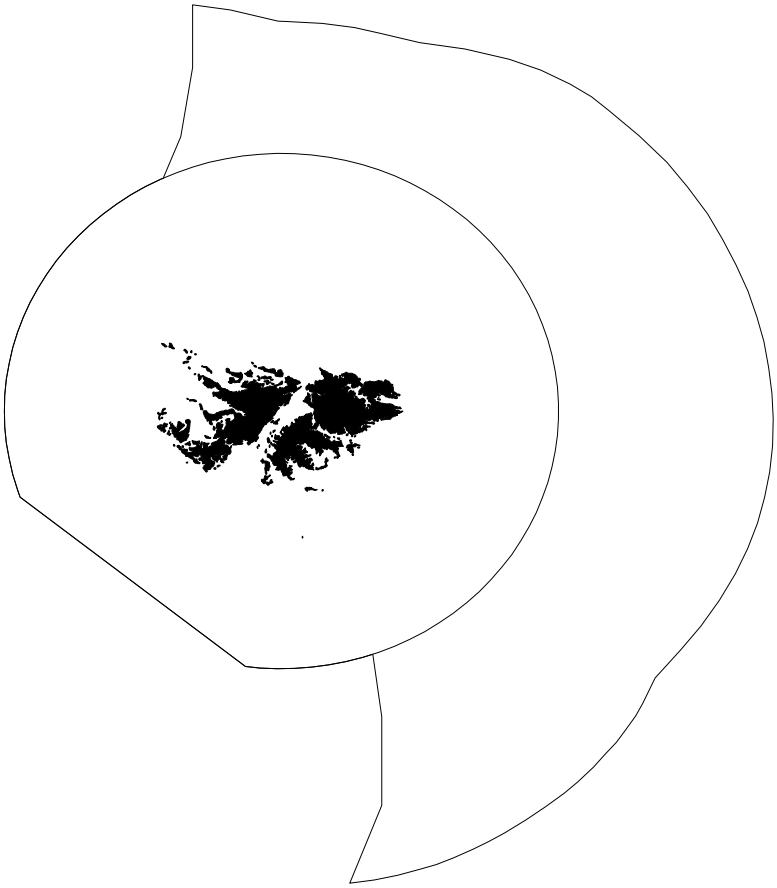
FALKLAND ISLANDS GOVERNMENT
FISHERIES DEPARTMENT



FISHERY STATISTICS

Volume 21
(2007 –2016)

For citation purposes this publication should be referenced as follows:

Falkland Islands Government, (2017).
Fisheries Department Fisheries Statistics, Volume 21, 2016: 102pp
Stanley, FIG Fisheries Department

Stanley,
Falkland Islands

Contents

Section H *Salilota australis* (BAC) - Red cod - continued

Section I *Merluccius spp.* (PAT) - Hakes

Section J *Genypterus blacodes* (KIN) - Kingclip

Section K *Dissostichus eleginoides* (TOO) - Patagonian toothfish

Section K *Dissostichus eleginoides* (TOO) - Patagonian toothfish

Section L Rajidae (RAY) - Skates and rays

Section M *Patagonotothen ramsayii* (PAR/COX) Rockcod

Section O Others (OTH)

FOREWORD

1 The Falkland Islands Fishery - 2016

The year 2016 showed again how volatile the Falkland fishery can be, a result of being heavily dependent on its two main commercial squid stocks, which can vary significantly in abundance. After two years of record catches, *Illex* squid did not appear in any significant quantities in Falkland waters due to adverse oceanographic conditions and a reduced overall in biomass the Southwest Atlantic. As a result, the total annual catch of all commercial species (~113,000 t) represented only a quarter of the record harvests of 2014 and 2015. On a positive note, stocks of Falkland calamari *Doryteuthis gahi* seemed to be fully recovered from impacts by *Illex argentinus* predation in the previous year (2015) when the latter unexpectedly migrated into the calamari feeding grounds of the south-eastern part of the Falkland Shelf. The total annual catch of Falkland calamari attained 46,400 t, close to the average of the last 15 years. Hakes continued to come to the north-western part of the Falkland Shelf to feed during austral winter months. The positive trend in abundance of their migrating schools carried on from previous years and resulted in the highest annual catch of hakes observed in the Falklands since 1989 (23,900 t). Catches of previously abundant rock cod dropped down to a mere 7,000 t due to decrease in abundance and stock redistribution.

1.1. Illex argentinus – Illex squid

The *I. argentinus* fishery is usually the major contributor to the Falkland Islands Govermment revenue with licence fees constituting ~ 50% of the total fisheries licence income. The most abundant South Patagonian Stock (SPS) of this squid migrates in the austral summer and autumn to the southern part of the Patagonian Shelf including the waters around the Falkland Islands. Its abundance fluctuated greatly in 2000‘s due to both high exploitation rates and variable environmental conditions. A period of low abundance was last observed in 2009-2011, with gradual recovery of the SPS of *Illex* during 2012 and 2013. The years 2014 and 2015 showed full recovery and high abundance of this squid in the Southwest Atlantic. However, in 2016 the *Illex* abundance crashed again, with the total catch for the Southwest Atlantic probably not exceeding

100,000 t. The situation in the Falkland fishery was further aggravated with negative anomalies in near bottom water temperatures near the bottom observed in the southern part of the Patagonian Shelf. Similar to the environmental conditions observed in 2002, these affected southern migrations of *Illex* to Falkland waters.

The oceanographic situation in January was quite similar to that observed last year. There were positive sea surface temperatures (SST) anomalies across the whole Southwest Atlantic. The Falkland Current was intensified and created temperature gradients along the shelf break on the high seas. In the FICZ/FOCZ a quite strong outflow of shelf waters was formed with SST reaching 11°C in the centre. However, water temperatures under the thermocline were 1-1.5° lower than last year. About 150 jigging vessels and trawlers worked between 45°S and 46°40'S outside the Argentine EEZ in the high seas area. *Illex* did not appear en masse, with catches not exceeding 2.5 t per vessel per night during the whole month.

In February, it became clear that the marine environment was exhibiting a cold phase as in 2013-2014, with negative water temperature anomalies under the thermocline spread all across the Southwest Atlantic. Near-bottom temperatures on the shelf were as cold as 5.5ºC, about 1-1.5ºC colder than the normal. A warm water inflow (>11ºC) was formed at the end of January and spread further southeast into the FICZ in February, however this did not bring any squid to Falkland waters. Catches on the high seas were poor for both jigging and trawling fleets. At least 60 vessels fished at 42ºS, and about 170-180 vessels fished at 45-47 ºS. In the first half of the month, the waters were practically devoid of squid, with the majority of the jigging fleet having zero catches. The situation improved slightly during the second half of February when some *Illex* appeared from the Argentine EEZ at 45-47 ºS. Average catches did not exceed 4.7 t per vessel per night, though some vessels had sporadic catches of 17.5-20 t per night. Similar trends were also reported for the trawling fleet, catching 4-5 t of *Illex* per day. The official start of the *Illex* fishery in Falkland waters was scheduled for 15 February. Of the 105 licensed jiggers, only 14 vessels started to fish in the northern part of FICZ/FOCZ, but had very low catches (less than 1 t per night). Between 42 and 48 jiggers tried to fish in the FICZ from the 17 to 19 February, but did not have any success and left for the high seas where catches were higher.

Negative temperature anomalies observed in the summer below the main thermocline continued into the autumn. Near-bottom temperatures on the shelf were a mere 5-5.5ºC, about 1-1.5ºC colder than normal, impeding any *Illex* migration from the northern part of the Argentine EEZ into Falkland waters. At the beginning of March, only ten jiggers fished in the northern part of FICZ/FOCZ. After two days of poor fishing (less than 1 t per vessel/night), only two vessels stayed in

the zones, with the rest moving to the high seas to join the other 92 Falkland-licensed jiggers. The catches were poor on the high seas (3-6 t per night) too. Just one good catch (18 t per night) was reported by a jigger from within the FICZ, this triggered the fleet of 72 vessels to move back to Falkland waters to try to find squid aggregations, but in vain. Catches in the following days were just 3 to 4 t per night on average, with most jiggers staying in the FCZs until catches dropped to 1-2 t per night by the fourth week of March. From then on, 20-35 jiggers fished within the FICZ/ FOCZ, with average catches just below 1 t per night. The fleet that worked on the high seas did marginally better, having 2-4 t per night. The trawlers fished even better there, having 5-10 t per day on average, catching mostly of small squid.

