12,681	23	2,434	1,989	1,446
1,400-1,599	3,400	20,724	21,094	27,555	51,947	42,725	89	5,513	2,844	1,711
1,600-1,799	1,696	6,841	9,683	15,648	32,897	31,886	97	5,126	2,936	2,744
1,800-1,999	2,999	22,098	23,344	33,294	62,445	64,253	291	12,463	8,295	5,384
2,000-2,499	2,019	14,523	18,196	34,270	89,699	116,396	944	19,909	16,336	13,842
2,500-2,999	946	7,248	7,565	17,615	43,767	70,356	783	20,271	19,993	17,031
3,000-3,999	6	1,362	47	2	161	7,005	3	8	29	12
>3,999	-	499	4	3,144	7,764	12,423	127	1,723	1,329	734
	12,111	**79,264**	**87,002**	**142,619**	**306,122**	**357,724**	**2,355**	**67,445**	**54,372**	**43,398**

Table D.7 Total catch (tonnes) of jiggers by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	98	761	936	1,245	2,579	-	-	-	-	-
600-799	4,152	21,000	24,327	34,767	60,488	48,489	68	7,266	4,457	3,450
800-999	6,457	45,065	52,609	85,278	188,197	242,582	2,028	48,762	35,671	27,193
1,000-1,499	937	6,751	6,748	17,848	40,510	41,792	202	7,779	11,232	10,894
1,500-1,999	-	-	-	-	-	-	-	-	-	-
2,000-2,999	-	-	-	-	-	-	-	-	-	-
>2,999	-	-	-	-	-	-	-	-	-	-
	11,645	**73,577**	**84,619**	**139,137**	**291,774**	**332,863**	**2,297**	**63,807**	**51,360**	**41,538**

Table D.8 Total catch (tonnes) of jiggers by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	98	761	936	1,245	2,579	-	-	-	-	-
45-49	1,256	4,973	6,610	11,326	18,786	18,136	15	2,938	2,487	1,827
50-54	3,273	16,346	18,870	24,287	48,080	34,429	20	4,359	2,373	1,996
55-59	2,527	19,081	19,894	30,141	51,404	52,549	348	9,505	5,092	3,205
60-64	2,154	16,409	19,619	28,849	45,361	53,966	210	9,015	6,792	7,370
65-69	1,967	12,164	13,163	20,896	50,906	71,209	725	16,231	15,538	12,677
70-79	370	3,843	5,529	22,393	74,658	102,574	980	21,759	19,078	14,463
80-89	-	-	-	-	-	-	-	-	-	-
>89	-	-	-	-	-	-	-	-	-	-
	11,645	**73,577**	**84,619**	**139,137**	**291,774**	**332,863**	**2,297**	**63,807**	**51,360**	**41,538**

Table D.9 Total catch (tonnes) of jiggers by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	98	761	936	1,245	2,579	-	-	-	621	493
1,200-1,399	946	5,208	6,127	9,621	14,306	12,350	23	2,434	1,989	1,446
1,400-1,599	3,386	20,053	21,034	27,247	50,110	40,864	82	4,770	2,168	1,530
1,600-1,799	1,643	6,419	9,424	15,402	31,778	31,524	94	5,126	2,936	2,744
1,800-1,999	2,879	20,887	22,837	32,067	57,113	59,143	253	10,607	6,930	4,767
2,000-2,499	1,959	13,821	18,068	32,901	86,665	111,654	938	19,608	16,040	13,331
2,500-2,999	734	6,428	6,194	17,510	41,471	67,731	782	19,547	19,355	16,495
3,000-3,999	-	-	-	-	-	-	-	-	-	-
>3,999	-	-	-	3,144	7,752	9,599	125	1,715	1,320	732
	11,645	**73,577**	**84,619**	**139,137**	**291,774**	**332,863**	**2,297**	**63,807**	**51,360**	**41,538**

Table D.10 Total catch (tonnes) of trawlers by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	21	394	38	314	1,219	1,006	4	359	440	150
800-999	222	1,259	1,413	480	4,474	3,885	9	1,109	1,448	712
1,000-1,499	127	1,678	828	1,866	6,406	7,515	32	1,473	659	726
1,500-1,999	96	1,184	102	821	2,131	5,474	11	691	438	268
2,000-2,999	-	1,173	1	0	119	6,981	2	6	27	4
>2,999	-	-	-	-	0	-	-	-	-	-
	466	**5,688**	**2,383**	**3,481**	**14,348**	**24,861**	**57**	**3,638**	**3,012**	**1,860**

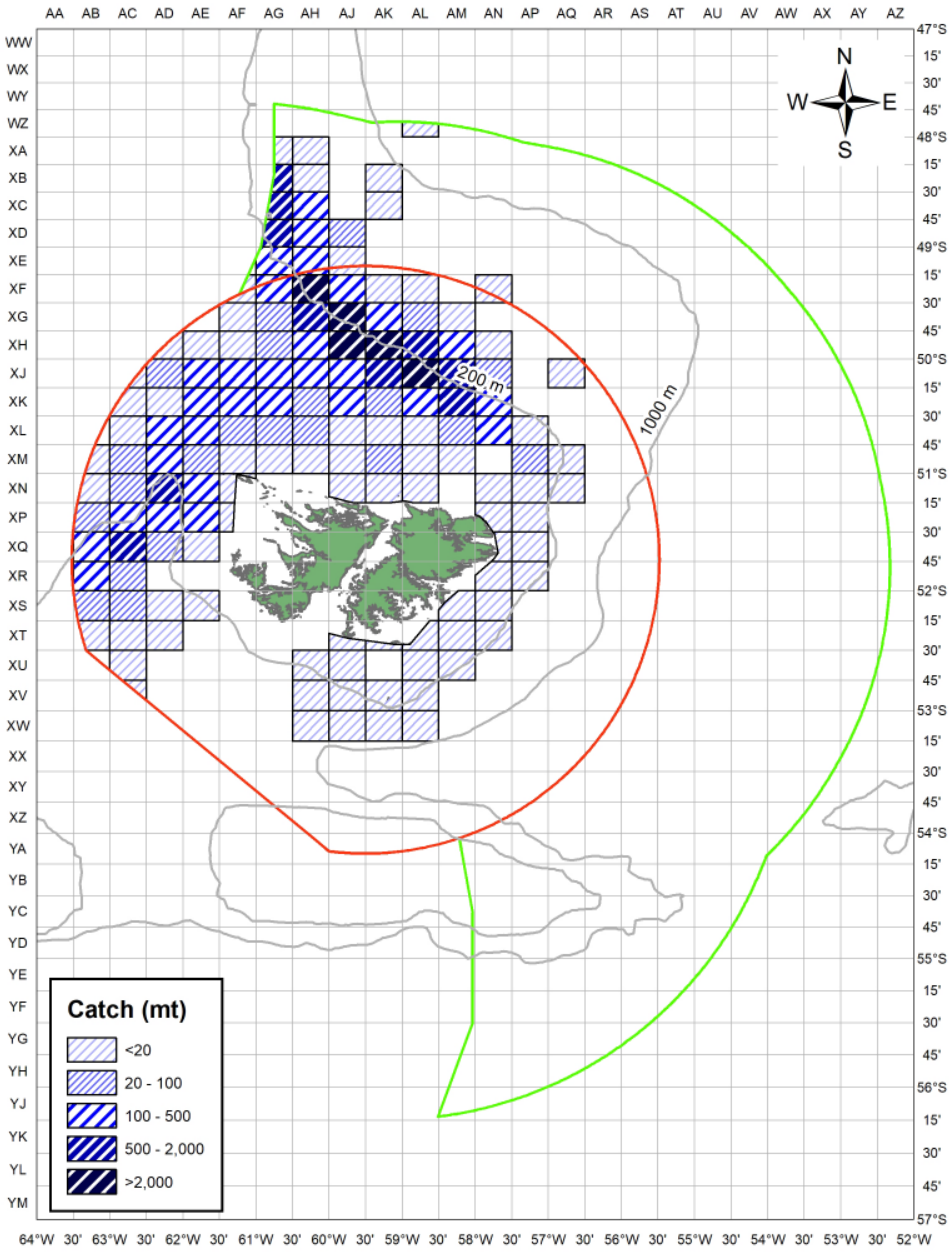
Table D.11 Total catch (tonnes) of trawlers by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	-	110	-	-	-	-	-	-	-	-
45-49	12	123	27	285	586	820	1	0	500	-
50-54	12	259	102	159	1,042	1,048	4	526	556	152
55-59	230	1,476	1,658	587	3,391	3,453	7	1,334	834	842
60-64	82	705	311	891	3,713	2,768	22	339	167	102
65-69	101	686	188	519	3,310	4,973	17	1,121	614	338
70-79	29	1,440	98	1,041	2,289	8,024	6	315	317	423
80-89	-	503	-	-	6	1,637	1	1	0	0
>89	-	384	-	0	11	2,137	1	2	26	3
	466	**5,688**	**2,383**	**3,481**	**14,348**	**24,861**	**57**	**3,638**	**3,012**	**1,860**

Table D.12 Total catch (tonnes) of trawlers by brake horsepower (BHP) and year

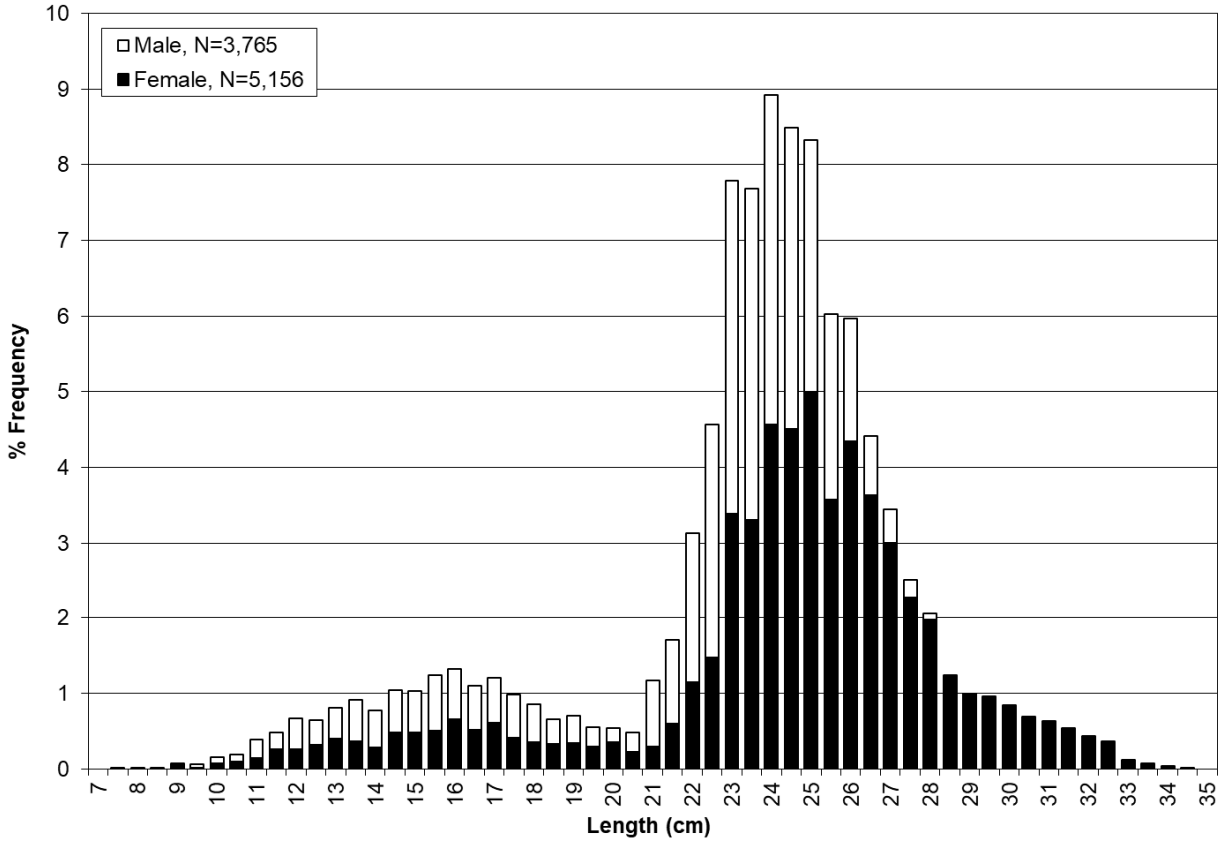
BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	-	-	-	-	-	-	-	-	-	-
1,200-1,399	1	-	6	225	557	331	-	-	-	-
1,400-1,599	14	670	60	308	1,838	1,861	7	742	676	181
1,600-1,799	52	422	259	246	1,119	362	3	-	-	-
1,800-1,999	120	1,211	507	1,227	5,332	5,110	38	1,855	1,365	617
2,000-2,499	61	703	128	1,368	3,034	4,742	5	301	295	511
2,500-2,999	212	821	1,371	105	2,296	2,625	0	724	637	536
3,000-3,999	6	1,362	47	2	161	7,005	3	8	29	12
>3,999	-	499	4	-	12	2,824	1	8	10	2
	466	**5,688**	**2,383**	**3,481**	**14,348**	**24,861**	**57**	**3,638**	**3,012**	**1,860**

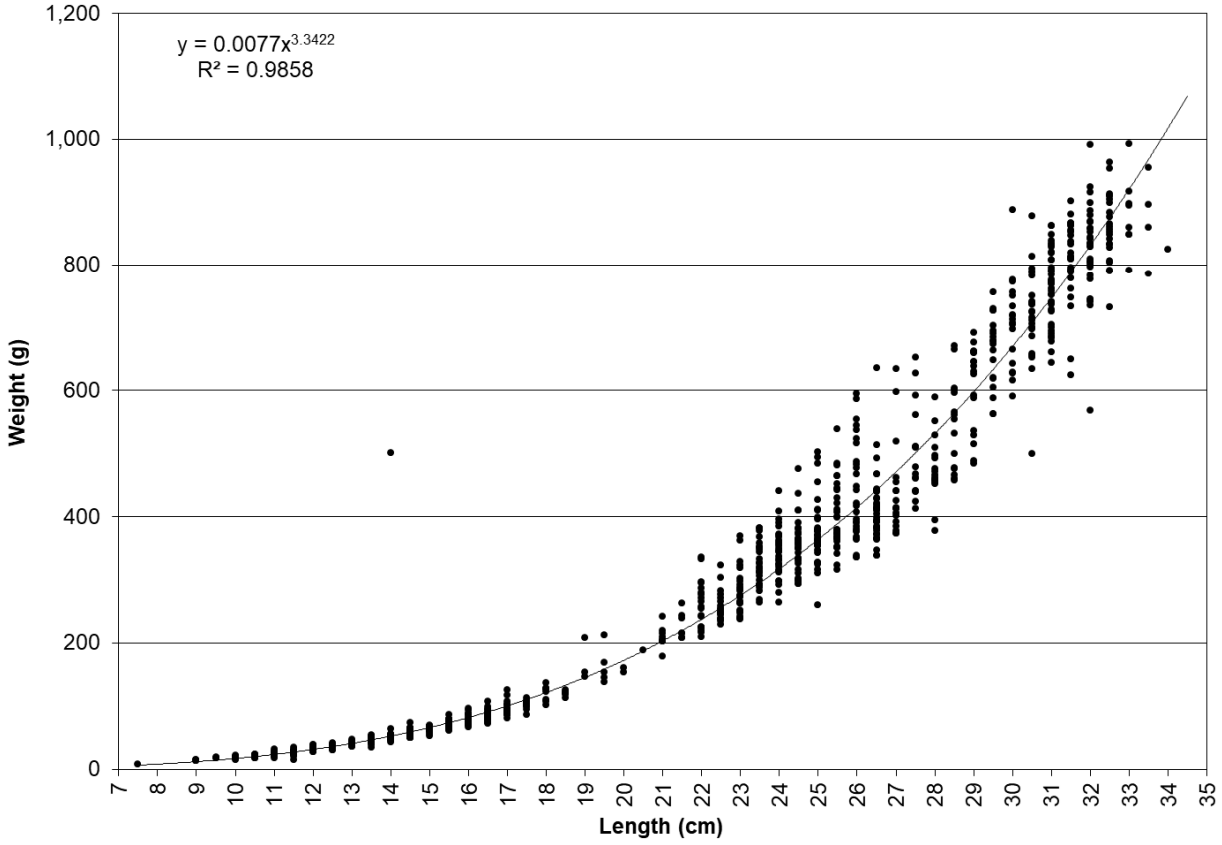
Illex argentinus
First Season 2019 (01 Jan to 30 Jun)



Illex argentinus—Illex squid

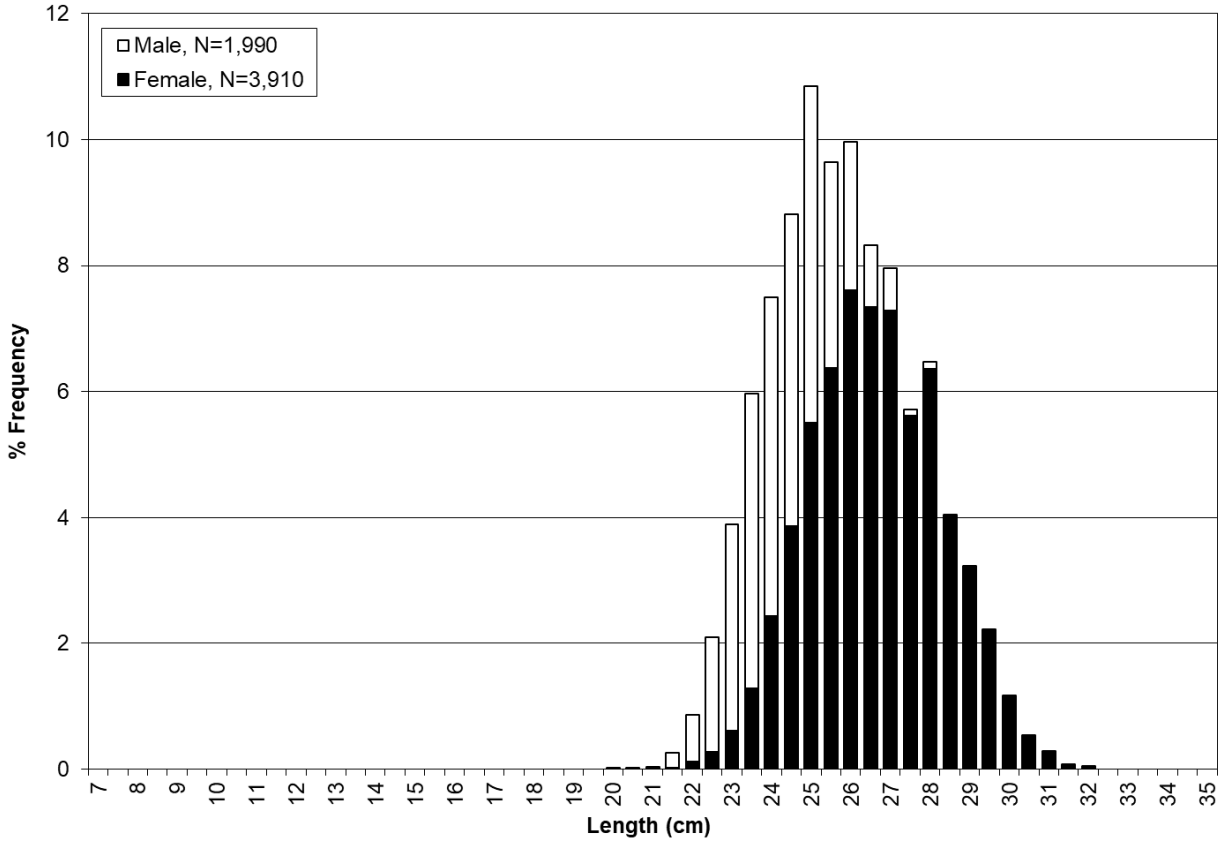
Length– frequency distribution and length-weight relationship in trawler fleet in 2019

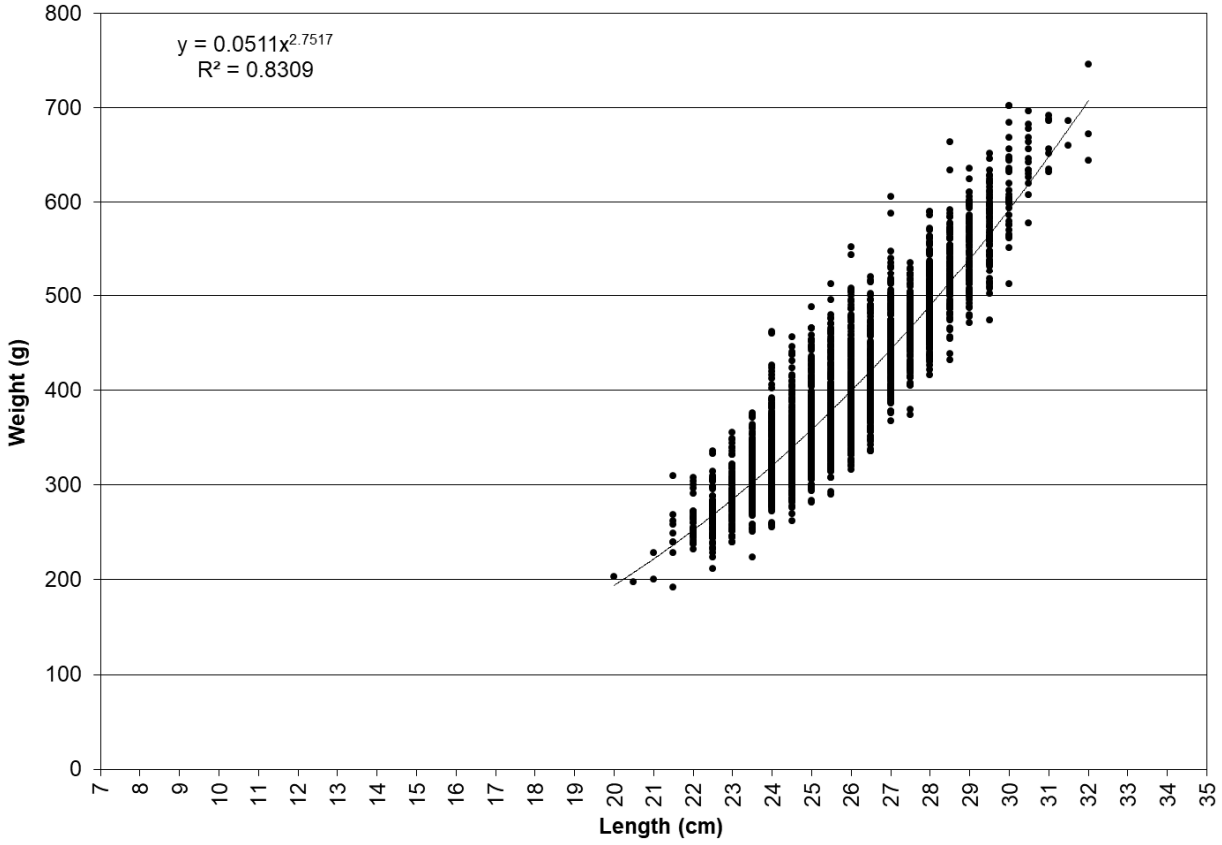




Illex argentinus—Illex squid

Length– frequency distribution and length-weight relationship in jigger fleet in 2019





Doryteuthis gahi - Falkland Calamari

Table E.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
TR	66,543	34,675	70,897	40,168	48,700	30,317	46,447	64,676	79,996	81,908
	66,543	**34,675**	**70,897**	**40,168**	**48,700**	**30,317**	**46,447**	**64,676**	**79,996**	**81,908**

Table E.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	0	-	-	-	-	-	0	5	-	2
February	4,455	1,308	3,885	1,293	2,167	2,048	1,222	2,224	1,407	6,377
March	16,963	10,276	21,154	12,983	13,832	14,630	8,713	20,244	23,412	26,926
April	7,733	3,826	9,917	5,724	12,318	3,007	12,832	16,322	16,852	22,638
May	5	20	18	35	47	115	55	1,081	1,715	516
June	3	11	22	9	15	4	17	24	15	23
July	11,013	7,075	6,362	5,006	4,800	1,176	1,879	2,509	3,745	4,537
August	16,654	8,186	17,595	7,740	9,641	8,056	12,746	12,432	22,910	18,877
September	9,622	3,856	11,784	7,223	5,778	1,204	7,763	9,016	9,273	2,002
October	80	99	145	132	92	55	1,217	817	657	8
November	16	18	15	21	11	20	2	2	7	0
December	0	-	1	1	-	3	-	0	2	-
	66,543	**34,675**	**70,897**	**40,168**	**48,700**	**30,317**	**46,447**	**64,676**	**79,996**	**81,908**