At the beginning of April, ten to 13 jigging vessels fished in the northern part of FICZ/ FOCZ. Catches were poor (2-3 t per night), and the majority left the zones for the high seas. Only two or three vessels stayed within FICZ/FOCZ until the end of the first week having 1-2 t per night. On the 7th of April, half of the licensed fleet (40-57 jiggers) moved to the northern part of the FICZ/FOCZ as catches on the high seas dropped. However, they were not successful (0.5-1 t per night) and moved back to the high seas where the catches were slightly higher. The last catch of *Illex* from the FICZ/FOCZ was reported on the 15th April (0.6-0.8 t per night). During the last week of April, only one jigger stayed within the FICZ/FOCZ monitoring squid migrations, but not Catching any. Fishing on the high seas was slightly better. In the first half of the month, jiggers caught 2-4 t per night and trawlers caught 2-12 t per day. However, in the second half of April catches dropped to less than 1 t per night, with the majority of the fleet not reporting any catch at all. Due to poor fishing, jiggers started to leave the fishing grounds, and by the end of the month only 11-12 jiggers were fishing but with zero catches.

In May, only three Korean jiggers worked in the FICZ/FOCZ during the first two weeks of the month, reporting zero catches. The trawlers had 100-200 kg of relatively large squid every day in the north-western and western parts of the Zones. The total catch for the month attained just 19 t, bringing the cumulative total for the season to 2,357 t. Due to such low catches, the Falkland Islands Government reimbursed 70% of licence fees to all licensed jigging vessels.

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

Falkland calamari (*Doryteuthis gahi*) is a domestic squid resource managed exclusively under the jurisdiction of the Falkland Islands. Due to a number of conservation measures and regulations, stocks of Falkland calamari are considered to be sustainable and much less variable than those of *Illex*.

Due to cold water anomalies on the Falkland Shelf, migrations of *D. gahi* to their feeding grounds were delayed and squid grew slower than in 'normal' years. A biomass survey for recruits of the first season was carried out onboard the fishing vessel *Sil* from the 9th to 23rd February. Fifty-seven scientific trawls were taken during the survey, catching a total of 65 t of squid. An estimated biomass of 21,729 t of *D. gahi* was calculated for the fishing zone, of which 8,520 t were estimated north of 52 ºS, and 13,210 t were estimated south of 52 ºS.

The first fishing season started on the 24th February with all 16 C-licensed trawlers working in the southern part of the *Loligo* box. At the start, CPUEs were low with a mean of 15.4 t per day (maximum 26.6 t per day). Then catches dropped further to 10-11 t per day and remained at this level until the end of the month.

Relatively poor fishing of *D. gahi* carried on into March. After two peaks in catches during the first week of the month (mean 25 t per day on 2nd March and 27 t per day on 5th March), the catches dropped (14-15 t per day) with vessels moving from the north to the middle and southern part of the *Loligo* box in search of squid aggregations. Some dense aggregations of squid appeared sporadically during the last ten days of March in the northern and middle parts of the box, but these were not abundant and were depleted quite quickly.

From the beginning of April, the *D. gahi* fishery was much improved as compared to the previous months. Two massive migrations of squid into the fishing grounds were observed in the northern part of the *Loligo* box (3rd and 10th April) and one massive migration into the southern part (5th April). Catches by trawlers in both areas were high and stable (30-35 t per day), with a maximum average catch (42.5 t per day) on the 10th April. Due to catches of very small squid (7-8 cm ML), the inshore northern part of the box (XNAN in its entirety, and those parts of grids XNAP & XPAP which lie to the west of 57°15' W) were closed to fishing until the end of the month. As there were no further immigrations of new cohorts, aggregations of *D. gahi* were being depleted in both parts of the box. After the 24th of April, the CPUE gradually decreased from 25 t to 17.5 t per vessel/day. Two trawlers were able to fish for another two and three days after the official end of the season (28 April), respectively, due to a loss of fishing days because of breakdowns.

The total catch of *D. gahi* for the first season reached 22,636 t, close to the average value for the first season in the last decade. A preliminary estimate of remaining biomass of squid after the first season was 24,868 t, with zero risk of overfishing and not falling below the threshold biomass limit of 10,000 t.

Before the second fishing season, another biomass survey of the *D. gahi* was carried out by the trawler *Castelo* between 14 and 28 July 2016. Fifty-eight scientific trawls were conducted during the survey, catching 225 t of squid. *D. gahi* were well spread throughout the *Loligo* box, with large quantities both in its northern and southern parts. The results of the survey showed a geostatistical estimate of 43,580 t of squid present in the fishing zone. This represented the highest second season survey biomass estimate since 2011.

The commercial fleet (16 vessels) started fishing on the 29th July in the southern part of the *Loligo* box. Daily CPUEs were stable ranging from 28 to 35 t per day, with maximum catch of 50 t per day.

Good fishing for squid was observed in August, with reasonable catches throughout the month. Several trawlers started to fish in the northern part of the *Loligo* box from the beginning of the month. The second immigration of squid to this area took place on the 5th of August, with CPUEs attaining 45-47 t per day (maximum 74 t per day). These aggregations were gradually depleted, with no further immigrations occurring. By the end of the month, the depletion model estimated about 3,000 t of squid in the northern fishing grounds. The fishing in the southern part of the *Loligo* box started on the 29th of July; the first day of the season. Another immigration wave was observed into this area on the 17th of August based on a peak of CPUE (~average 30 t per vessel/day, maximum CPUE of 65 t per vessel/day) and a decrease, then increase of the average squid size. Those concentrations were gradually depleted by the fishery, with about 15,000 t of squid estimated to remain in the southern area. Eleven vessels took a bad weather day on the 29th of August sheltering from a severe northerly storm.

Catches continued to decrease gradually during September. During the first week of the month, mean CPUEs ranged between 17 and 21 t per vessel/day (maximum 36.5 t per vessel/day). Then, they further decreased to 15.5-18 t per vessel/day during the second and third weeks. A slight increase of CPUEs was reported in the northern part of the *Loligo* Box on 22-23rd September (20-22 t per vessel/day) due to some local aggregation of squid in the fishing grounds. During the three last days of fishing on 1-3 October, vessels encountered very dense aggregations of *D. gahi* in the northern part of the box, and fished to their full capacity (mean CPUE of 67 t per vessel/day), with the maximum catch of 142.9 t per vessel/day. The aggregate biomass estimate as of October the 4th was: 27,700 t of squid remaining in the fishing zone, with 17,500 t remaining in the northern area and 10,200 t remaining in the southern area. With the unusual very late -migration into the northern area, uncertainty of the estimates increased as there were only a few days left in the season time series to constrain the effect of the late CPUE peak.

The total catch for the whole year amounted to 46,444 t, making it the 5th highest annual catch in the last decade.

1.3. *Martialia hyadesi* – Martialia squid

As in many previous years, no catch of *Martialia* squid was reported within the FICZ/ FOCZ.

1.4. Micromesistius a. australis – Southern blue whiting

When the Falkland Islands Government started to regulate its fishery in 1987, southern blue whiting was one of the largest stocks exploited by trawlers. Twelve years later (1999), in order to meet conservation targets, the South Atlantic Fisheries Commission recommended a reduction of the fishing exploitation rates. Less than a decade after this, due to oceanographic conditions and/or fishing pressure, southern blue whiting stocks collapsed. This fish is a straddling stock that migrates between Argentine, Chilean and Falkland waters. Two main spawning grounds were identified for this species, one is situated to the south of West Falkland and one in Chile. The Falkland spawning ground has been protected since 2010 from any fishing activity in September and October when the spawning season occurs. After the spawning season, southern blue whiting migrates to foraging grounds and spreads around in the southwest Atlantic and south–eastern Pacific.

Throughout 2016, trawlers caught 5,415 t of southern blue whiting in Falkland waters. Over the last decade, southern blue whiting annual catches first followed a decreasing trend from 22,204 t in 2007 to 1,596 t in 2012 and then an increasing trend until 2016. In 2016, most catches were taken in two different periods. The first period took place during the first four months of the year when 4,426 t were harvested. More than a half of this catch was taken in January and February by W–licensed trawlers that targeted hoki in the southwest of the FICZ. The rest was caught by A–licensed trawlers (404 t in February and March) and G–licensed trawlers (1,483 t in March and April). CPUEs of finfish trawlers were also at their maximum for the year (on average 669 kg*h^{-1}, ranging from 370 to 836 kg*h^{-1}). Finally, one S–licensed vessel fished 18 t of southern blue whiting from 18 to 21 April in the southwest (three days) and in the south (one day) of the FICZ. During these first four months, the most abundant resource for trawlers to fish was hoki in the southwest of the FICZ as rock cod abundance was low, hake did not migrate before April and the first *Loligo* season did not start before the end of February. In this area, southern blue whiting was a significant bycatch. The second period of high catch and CPUE was observed in August when 580 t of southern blue whiting were caught to the southwest of West Falkland mainly by W–licensed vessels (CPUE was 499 kg*h^{-1}). During this month, southern blue whiting migrated to spawning grounds to the south of West Falkland and W–licensed vessels targeted this resource before the area closure in September and October. During the rest of the year, catches and CPUE of southern

blue whiting were lower than during the two periods presented above. In September, X–licensed vessels harvested 115 t of southern blue whiting that had probably been migrating from the spawning grounds. In December, W–licensed vessels targeting hoki and grenadier caught 114 t of southern blue whiting as bycatch to the southwest of West Falkland.

As a consequence of its low abundance, currently, southern blue whiting is most of the time a bycatch in the finfish fishery. In the last years, some trawlers fished with pelagic nets in an attempt to target southern blue whiting but left after a few days as the fish was not abundant nor big enough to be profitable (between 2012–2016, S–licensed vessels did not fish more than five days except in 2014 when they spent 15 days in Falkland waters). Southern blue whiting has been targeted by bottom trawlers when other species like hake, rock cod or hoki are not abundant in the finfish area or when they concentrate in their spawning grounds in August, prior to the closure of this area. Finally, southern blue whiting stocks seemed to show a recovery over the last few years (fish are bigger and abundance seems to be increasing). However, evidence of this recovery is still weak and more research into the performance of this stock is needed.

1.5. Macruronus magellanicus - hoki

Hoki is a pelagic species and one of the most abundant pelagic stocks on the Patagonian shelf. It is distributed through Falkland, Argentine and Chilean waters. Highest catches are generally recorded in Chile and Argentina. As the Falkland Islands are situated at the edge of its distribution area, catches here are generally low compared to the rest of the distribution area. Unlike southern blue whiting, hoki has its spawning grounds outside Falkland waters and is present in the FICZ/FOCZ mainly during spring, summer and autumn to forage.

In 2016, trawlers caught 11,555 t of hoki in the FICZ/FOCZ, which constitutes the third lowest catch observed since 2007 and the 7th lowest catch since the onset of the regulated fishery in the Falkland Islands in 1987. From 2014 to 2016, it seems that hoki abundance was low as these three years had the lowest annual catches observed since 2007. This situation is perhaps partially due to the increasing interest of fishers in rockcod and then in hake, respectively. These two species are abundant in the northwest and north of the FICZ/FOCZ where hoki is less abundant. Most of the hoki catch for 2016 (10,815 t) was taken during the first five months of the year. Highest catches were taken by G–licensed vessels which harvested a total of 5,225 t from March to May. W–licensed vessels fished 4,096 t during the first quarter, mostly in February (3,581 t). Finally, A–licensed vessels reported 1,380 t in February and March. High catches during the first months of the year are explained by the absence of hake (which is on their spawning grounds on the Argentine shelf in summer) and the low abundance of rockcod. As a result, and during this period, trawl-

ers exploited the only suitable finfish resource, hoki. From April, finfish trawlers moved to the north of the FICZ/FOCZ where hake migrated to its feeding grounds leading to the drop in catch and CPUE. From June to the end of the year, hoki catches and CPUE were low. Monthly catches remained below 100 t (17 to 231 kg*h^{-1}). In November–December, as hake had migrated to Argentine waters, trawlers relocated again to the southwest and targeted hoki and grenadiers, the main stocks that could be exploited at this time of the year leading to increasing catches (290 and 185 t, respectively) and CPUEs (565 and 213 kg*h^{-1}, respectively).

As observed during the last years, hoki catches remained on the low side in 2016.

1.6. Merluccius hubbsi, Merluccius australis – Hakes

In Falkland waters, two species of hake occur and are exploited by fishers, *Merluccius hubbsi* and *Merluccius australis*; the former being much more abundant. Both species consist of straddling stocks migrating between Argentine and Falkland waters. *Merluccius hubbsi* occurs in Argentine waters from November to February for the spawning, and then relatively small proportion of the total stock migrates to Falkland waters (north and northwest of the FICZ/FOCZ) for the rest of the year to forage. The abundance of *M. hubbsi* has increased in recent years. *Merluccius australis* is a high value species and is abundant in Chilean waters. In Falkland waters, *M. australis* is encountered in deeper waters in the southwest of the FICZ. Our zones are at the edge of the distribution area of the species and as a consequence, *M. australis* abundance in Falkland waters is limited. From 1 July 2015, captains were asked to declare separately both species of hake. However, as it was not the case during preceding years, figures in this report combine both species.

In 2016, total catches of hakes attained 23,884 t (23,354 t of *M. hubbsi* and 530 t of *M. australis*). It was the second highest annual catch recorded since 1988 when the fleets caught 51,429 t. An increasing trend started in 2014 when 14,875 t were caught and then carried on into 2015 (21,068 t). In 2016, 98% of the catch was taken under two finfish licences (A and W) as well as the finfish/*Illex* licence (G). A–licensed vessels, as they are unrestricted, caught the highest amount of hake (15,558 t). As observed in previous years, catches and CPUEs started to increase after the first quarter when hake migrated to Falkland waters and reached their maximums in May (3,256 t) and April (2,699 kg*h^{-1}), respectively. Catches and CPUEs then decreased gradually until September (2,445 t; 1,526 kg*h^{-1}, respectively) and further dropped in October (1,078 t; 648 kg*h^{-1}, respectively) when migration to the spawning grounds started. During the last two months of the year, no vessel fished under A–licences. W–licensed vessels exhibited a different dynamic; their catches and CPUEs were low during the first quarter. In April and May there was no ship

fishing under W–licence. From June to September average catches were 588 t per month. CPUEs were highly variable averaging around 693 kg*h^{-1}. This difference between A– and W–licensed ships is due to the closure of the area situated to the west of 60°W and north of 51°S from 28 May to the end of September for W–licensed vessels. As a result, catches and CPUEs of W–licensed vessels were lower than A–licensed vessels and did not show the same trend. When the northwest of the FICZ/FOCZ was reopened in October to any finfish licensed vessel, the monthly catch of restricted finfish vessels peaked to their maximum (1,881 t). However, the CPUE was below the average of the previous months as hake probably started to leave Falkland waters for the spawning season. G–licensed vessels also caught a significant amount of hake, 3,055 t, mainly in May.

Between 2007 and 2016, annual hake catches doubled (from 11,909 to 23,884 t). During this period, catches were variable exhibiting no trend until 2013. Annual catches started to increase since 2014. As hake is becoming an important species in the finfish fishery, a closer monitoring of the stock has been initiated.

1.7. Genypterus blacodes – kingclip

Kingclip is a commercially valuable bycatch in the Falklands trawl fishery, with catches in decline since a high of 3,977 t in 2013. In fact, the total annual catch for 2016 was 1,614 t, the lowest since 2003 and the seventh lowest total since 1989. Analysis of seasonal distributions showed that *G. blacodes* migrates into the FICZ from the Argentine EEZ in austral autumn, during which time abundance is greatest in the northern, north-western and western parts of the FICZ/ FOCZ. Kingclip has feeding grounds mainly in the north-western part of the FICZ over winter and spring. Large individuals return to their spawning grounds, believed to be outside Falkland waters, in late summer.

In 2016, the highest catches of kingclip were recorded in October (337 t) and August (234 t), representing an austral spring seasonal peak in abundance. Another increase in catches was observed in May (207 t). This second peak corresponds to the austral autumn migration into the FICZ. Low catches during the summer months coincided with larger individuals returning to their spawning grounds, whereas lower catches, compared to previous years, can be attributable to vessels targeting hake in the north-western part of the FICZ/FOCZ.