Table E.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	3,723	2,614	3,353	2,261	2,442	1,676	2,851	6,677	4,615	4,026
FK	58,016	30,580	62,671	35,243	42,927	26,478	40,823	54,039	70,680	73,148
JP	0	-	-	-	-	-	-	-	-	-
KR	34	54	87	34	39	2	7	12	1	2
UK	4,770	1,426	4,786	2,629	3,292	2,161	2,767	3,948	4,699	4,732
	66,543	**34,675**	**70,897**	**40,168**	**48,700**	**30,317**	**46,447**	**64,676**	**79,996**	**81,908**

Table E.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	76	45	97	58	30	13	48	62	22	29
800-999	3,030	1,892	3,405	2,157	2,371	1,598	2,509	2,666	65	57
1,000-1,499	10,769	5,967	11,167	6,988	7,906	5,056	7,935	10,897	16,263	16,448
1,500-1,999	20,173	9,554	21,284	11,990	14,603	9,377	13,775	21,467	25,104	26,130
2,000-2,999	32,494	17,212	34,932	18,969	23,784	14,272	22,180	29,584	38,542	39,244
>2,999	0	4	13	7	5	-	-	-	-	-
	66,543	**34,675**	**70,897**	**40,168**	**48,700**	**30,317**	**46,447**	**64,676**	**79,996**	**81,908**

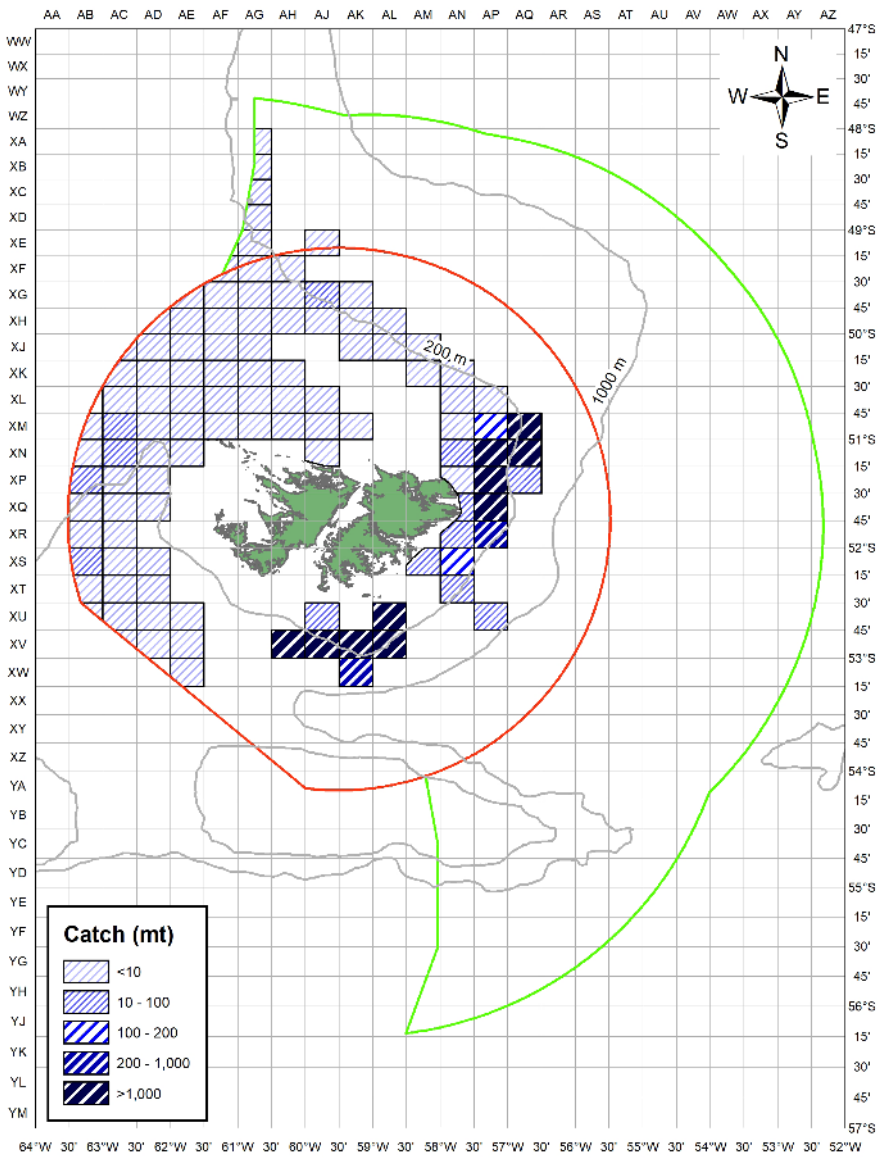
Table E.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	0	12	-	1	0	3	2	-	0	-
45-49	2,728	1,702	3,321	2,111	2,318	1,577	2,431	1,368	41	-
50-54	77	35	114	60	36	14	53	62	20	29
55-59	345	213	124	60	50	4	80	59	25	44
60-64	34	27	801	340	252	36	278	16	4,735	4,828
65-69	15,921	6,729	15,702	9,404	11,389	7,275	10,677	15,969	16,474	12,620
70-79	30,114	16,643	32,318	18,060	21,758	13,623	20,214	31,793	34,588	40,846
80-89	7,655	4,335	8,114	4,772	5,937	3,381	5,471	8,317	10,800	10,479
>89	9,669	4,979	10,403	5,361	6,959	4,403	7,241	7,092	13,312	13,061
	66,543	**34,675**	**70,897**	**40,168**	**48,700**	**30,317**	**46,447**	**64,676**	**79,996**	**81,908**

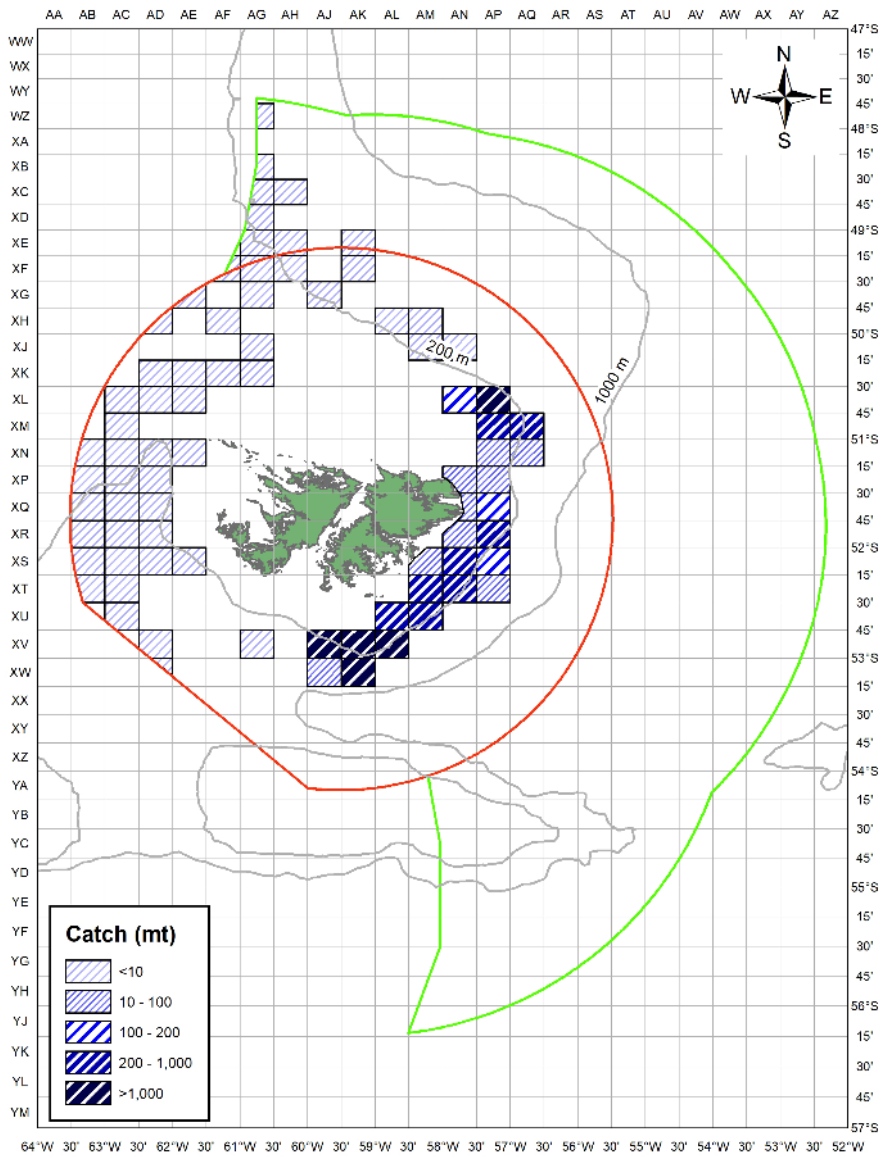
Table E.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	1	-	-	-	-	3	-
1,000-1,199	0	6	-	1	0	3	2	-	-	-
1,200-1,399	-	-	0	1	-	-	-	-	-	-
1,400-1,599	3,659	1,919	2,982	2,160	2,116	1,561	2,455	3,488	3,610	3,783
1,600-1,799	24	17	744	307	39	8	257	-	-	-
1,800-1,999	6,006	3,603	6,840	3,871	4,418	3,216	4,635	6,272	3,851	3,461
2,000-2,499	7,302	4,101	7,694	4,709	5,550	3,679	5,819	8,920	8,898	3,865
2,500-2,999	31	47	81	31	36	2	10	12	2	2
3,000-3,999	34,941	17,118	35,978	20,322	25,298	14,956	22,740	30,213	44,931	51,373
>3,999	14,580	7,863	16,579	8,766	11,242	6,891	10,530	15,772	18,701	19,424
	66,543	**34,675**	**70,897**	**40,168**	**48,700**	**30,317**	**46,447**	**64,676**	**79,996**	**81,908**

Doryteuthis gahi
First Season 2019 (01 Jan to 30 Jun)

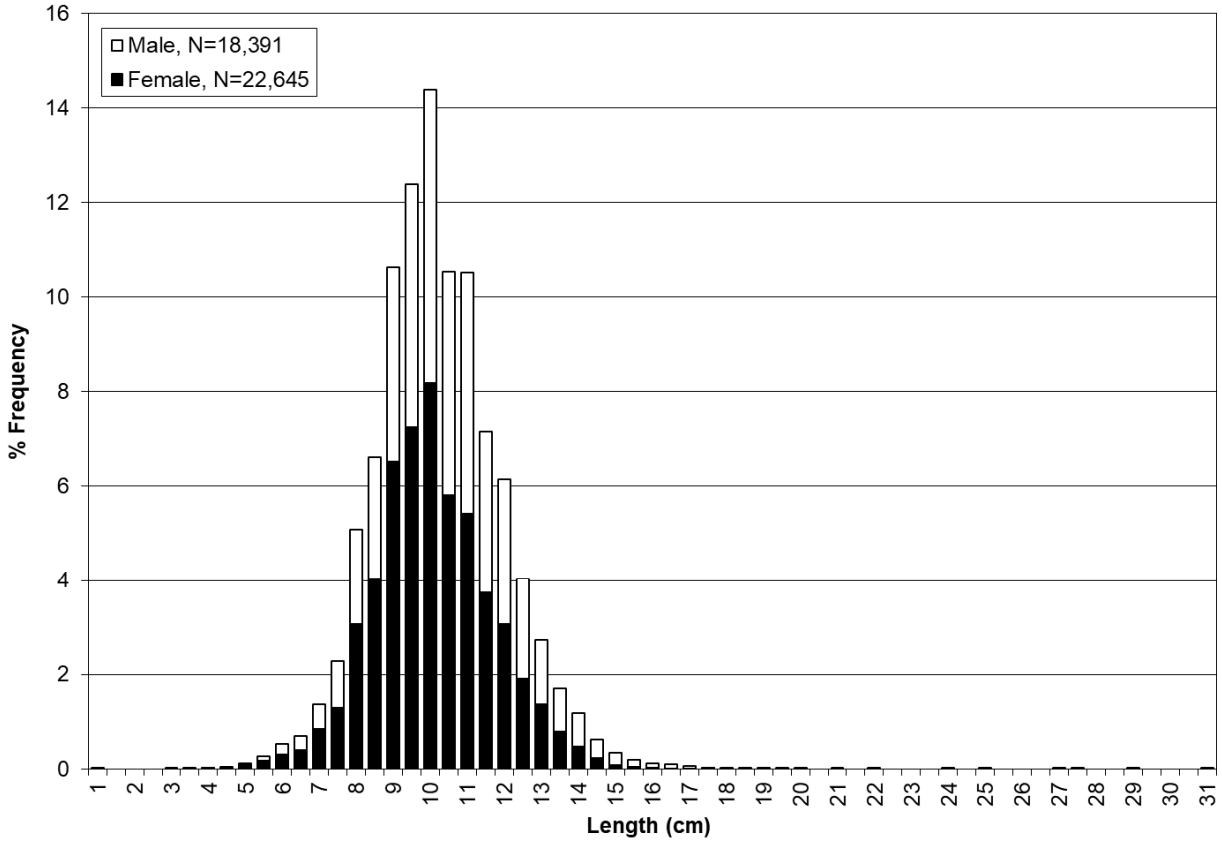


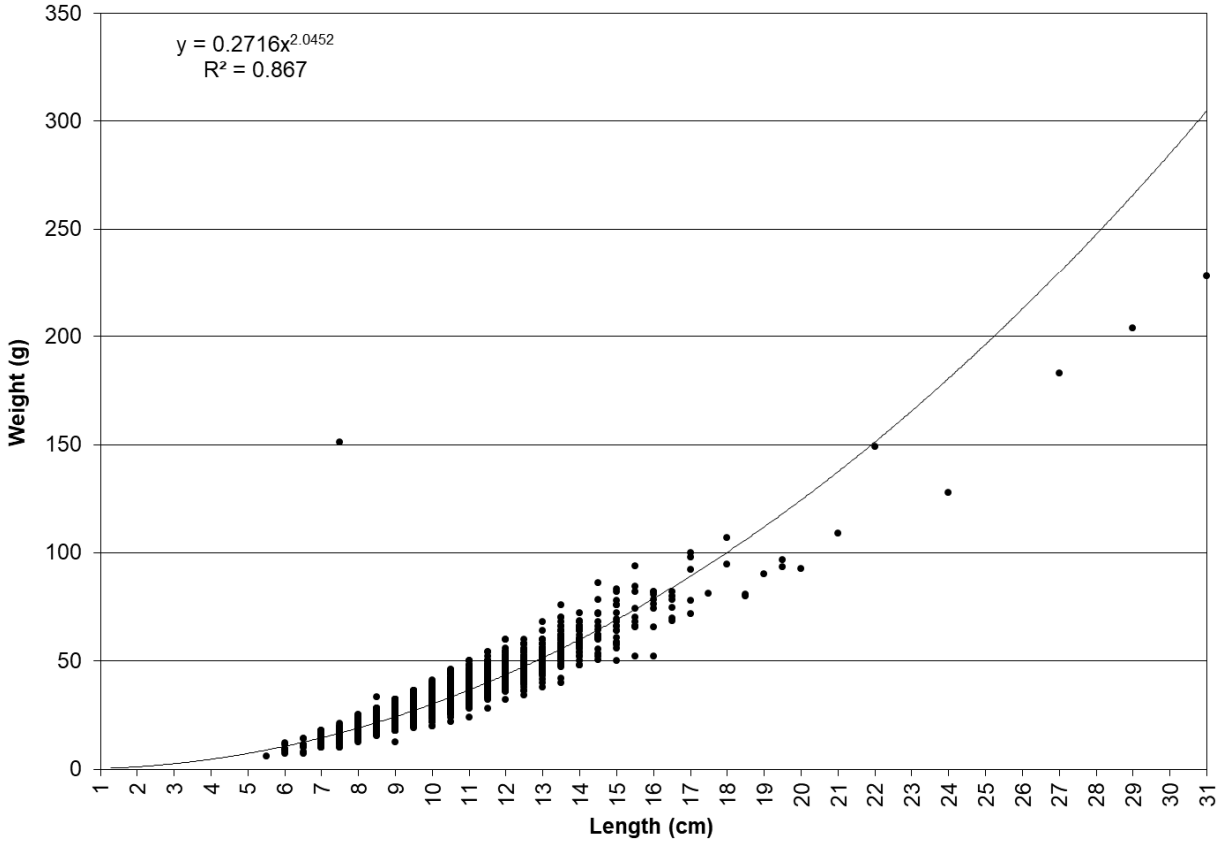
Doryteuthis gahi
Second Season 2019 (01 Jul to 31 Dec)



Doryteuthis gahi - Falkland Calamari

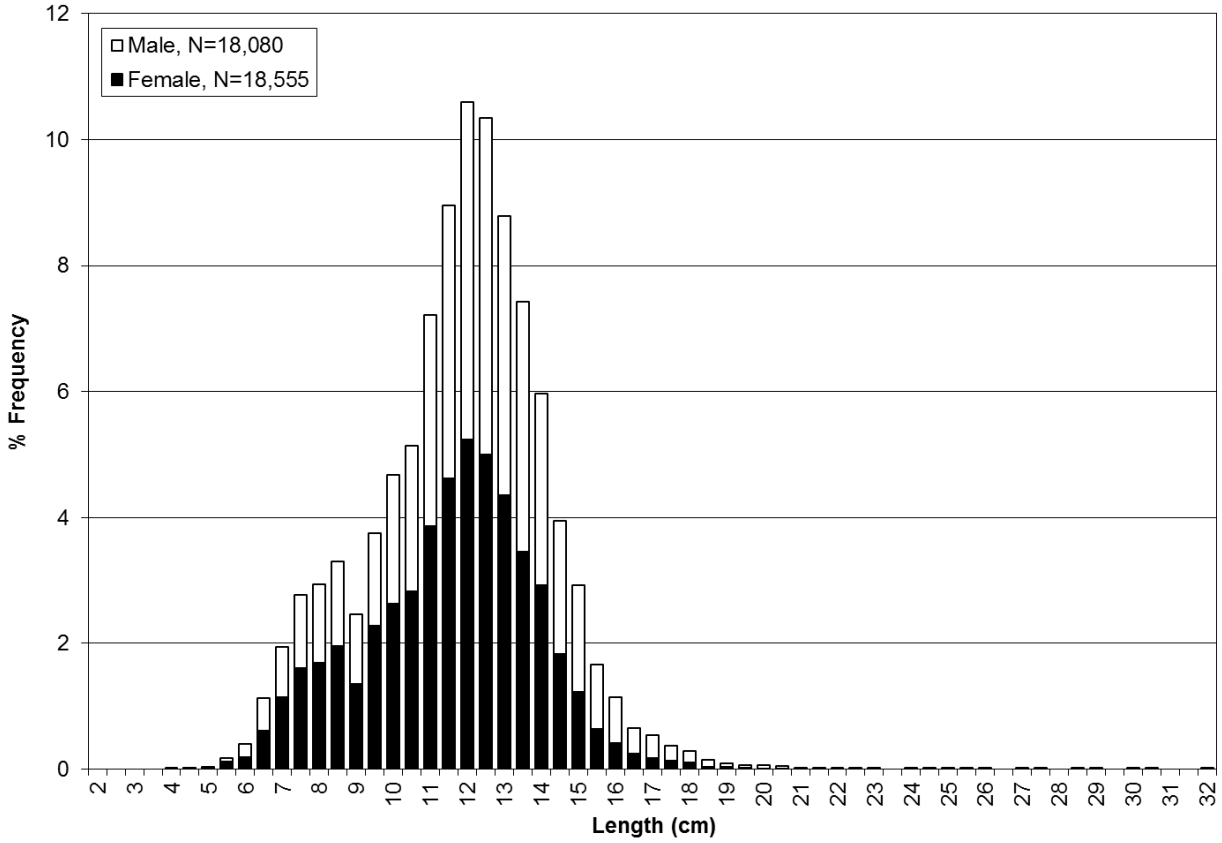
Length– frequency distribution and length-weight relationship during First Season 2019

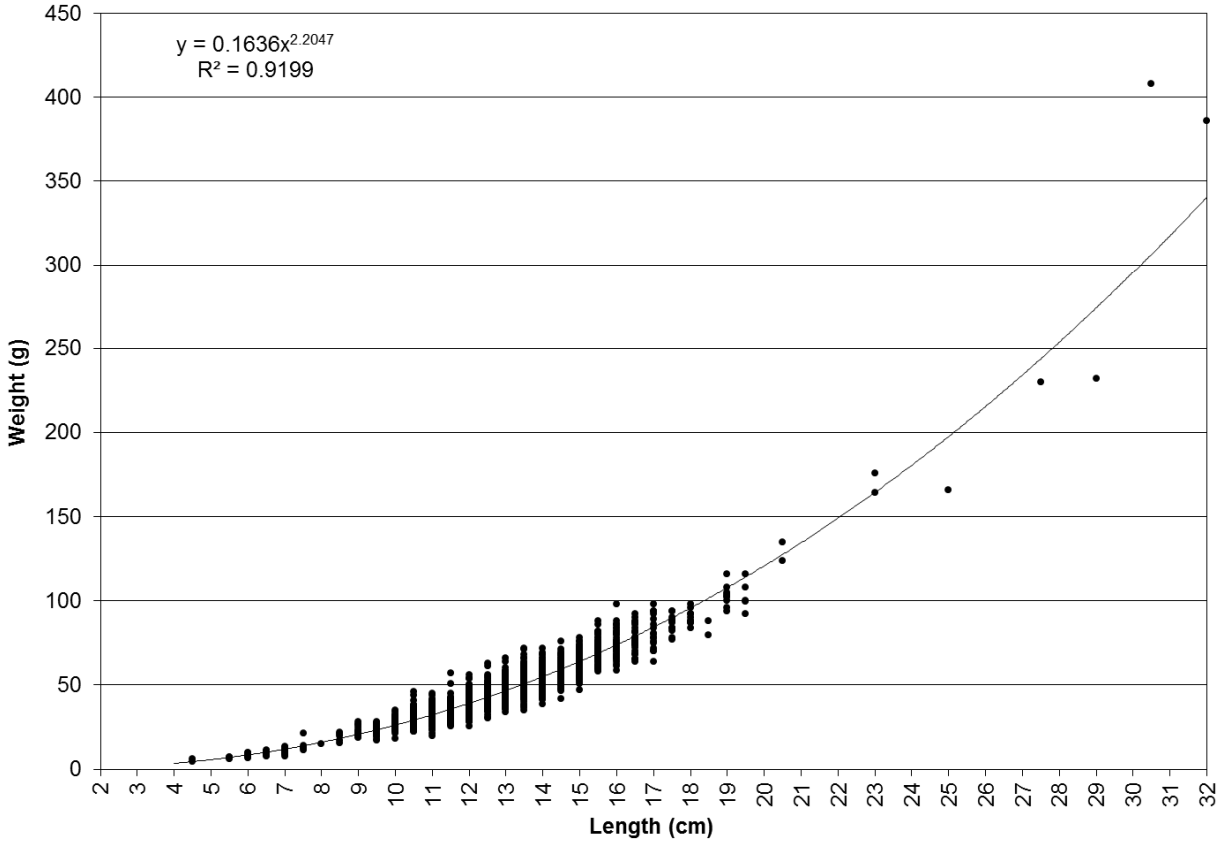




Doryteuthis gahi - Falkland Calamari

Length– frequency distribution and length-weight relationship during Second Season 2019





Micromesistius australis - Southern Blue Whiting

Table F.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
TR	6,471	3,940	1,596	2,698	3,612	2,790	5,415	2,309	992	518
	6,471	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**	**2,309**	**992**	**518**

Table F.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	1,439	199	36	162	-	-	1,189	157	-	190
February	32	233	39	375	123	184	1,420	283	59	132
March	107	26	219	205	137	28	1,002	176	64	3
April	414	220	95	116	127	5	816	14	21	1
May	76	27	7	84	0	4	83	1	12	0
June	9	10	3	8	15	-	1	-	-	0
July	2	7	9	47	14	1	2	3	1	0
August	296	543	727	897	55	97	580	616	704	192
September	248	496	138	758	1,670	121	116	515	52	0
October	537	5	211	14	212	147	40	482	2	0
November	2,171	1,369	31	1	1,211	1,687	52	60	2	-
December	1,141	805	81	32	47	517	114	2	76	-
	6,471	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**	**2,309**	**992**	**518**