The total catch of kingclip for 2016 was over 600 t lower than 2008, the second lowest total for the previous 11 years. The majority of catches were taken under W-licence (692 t; 42.9%), followed by A-licence (520 t; 32.2%), G-licence (338 t; 20.9%), X-licence (46 t; 2.8%), F-licence (13 t; 0.8%), E-licence (6 t; 0.4%), and C-licence (0.2 t; 0.01%), respectively. Catches were pri-

marily from Spanish-flagged vessels (1,280 t; 79.3%), followed by Falkland Islands-flagged vessels (313 t; 19.4%).

One of the worrying trends for 2016 is the observation that the average kingklip size has decreased. This requires more in-depth analysis of the status of the stock to be undertaken in 2017.

1.8. Salilota australis – red cod

Red cod is another commercial bycatch species in the trawl fishery, occasionally targeted by some Spanish-flagged trawlers to the southwest of the Falkland Islands before and after its spawning season in October. Due to a declining trend in abundance, conservation measures for this species were initiated in 2009, and later expanded, leading to a complete fishing ban in their spawning grounds from the end of August to the middle of October.

The total catch of red cod in 2016 reached 3,143 t and has been declining steadily for the past three years. The 2016 total catch is the second lowest in the past 11 years; just 15 t higher than the 2010 low. This year represents the 9th lowest total since 1989. As in the previous two years, a smaller than usual total catch of red cod is likely a result of changes in trawl fleet behaviour compared to previous years (2007-2013). Trawlers did not specifically target red cod in their feeding grounds preferring to go for much more abundant hake and rock cod. Therefore, the total catch in October (straight after spawning) was almost similar (562 t) to catches during the resting period (Feb-May) when red cod does not usually aggregate in dense schools and, instead, forages over the entire Patagonian Shelf.

The majority of the catches were caught under W-licence (1,590 t; 50.6%), followed by G-licence (837 t; 26.6%), A-licence (603 t; 19.2%), X-licence (64 t; 2.1%), F-licence (24 t; 0.7%), E-licence (21 t; 0.7%), and C-licence (4 t; 0.1%), respectively. Catches were primarily from Spanish-flagged vessels (2,237 t; 71.2%), followed by Falkland Islands-flagged vessels (878 t; 27.9%).

Biological data collected in 2016 indicates good recruitment of red cod following implementation of the conservation measures. However, a determination as to whether these new recruits will enter the commercial size cohorts is still a few years away.

1.9. Dissostichus eleginoides – Patagonian toothfish

Toothfish is the most valuable and highest-priced commercial fish in the Falkland Islands fishery, with prices exceeding US$ 30/kg in longline fishery at times. Juvenile and young adult fishes are taken as by-catch on the shelf and shelf break (150-300 m) by the bottom trawl fisheries. Large adult fish are targeted by longline on the Patagonian Slope and deep water plains to the east

of the Falkland Islands. Toothfish is one of the species regulated in the Falkland Islands by TAC. However, catch on the shelf is not included in the annual TAC but is considered in stock assessment models. In March 2014, the Falkland toothfish fishery was awarded MSC certification. The stock is assessed annually via an age structured production model and analysis of biological trends. The longline TAC for 2016 was set at 1,040 t.

A total of 1,498 t of toothfish was taken by all fisheries in the Falkland fishing zones, with 1,020 t (68.1%) taken by the longline fishery. The majority of catches in the finfish trawling fisheries was taken under W-licence (250 t; 16.7%), followed by G-licence (114 t; 7.6%), A-licence (44 t; 2.9%), X-licence (40 t; 2.7%), F-licence (13 t; 0.9%), C-licence (12 t; 0.8%), and E-licence (5 t; 0.3%), respectively. With the longline vessel being Falkland-flagged, it is not surprising that most of the toothfish catches were taken by Falkland-flagged vessels (1,122 t; 74.9%). This was followed by 367 t (24.5%) on Spanish-flagged vessels and 10 t (0.6%) on Korean-flagged vessels.

In 2016, catches of toothfish on the shelf increased to a staggering 478 t compared with the previous year (104 t), with the majority of this catch (76 t) taken during a single month (February). During most months, catches by trawlers were the greatest to the southwest where hoki and grenadiers were targeted by fishers (late spring and summer months). In months where hake was the target species, toothfish catches were higher in the western parts of the FICZ. Negligible amounts of toothfish were caught in the northern parts of the FICZ and FOCZ. Of note, catches during the second *Doryteuthis* season were approximately 500% higher in 2016 that the previous maximum catches for the same period of the previous five years. This is believed to be a good indication of strong recruitment, but it will take at least three years before we can confirm whether this peak in recruitment is mirrored in the cohorts of commercial sizes.

A single longline vessel (*CFL Gambler*) operated in Falkland waters during the whole year for a total of 199 fishing days on L-licence and two days on E-licence (pulsed-tagging trip), alternating between the north-eastern and southern parts of FICZ/FOCZ. Catches on L-licence were very good in 2016 and despite a poor month due to slowed fishing during the June pulsed-tagging research cruise, the TAC was fully taken by the end of August. Average CPUE by longline ranged between approximately 400 and 600 kg/1000 hooks from January to June. In June, during the pulsed-tagging research cruise, the number of hooks per umbrella was decreased from seven to six, resulting in CPUEs closer to 700 kg/1000 hooks for July and August. These increases in CPUE are artefacts of this reduction in hook numbers per umbrella. From 2017, the CPUE in the longline toothfish fishery will be expressed as kg per umbrella; a more accurate representation of CPUE.

1.10. Rajidae – Skates

In 2016, 5,882 t of skate were caught in the Falklands Islands Conservation Zones. This represents the second-lowest annual total skate catch since the all-time highest catch in 2011 (7,001 t). Approximately 36.2% of the 2016 total (2128 t) was harvested as target catch (F licence). This represents the lowest percentage of target catch since 2009. However, both target catch and non-target bycatch decreased from the year before, by respectively 237 and 239 t.

The 2016 target catch was taken by three Korean vessels (1969.5 t in 131 vessel-days; mean CPUE of 823 kg/hr) and five Spanish vessels (158.5 t in 21 vessel-days; mean CPUE of 465 kg/hr). The F-licensed Korean vessels took 25.7% of their skate catch in January (vs. 19.1% of the effort), and 47.9% of skate catch in September-October (45.1% of the effort). The F-licensed Spanish vessels took 56.8% of their skate catch in June (38.1% of the effort), and 22.0% of skate catch in September-October (14.3% of the effort).

Of the three Korean vessels, one also held a finfish licence, which accounted for 9.5% of that vessel's total fishing activity in 2016. Of the five Spanish vessels, all held finfish licences, which accounted for 96.5% to 99.1% of those vessels' total fishing activity in 2016. Skate-licence fishing was thus a very minor activity for Spanish vessels in 2016. These six vessels took 46% of the total skate bycatch under finfish licence, higher than the 39% of total finfish-licensed effort they accounted for. Within finfish trawls, 1,439 t of skate were taken under A licence, 721 t under G licence, and 1,379 t under W licence. Skate bycatch under W licence decreased substantially from the year before, following area restrictions on this licence that were aimed primarily at reducing hake catches. Additionally 180 t of skate were caught in the calamari fishery, 29 t in the toothfish longline fishery, 6 t under experimental licence, and 1 t under S licence. Skates caught in the longline fishery were almost entirely discarded.

In all commercial fisheries, a total of 34,826 skates were identified to 15 species by observers on twenty vessels. In skate-target trawls, four species represented at least 10% each of the sampled species composition by numbers: *Bathyraja albomaculata* (28%), *Zearaja chilensis* (23%), *Bathyraja brachyurops* (17%), and *Bathyraja griseocauda* (16%). The same four species also represented at least 10% each by weight, but with different proportions: *Z. chilensis* (37%), *B. griseocauda* (21%), *B. brachiurops* (19%), and *B. albomaculata* (11%). In finfish-target trawls, three species represented at least 10% each of the sampled species composition by numbers: *B. brachiurops* (45%), *Z. chilensis* (22%), and *Bathyraja macloviana* (13%).