Table F.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	1,155	-	-	-	-	-
ES	1,010	818	1,157	834	578	2,488	4,578	1,796	925	431
FK	375	764	412	1,669	1,795	273	800	509	67	87
JP	5,062	2,282	24	-	-	-	-	-	-	-
KR	24	31	3	32	2	0	8	-	-	-
UK	1	45	1	163	82	29	29	4	0	-
	6,471	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**	**2,309**	**992**	**518**

Table F.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	347	65	165	127	29	28	499	65	2	0
800-999	241	115	142	299	171	569	1,118	195	52	40
1,000-1,499	269	229	225	657	810	1,449	1,845	857	204	211
1,500-1,999	521	1,024	882	910	455	597	1,812	956	724	214
2,000-2,999	31	226	158	705	991	148	141	237	9	52
>2,999	5,062	2,282	24	-	1,155	-	-	-	-	-
	6,471	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**	**2,309**	**992**	**518**

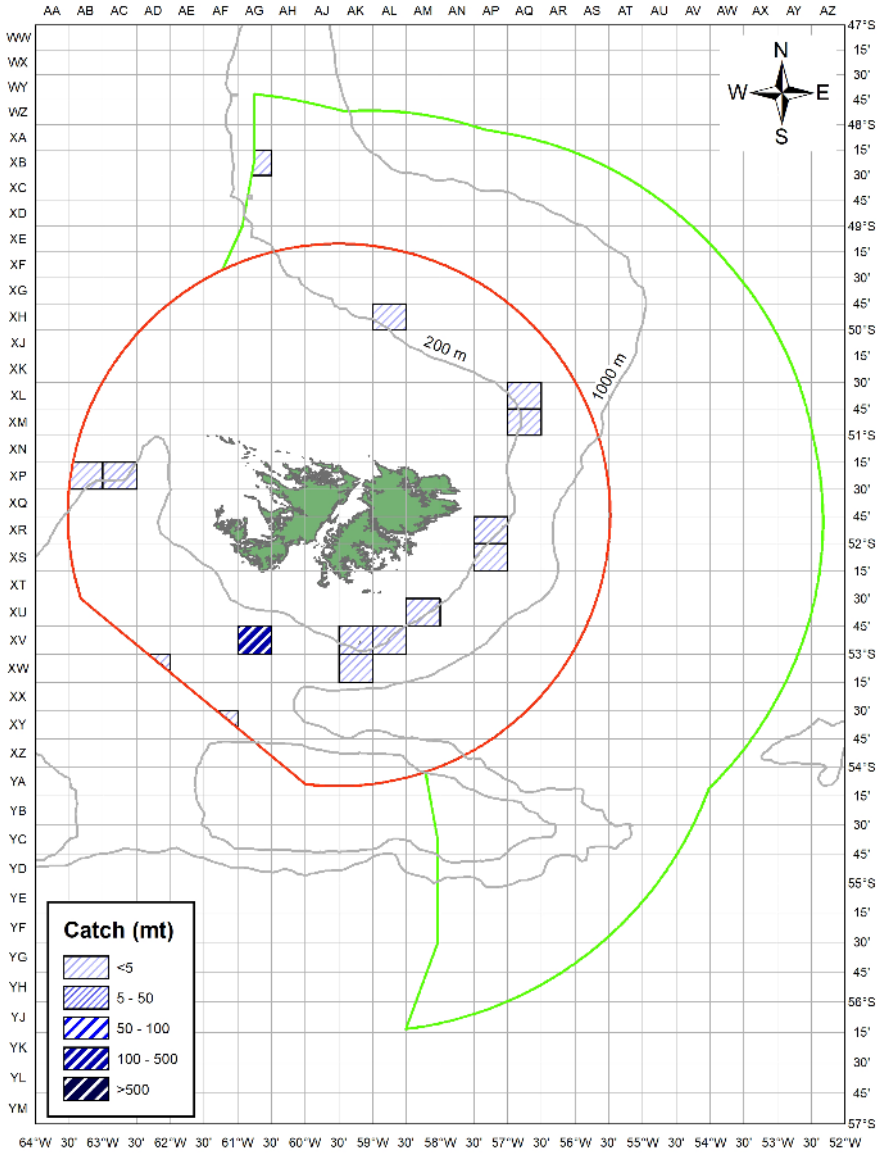
Table F.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	15	1	-	-	-	132	26	-	-	-
45-49	57	14	47	80	96	57	23	1	1	-
50-54	291	63	162	177	39	34	519	105	1	0
55-59	248	115	132	369	37	189	408	121	5	22
60-64	92	22	112	133	101	590	1,317	432	144	106
65-69	592	695	873	661	709	887	2,060	1,061	806	310
70-79	72	343	158	640	539	792	1,032	409	25	80
80-89	19	211	50	240	490	32	5	107	5	-
>89	5,085	2,475	62	397	1,602	78	25	72	3	-
	6,471	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**	**2,309**	**992**	**518**

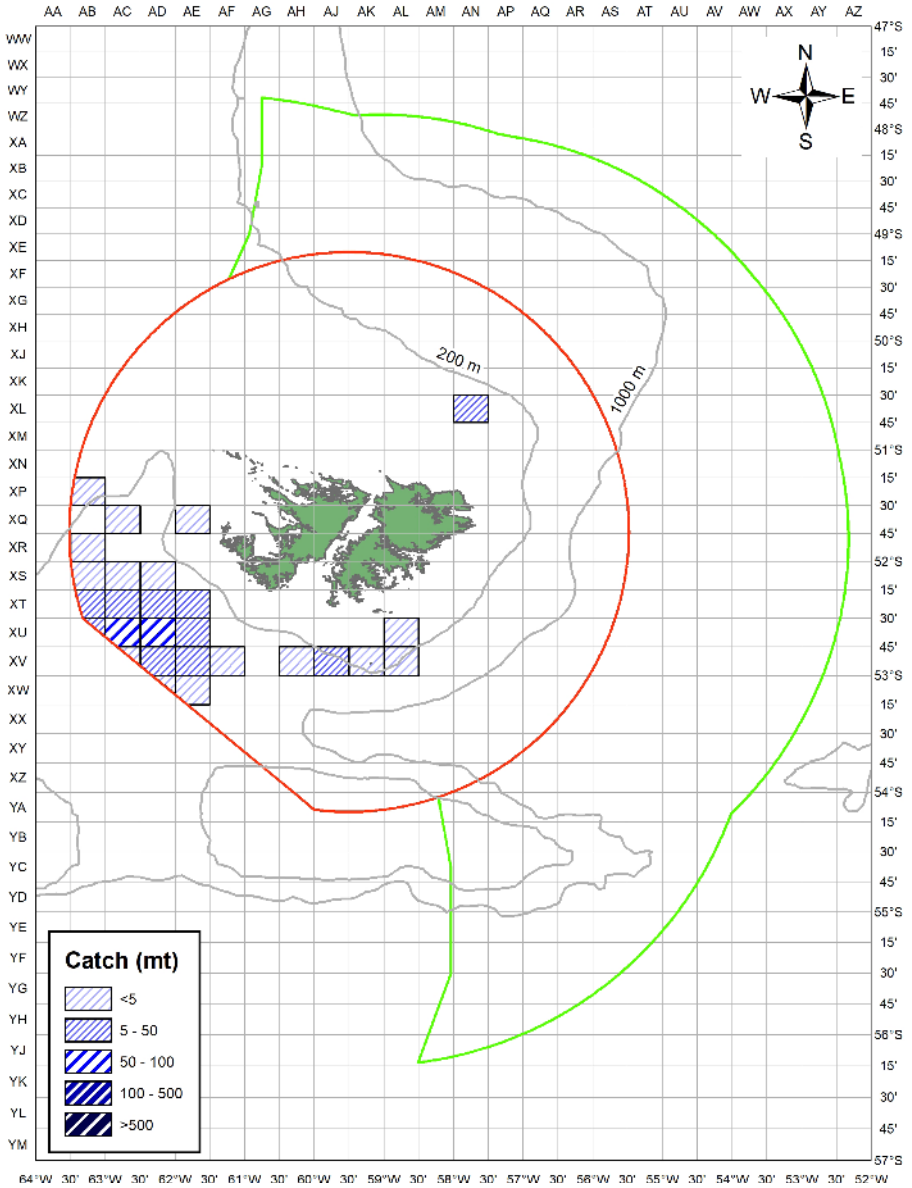
Table F.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	-	-	-	-	-	1	-
1,000-1,199	15	-	-	-	-	132	26	-	-	-
1,200-1,399	51	-	14	4	1	-	-	-	-	-
1,400-1,599	423	176	239	296	314	222	820	232	25	22
1,600-1,799	76	7	72	70	42	1	83	-	-	-
1,800-1,999	690	838	978	845	289	1,375	3,345	1,463	896	402
2,000-2,499	76	96	44	146	167	855	811	286	31	9
2,500-2,999	22	31	21	86	13	6	28	41	-	-
3,000-3,999	54	394	157	1,043	1,407	166	99	230	35	85
>3,999	5,065	2,398	71	208	1,380	34	203	57	3	0
	6,471	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**	**2,309**	**992**	**518**

Micromesistius australis
Second Season 2019 (01 Jul to 31 Dec)

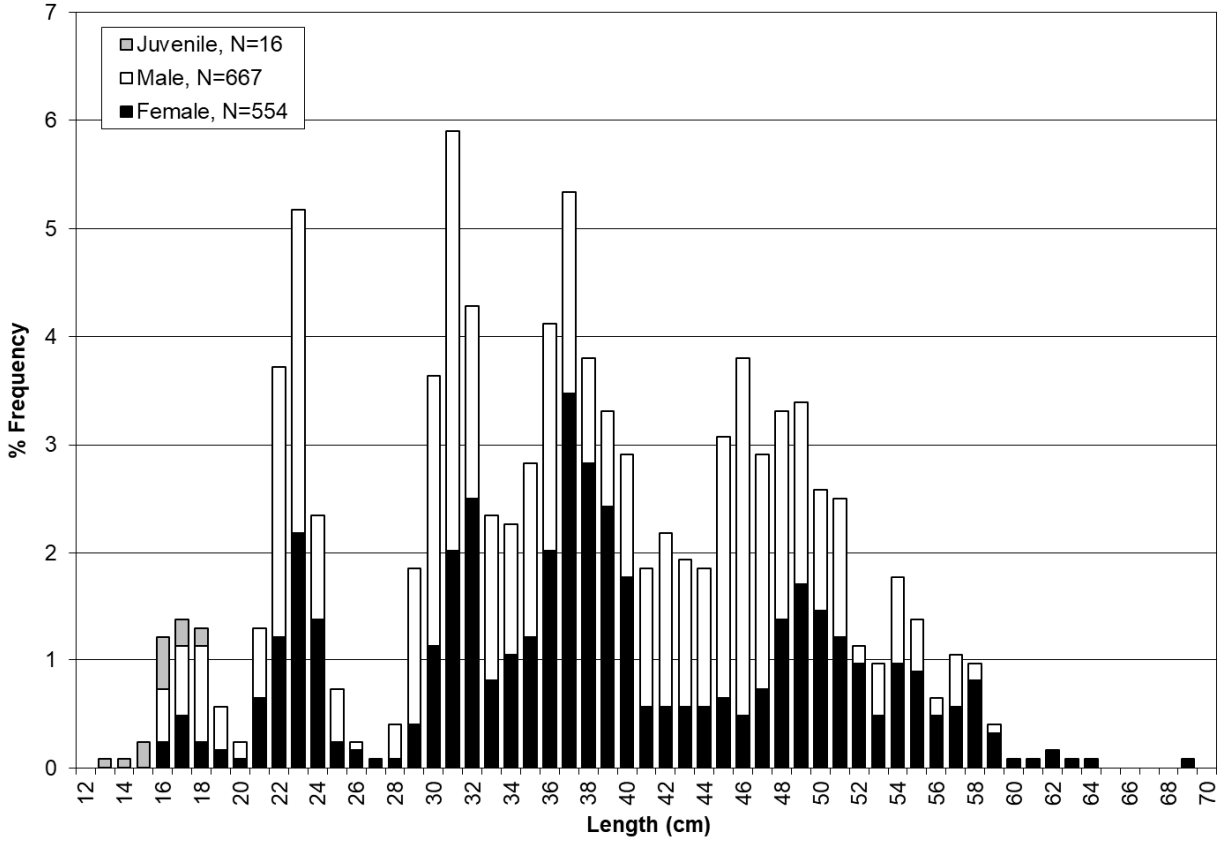


Micromesistius australis
First Season 2019 (01 Jan to 30 Jun)



Micromesistius australis - Southern Blue Whiting

Length– frequency distribution and length-weight relationship in 2019



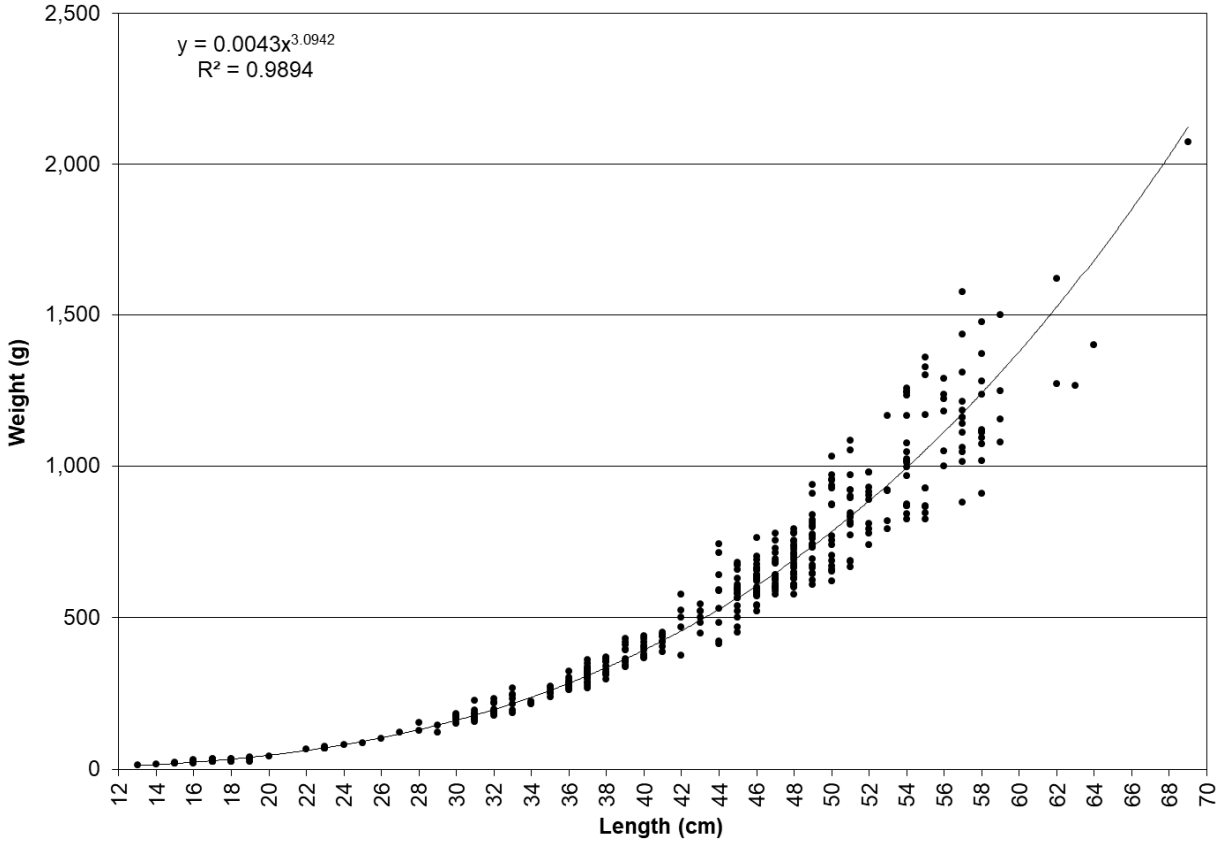


Table G.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
TR	19,227	22,979	15,867	16,849	7,392	6,845	11,562	4,053	4,439	7,407
	19,227	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,562**	**4,053**	**4,439**	**7,407**

Table G.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	179	635	230	2,010	-	-	211	22	-	3,988
February	1,834	1,289	535	2,196	754	484	4,655	146	639	2,078
March	1,893	1,264	2,414	1,745	1,521	3,836	2,277	530	901	1,046
April	2,772	5,769	2,508	3,043	2,811	1,610	2,596	770	503	77
May	1,270	2,609	652	3,414	774	256	1,082	733	1,162	8
June	205	1,143	311	553	350	36	99	19	4	3
July	351	2,775	839	233	56	5	25	273	29	2
August	2,374	2,387	1,739	761	82	64	90	316	2	5
September	2,127	978	557	1,239	800	181	6	47	28	9
October	856	357	3,617	362	9	35	45	878	127	9
November	4,125	1,082	2,183	1,091	229	239	290	311	217	0
December	1,239	2,690	283	203	6	101	185	9	827	182
	19,227	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,562**	**4,053**	**4,439**	**7,407**

Table G.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	207	-	-	-	-	-
ES	13,511	15,867	11,628	11,569	5,275	5,705	8,886	3,548	3,880	6,114
FK	4,033	3,808	3,433	4,755	1,889	959	2,378	467	555	1,291
JP	917	2,457	85	-	-	-	-	-	-	-
KR	667	594	712	481	20	147	211	19	3	2
UK	98	253	10	45	1	35	87	18	0	0
	19,227	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,562**	**4,053**	**4,439**	**7,407**

Table G.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	2,795	2,714	2,568	1,478	497	1,051	1,155	323	307	110
800-999	2,933	3,119	3,532	3,238	1,634	1,845	3,569	615	768	1,999
1,000-1,499	8,034	8,562	6,957	8,740	3,477	3,055	2,992	2,371	2,163	4,009
1,500-1,999	4,310	5,894	2,529	3,177	1,566	858	3,813	644	1,201	934
2,000-2,999	237	221	100	214	8	38	31	100	0	354
>2,999	917	2,469	181	2	210	-	1	-	-	-
	19,227	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,562**	**4,053**	**4,439**	**7,407**

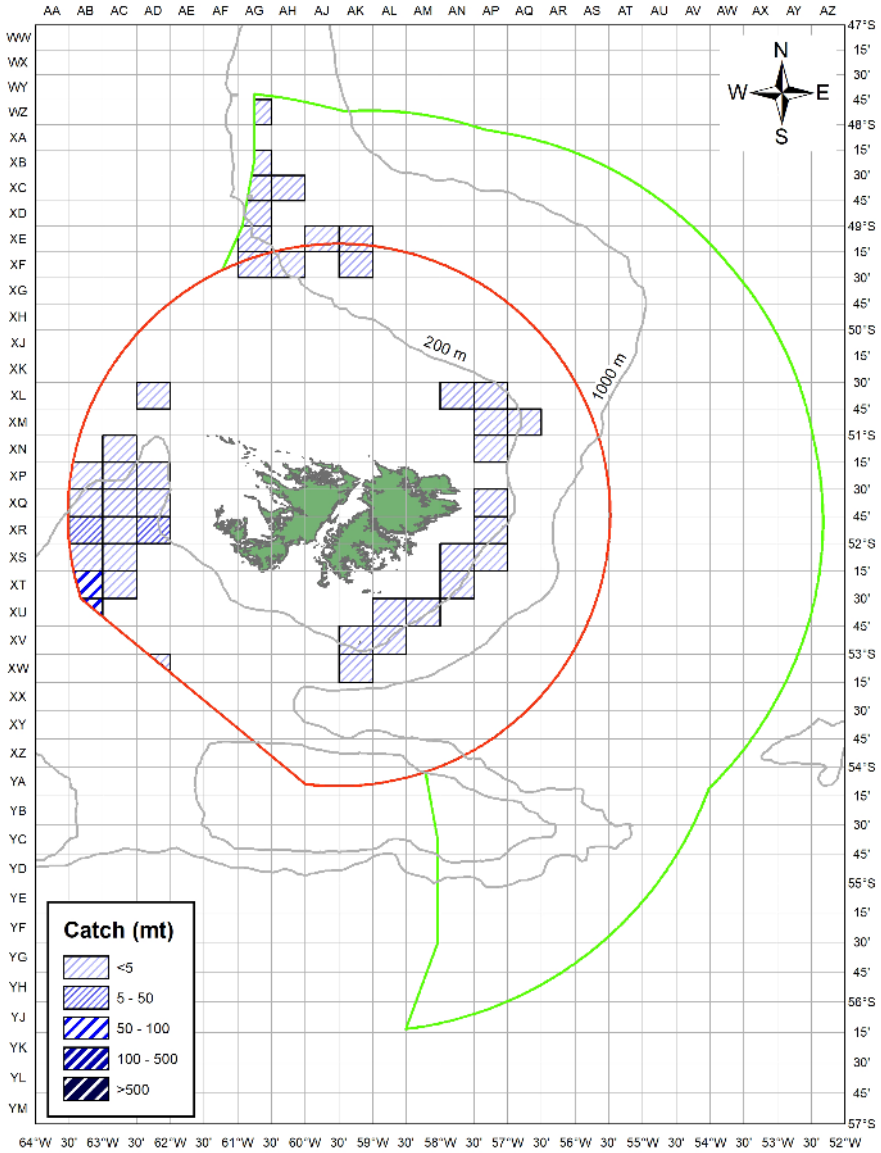
Table G.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	155	217	-	-	-	10	167	-	-	-
45-49	1,063	843	855	507	77	156	234	0	56	-
50-54	2,132	2,216	2,911	1,673	763	1,514	1,409	336	302	111
55-59	3,152	3,834	3,603	3,807	811	1,781	1,413	718	651	1,410
60-64	3,537	4,506	3,308	3,680	1,479	1,209	1,694	1,487	1,420	1,693
65-69	4,264	4,735	2,375	3,545	2,973	740	3,792	1,144	1,235	3,238
70-79	3,607	3,472	2,550	3,571	999	1,386	2,805	267	719	948
80-89	285	597	61	9	79	40	45	79	56	0
>89	1,031	2,559	204	57	211	8	1	22	0	7
	19,227	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,562**	**4,053**	**4,439**	**7,407**

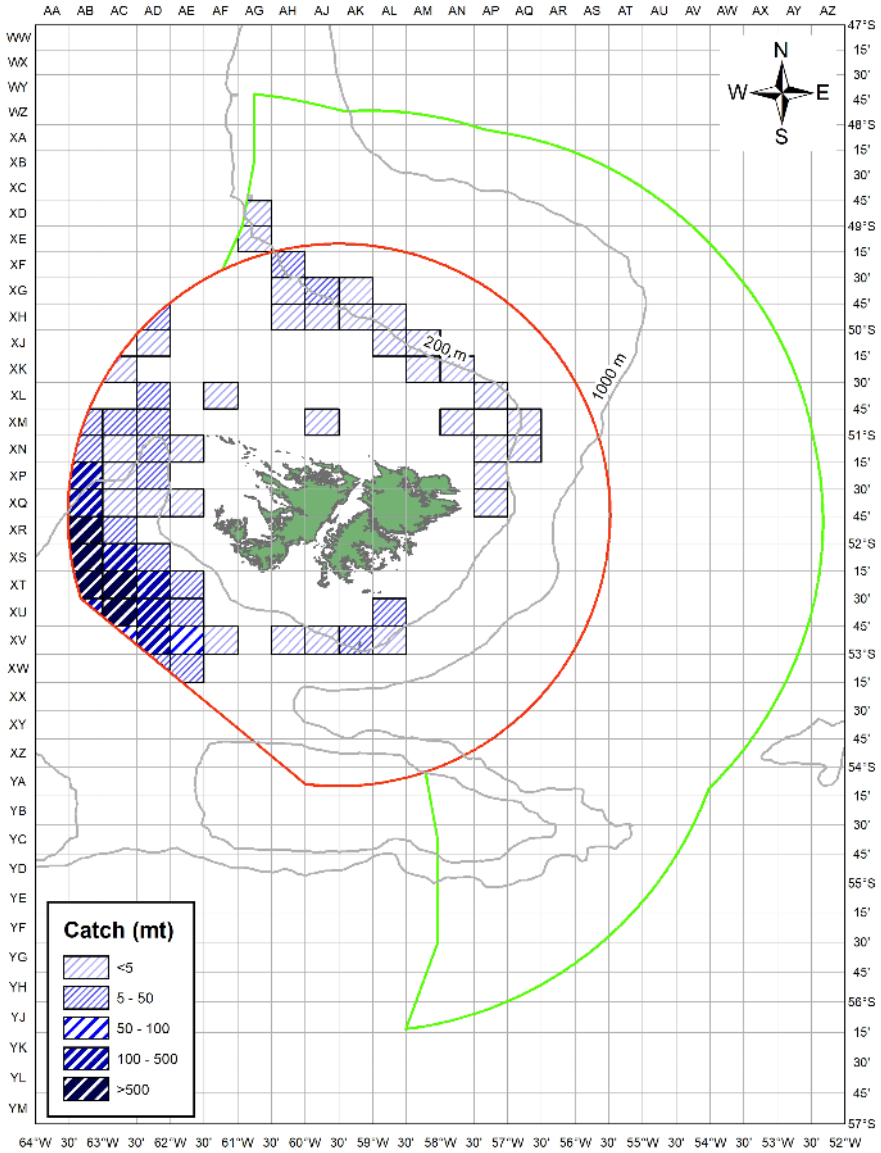
Table G.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	-	-	-	-	-	46	-
1,000-1,199	155	54	-	-	-	10	167	-	-	-
1,200-1,399	442	310	327	276	67	119	-	-	-	-
1,400-1,599	2,884	3,109	3,719	2,815	968	2,006	2,141	840	966	1,117
1,600-1,799	2,444	1,910	608	837	402	396	586	14	-	-
1,800-1,999	6,728	7,748	5,375	7,129	3,255	1,783	5,336	2,846	2,888	4,420
2,000-2,499	4,260	5,182	3,928	4,457	1,958	1,607	1,859	182	361	1,339
2,500-2,999	551	875	1,592	940	344	723	464	31	45	2
3,000-3,999	757	1,254	206	361	190	199	380	130	131	521
>3,999	1,005	2,538	112	34	208	2	629	9	2	8
	19,227	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,562**	**4,053**	**4,439**	**7,407**

Macruronus magellanicus
Second Season 2019 (01 Jul to 31 Dec)

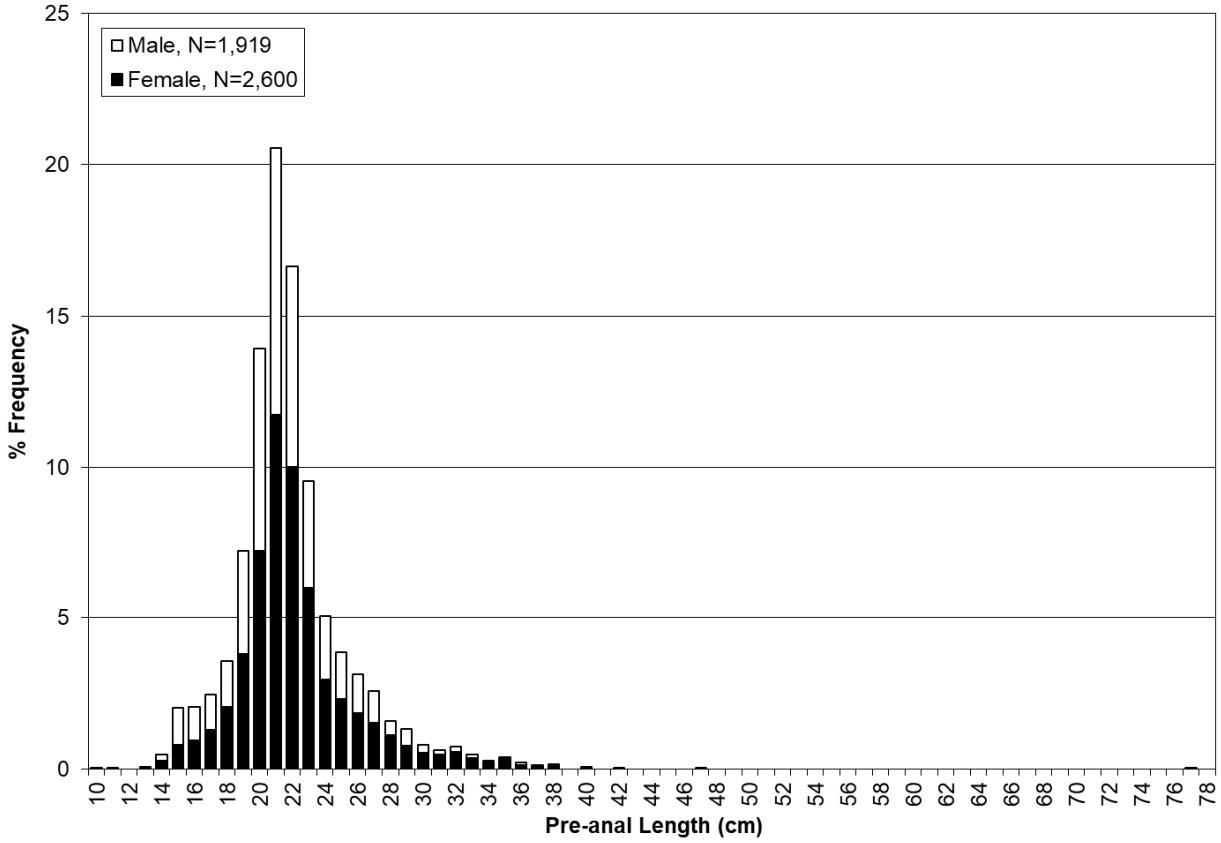


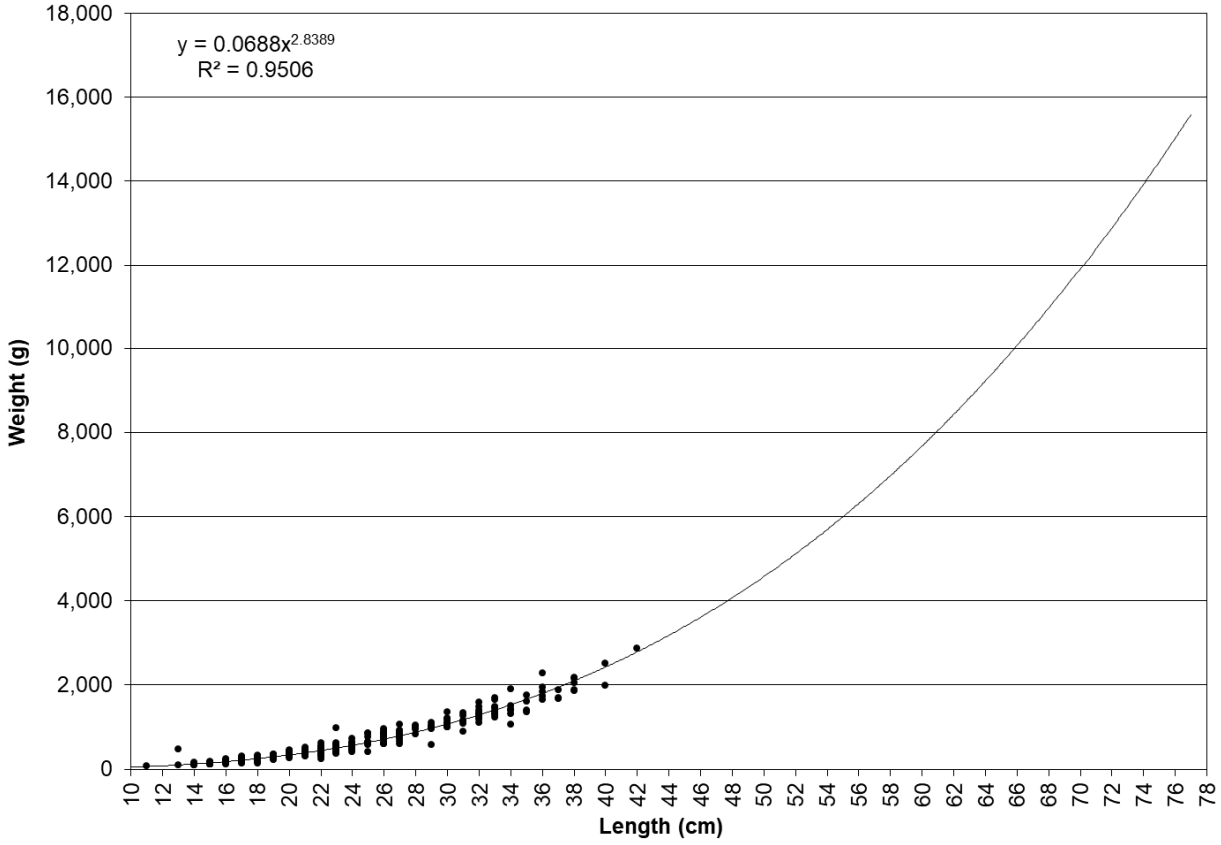
Macruronus magellanicus
First Season 2019 (01 Jan to 30 Jun)



Macruronus magellanicus—Hoki

Length– frequency distribution and length-weight relationship in 2019





Salilota australis - Red cod

Table H.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
LO	-	0	-	0	-	-	-	-	-	-
TR	3,129	4,210	4,629	5,164	3,467	3,340	3,143	1,379	1,654	1,767
	3,129	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**	**1,379**	**1,654**	**1,767**

Table H.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	29	100	62	215	-	0	143	33	-	310
February	193	236	351	480	114	63	479	24	47	367
March	387	157	341	311	221	557	181	101	64	220
April	649	438	340	325	477	685	270	245	154	169
May	215	749	370	514	768	310	527	138	451	168
June	69	213	125	77	398	131	198	38	102	116
July	75	309	150	162	135	174	138	134	200	131
August	361	605	656	1,199	376	161	369	223	134	167
September	340	474	580	1,299	195	329	135	248	108	72
October	284	273	615	283	532	631	562	144	163	26
November	321	436	626	230	189	200	74	40	129	3
December	207	221	411	68	63	99	66	12	103	19
	3,129	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**	**1,379**	**1,654**	**1,767**

Table H.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	2,267	2,851	3,441	3,592	2,530	2,776	2,237	1,027	1,072	1,399
FK	801	1,317	1,167	1,522	874	505	878	319	565	353
JP	0	0	-	-	-	-	-	-	-	-
KR	19	6	16	33	57	47	18	14	17	1
UK	41	36	5	17	5	12	10	18	0	15
	3,129	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**	**1,379**	**1,654**	**1,767**

Table H.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	327	484	633	467	508	401	480	143	360	171
800-999	403	444	618	610	600	648	783	275	336	372
1,000-1,499	1,323	1,889	2,004	2,584	1,399	1,387	793	409	516	790
1,500-1,999	1,012	1,268	1,285	1,256	881	869	1,053	469	424	398
2,000-2,999	64	124	89	248	77	34	34	83	17	36
>2,999	0	0	-	-	2	-	0	-	-	-
	3,129	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**	**1,379**	**1,654**	**1,767**

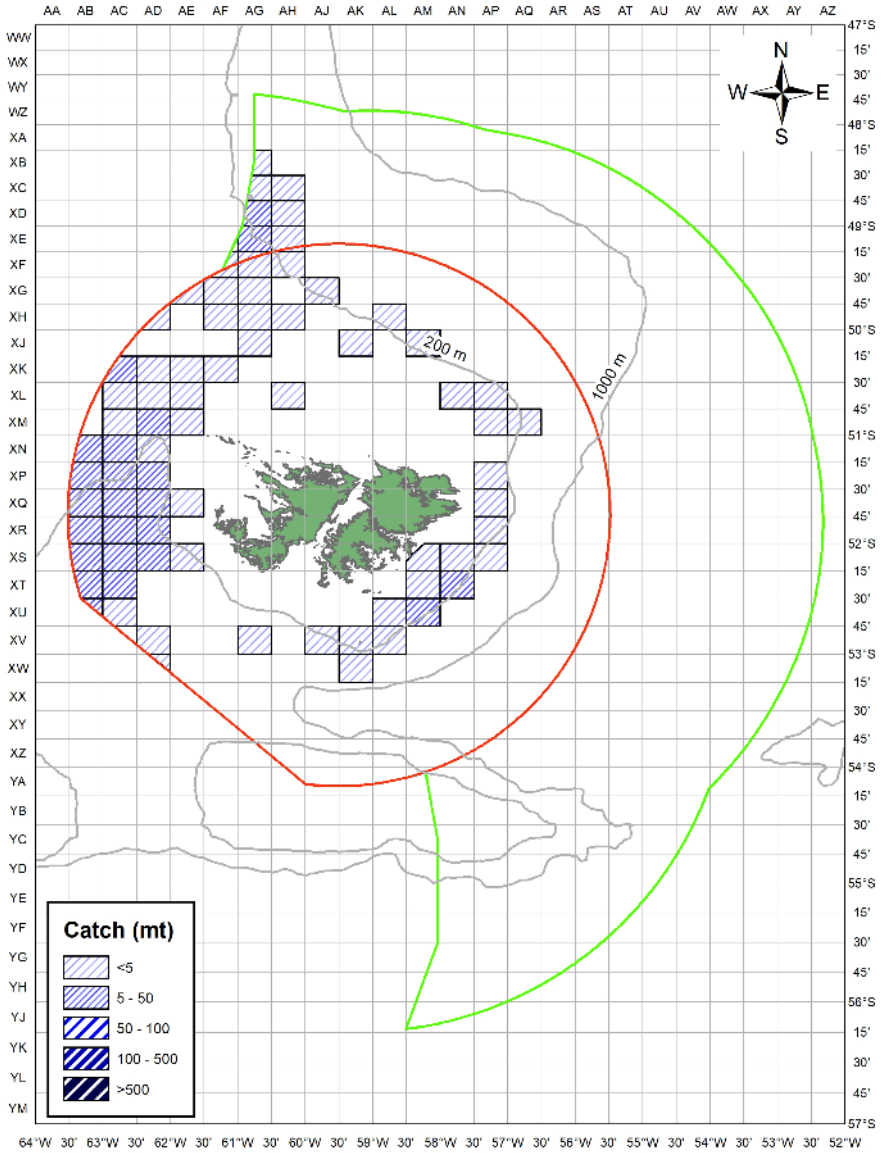
Table H.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	17	78	-	9	3	8	56	-	2	-
45-49	131	173	214	123	98	111	99	12	114	-
50-54	250	325	703	552	607	463	566	216	373	238
55-59	492	825	843	685	365	464	310	191	155	315
60-64	525	731	868	1,333	720	493	351	122	249	250
65-69	1,327	1,508	1,435	1,418	1,005	1,086	939	421	398	619
70-79	330	452	483	903	630	695	772	369	305	336
80-89	33	59	12	18	16	12	48	28	54	4
>89	24	59	70	123	25	8	2	19	5	6
	3,129	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**	**1,379**	**1,654**	**1,767**

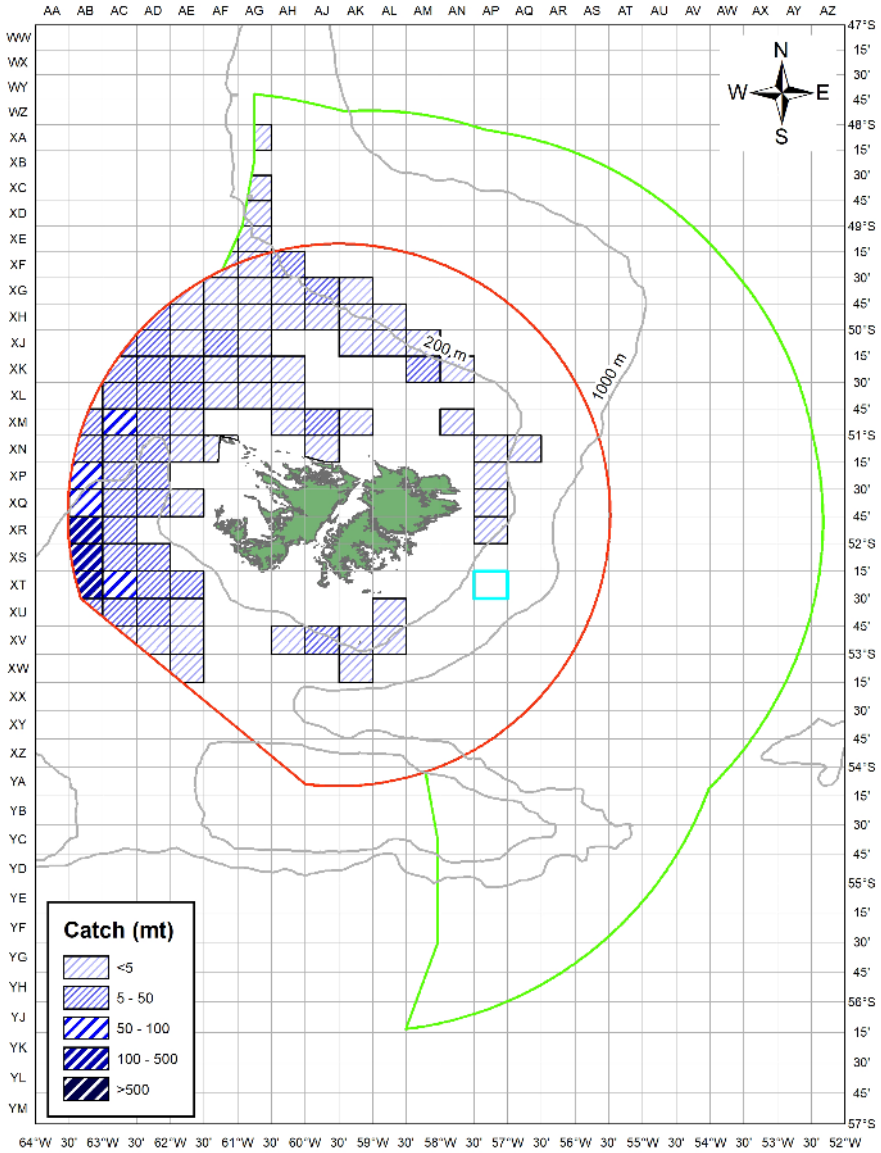
Table H.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	5	-	-	-	-	72	-
1,000-1,199	17	22	-	9	3	8	56	-	-	-
1,200-1,399	58	89	100	77	54	43	-	-	-	-
1,400-1,599	336	584	825	634	651	778	739	313	402	348
1,600-1,799	372	262	112	180	145	110	142	2	-	-
1,800-1,999	1,552	2,140	2,494	2,167	1,362	1,354	1,230	546	775	908
2,000-2,499	626	778	734	1,449	912	773	643	287	194	321
2,500-2,999	14	47	235	200	208	151	104	87	101	67
3,000-3,999	135	270	118	327	82	114	142	109	103	87
>3,999	18	18	10	115	50	7	86	35	8	36
	3,129	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**	**1,379**	**1,654**	**1,767**

Salilota australis
Second Season 2019 (01 Jul to 31 Dec)

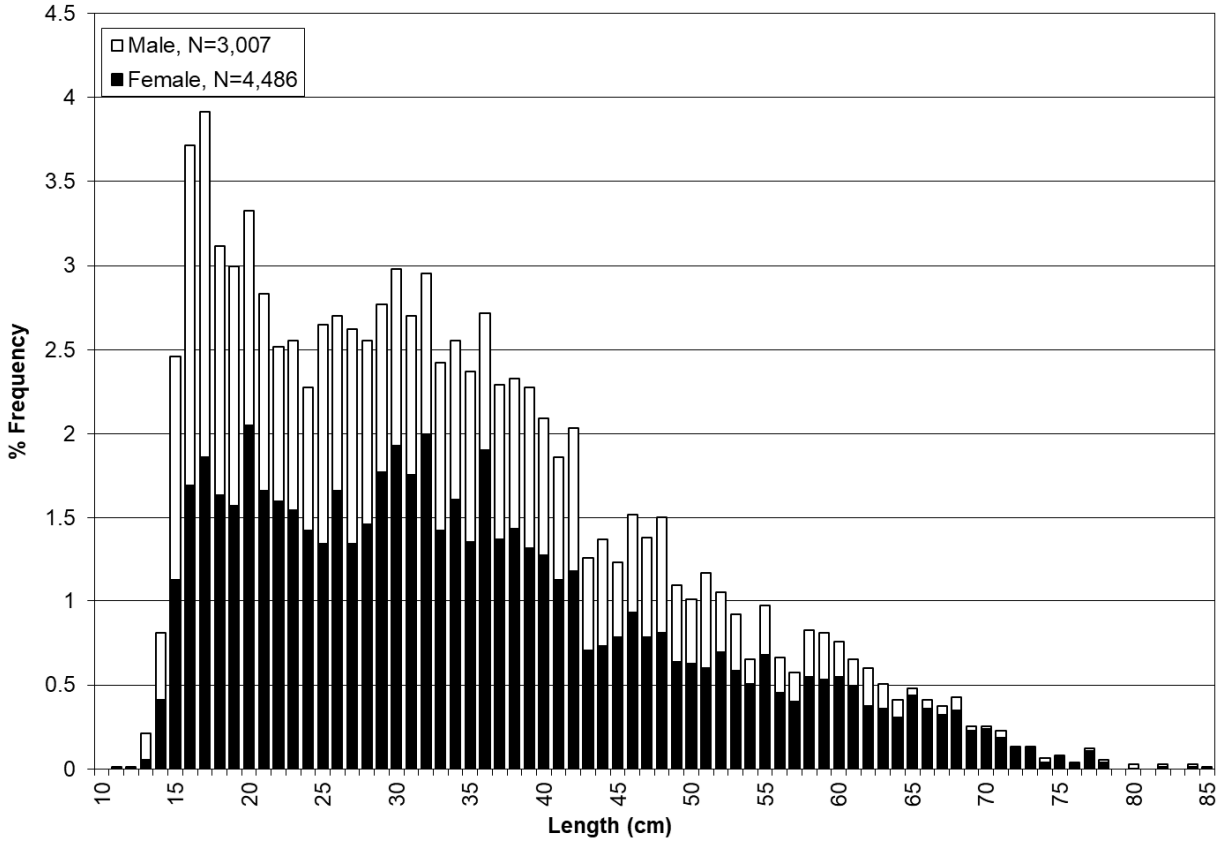


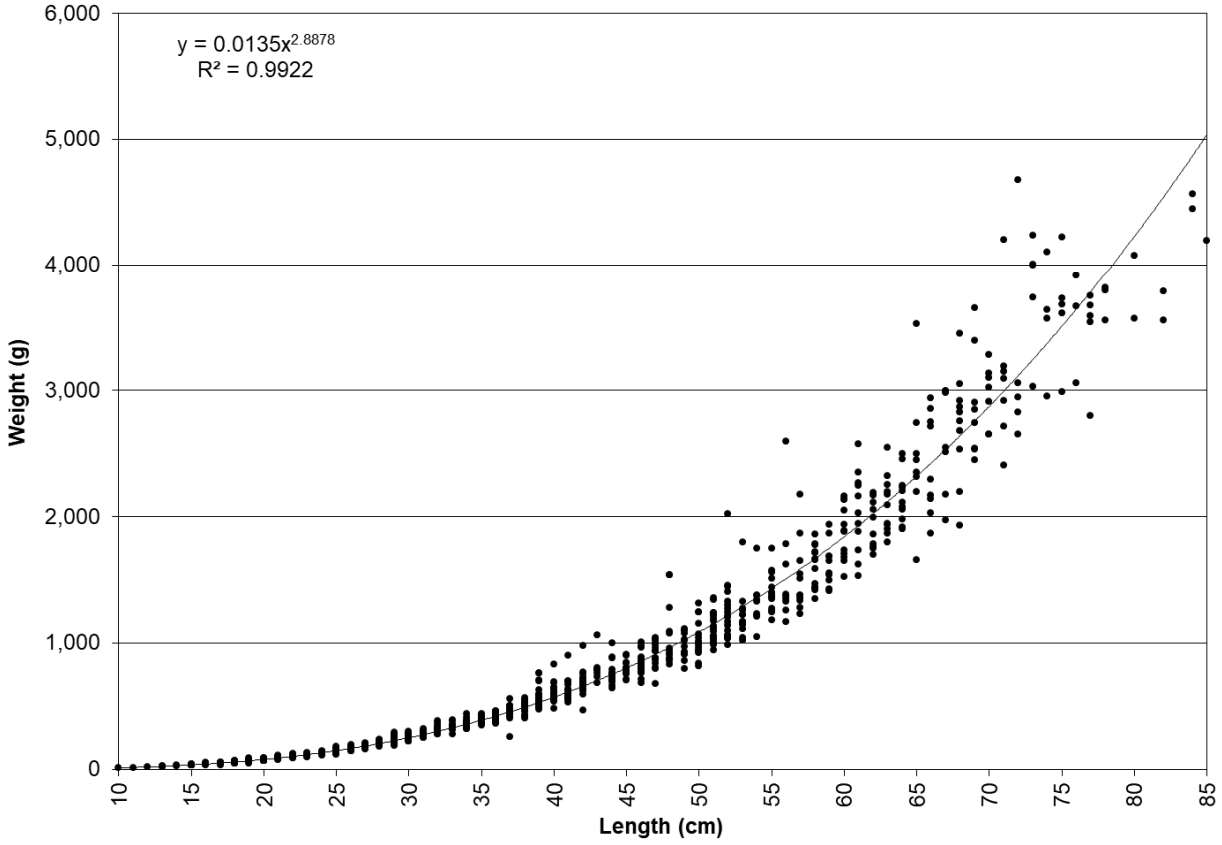
Salilota australis
First Season 2019 (01 Jan to 30 Jun)