1.11. Patagonotothen ramsayi – Rock cod

Before 2007, rock cod was considered as a non–valuable bycatch in the Falkland finfish fishery with southern blue whiting being the most abundant commercial species. Since 2007, rock cod abundance started to increase. Finfish vessels also started to target this new commercial resource as the fishing companies found a large market for this fish in Eastern Europe. Following depletion of southern blue whiting stocks, the finfish fleet started to target rock cod, with its annual catches increasing from 21,000 t in 2006 to the record catch of 76,458 t in 2010. From 2010 to 2016 annual catches had a decreasing trend. The Fisheries Department has been monitoring rock cod resources using biological and commercial data. Whilst commercial data showed stable, but highly variable trends in abundance from 2010 to 2015, data from scientific surveys revealed a substantial decrease of the rock cod biomass in Falkland waters from 803,955 t to 195,693 t between 2011 and 2016. As a result, the Fisheries Department reduced the finfish effort by 10% and set up a precautionary rock cod TAC of 30,000 t for the 2017 fishing season, this is a 50% reduction in the rock cod TAC.

In 2016, the annual catch of rock cod totalled 7,008 t, which appeared to be the lowest catch since the targeted fishery started in 2008. Of this catch, 48.8% was retained as product. Unlike in previous years where the catch had been predominantly taken by restricted finfish (W licence) vessels, in 2016 the largest catch was taken by the *Doryteuthis gahi* fleet (3,085 t, or 44% of the total catch), this was almost completely discarded because of small fish sizes (99.1% discard). G and W licences took 1,931 t and 1,306 t, respectively.

Finfish licensed trawlers (A, W and G licences) caught 3,803 t of rock cod. The amount of catch dropped during each quarter, with 1,806 t caught in the first quarter, 1,329 t in the second quarter, 345 t in the third and 301 t the fourth quarter. Overall the CPUE from the finfish licences was 215 kg/hr, ranging from 425 kg/hr in the first quarter to 52 kg/hr in the last quarter.

1.12. Grenadiers (*Macrouridae*)

There was neither a target fishery nor a research cruise investigating a grenadier fishery in 2016. Total annual catch of grenadiers was 2,327 t taken as by-catch during longline and finfish trawl fisheries, a significant increase from the 367 t in 2015. The majority was taken in the fourth quarter in the finfish fishery, when 1,347 t was caught. A total of 74 t of *Macrourus spp*. was caught in the longline fishery, whilst the trawl fishery was split between *Macrourus spp.* (generally *M. carinatus*, with few *M. holotrachys*) and *Coelorhynchus* (*C. fasciatus*), the latter being generally discarded due to its small size.

1.13. Zygochlamys patagonica - Patagonian scallop

No targeted scallop fishery in Falkland Island waters occurred in 2016, although 8 t were taken as bycatch.

1.14. Eleginops maclovinus - Falkland mullet

Historically, there has been a minor commercial beach seine fishery for Falkland mullet whuch supplies the domestic market, with fishing occurring only during summer months (Dec-Feb). Operations have been reduced with modest supply to the domestic market outlets.

1.15. Snow crab (Paralomis granulosa)

There is an experimental licence available for snow crabs, but this was not used in 2016.

1.16. Others

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

2 Fisheries Department research cruises in 2016

In 2016, two research cruises were conducted by the Fisheries Department.

2.1. Rock cod biomass survey ZDLT1–02–2016

After the gradual depletion of southern blue whiting, rock cod became the most abundant finfish stock in Falkland waters. As a result, the mixed finfish management system, originally based on southern blue whiting, was changed to use rock cod catches and abundance as a basis to manage the finfish fishery. The objectives of the finfish and rock cod demersal survey conducted on board F/V Castelo were: (i) to monitor and estimate the biomass of rock cod and other commercial species using the scientific catch data; (ii) gather biological information on fish, cephalopods and benthos caught; (iii) deploy a CTDO to gather oceanographic information; and (iv) sample fish larvae/fry and plankton.

The finfish and rock cod demersal survey was carried out from the 2nd to the 22nd of February. During 21 days of the survey, 90 trawl stations, 93 CTDO stations and 7x2 plankton stations were conducted from the southwest of West Falkland clockwise to the northern part of the *Loligo* Box. The trawl stations were conducted using a bottom trawl equipped with rockhopper gear. The catch was weighed by species for finfish, squids, skates and sharks or by the lowest taxonomic level for invertebrate. Length frequency, sex ratio, maturity stages and individual weights were assessed for a sample of the catch and otoliths/statoliths/vertebrae extracted from a subsample of

finfishes, cephalopods, skates and sharks. The CTDO was deployed before or after each trawl to collect temperature, oxygen, salinity, and density of the water column. Finally, the Isaacs–Kid Midwater plankton net was used to sample fish larvae/fry and plankton at seven stations (two strata were sampled at each station, one at the surface and one at the backscattering layer).

A total of 101.5 t of finfish, skate and cephalopod was caught. Results showed that rock cod biomass was stable from 2015 to 2016, same as that of red cod. Biomasses of toothfish, hoki, southern blue whiting and Falkland calamari increased while hake, kingclip and *Illex* squid decreased. During the 14 plankton stations, 143 pelagic fish larvae and fry were caught and identified. Most of these were Falkland herring. Other larvae and fry of commercial species were those of redfish, red cod, rock cod, grenadier and frogmouth. In conclusion, the survey confirmed that rock cod biomass remained relatively low.

2.2. Fisheries Department Research Cruise ZDLC2-06-2016

Recently, Consolidated Fisheries Ltd (CFL) was awarded MSC certification for Patagonian toothfish (*Dissostichus eleginoides*). An independent review of stock discrimination tools available for fisheries management was undertaken by the National Institute of Water and Atmosphere Research Ltd. (NIWA). Recommendations put forward by the NIWA stock discrimination review report highlighted the benefits of further research through the use of a pulsed tag-recapture programme as an effective approach for obtaining information about the movement patterns of individual large fish. A pulsed (intermittent tagging of large number of fish) conventional tag-recapture study was recommended in order to firstly establish linkages between juvenile on the shelf and adults in deep waters and secondly to quantify the amount of exchange between adults in the northern and eastern FOCZ and the spawning grounds on the slopes of Burdwood Bank.

The tagging trip was conducted from June the 4th to the 18th, inclusively, on board CFL's longliner *Gambler*, in the eastern parts of the FICZ/FOCZ from the Burdwood Bank to the north-eastern edge of the FOCZ. Fishing behaviour was altered in several ways to increase the likelihood of recovering fish in suitable condition and ensuring maximum survival of fish that were released once tagged. These included: (1) setting fewer lines per day (two, down from four or five) to reduce the soak time; (2) reducing the hauling speed to minimise drag on the fish while hauling; (3) prevention of gaffing to haul fish on board (gaffing restricted to the umbrella); and (4) reducing the number of hooks per umbrella (to six, from seven) to decrease the probability of hooks getting snagged on the body or resulting in multiple hooks in the mouth. In total, two days were spent fishing in the Burdwood Bank area, five days in the eastern region (FICZ/FOCZ, south of 50°S) and three days in the northern region (FOCZ, north of 50°S).

A total of 407 fish (5.2 t in total weight) were tagged from 18 lines, of which 405 (99.5%) swam away towards the bottom; a favourable outcome. The fate of the other two fish was unclear at the time of release. Fish were tagged in all three zones, with 66 tagged off the eastern edge of Burdwood Bank (south) (two days of fishing effort as per E-licence conditions), 213 in the eastern region of the FICZ/FOCZ (five days of fishing effort on L-licence), and 128 in the northeast area (north) of the FICZ/FOCZ (three days of fishing effort on L-licence). Sixty fish from the Burdwood Bank region were injected with oxytetracycline (90.9% of fish tagged in this region; 14.7% overall).

All 407 fish were measured and weighed. Total length and weight ranged between 67 to 167 cm (mean = 103.4 ± 16.7 cm) and 3.1 to 63.0 kg (mean = 12.82 ± 7.81 kg), respectively.

On average, 10.5% of toothfish caught per line was deemed suitable for tagging (range = 6.2 to 50.7%). None of the changes in fishing behaviour described above had an effect on the proportion of fish identified as suitable for tagging.