Salilota australis - Red cod

Length– frequency distribution and length-weight relationship in 2019





Merluccius spp - Hakes

Table I.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
LO	-	-	-	0	-	-	-	-	-	-
TR	13,606	9,936	10,486	12,317	14,865	21,068	23,894	15,759	27,091	53,416
	13,606	**9,936**	**10,486**	**12,317**	**14,865**	**21,068**	**23,894**	**15,759**	**27,091**	**53,416**

Table I.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	3	12	4	56	-	1	62	10	-	42
February	106	199	65	166	30	29	231	11	12	164
March	873	260	517	232	224	382	155	237	144	1,708
April	2,492	2,005	1,388	1,169	680	1,266	821	2,236	1,130	6,606
May	2,584	1,979	1,895	1,615	3,168	3,277	5,847	2,589	5,183	11,418
June	773	726	1,125	1,129	2,506	1,912	3,500	1,696	4,130	10,181
July	1,340	858	942	1,225	2,065	3,508	3,461	2,875	5,239	9,925
August	2,245	1,145	2,473	2,468	2,706	3,619	3,453	1,821	3,830	7,215
September	2,145	1,598	1,260	2,638	2,431	5,153	3,273	3,414	4,124	5,403
October	853	930	644	1,480	862	1,823	3,054	840	3,177	743
November	168	201	151	135	189	62	27	23	107	9
December	23	22	21	4	3	36	10	5	15	3
	13,606	**9,936**	**10,486**	**12,317**	**14,865**	**21,068**	**23,894**	**15,759**	**27,091**	**53,416**

Table I.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	0	-	-	-	-	-
ES	8,459	6,019	6,950	7,253	10,454	15,429	18,858	11,019	19,431	45,087
FK	4,565	3,506	3,182	4,884	4,196	5,072	4,739	4,443	7,338	7,981
JP	0	1	-	-	-	-	-	-	-	-
KR	181	221	283	130	159	351	191	199	210	25
UK	401	190	71	50	56	215	106	98	112	322
	13,606	**9,936**	**10,486**	**12,317**	**14,865**	**21,068**	**23,894**	**15,759**	**27,091**	**53,416**

Table I.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	1,439	1,138	1,178	1,251	1,815	2,201	2,171	2,336	3,085	6,069
800-999	1,167	872	762	1,715	2,055	3,843	4,452	2,699	8,379	12,741
1,000-1,499	7,908	5,907	6,939	7,149	7,916	10,035	12,016	5,998	10,614	20,446
1,500-1,999	2,839	1,904	1,483	2,125	3,030	4,115	5,034	4,516	4,921	14,067
2,000-2,999	253	90	42	70	41	874	213	210	92	92
>2,999	0	25	81	7	7	-	9	-	-	-
	13,606	**9,936**	**10,486**	**12,317**	**14,865**	**21,068**	**23,894**	**15,759**	**27,091**	**53,416**

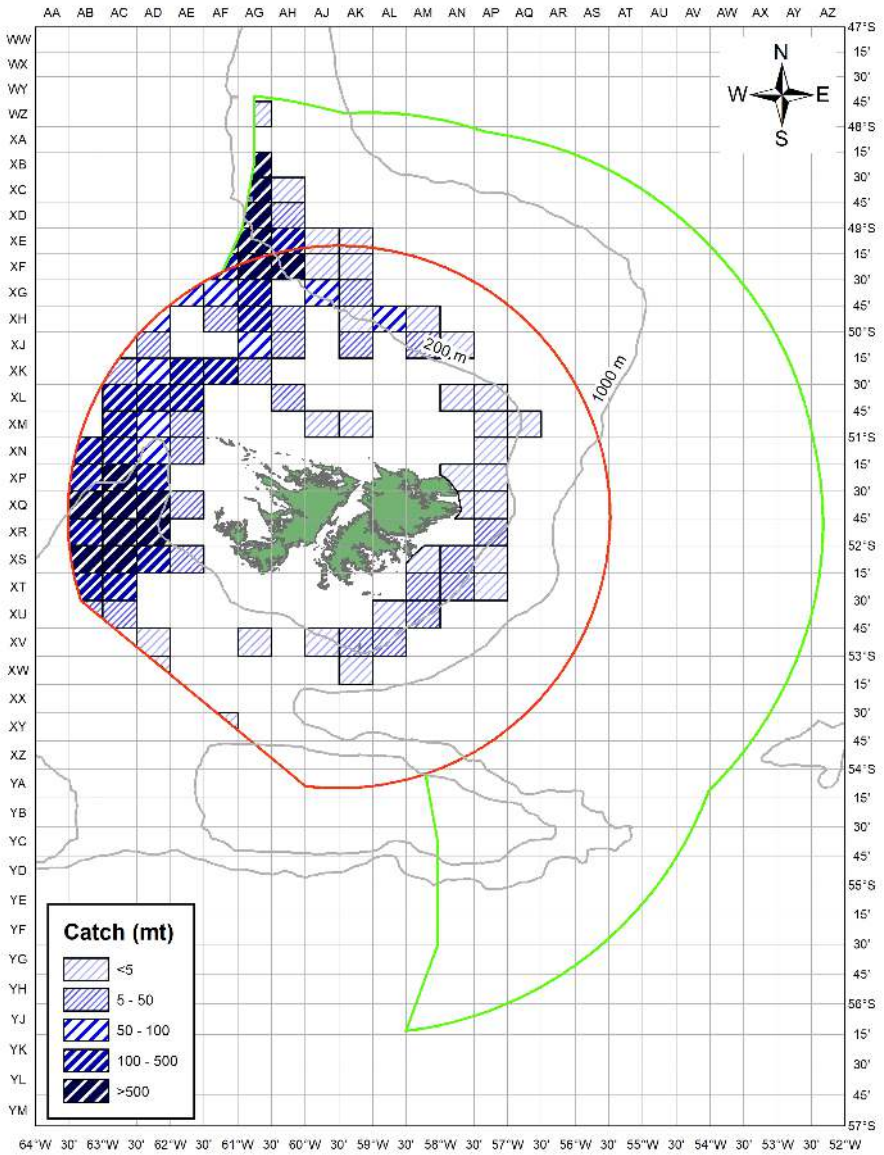
Table I.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	5	165	-	6	15	42	51	-	109	-
45-49	950	641	496	852	564	1,358	990	767	1,961	-
50-54	766	674	1,041	1,149	1,897	2,336	3,119	2,868	4,753	8,897
55-59	2,497	1,883	2,372	2,867	1,948	2,161	2,910	2,347	4,120	10,797
60-64	2,688	2,100	2,747	2,813	4,415	4,671	6,149	1,640	3,842	8,285
65-69	3,717	2,698	2,100	2,160	2,892	5,786	6,329	3,747	7,268	15,700
70-79	2,561	1,606	1,605	2,304	3,127	4,498	4,063	3,489	4,798	9,311
80-89	420	133	3	155	-	212	265	720	193	389
>89	3	36	122	10	7	4	18	182	47	37
	13,606	**9,936**	**10,486**	**12,317**	**14,865**	**21,068**	**23,894**	**15,759**	**27,091**	**53,416**

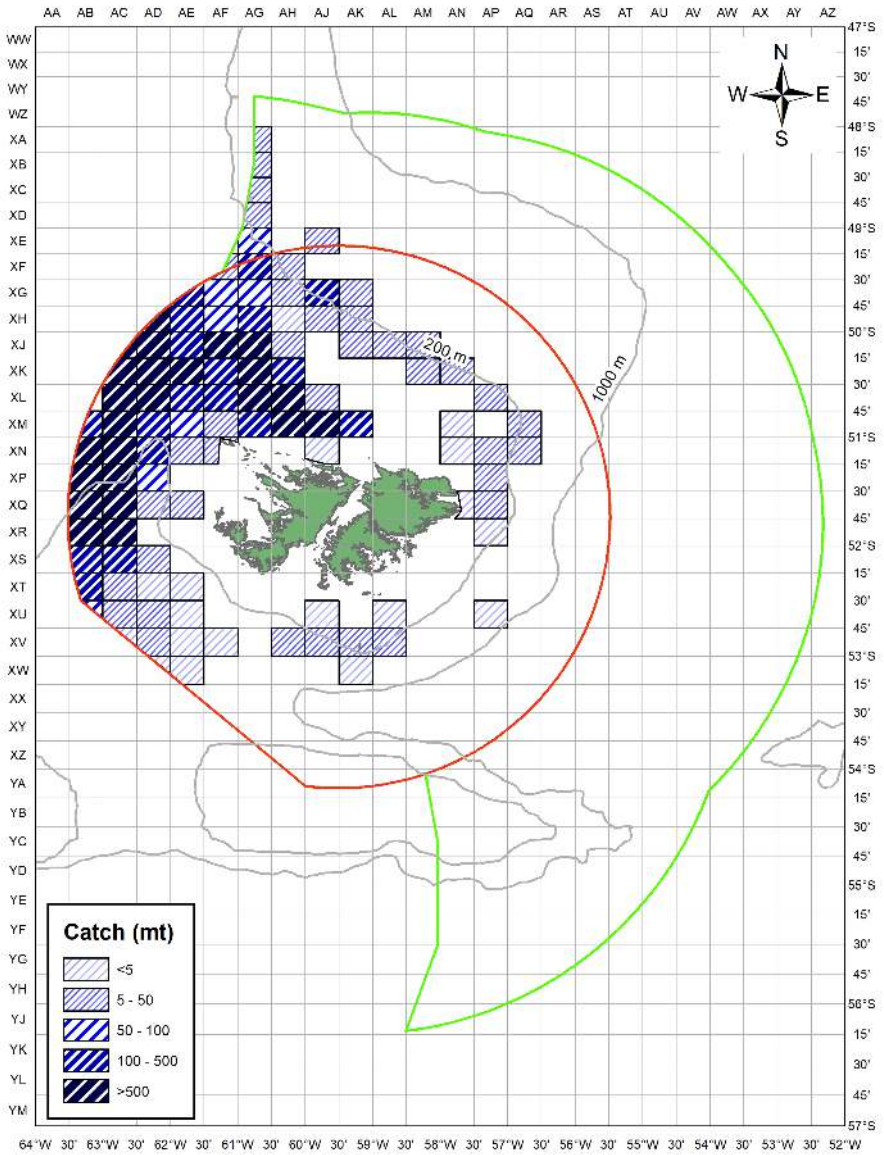
Table I.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	-	-	-	-	-	204	-
1,000-1,199	5	54	-	6	15	42	51	-	-	-
1,200-1,399	326	128	307	405	338	454	-	-	-	-
1,400-1,599	1,275	1,240	1,361	1,541	2,476	2,897	2,772	3,379	4,834	11,548
1,600-1,799	2,264	1,408	1,095	1,411	1,537	1,795	1,948	4	-	-
1,800-1,999	5,772	4,374	5,544	5,923	6,833	8,694	13,130	7,818	14,544	27,615
2,000-2,499	2,338	1,702	1,544	2,315	2,986	4,636	3,843	2,633	4,632	8,749
2,500-2,999	170	190	412	410	532	893	1,098	731	2,081	2,853
3,000-3,999	1,449	826	184	305	149	1,654	955	1,178	730	2,601
>3,999	6	14	39	1	0	2	99	18	66	49
	13,606	**9,936**	**10,486**	**12,317**	**14,865**	**21,068**	**23,894**	**15,759**	**27,091**	**53,416**

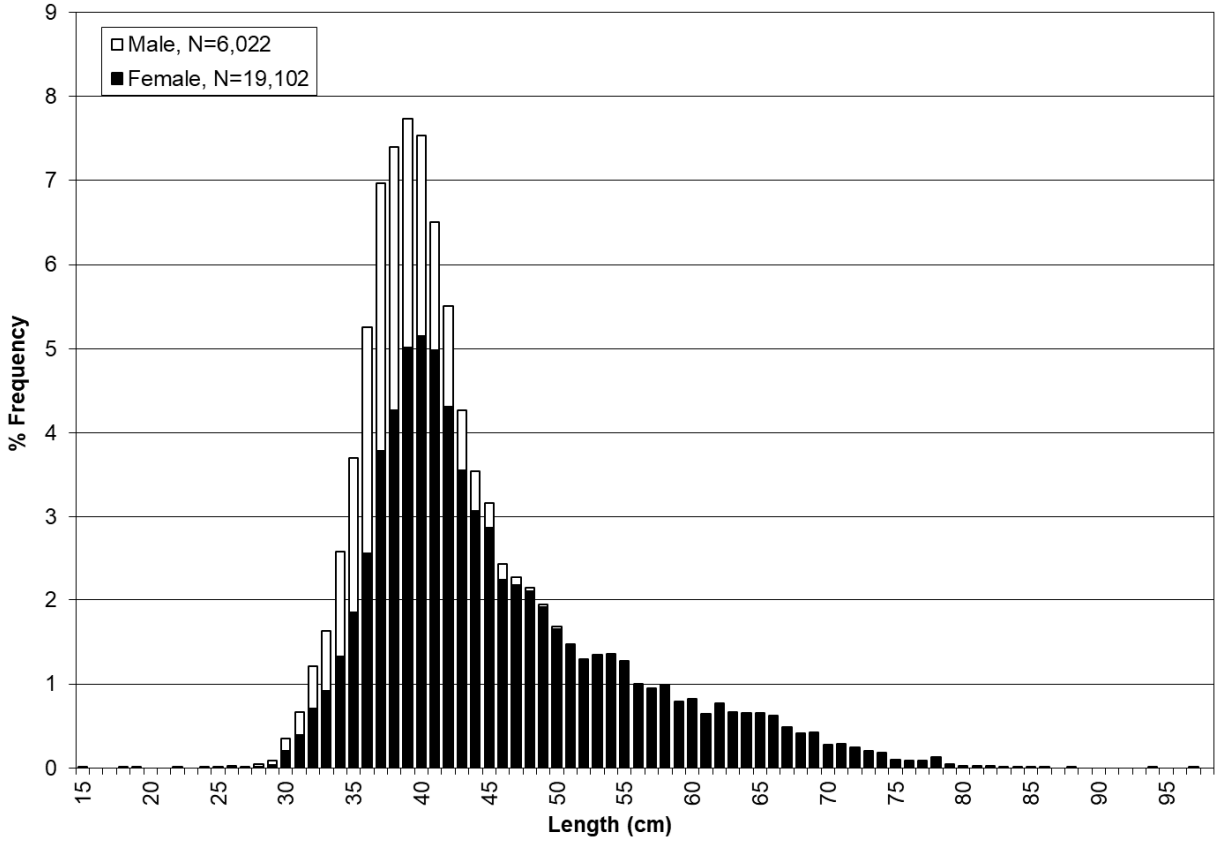
Merluccius spp.
Second Season 2019 (01 Jul to 31 Dec)

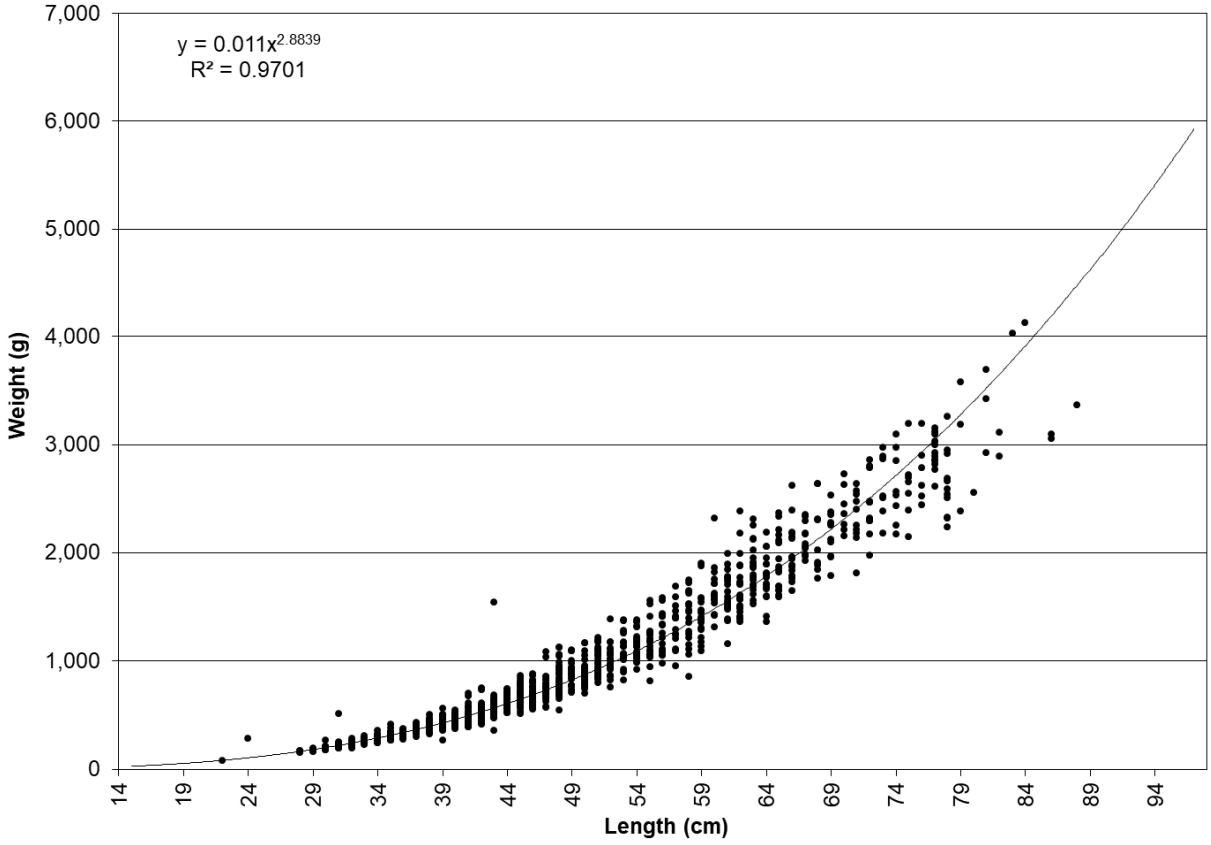


Merluccius spp.
First Season 2019 (01 Jan to 30 Jun)



Length– frequency distribution and length-weight relationship in *M.hubbsi* in 2019





Genypterus blacodes - Kingclip

Table J.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
TR	3,639	3,867	3,510	3,977	2,881	2,983	1,612	1,632	1,446	1,712
	3,639	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,612**	**1,632**	**1,446**	**1,712**

Table J.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	15	163	12	108	-	1	62	12	-	98
February	110	296	138	188	65	50	175	7	22	109
March	300	214	277	153	141	200	52	67	41	148
April	580	429	338	281	189	250	134	110	110	247
May	416	728	389	358	372	314	205	107	276	281
June	202	141	134	114	324	288	78	42	115	268
July	89	226	170	140	296	159	154	168	222	281
August	366	421	570	836	387	226	234	251	156	167
September	446	462	390	843	357	491	142	410	134	68
October	377	309	420	653	491	503	337	310	209	39
November	445	310	432	234	203	265	23	142	106	1
December	294	167	240	67	57	237	15	8	55	5
	3,639	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,612**	**1,632**	**1,446**	**1,712**

Table J.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ES	2,835	2,933	2,583	3,053	2,219	2,370	1,280	1,386	1,072	1,460
FK	677	851	858	843	548	502	312	225	353	240
JP	0	0	-	-	-	-	-	-	-	-
KR	101	47	62	72	107	90	19	10	18	9
UK	26	35	7	9	7	22	1	11	4	2
	3,639	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,612**	**1,632**	**1,446**	**1,712**

Genypterus blacodes - Kingclip

Table J.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	460	481	518	410	291	338	141	146	186	163
800-999	467	404	456	904	710	612	434	204	347	387
1,000-1,499	1,664	2,000	1,905	1,889	1,182	1,350	543	710	541	711
1,500-1,999	1,034	972	625	760	683	648	465	552	370	441
2,000-2,999	15	11	5	14	13	36	30	20	2	9
>2,999	0	0	1	0	2	-	0	-	-	-
	3,639	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,612**	**1,632**	**1,446**	**1,712**

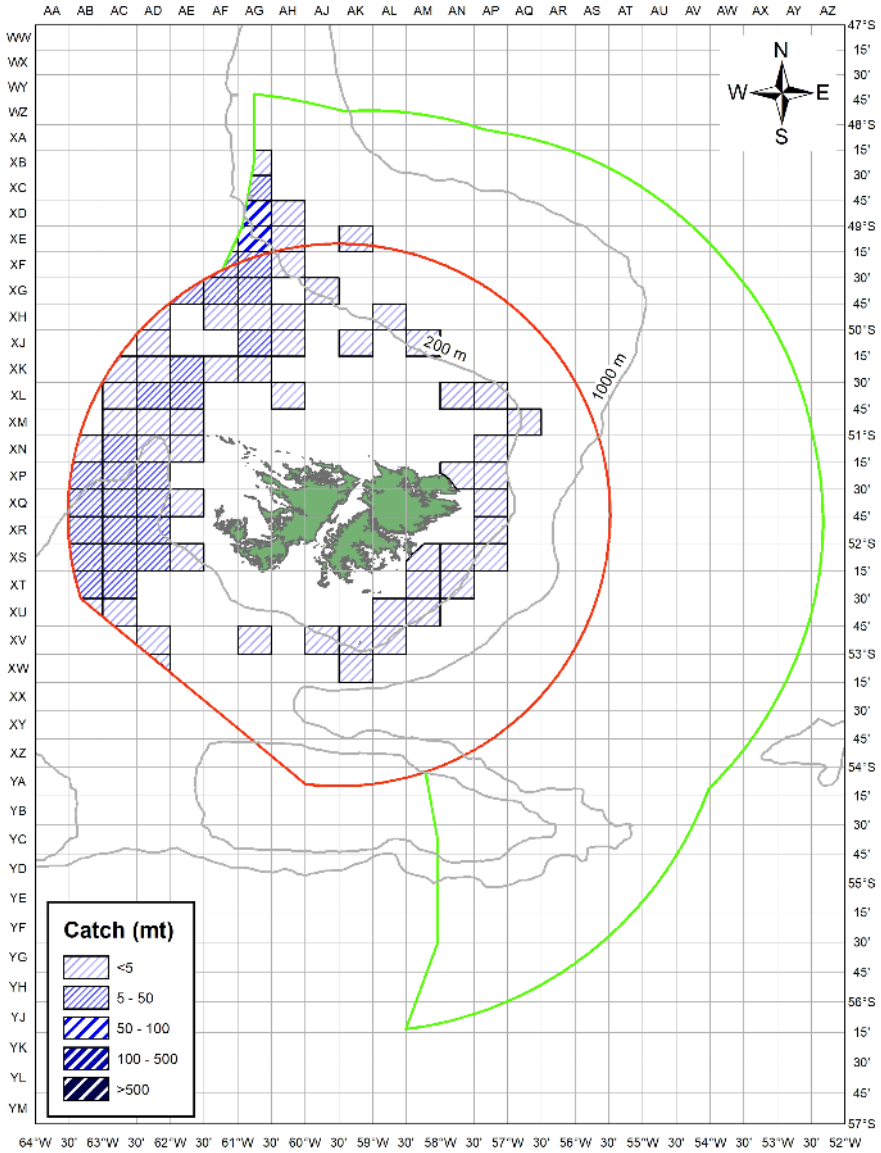
Table J.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	12	101	-	11	13	24	41	-	6	-
45-49	204	173	177	182	63	105	31	23	111	-
50-54	332	302	487	534	460	419	242	202	229	258
55-59	539	819	863	884	400	365	222	193	235	384
60-64	824	820	816	950	464	639	251	87	210	244
65-69	1,308	1,151	786	814	992	956	437	642	379	490
70-79	398	474	375	579	481	470	361	448	249	316
80-89	22	26	2	19	2	5	27	25	24	15
>89	1	1	4	3	4	-	0	12	1	4
	3,639	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,612**	**1,632**	**1,446**	**1,712**

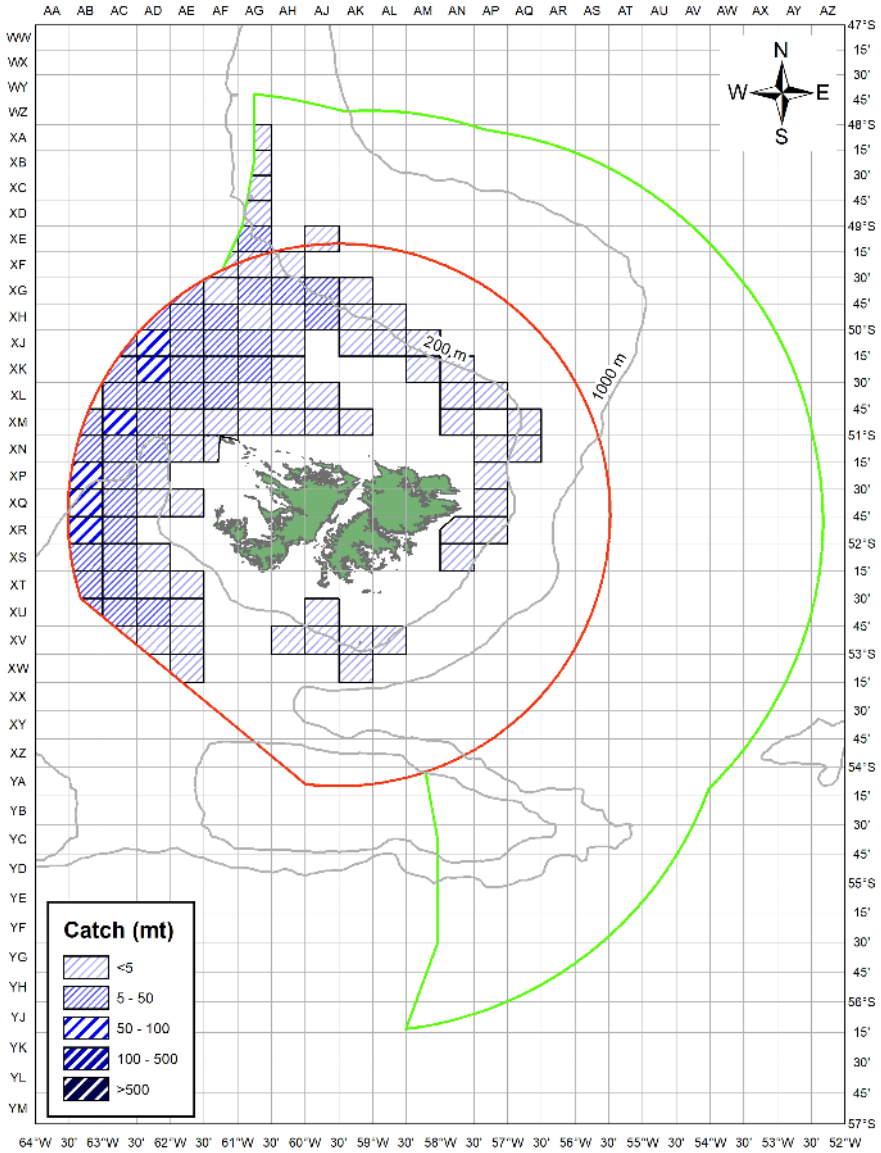
Table J.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	18	-	-	-	-	43	-
1,000-1,199	12	29	-	11	13	24	41	-	-	-
1,200-1,399	113	77	107	86	45	34	-	-	-	-
1,400-1,599	376	541	630	702	483	517	262	265	257	347
1,600-1,799	520	331	144	179	121	133	97	1	-	-
1,800-1,999	1,781	1,877	1,687	1,608	1,222	1,323	680	821	785	865
2,000-2,499	697	818	741	1,017	649	657	317	411	204	333
2,500-2,999	73	73	181	295	312	190	119	66	104	104
3,000-3,999	67	120	18	61	34	106	59	61	52	57
>3,999	0	1	1	0	2	0	37	6	1	6
	3,639	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,612**	**1,632**	**1,446**	**1,712**

Genypterus blacodes
Second Season 2019 (01 Jul to 31 Dec)

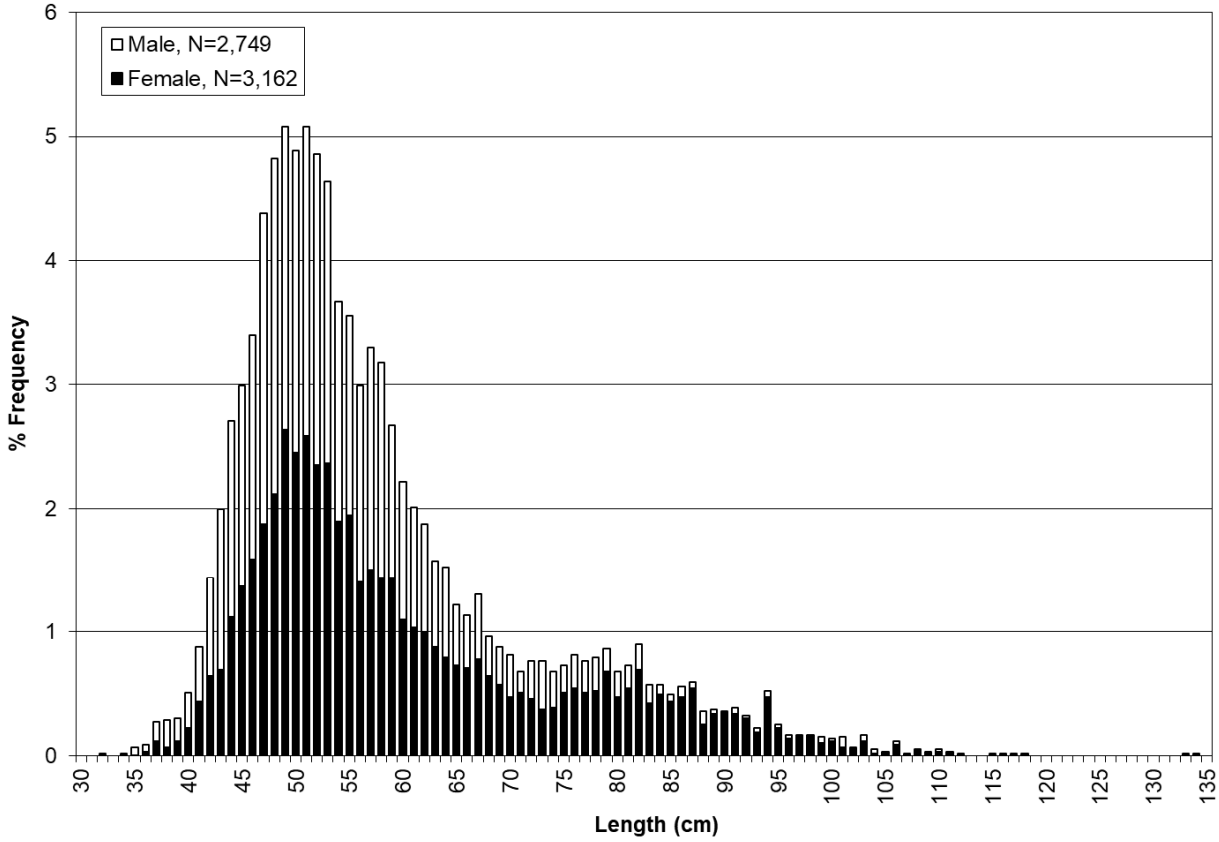


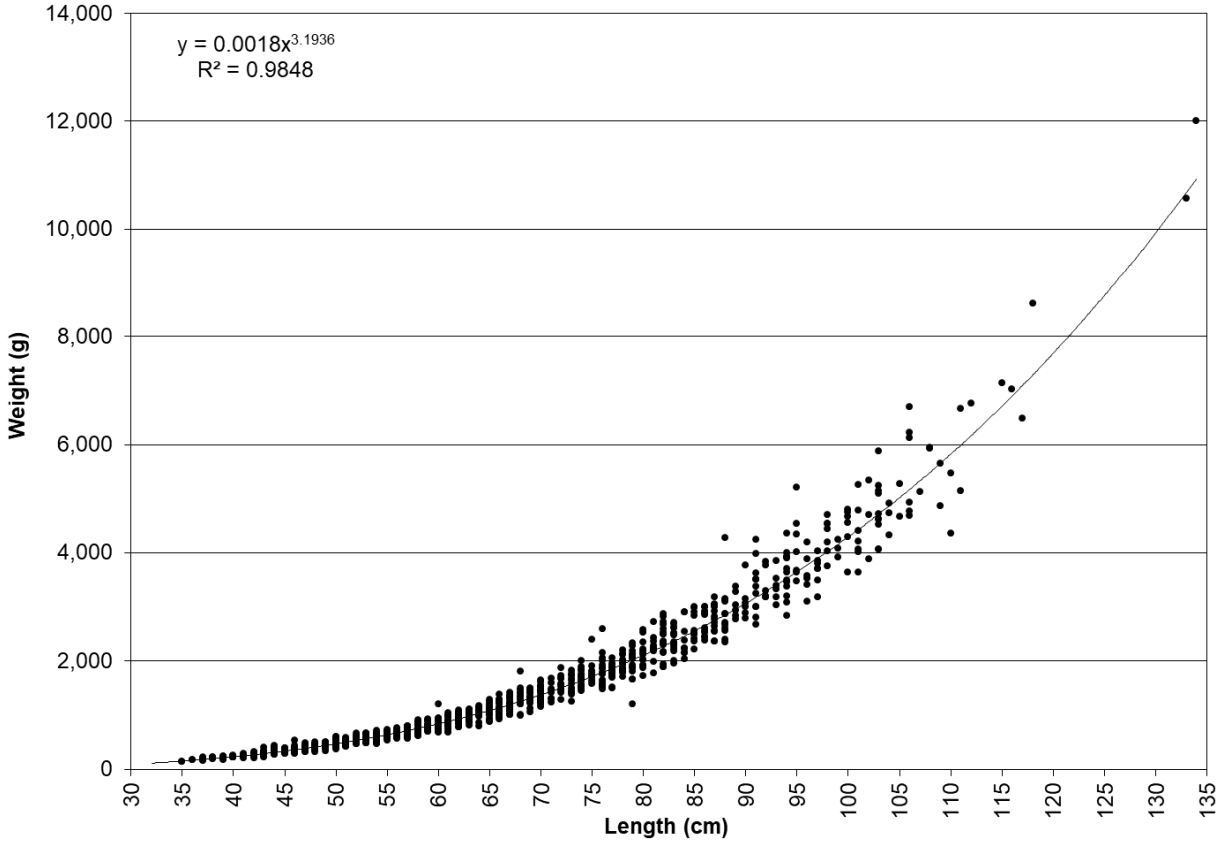
Genypterus blacodes
First Season 2019 (01 Jan to 30 Jun)



Genypterus blacodes - **Kingclip**

Length– frequency distribution and length-weight relationship in 2019





Dissostichus eleginoides - Toothfish

Table K.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
LO	944	1,221	1,085	1,301	1,252	1,123	1,023	1,030	982	1,049
PO	0	-	-	-	-	-	-	-	-	-
TR	460	339	226	120	45	103	476	489	277	268
	1,404	**1,560**	**1,311**	**1,421**	**1,297**	**1,227**	**1,499**	**1,519**	**1,259**	**1,317**

Table K.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	129	131	136	140	125	161	172	24	116	141
February	141	138	159	91	109	111	146	9	40	130
March	207	84	122	133	73	142	218	23	163	142
April	169	182	159	193	121	118	157	37	161	198
May	167	161	131	153	36	71	156	174	56	44
June	62	82	91	22	72	49	105	72	7	6
July	136	180	133	128	130	134	160	168	30	8
August	100	216	162	196	37	130	217	39	27	50
September	106	165	101	207	234	34	30	115	148	144
October	23	55	19	2	115	19	46	241	200	196
November	52	30	23	8	107	18	36	384	157	103
December	113	136	76	146	139	239	55	233	154	153
	1,404	**1,560**	**1,311**	**1,421**	**1,297**	**1,227**	**1,499**	**1,519**	**1,259**	**1,317**

Table K.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	353	-	-	249	-	-
ES	366	260	155	81	34	87	367	396	207	205
FK	1,030	1,287	1,150	1,339	911	1,134	1,122	833	1,045	1,111
KR	6	7	7	1	0	5	10	40	6	0
RU	0	-	-	-	-	-	-	-	-	-
UK	2	6	0	-	-	0	-	1	1	0
	1,404	**1,560**	**1,311**	**1,421**	**1,297**	**1,227**	**1,499**	**1,519**	**1,259**	**1,317**

Table K.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	45	31	44	10	7	5	35	19	34	20
800-999	983	1,263	1,118	1,197	906	1,141	1,198	98	61	58
1,000-1,499	234	84	66	166	370	51	77	482	93	122
1,500-1,999	135	176	82	44	15	29	173	909	1,067	1,109
2,000-2,999	6	6	2	3	-	1	16	10	4	8
>2,999	-	-	-	-	-	-	-	-	-	-
	1,404	**1,560**	**1,311**	**1,421**	**1,297**	**1,227**	**1,499**	**1,519**	**1,259**	**1,317**

Table K.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	2	7	-	-	-	5	21	-	-	-
45-49	13	9	8	2	1	0	4	1	13	-
50-54	976	1,244	1,132	1,195	907	1,130	1,077	28	37	25
55-59	50	40	37	136	4	10	50	857	1,009	1,076
60-64	40	27	14	19	362	25	9	362	54	43
65-69	205	128	75	32	16	28	221	159	90	116
70-79	114	101	44	36	8	28	102	104	48	53
80-89	3	5	-	-	-	1	11	4	7	1
>89	0	-	2	0	-	-	4	3	1	1
	1,404	**1,560**	**1,311**	**1,421**	**1,297**	**1,227**	**1,499**	**1,519**	**1,259**	**1,317**

Table K.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	0	-	-	-	-	-	-	-	8	-
1,000-1,199	2	5	-	-	-	5	21	-	-	-
1,200-1,399	9	4	0	117	1	0	-	-	-	-
1,400-1,599	1,001	1,266	1,142	1,204	1,262	1,131	1,099	149	44	44
1,600-1,799	30	15	6	9	6	5	0	169	-	-
1,800-1,999	220	139	96	42	18	34	232	261	164	156
2,000-2,499	115	98	52	40	8	44	84	91	29	45
2,500-2,999	6	8	11	1	2	6	25	828	999	1,054
3,000-3,999	21	24	3	7	0	3	28	13	14	16
>3,999	-	0	1	-	-	0	9	8	1	2
	1,404	**1,560**	**1,311**	**1,421**	**1,297**	**1,227**	**1,499**	**1,519**	**1,259**	**1,317**

Table K.7 Total catch (tonnes) of longliners by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
800-999	944	1,221	1,085	1,184	900	1,123	1,023	-	-	-
1,000-1,499	-	-	-	117	353	-	-	249	-	-
1,500-1,999	-	-	-	-	-	-	-	781	982	1,049
	944	**1,221**	**1,085**	**1,301**	**1,252**	**1,123**	**1,023**	**1,030**	**982**	**1,049**

Table K.8 Total catch (tonnes) of longliners by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
50-54	944	1,221	1,085	1,184	900	1,123	1,023	-	-	-
55-59	-	-	-	117	-	-	-	781	982	1,049
60-64	-	-	-	-	353	-	-	249	-	-
	944	**1,221**	**1,085**	**1,301**	**1,252**	**1,123**	**1,023**	**1,030**	**982**	**1,049**

Table K.9 Total catch (tonnes) of longliners by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
1,200-1,399	-	-	-	117	-	-	-	-	-	-
1,400-1,599	944	1,221	1,085	1,184	1,252	1,123	1,023	99	-	-
1,600-1,799	-	-	-	-	-	-	-	150	-	-
2,500-2,999	-	-	-	-	-	-	-	781	982	1,049
	944	**1,221**	**1,085**	**1,301**	**1,252**	**1,123**	**1,023**	**1,030**	**982**	**1,049**

Table K.10 Total catch (tonnes) of trawlers by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
600-799	45	31	44	10	7	5	35	19	34	20
800-999	39	41	33	13	6	18	175	98	61	58
1,000-1,499	234	84	66	49	17	51	77	233	93	122
1,500-1,999	135	176	82	44	15	29	173	128	85	61
2,000-2,999	6	6	2	3	-	1	16	10	4	8
	460	**339**	**226**	**120**	**45**	**103**	**476**	**489**	**277**	**268**

Table K.11 Total catch (tonnes) of trawlers by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	2	7	-	-	-	5	21	-	-	-
45-49	13	9	8	2	1	0	4	1	13	-
50-54	32	23	47	11	8	6	54	28	37	25
55-59	50	40	37	19	4	10	50	76	28	28
60-64	40	27	14	19	9	25	9	113	54	43
65-69	205	128	75	32	16	28	221	159	90	116
70-79	114	101	44	36	8	28	102	104	48	53
80-89	3	5	-	-	-	1	11	4	7	1
>89	0	-	2	0	-	-	4	3	1	1
	460	**339**	**226**	**120**	**45**	**103**	**476**	**489**	**277**	**268**

Dissostichus eleginoides - Toothfish

Table K.12 Total catch (tonnes) of trawlers by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	-	-	-	-	-	-	-	-	8	-
1,000-1,199	2	5	-	-	-	5	21	-	-	-
1,200-1,399	9	4	0	-	1	0	-	-	-	-
1,400-1,599	57	45	57	20	10	8	76	50	44	44
1,600-1,799	30	15	6	9	6	5	0	19	-	-
1,800-1,999	220	139	96	42	18	34	232	261	164	156
2,000-2,499	115	98	52	40	8	44	84	91	29	45
2,500-2,999	6	8	11	1	2	6	25	46	17	5
3,000-3,999	21	24	3	7	0	3	28	13	14	16
>3,999	-	0	1	-	-	0	9	8	1	2
	460	**339**	**226**	**120**	**45**	**103**	**476**	**489**	**277**	**268**

Table K.13 Total catch (tonnes) of potting vessels by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
600-799	0	-	-	-	-	-	-	-	-	-
	0	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

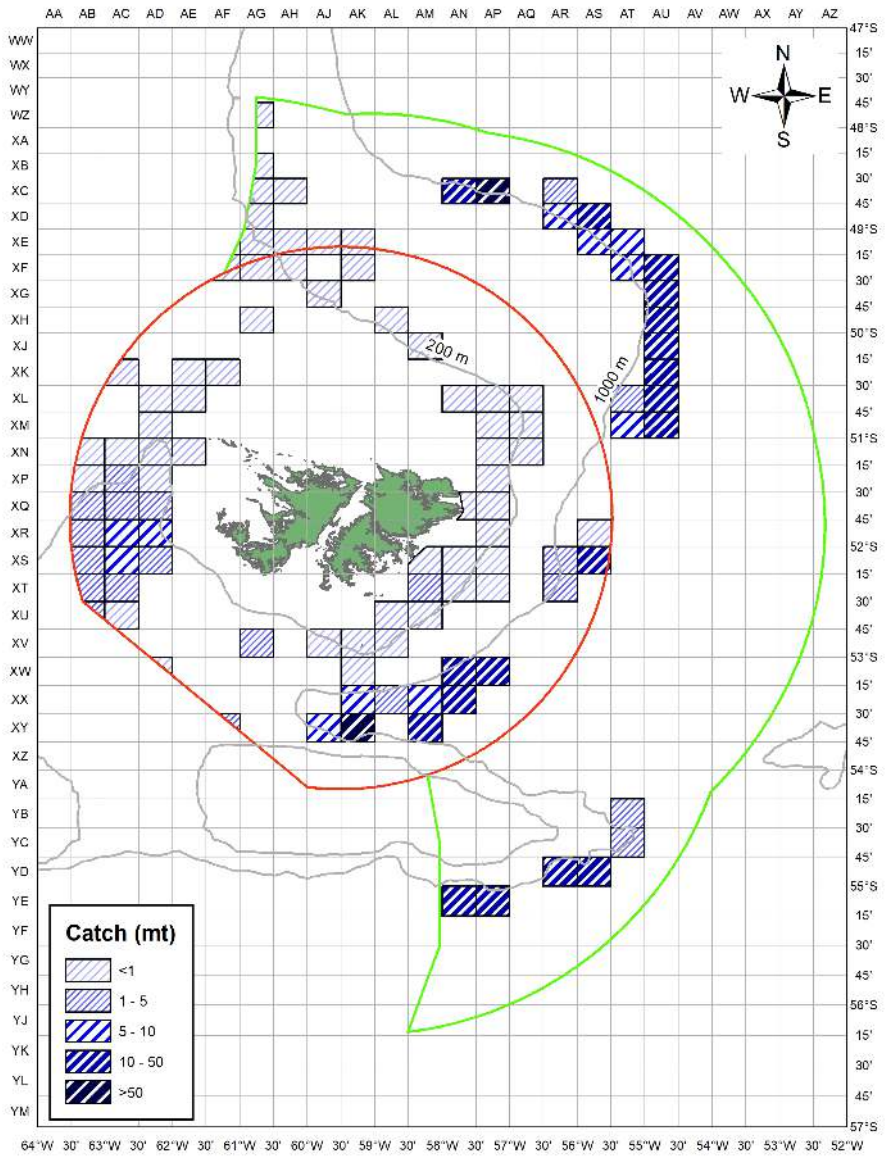
Table K.14 Total catch (tonnes) of potting vessels by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
50-54	0	-	-	-	-	-	-	-	-	-
	0	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

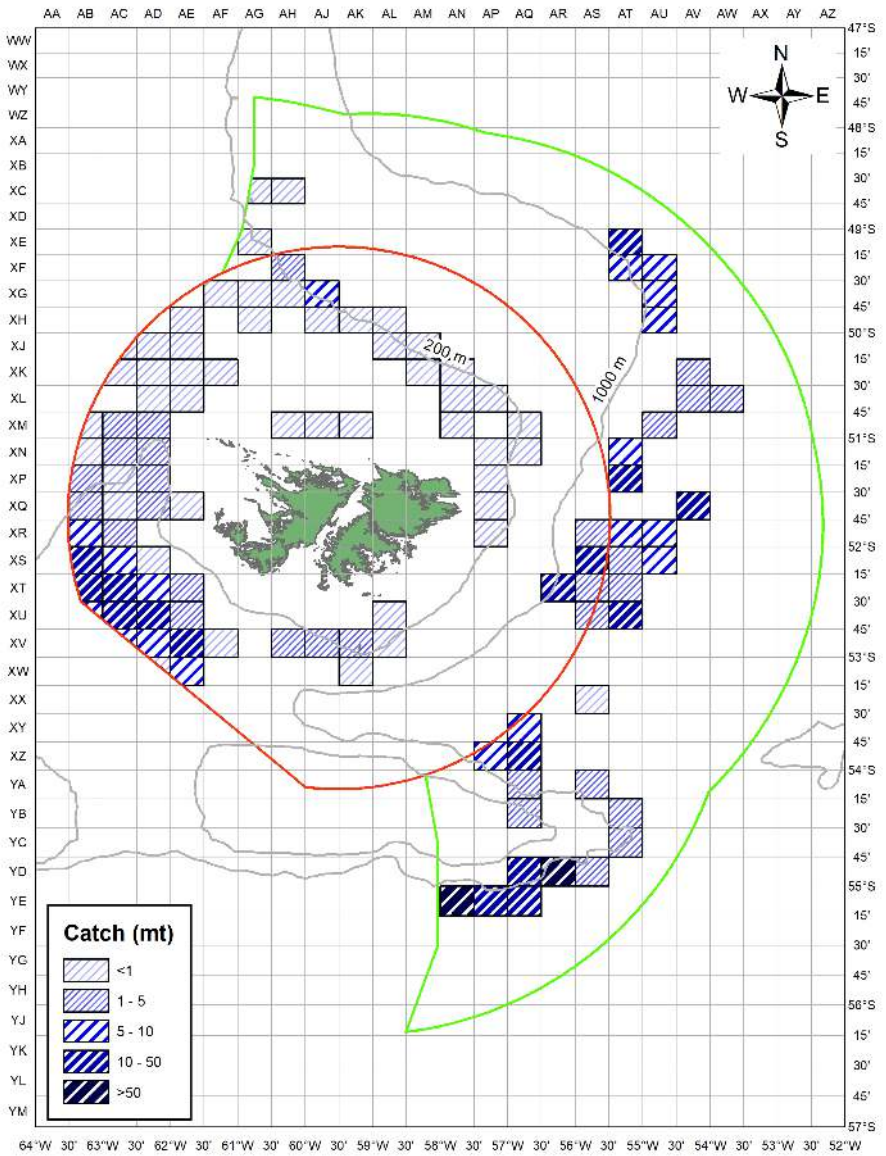
Table K.15 Total catch (tonnes) of potting vessels by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	0	-	-	-	-	-	-	-	-	-
	0	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Dissostichus eleginoides
Second Season 2019 (01 Jul to 31 Dec)