The tagging cruise has led to the development of a guide for FI Fisheries observers to identify fish suitable for tagging, a tagging protocol to be followed by FI Fisheries observers when onboard the new F/V CFL *Hunter*, and a protocol to follow when retrieving a tagged fish to be actioned by factory bosuns in the absence of FI Fisheries observers. Additionally, a series of eight recommendations were proposed (see Randhawa and Lee, 2016); all of which were accepted by CFL's Board of Directors.

3 Fisheries Department research contracts in 2016

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 2016 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 2016".

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

SST maps were sent to the Fisheries Department three times a week (Monday, Wednesday, Friday) by e-mail. The SST maps were made in color 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 2016)'

This year the 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 analyzed using the data from research cruises.

4 Reductions in seabird mortality in the Falkland Islands

The issue of seabird mortality in the Falkland Islands fishing fleet was first acknowledged in the late 1990s. The most impacted species is the black-browed albatross Thalassarche melanophris. Work conducted by the Seabird at Sea Team in 2002/2003 highlighted that trawl fisheries posed the greatest threat in Falkland Islands waters. In consequence, the Falkland Islands National Plan of Action-Seabirds (FI-NPOA-S) was created in 2004 and adopted by the Falkland Islands Fisheries Department (FIFD). This NPOA was the first to be written for a United Kingdom Overseas Territory, and amongst the first globally to cover trawl fisheries. Updated FI-NPOA-S-T (Trawlers) followed in 2009 and 2014 with the primary objective to strive towards the significant decrease of seabird mortalities in the Falkland Islands trawling fleet.

4.1. Longlining

Since 2007, no fishing gear-related mortalities have been recorded. This is in part due to the implementation of a number of highly effective mitigation measures, including the introduction of the umbrella longlining method, also known as 'cacheloteras'. However, in 2010 one snowy sheathbill Chionis alba, and in 2012 one giant petrel Macronectes spp. died as a result of flying into the vessel at night. In 2014, one black-browed albatross became entangled in the tori-line near the buoy and was presumed to have died from drowning. A dedicated Seabird Observer has not been on the longliner since 2010, but the Fisheries Observers continue to conduct dedicated seabird observations every one in four days when on board.

4.2. Finfish trawling

The first incidental seabird mortality assessment carried out in 2002/2003 in the Falkland Islands finfish fleet estimated a minimum of 1,529 birds being killed. As a result, bird scaring lines (BSLs, commonly known as tori-lines) became mandatory in 2004. Annual mortality estimates have since been lower; however, inter-annual variation has been substantial (min. 103 in

2013/2014; max. 1,447 in 2010-2011), and preliminary research by Parker et al. (2013) found that 23-38% of mortalities may be going undetected.

For the period of July 2015 to June 2016, observations of seabird interactions with the demersal finfish fleet were conducted on 107 days, representing 3.6% of the finfish trawling effort over the reporting period. A total of 11 seabird mortalities of high-risk species (i.e. long-winged species at risk of injury or mortality from heavy contact) were recorded. Extrapolated to the entire year's finfish fishing effort, this equates to 308 mortalities: 280 black-browed albatrosses and 28 giant petrels. When considering the available undetected mortality index (UMI) (after Parker et al. 2013), the estimates are higher at 379-475 mortalities for the year. Fifty-five percent of these mortalities were warp cable related, the remaining were net casualties.

4.3. Falkland calamari trawling

For the period between July 2015 to June 2016, observations of seabird interactions with the Falkland calamari fleet were conducted on 42 days, representing 2.5% of the Falkland calamari trawling effort over the reporting period. Thirteen mortalities of high-risk species were recorded. Extrapolated to the entire Falkland calamari fishing effort, this equates to 523 mortalities, of which 482.9 black-browed albatrosses and 40.2 white-chinned petrels (Procellaria aequinoctialis). Including the UMI, estimates lie at 634-722 mortalities for the year. Sixty-nine percent of the mortalities were the result of heavy warp strikes; the remaining were caused by the net.

The Falkland calamari fleet is generally considered a cleaner fishery, and the issue of seabird interactions and mortalities in this fishery has in the past been found negligible. Poor productivity and possible food shortages towards the end of the seabird breeding season, in combination with high levels of discards of rockcod, may have contributed to birds feeding more aggressively behind the vessels. Additional factors contributing to the increased mortality records may include enhanced observer effort (in hours), as well as the fact that observations in the Falkland calamari fishery focused on vessels with Fixed Aerial Arrays (FAA).

4.4. Skate fishery

During 13 days of observations during the reporting year, a single incident was recorded as a mortality. A black-browed albatross had become irrevocably entangled in the tori-line and was freed by intervention. Extrapolated to the entire skate fishing effort for the year, this equates to 20 mortalities of black-browed albatross. Including the UMI, estimates lie at 24.7 – 27.7 mortalities for the year.

4.5. Pelagic trawling

No mortalities were recorded from the pelagic trawl fishery for this period, which in the period of July 2015 to June 2016 only amounted to ten fishing days.

4.6. Experimental trawling (Loligo pre-recruitment survey)

Seabird observations are not generally conducted during Loligo pre-recruitment surveys; however, the vessel of the February 2016 survey was in possession of a newly installed FAA which needed assessing. Eleven mortalities of black-browed albatross were recorded over the 14-day survey, involving seven warp-related and two net-related incidents. An additional four heavy interactions with the tori-line, which would have inevitably led to mortality without intervention, were also recorded as mortalities. This equates to an estimated 32 mortalities for the two annual Loligo pre-recruitment surveys. Including the UMI, estimates lie at 39.5 – 44.3 mortalities for the year.

4.7. Unknown fates

'Unknown fates' follow those interactions where the observer cannot be sure of the outcome that ensued. Between 01 July 2015 and 30 June 2016, 293 unknown fates were recorded across the trawler fleet, of which 53.2% followed warp strikes and 46.1% followed tori-line contacts. Save one, all of the tori-line contacts were restricted to a few stations on a single vessel during the *Loligo* pre-recruitment survey when very high numbers of black-browed albatrosses became readily entangled at the float-end of the tori-lines. Extrapolated to the fishing effort for the year, and stratified by fishing licence, a maximum additional 3,899.1 mortalities may have occurred from these unknown fates in the Falkland Islands fisheries during the year. The number of unknown fates was much higher this year compared to last; note however that in previous years only unknown fates from the finfish fishery were considered in the analysis.

4.8. Heavy Contacts

Heavy contacts are those that have the potential to lead to injury or death. In the reporting year, 3,355 heavy contacts between high-risk species and fishing gear were recorded in the trawl fleet. For most trawl fisheries, the majority of heavy contacts were warp related (67-100%). The exception was the *Loligo* pre-recruitment survey, which saw a very high proportion of heavy contacts with the tori-lines. Thirteen percent of heavy contacts resulted in potential injury or death in high-risk species. A generalised linear model revealed that discharge level, relative wind direction, sea state and warp exposure had a highly significant effect on the rate of heavy contacts by black-browed albatrosses.

4.9. Improvements to incidental seabird mitigation

FIFD recognises the limitations of conventional tori-lines in eliminating seabird mortalities and is committed to the research and development of alternative, safe, cost-effective and practical mitigation measures.

4.9.1. FIXED AERIAL ARRAY

A (re-)evaluation of the effectiveness of the FAA on the Argos Vigo, Robin M. Lee and *Sil* in 2016 highlighted that original designs were not effectively mitigating seabird by-catches. The issue was the high level of cable exposure as a result of stern booms being too short, or because cables deviated out of the protective curtain laterally. Modifications to the *Robin M. Lee* FAA following suggested improvements increased cable protection significantly, although some issues remain. The FIFD has stressed the importance of careful calculations to ensure that structures provide adequate mitigation.

4.9.2. DISCARD MANAGEMENT

The FIFD recognises discard management as a long-term solution to seabird by-catch and continues to collaborate with the industry to investigate options for the fleet. The *Santa Mariña* currently remains the only vessel with a discard management system (in the form of a discard storage tank). A batch-discard study showed that seabird interaction was reduced significantly, although a design flaw compromises the tank's full potential. Meanwhile, newly built vessels are being encouraged to fit an adequate discard management system, and a fleet-wide investigation is being undertaken to establish the feasibility of installing a discard management system on existing vessels.

4.9.3. OTHER MITIGATIONS

The Mark1 design, Inverted V design, Clamped design and Warp Deflector have been tested but abandoned for safety and practical reasons. See previous bulletins for more details.