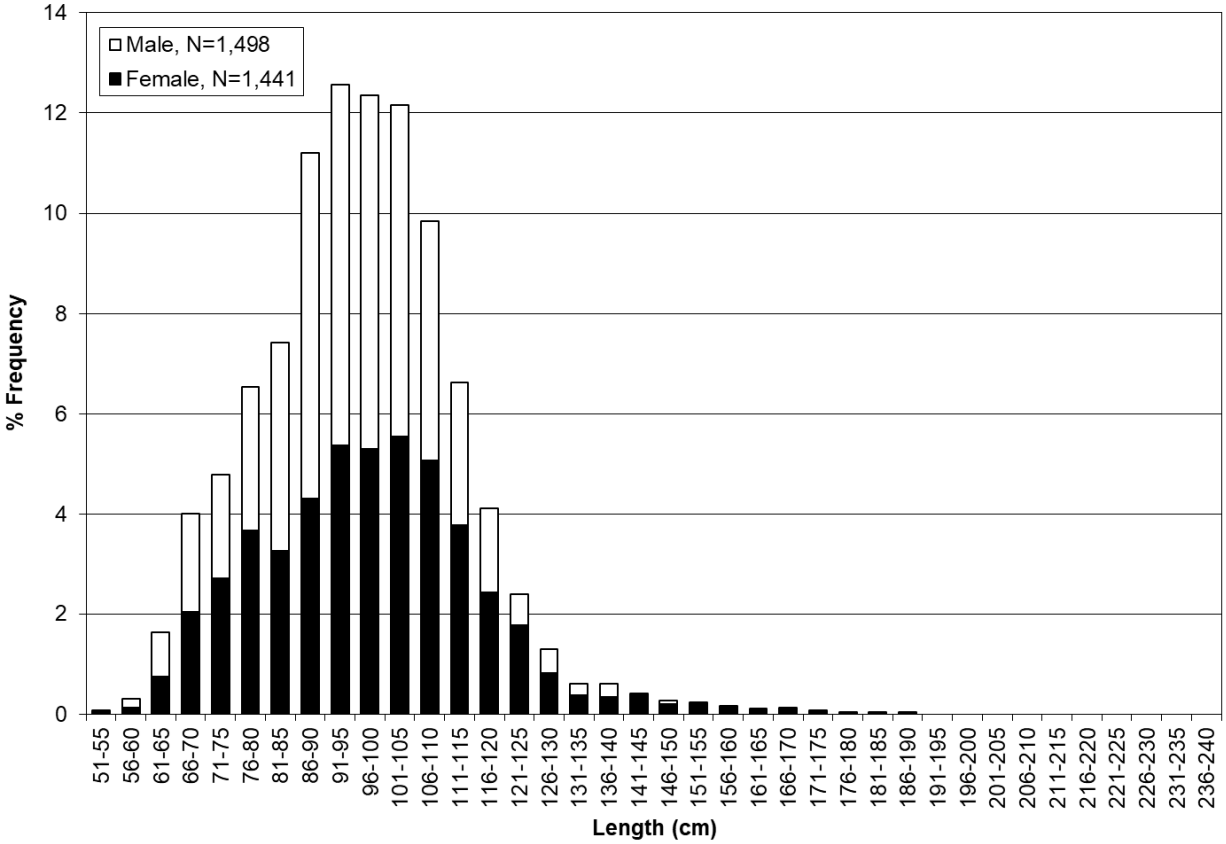


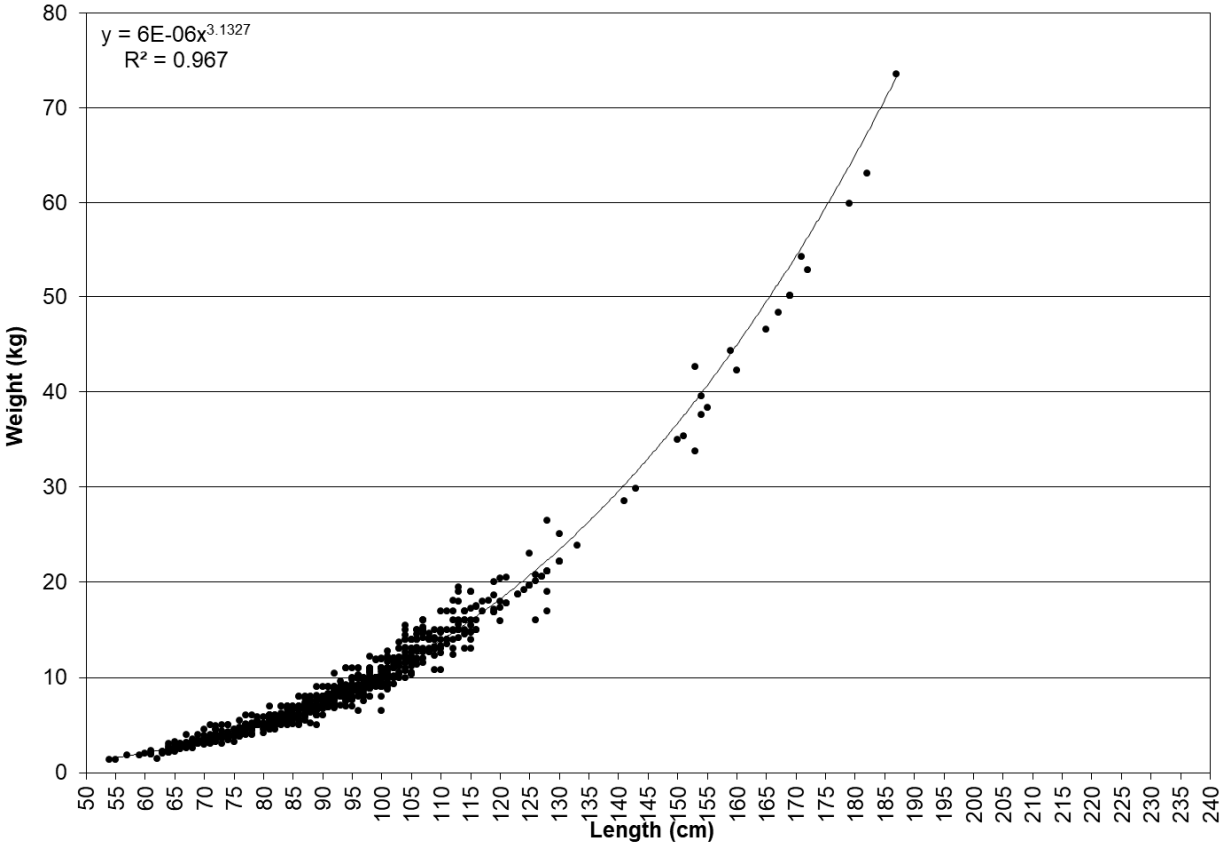
Dissostichus eleginoides
First Season 2019 (01 Jan to 30 Jun)



Dissostichus eleginoides - Toothfish

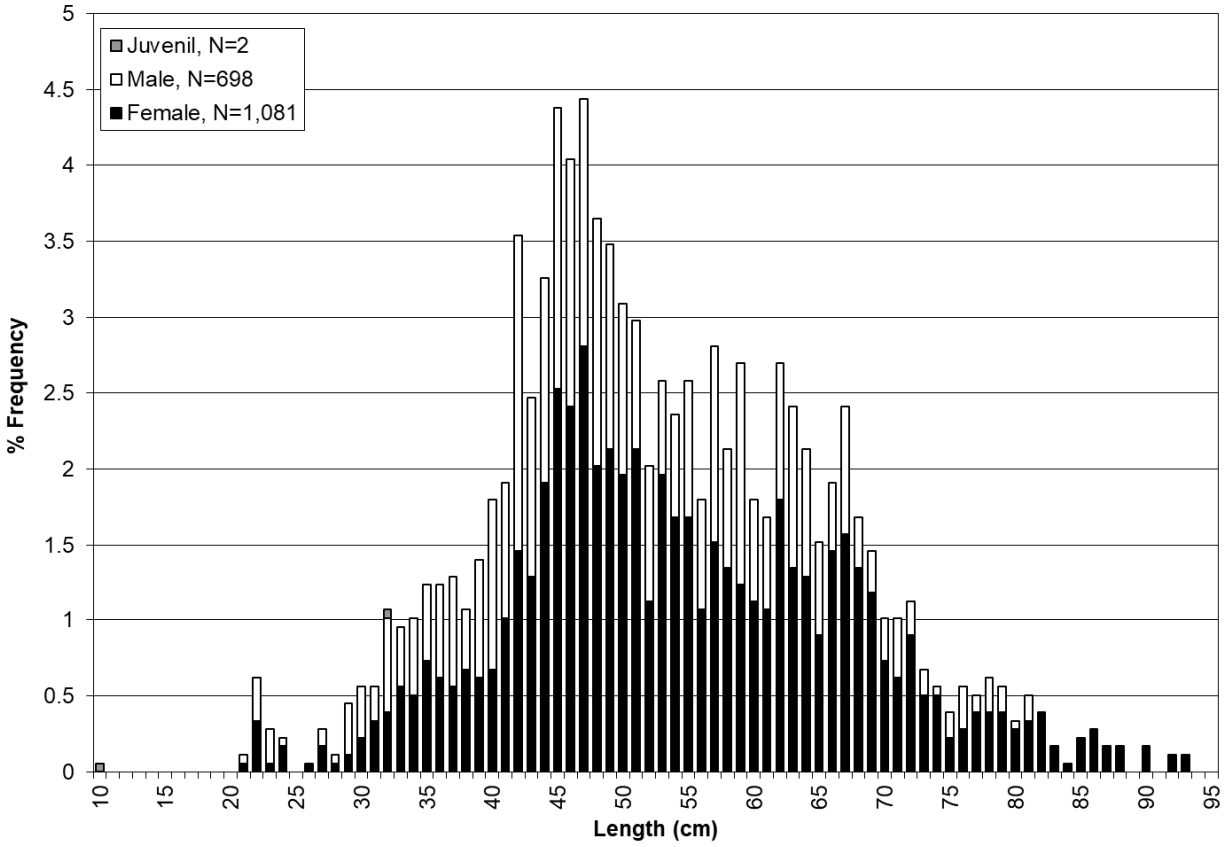
Length– frequency distribution and length-weight relationship in longliner fleet in 2019

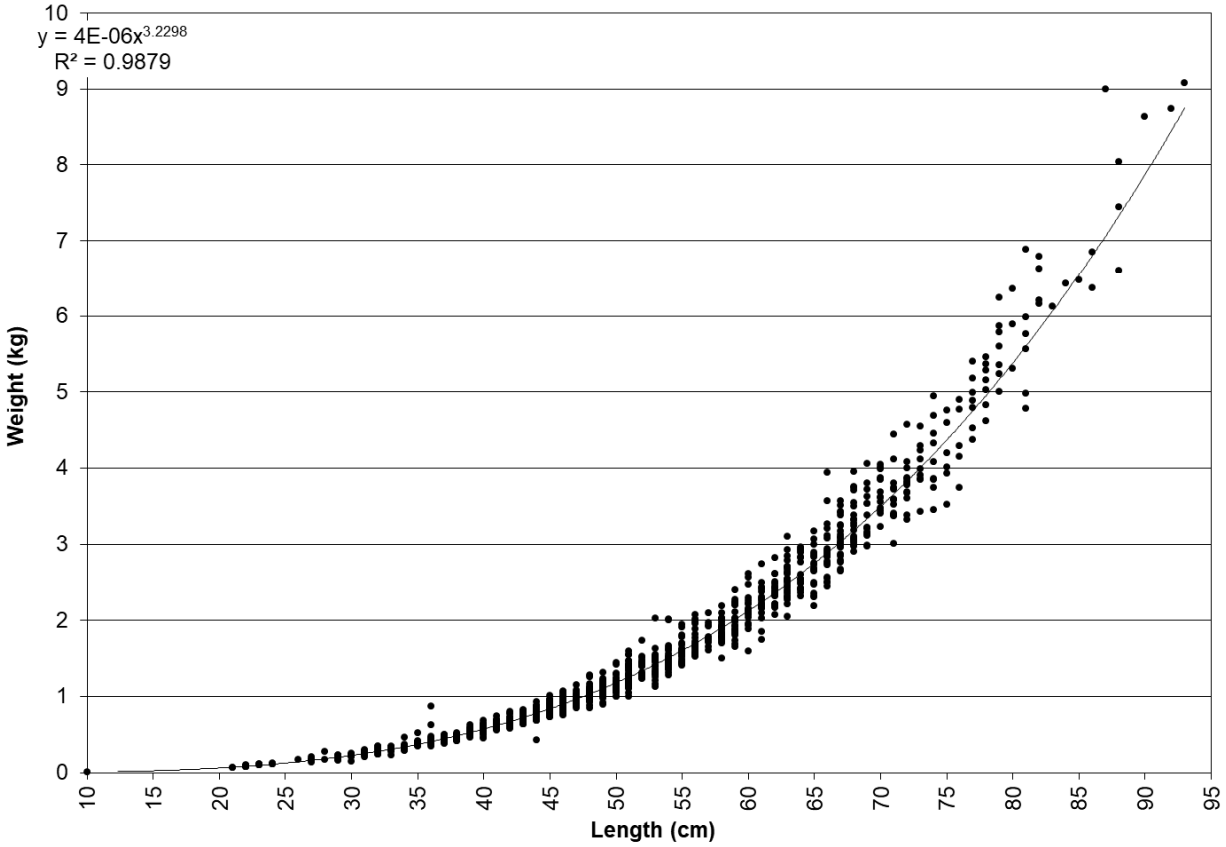




Dissostichus eleginoides - Toothfish

Length– frequency distribution and length-weight relationship in trawler fleet in 2019





Rajidae - Skates and Rays

Table L.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
LO	23	55	32	78	32	28	29	28	28	26
PO	0	-	-	-	-	-	-	-	-	-
TR	5,868	6,916	6,620	5,855	5,522	6,365	5,877	3,161	1,967	1,476
	5,891	**6,972**	**6,652**	**5,933**	**5,554**	**6,393**	**5,906**	**3,189**	**1,995**	**1,503**

Table L.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	43	185	15	278	5	8	592	27	1	107
February	167	360	216	288	125	154	440	8	27	111
March	168	126	511	219	144	119	129	67	79	124
April	332	588	320	413	208	184	225	205	130	137
May	474	879	398	428	394	348	663	285	398	231
June	338	398	404	267	267	693	669	390	133	220
July	323	849	701	394	289	878	522	466	268	223
August	1,650	1,446	1,568	1,228	1,372	1,110	627	436	130	172
September	1,146	992	802	867	1,479	1,359	585	420	130	110
October	326	691	1,099	868	560	829	1,201	626	211	57
November	418	317	438	369	523	330	120	96	121	3
December	505	141	181	313	188	380	132	163	367	7
	5,891	**6,972**	**6,652**	**5,933**	**5,554**	**6,393**	**5,906**	**3,189**	**1,995**	**1,503**

Table L.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	3	-	-	15	-	-
ES	2,514	2,845	2,490	2,284	2,244	3,637	3,208	1,487	1,059	1,146
FK	912	1,837	1,330	1,742	1,120	837	665	602	458	342
KR	2,394	2,219	2,797	1,884	2,174	1,894	1,995	1,077	477	12
RU	0	-	-	-	-	-	-	-	-	-
UK	71	71	35	23	13	24	38	8	1	3
	5,891	**6,972**	**6,652**	**5,933**	**5,554**	**6,393**	**5,906**	**3,189**	**1,995**	**1,503**

Table L.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	1,133	616	731	449	592	220	167	324	178	150
800-999	1,723	1,871	2,237	1,749	1,899	2,755	2,865	1,435	915	402
1,000-1,499	2,220	2,909	2,324	2,589	2,079	2,537	1,754	732	595	590
1,500-1,999	775	1,033	823	682	639	743	987	647	303	332
2,000-2,999	40	119	47	67	58	138	73	51	5	28
>2,999	-	424	489	396	287	-	59	-	-	-
	5,891	**6,972**	**6,652**	**5,933**	**5,554**	**6,393**	**5,906**	**3,189**	**1,995**	**1,503**

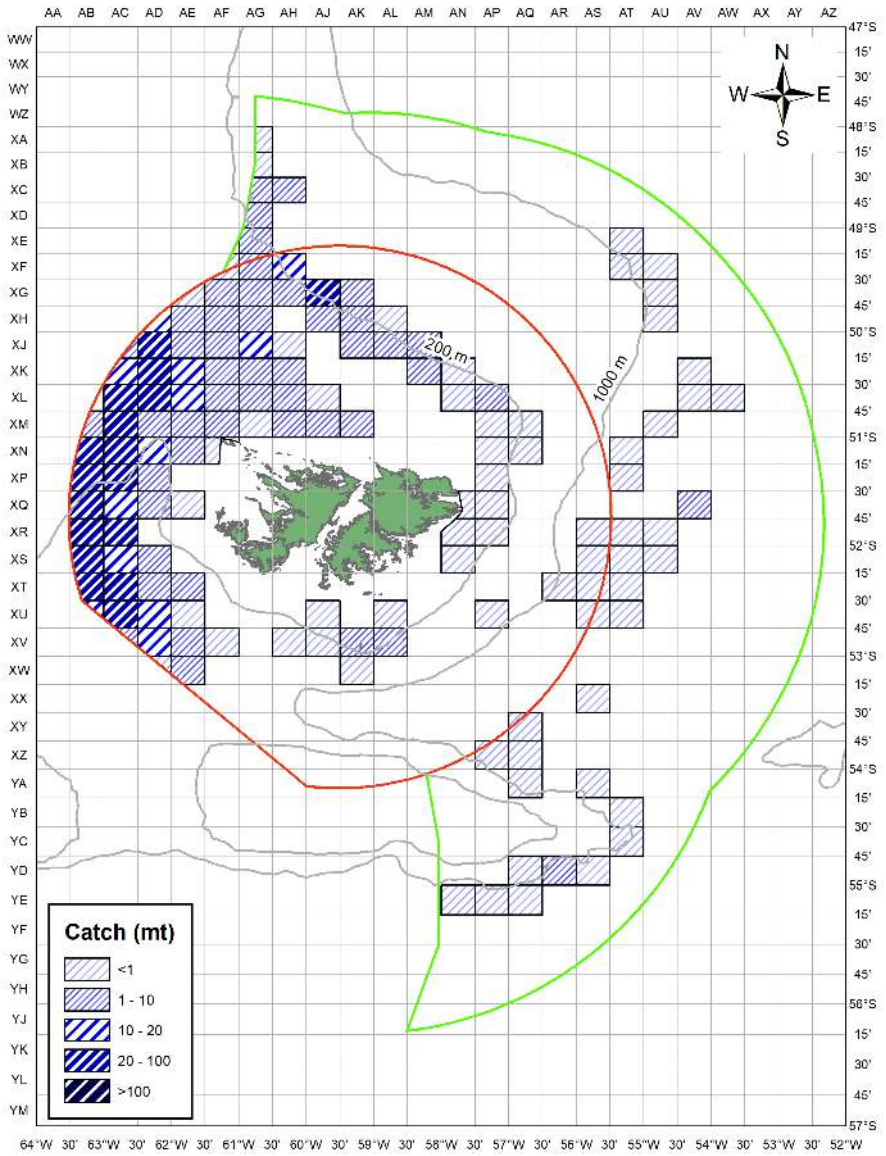
Table L.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	18	54	-	19	1	46	46	-	4	-
45-49	662	252	152	160	40	103	64	63	123	-
50-54	852	771	1,040	588	835	727	565	504	177	220
55-59	1,653	1,925	2,375	1,939	1,550	1,883	2,014	1,192	682	302
60-64	823	868	817	961	1,056	1,044	814	188	153	254
65-69	1,044	1,460	918	1,059	955	1,467	1,425	616	578	461
70-79	775	1,165	829	769	806	1,072	874	530	272	257
80-89	63	51	27	42	20	45	43	77	5	9
>89	0	426	495	396	291	4	63	20	0	0
	5,891	**6,972**	**6,652**	**5,933**	**5,554**	**6,393**	**5,906**	**3,189**	**1,995**	**1,503**

Table L.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	0	-	-	24	-	-	-	-	50	-
1,000-1,199	18	35	-	19	1	46	46	-	-	-
1,200-1,399	40	42	49	62	20	19	-	-	-	-
1,400-1,599	235	414	488	432	341	493	413	581	254	300
1,600-1,799	569	414	486	503	373	615	435	27	-	-
1,800-1,999	1,450	1,824	1,695	1,571	1,152	1,665	1,899	926	887	785
2,000-2,499	1,309	1,895	1,272	1,340	1,713	1,319	783	364	196	188
2,500-2,999	2,062	1,556	2,039	1,412	1,558	1,925	2,000	1,126	555	108
3,000-3,999	206	775	611	562	385	295	263	146	52	120
>3,999	0	16	13	8	10	14	67	19	2	2
	5,891	**6,972**	**6,652**	**5,933**	**5,554**	**6,393**	**5,906**	**3,189**	**1,995**	**1,503**

Rajidae
First Season 2019 (01 Jan to 30 Jun)



Rajidae
Second Season 2019 (01 Jul to 31 Dec)

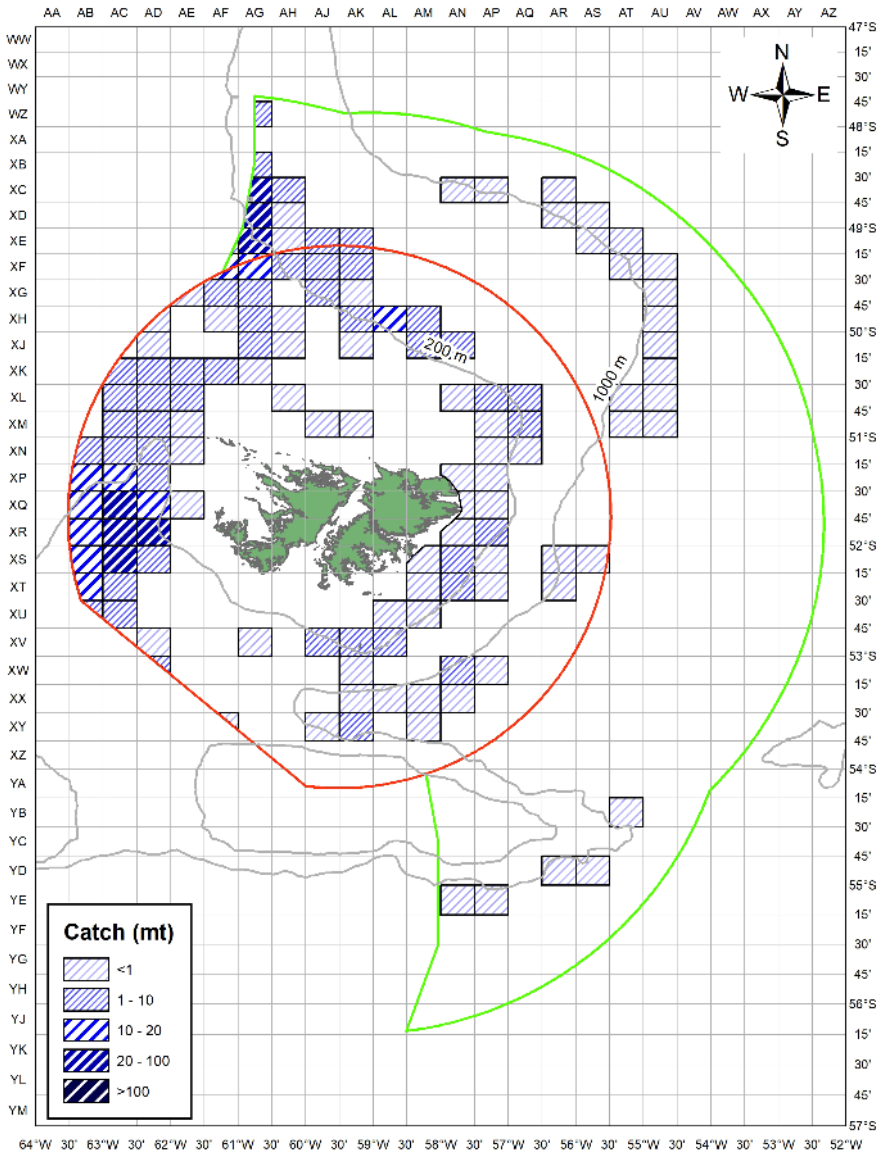


Table M.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
PO	0	-	-	-	-	-	-	-	-	-
TR	76,451	55,705	63,509	32,436	56,709	29,086	7,039	2,520	2,213	950
	76,451	**55,705**	**63,509**	**32,436**	**56,709**	**29,086**	**7,039**	**2,520**	**2,213**	**950**