4.10. Compliance

4.10.1. TORI-LINE DEPLOYMENT

The use of tori lines is mandatory so they are used by all licensed vessels. The areas where less than full compliance might arise are around the speed of deployment/retrieval as gear is being deployed/retrieved. Additionally, there is a requirement that if the gear is deployed but tori lines can't be deployed due to shooting/hauling operations then no discarding should be taking place from the factory. This is another area where compliance needs to improve.

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, whereas the Seabird Observer primarily works on seabird/mammal interaction/mortality data as well as being involved with trial and development of appropriate bird mitigation measures in the demersal mixed finfish and Falkland calamari trawl fleet. Observers also monitor activities of the Falkland-licensed fleet operating on the high seas to the North of the FCZ. Lastly, observers also take part in the research cruises conducted regularly by the department. 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.

Table 1 summarizes monitoring over the last 4 years (2013-2016). 2016 saw an increase in observer coverage in all fisheries except the B-licensed fleet, where observer coverage only amounted to six days (0.4% of all B-licensed fishing days. 2016 was however an unusual year, with very low *Illex* abundance, yet considerable vessel presence. In all other fisheries observer coverage was either higher or maintained.

Table 1: Observer coverage for 2013-2016 FICZ/FOCZ

	2013			2014			2015			2016		
Licence	Fish-ing Days	Obs Days		Fish-ing Days	Obs Days		Fish-ing Days	Obs Days		Fish-ing Days	Obs Days	
A/G/W	3204	109	3.4%	3164	244	7.7%	3031	270	8.9%	2350	243	10.3 %
B	7638	81	1.1%	7041	79	1.1%	8278	116	1.4%	1714	6	0.4%
C/X	1977	159	8.0%	1972	164	8.3%	1616	133	8.2%	2024	207	10.2 %
F	246	17	6.9%	260	19	7.3%	251	34	13.5%	152	29	19.1 %
L	298	123	41.3%	250	100	40.0%	216	93	43.1%	197	98	49.7 %
S	3	3	100.0 %	15	15	100.0 %	6	0	0%	4	4	100.0 %
E (surveys)	91	91	100.0 %	61	61	100.0 %	89	89	100%	53	53	100.0 %
Totals	13457	583	4.3%	12763	682	5.3%	13491	735	5.4%	6494	640	9.9%

In 2016, there were 39 observer trips on commercial vessels, two 14-day Loligo pre-recruitment trips, one three-week research survey trip with the RV Castelo and one two-week Toothfish tagging trip on the CFL Gambler. Besides observer coverage inside the Falkland Conservation zones, Observers also spend time on trawlers and occasionally jiggers on the high seas.

Table 2 summarizes the number of observed days for the last four years.

Table 2: Observer coverage 2013-2016 North of the FICZ/FOCZ

	2013	2014	2015	2016
Observed Days	59	75	46	92

Table 3 provides a four year summary of specimens sampled for size/sex/maturity and optionally weight/otoliths/statoliths. Four-year totals of less than 100 specimens per species were grouped into 'Others'.

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

SPECIES NAME	2013-16 TOTAL	%	2013	%	2014	%	2015	%	2016	%
Doryteuthis gahi	409,252	37.4%	96,571	32.9%	98,446	42.0%	99,805	35.6%	114,430	40.2%
Patagonotothen ramsayi	181,904	16.6%	50,078	17.1%	38,598	16.5%	48,212	17.2%	45,016	15.8%
Illex argentinus	111,947	10.2%	22,256	7.6%	31,309	13.4%	45,924	16.4%	12,458	4.4%
Merluccius hubbsi	58,660	5.4%	10,349	3.5%	11,045	4.7%	14,873	5.3%	22,393	7.9%
Bathyraja brachyurops	52,376	4.8%	20,846	7.1%	12,463	5.3%	9,507	3.4%	9,560	3.4%
Dissostichus eleginoides	41,355	3.8%	8,116	2.8%	7,762	3.3%	11,256	4.0%	14,221	5.0%
Salilota australis	34,800	3.2%	7,772	2.7%	6,843	2.9%	8,526	3.0%	11,659	4.1%
Bathyraja albomaculata	31,526	2.9%	14,779	5.0%	2,139	0.9%	7,357	2.6%	7,251	2.5%
Macruronus magellanicus	24,366	2.2%	9,716	3.3%	3,086	1.3%	4,174	1.5%	7,390	2.6%
Zearaja chilensis	23,062	2.1%	9,226	3.1%	1,199	0.5%	5,047	1.8%	7,590	2.7%
Micromesistius australis	19,286	1.8%	3,927	1.3%	6,474	2.8%	3,469	1.2%	5,416	1.9%
Genypterus blacodes	18,652	1.7%	6,649	2.3%	2,923	1.2%	4,457	1.6%	4,623	1.6%
Bathyraja griseocauda	12,202	1.1%	5,840	2.0%	620	0.3%	1,538	0.5%	4,204	1.5%
Bathyraja macloviana	12,170	1.1%	7,580	2.6%	1,599	0.7%	1,272	0.5%	1,719	0.6%
Macrourus holotrachys	11,389	1.0%	3,753	1.3%	2,110	0.9%	2,940	1.0%	2,586	0.9%
Amblyraja doellojuradoi	5,398	0.5%	2,283	0.8%	567	0.2%	884	0.3%	1,664	0.6%
Macrourus carinatus	5,190	0.5%	2,786	0.9%	792	0.3%	488	0.2%	1,124	0.4%
Antimora rostrata	4,957	0.5%	1,539	0.5%	691	0.3%	1,306	0.5%	1,421	0.5%
Coelorhynchus fasciatus	4,766	0.4%	819	0.3%	568	0.2%	1,904	0.7%	1,475	0.5%
Bathyraja scaphiops	4,580	0.4%	2,030	0.7%	430	0.2%	636	0.2%	1,484	0.5%
Sprattus fuegensis	3,205	0.3%	417	0.1%	886	0.4%	1,672	0.6%	230	0.1%
Psammobatis spp.	2,072	0.2%	955	0.3%	351	0.1%	397	0.1%	369	0.1%
Bathyraja cousseauae	1,908	0.2%	886	0.3%	200	0.1%	151	0.1%	671	0.2%
Cottoperca gobio	1,844	0.2%	1,035	0.4%	314	0.1%	32	<0.1%	463	0.2%
Merluccius australis	1,806	0.2%	815	0.3%	191	0.1%	322	0.1%	478	0.2%
Champsocephalus esox	1,735	0.2%	196	0.1%	322	0.1%	940	0.3%	277	0.1%
Bathyraja multispinis	1,597	0.1%	628	0.2%	109	<0.1%	251	0.1%	609	0.2%
Iluocoetes fimbriatus	1,410	0.1%	58	<0.1%	138	0.1%	174	0.1%	1,040	0.4%
Gymnoscopelus nicholsi	1,161	0.1%		<0.1%	61	<0.1%	679	0.2%	421	0.1%
Patagonotothen tessellata	1,095	0.1%	105	<0.1%	244	0.1%	7	<0.1%	739	0.3%
Sebastes oculatus	969	0.1%	201	0.1%	294	0.1%	333	0.1%	141	<0.1%
Moroteuthis ingens	934	0.1%	52	<0.1%	385	0.2%	185	0.1%	312	0.1%