Table M.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	892	3,521	112	743	-	32	933	40	-	97
February	5,674	5,993	3,086	3,197	560	1,780	1,024	141	154	240
March	10,163	2,502	9,016	2,847	1,251	1,527	750	415	472	304
April	13,402	6,205	10,051	3,837	1,170	4,442	1,167	434	622	139
May	11,580	11,150	14,240	2,751	9,128	9,544	536	85	173	49
June	5,281	4,578	5,500	922	5,940	3,806	131	19	10	20
July	4,449	2,571	3,680	675	8,922	390	226	109	36	17
August	4,027	3,697	4,945	2,935	7,350	756	923	564	234	54
September	6,007	4,036	3,288	4,898	5,984	729	992	545	357	24
October	8,929	7,536	5,352	5,086	7,925	1,093	235	127	56	2
November	2,064	2,889	1,877	2,111	5,997	841	72	31	70	0
December	3,984	1,028	2,361	2,435	2,482	4,146	51	11	29	3
	76,451	**55,705**	**63,509**	**32,436**	**56,709**	**29,086**	**7,039**	**2,520**	**2,213**	**950**

Table M.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	0	-	-	-	-	-
ES	52,869	39,646	52,389	25,025	45,848	23,986	3,581	669	701	444
FK	22,388	15,051	10,754	7,079	10,314	4,605	3,205	1,765	1,470	492
JP	0	-	-	-	-	-	-	-	-	-
KR	337	215	255	305	511	170	119	5	6	0
RU	0	-	-	-	-	-	-	-	-	-
UK	857	794	111	28	36	325	133	82	37	13
	76,451	**55,705**	**63,509**	**32,436**	**56,709**	**29,086**	**7,039**	**2,520**	**2,213**	**950**

Table M.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	5,439	3,263	5,020	3,247	3,504	2,052	176	66	158	99
800-999	5,987	4,965	5,017	4,520	9,916	4,384	1,141	158	158	50
1,000-1,499	45,252	32,535	36,898	17,963	29,935	15,803	2,369	621	668	403
1,500-1,999	14,991	13,063	14,962	5,769	11,617	5,342	1,770	835	667	173
2,000-2,999	4,782	1,864	1,586	921	1,727	1,504	1,582	841	562	225
>2,999	0	14	26	16	10	-	0	-	-	-
	76,451	**55,705**	**63,509**	**32,436**	**56,709**	**29,086**	**7,039**	**2,520**	**2,213**	**950**

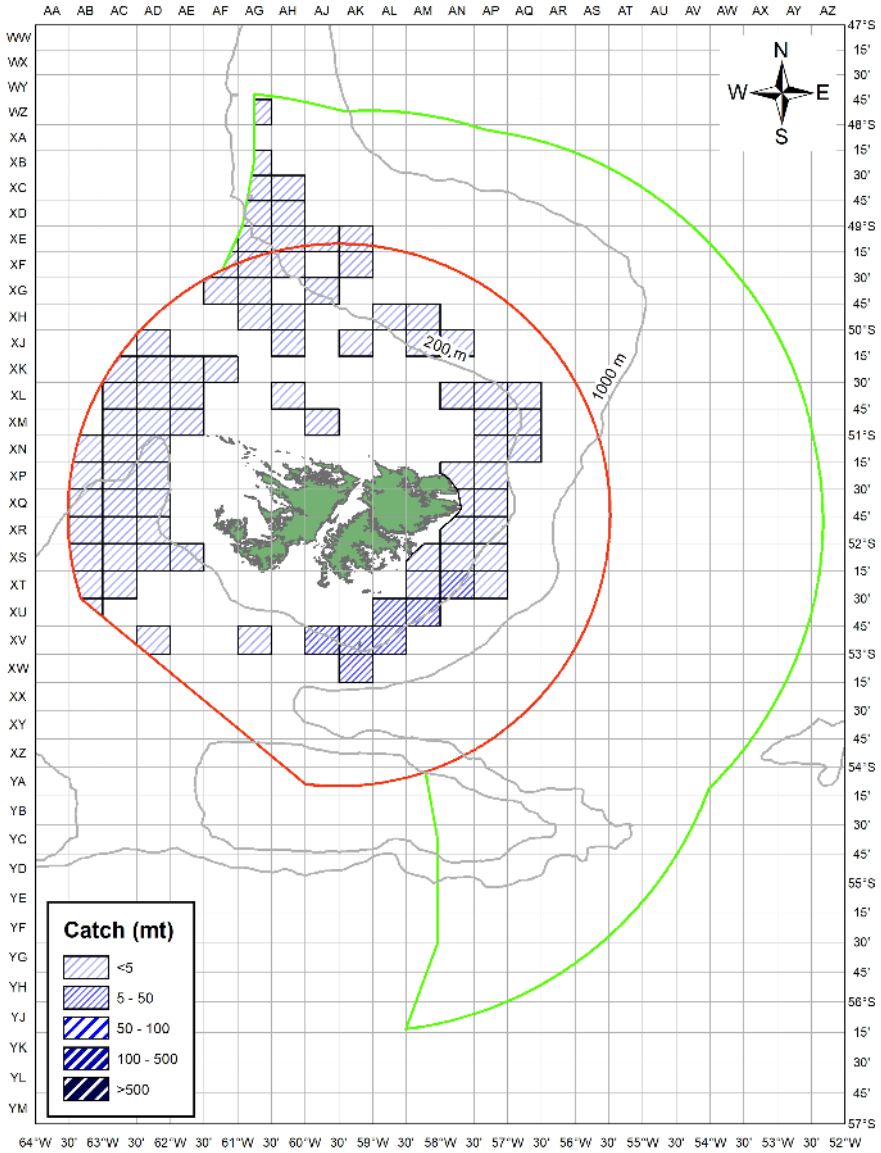
Table M.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	406	1,320	-	423	206	341	32	-	-	-
45-49	4,820	3,277	4,520	3,163	2,880	1,912	285	38	84	-
50-54	2,896	1,515	3,545	1,982	3,235	1,941	198	96	172	99
55-59	11,657	6,904	8,185	4,663	5,158	2,419	477	75	42	149
60-64	15,138	11,502	14,447	8,516	13,239	6,932	645	82	147	63
65-69	25,104	18,450	18,441	7,593	16,907	7,564	2,259	608	420	201
70-79	14,813	11,588	13,258	5,612	14,055	7,161	1,991	1,203	890	358
80-89	1,170	521	504	248	591	397	527	266	287	27
>89	447	629	610	235	437	418	624	152	170	53
	76,451	**55,705**	**63,509**	**32,436**	**56,709**	**29,086**	**7,039**	**2,520**	**2,213**	**950**

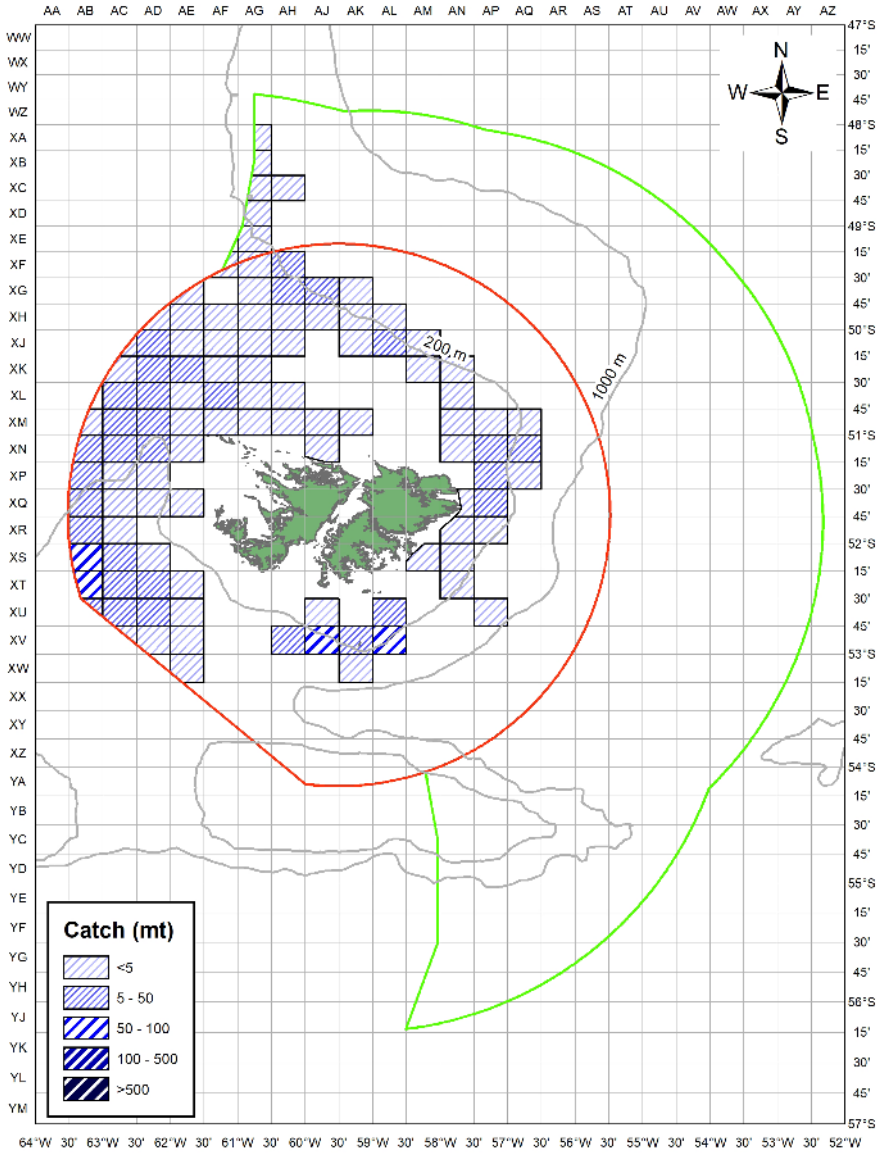
Table M.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	0	-	-	777	-	-	-	-	30	-
1,000-1,199	406	829	-	423	206	341	32	-	-	-
1,200-1,399	1,759	1,116	2,358	1,442	1,829	804	-	-	-	-
1,400-1,599	5,397	4,509	4,929	2,688	5,230	3,515	686	292	453	161
1,600-1,799	5,991	2,574	2,575	1,455	1,629	1,026	203	1	-	-
1,800-1,999	38,209	27,177	32,219	14,636	25,472	11,338	2,707	532	434	312
2,000-2,499	16,654	15,044	17,384	8,179	17,527	8,716	820	318	240	124
2,500-2,999	253	419	1,735	1,237	2,054	857	137	35	49	1
3,000-3,999	6,903	3,198	1,740	1,179	2,245	2,114	1,977	994	780	301
>3,999	880	840	570	419	516	376	476	349	227	52
	76,451	**55,705**	**63,509**	**32,436**	**56,709**	**29,086**	**7,039**	**2,520**	**2,213**	**950**

Patagonotothen ramsayi
Second Season 2019 (01 Jul to 31 Dec)

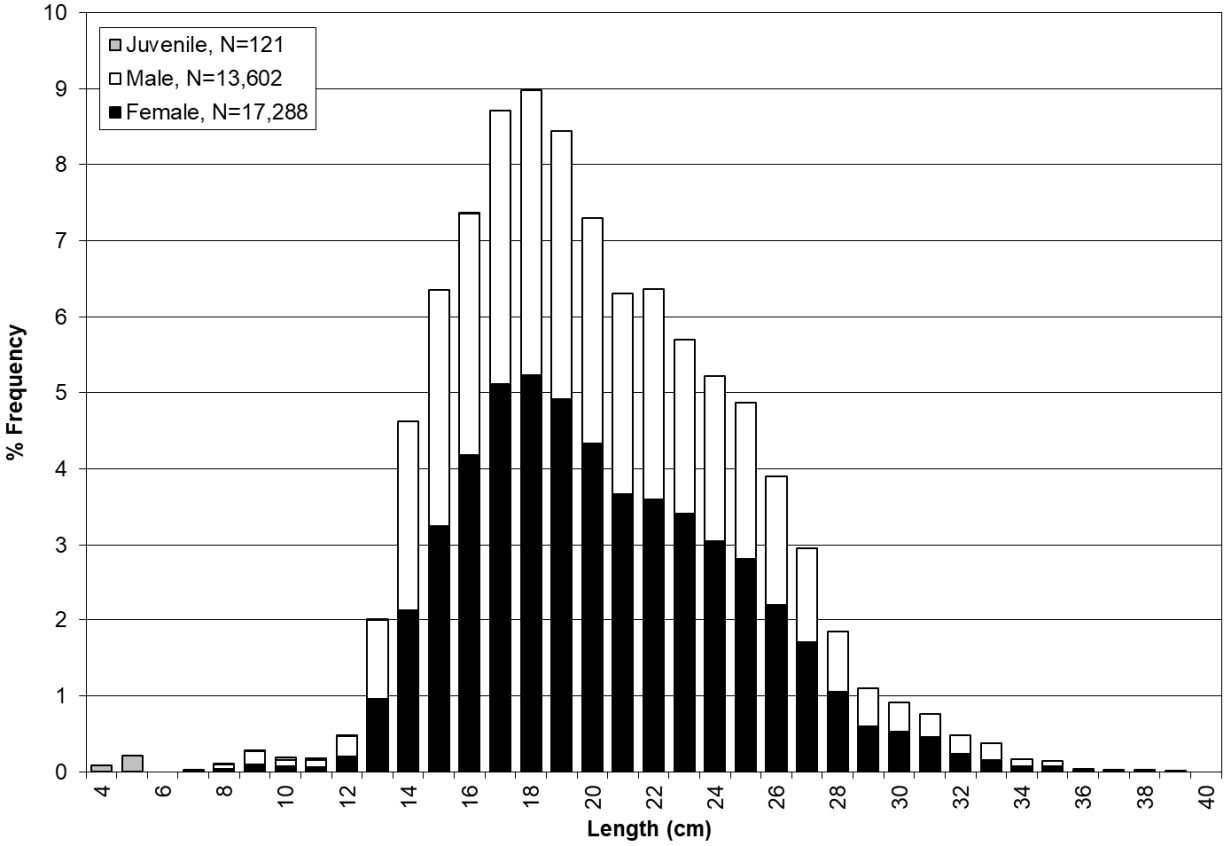


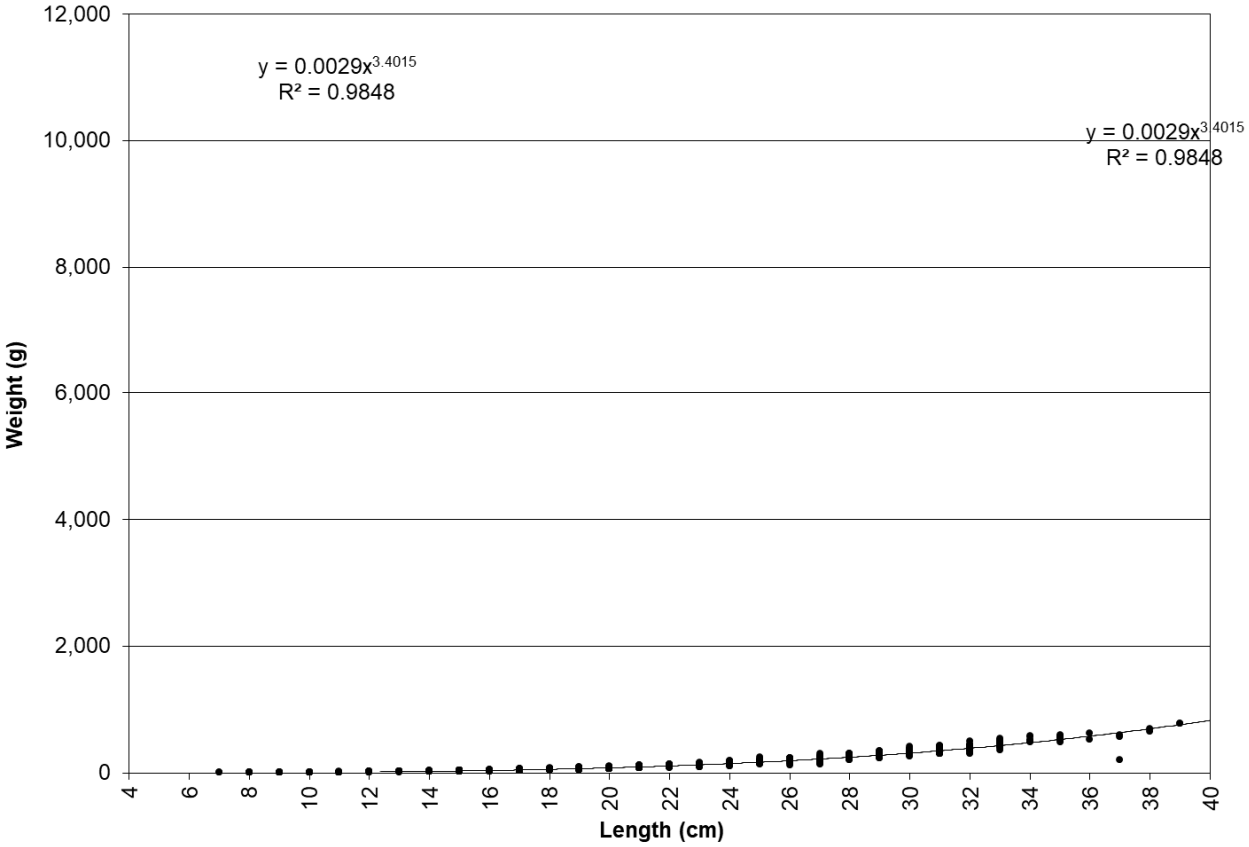
Patagonotothen ramsayi
First Season 2019 (01 Jan to 30 Jun)



Patagonotothen ramsayi—Rock Cod

Length– frequency distribution and length-weight relationship in 2019





Others

Table N.1 Total catch (tonnes) by vessel type and year

VESSEL TYPE	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
JI	-	-	-	-	-	-	-	-	1	-
LO	94	130	104	97	83	107	109	68	73	86
PO	1	-	-	6	7	5	-	-	0	-
TR	600	2,264	468	920	281	603	2,501	3,620	1,065	2,256
	696	**2,393**	**572**	**1,023**	**371**	**715**	**2,609**	**3,688**	**1,139**	**2,342**

Table N.2 Total catch (tonnes) by month and year

MONTH	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
January	14	28	18	45	12	13	93	166	10	117
February	36	69	24	216	76	30	356	40	134	635
March	72	32	30	179	45	57	158	60	109	565
April	77	66	38	106	34	79	260	119	180	783
May	16	350	26	28	11	17	127	64	128	69
June	7	921	10	21	35	5	70	49	9	23
July	17	573	26	11	33	23	46	90	55	21
August	178	90	104	185	26	67	92	186	144	63
September	118	73	145	47	45	109	47	161	181	19
October	20	126	63	85	20	89	51	680	66	26
November	99	40	54	75	22	100	583	1,710	49	9
December	42	26	34	26	13	127	727	363	74	12
	696	**2,393**	**572**	**1,023**	**371**	**715**	**2,609**	**3,688**	**1,139**	**2,342**

Table N.3 Total catch (tonnes) by fishing fleet and year

FISHING FLEET	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CL	-	-	-	-	10	-	-	12	-	-
ES	318	2,008	258	261	114	475	2,274	3,214	510	2,106
FK	324	358	300	748	241	203	321	407	573	234
JP	38	5	0	-	-	-	-	-	-	-
KR	10	23	11	9	6	19	3	34	7	0
RU	1	-	-	-	-	-	-	-	-	-
TW	-	-	-	-	-	-	-	-	1	-
UK	4	0	3	5	0	17	12	20	48	2
	696	**2,393**	**572**	**1,023**	**371**	**715**	**2,609**	**3,688**	**1,139**	**2,342**

Others

Table N.4 Total catch (tonnes) by gross registered tonnage (GRT) and year

GRT	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<400	-	-	-	6	7	5	-	-	0	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	66	97	16	20	27	16	80	34	33	90
800-999	141	183	162	275	87	270	1,375	292	102	215
1,000-1,499	239	142	154	595	133	264	720	2,042	414	1,552
1,500-1,999	203	1,954	196	93	86	125	373	1,206	405	470
2,000-2,999	9	12	43	34	28	34	60	114	185	14
>2,999	38	6	0	-	3	-	-	-	-	-
	696	**2,393**	**572**	**1,023**	**371**	**715**	**2,609**	**3,688**	**1,139**	**2,342**

Table N.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<45	0	6	-	6	7	30	539	-	0	-
45-49	8	76	21	1	1	28	7	15	34	-
50-54	158	165	127	108	102	125	294	46	13	91
55-59	60	63	56	88	10	35	243	226	112	539
60-64	73	13	20	348	98	179	371	979	127	602
65-69	173	220	171	395	99	190	930	1,474	294	721
70-79	164	1,811	138	64	16	100	192	852	409	384
80-89	17	33	17	6	11	14	13	82	80	4
>89	43	7	22	7	27	14	19	13	69	0
	696	**2,393**	**572**	**1,023**	**371**	**715**	**2,609**	**3,688**	**1,139**	**2,342**

Table N.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<1,000	1	-	-	6	7	5	-	-	21	-
1,000-1,199	0	1	-	0	-	25	539	-	-	-
1,200-1,399	3	1	2	9	1	1	-	-	-	-
1,400-1,599	168	174	136	125	113	130	418	184	168	173
1,600-1,799	74	63	6	334	89	76	306	237	-	-
1,800-1,999	180	215	213	424	80	204	952	2,222	340	1,612
2,000-2,499	189	1,866	126	68	31	187	188	725	146	410
2,500-2,999	10	22	22	9	6	22	108	101	80	88
3,000-3,999	26	44	44	38	31	51	67	146	285	52
>3,999	43	7	23	10	12	14	31	73	98	8
	696	**2,393**	**572**	**1,023**	**371**	**715**	**2,609**	**3,688**	**1,139**	**2,342**

Others

Table N.7 Total catch (tonnes) of others by species in 2019

Common name	Latin Name	Catch mt
Driftfish	*Seriolella porosa*	1,351.1
Butterfish	*Stromateus brasiliensis*	405.7
Grenadier	*Macrourus spp.*	381.7
Dogfish, Spurdog	*Squalus acanthias*	32.6
Banded Grenadier	*Coelorinchus fasciatus*	31.8
Lobster Krill	*Mundia gregaria*	30.8
Dogfish/Catshark	*Schroederichthys bivius*	24.2
Blue Antimora	*Antimora rostrata*	22.7
Dwarf Codling	*Physiculus marginatus*	15.1
Frogmouth	*Cottoperca gobio*	14.9
Slender Tuna	*Allothunnus fallai*	7.3
Greenland Shark	*Somniosus microcephalus*	5
Horsefish	*Congiopodus peruvianus*	5
Notothenid	*Patagonotothen tessellata*	2.8
Eelpout	*Iluocoetes fimbriatus*	2.2
Greater Hooked Squid	*Moroteuthis ingens*	1.9
Falkland Herring	*Sprattus fuegensis*	1.8
Porbeagle	*Lamna nasus*	1.6
Others	*Others*	1.1
Red Fish	*Sebastes oculatus*	0.6
Crab	*Lithodes murrayi*	0.5
Dogfish	*Squalidae*	0.4
Hagfish	*Myxinidae*	0.3
Chinese Baby Face	*Neophrynichthys marmoratus*	0.3
Octopus	*Octopus/eledone spp.*	0.2
Krill	*Euphasia superba*	0.1
Common Smelt	*Austromenidia smitti*	0.1
Icefish	*Champsocephalus esox*	0.1
Moonfish	*Lampris immaculatus*	0.1
Mullet	*Eleginops maclovinus*	0.1
Flat fish	*Mancopstta tricholepsis*	0.1
	Grand Total	2,342,2

FALKLAND ISLANDS COMMERCIAL FISH & SHELLFISH