SPECIES NAME	2013-16 TOTAL	%	2013	%	2014	%	2015	%	2016	%
Squalus acanthias	665	0.1%	158	0.1%	20	<0.1%	285	0.1%	202	0.1%
Physiculus marginatus	427	<0.1%	24	<0.1%	156	0.1%	48	<0.1%	199	0.1%
Stromateus brasiliensis	375	<0.1%	69	<0.1%	75	<0.1%	139	<0.1%	92	<0.1%
Amblyraja cf. georgiana	353	<0.1%	166	0.1%	52	<0.1%	82	<0.1%	53	<0.1%
Dipturus argentinensis	341	<0.1%	100	<0.1%	11	<0.1%	85	<0.1%	145	0.1%
Patagonotothen guntheri	327	<0.1%	1	<0.1%	12	<0.1%	273	0.1%	41	<0.1%
Munida gregaria	302	<0.1%		<0.1%	5	<0.1%	297	0.1%		<0.1%
Bathyraja magellanica	290	<0.1%	135	<0.1%	32	<0.1%	45	<0.1%	78	<0.1%
Gymnoscopelus bolini	283	<0.1%		<0.1%	283	0.1%		<0.1%		<0.1%
Allothunnus fallai	264	<0.1%	42	<0.1%	3	<0.1%	31	<0.1%	188	0.1%
Schroederichthys bivius	258	<0.1%		<0.1%	68	<0.1%	57	<0.1%	133	<0.1%
Paradiplospinus gracilis	202	<0.1%		<0.1%	202	0.1%		<0.1%		<0.1%
Pseudoxenomystax albescens	191	<0.1%	5	<0.1%	84	<0.1%	41	<0.1%	61	<0.1%
Paralomis formosa	182	<0.1%	53	<0.1%	30	<0.1%	78	<0.1%	21	<0.1%
Mancopsetta maculata	176	<0.1%	119	<0.1%	18	<0.1%	34	<0.1%	5	<0.1%
Cottunculus granulosus	175	<0.1%	5	<0.1%	1	<0.1%	50	<0.1%	119	<0.1%
Cataetyx messieri	132	<0.1%	2	<0.1%	9	<0.1%	107	<0.1%	14	<0.1%
Bathyraja meridionalis	120	<0.1%	55	<0.1%	16	<0.1%	16	<0.1%	33	<0.1%
Icichthys australis	119	<0.1%	25	<0.1%	62	<0.1%	24	<0.1%	8	<0.1%
Bathyraja papilionifera	106	<0.1%	48	<0.1%	11	<0.1%	26	<0.1%	21	<0.1%
Others	1,208	0.1%	223	0.1%	241	0.1%	357	0.1%	387	0.1%
	1,094,070		293,493		234,550		280,793		285,234	

6 Fishing Effort and Catch Limits

Total Allowable Effort (TAE) and Total Allowable Catch (TAC) were set by the Falkland Islands Fisheries Department for the 2017 calendar year fisheries and published (Item 1 on the technical reports list at 8.3).

7 Conversion factors in the Falkland Islands fishery

Green or live weight is used to measure the extraction of biomass from the fishery. In many cases, Conversion Factors (CFs) are used to calculate green (live) weight from the products that are produced. Conversion factors are applied mainly to products derived from fish (i.e. HGT, HGT SK/OFF, or FILL SK/ON and SK/OFF), but also skate wings (WINGS SK/ON and SK/OFF) and squid tubes (TUBE SK/ON and SK/OFF). Before 2009, many vessels used the suggested factors in the first pages of the FIFD fishing vessel logbooks, such as 1.5 for HGT, 2.5 for fillets, 2.5

for skate wings and 2.0 for Illex tubes. However, values were suggested (i.e. not stipulated), and some vessels did use their own conversion factors.

Following data collection by fisheries observers and fisheries scientists, a number of the most common species products received FIFD stipulated conversion factors to be used (trawl and jigging) fleet wide from 2009. Further work in 2009 and 2010 resulted in an update with further inclusion of a number of new species products. This update came then into force in 2011. One of the now regular duties of the fisheries observers is to collect further CF data on all vessels that are boarded, with the aim of monitoring and strengthening the CF versus green weight relationship used by fishing vessels. Data collected between 2011 and 2016 has been used to provide further updates and product inclusions.

As per 1 January 2017, the document "Conversion Factor Notice 2017" was adopted to be used (trawl and jigging) fleet wide. The tables containing products and relevant CFs by product type are appended below.

Headed, Gutted and Tailed Fish (HGT)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Salilota australis	Red cod	Brotola	BAC	**2.0**
Micromesistius australis	Southern blue whiting	Polaca	BLU	**1.8**
Cottoperca gobio	Frogmouth	Rubio	CGO	**3.0**
Macrourus spp.	Grenadier	Rata	GRV	**2.5**
Merluccius spp.	Hakes	Merluza	HAK/PAT	**1.9**
Genypterus blacodes	Kingclip	Rosada	KIN	**2.2**
Patagonotothen ramsayi	Rockcod	Marujo	PAR	**2.0**
Sebastes oculatus	Redfish	Cabra	RED	**2.1**
Dissostichus eleginoides	Toothfish	Robalo	TOO	**1.9**
Macruronus magellanicus	Hoki	Merluza de cola	WHI	**2.0**

Headed Gutted and Tailed Fish and Skinned (HGT SK/OFF)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Schroederichthys bivius	Cat shark	Pintarrojo	DGH	**3.0**
Squalus acanthias	Dog fish	Tiburon espinoso	DGS	**2.6**
Macrourus spp.	Grenadier	Rata	GRV	**2.7**
Coelorinchus fasciatus	Small grenadier	Grenadero chico	GRF	**2.8**

Filleted fish (FILL SK/ON)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Micromesistius australis	Southern blue whiting	Polaca	BLU	**2.7**
Cottoperca gobio	Frogmouth	Rubio	CGO	**4.1**
Macrourus spp.	Grenadier	Rata	GRV	**3.8**
Merluccius spp.	Hakes	Merluza	HAK/PAT	**2.9**
Genypterus blacodes	Kingklip	Rosada	KIN	**2.7**
Dissostichus eleginoides	Toothfish	Robalo	TOO	**2.5**
Macruronus magellanicus	Hoki	Merluza de cola	WHI	**2.6**

Filleted fish (FILL SK/OFF)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Macrourus spp.	Grenadier	Rata	GRV	**4.4**
Merluccius spp.	Hakes	Merluza	HAK/PAT	**3.3**
Macruronus magellanicus	Whiptail Hake or Hoki	Merluza de cola	WHI	**3.2**

Squid Tubes (Wings and Skin On=TUBE SK/ON)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Illex argentinus	Illex squid	Pota	ILL	**2.0**
Doryteuthis gahi	Loligo squid	Calamar	LOL	**1.9**

Squid Tubes (Wings and Skin Off=TUBE SK/OFF)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Illex argentinus	Illex squid	Pota	ILL	**3.0**

Skate Wings (SK/ON)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Rajidae	Skates/Rays	Raya	RAY	**2.6**

Skate Wings (SK/OFF)

Scientific Name	English Name	Spanish Name	FIFD Code	Conversion Factor
Rajidae	Skates/Rays	Raya	RAY	**3.2**

On longline vessels this type of work has been done too since 2006. Because of the size and value of the toothfish and the fact that the longline fishery is TAC regulated (using a green weight TAC), the conversion factor work done by observers has been vessel specific and the data is collected fish by fish. In the ten years since 2006, a small number of other longliners (some of which used different trunk cuts) did also undertake short periods of longlining in the FCZ. All of these vessels had individually assessed CFs assigned to them using the same methodology.

The table below shows 3 and 5 year summaries of collected averages for the CFL *Gambler*, with year-on-year stipulated values.

Year	5-year average CF	3-year average CF	FIFD stipulated CF
2006			1.67
2007			1.62
2008		1.61	1.62
2009		1.59	1.62
2010	1.62	1.62	1.62
2011	1.62	1.62	1.62
2012	1.63	1.62	1.62
2013	1.62	1.61	1.62
2014	1.61	1.60	1.62
2015	1.61	1.61	1.60
2016	1.60	1.60	1.60

Based on this data, and the expectation that the new CFL longliner 'CFL Hunter' will continue to operate in the same fashion as the CFL Gambler, their stipulated toothfish CF shall be 1.60 in the first instance and may be updated if required for the start of 2018, or earlier.

8 Participation in Scientific Workshops, Conferences and Symposia in 2016

8.1. Whale depredation Workshop – March 2016

This workshop was organised by the Coalition of Legal Toothfish Operators (COLTO) to address the issue of whale depredation in Toothfish longline fisheries. The workshop was held in Punta Arenas between 15 and 18 March. Participants from FIFD were Dr. A Winter and J. Pompert. A presentation was given by A. Winter: "Assessing depredation in a small fishery", which had been prepared by the two participants.

8.2. ACAP – May 2016

The Agreement for the Conservation of Albatrosses and Petrels meets every 18 months to conduct their working group meetings (the 7th Seabird Bycatch Working group and the 3rd meeting of the Population and Status Working Group). FIFD staff have attended working group meetings in previous years, and this time they were J. Pompert and A. Kuepfer. One Information paper was submitted: "Discard management as a seabird by-catch mitigation tool: The effect of batch-

discarding on seabird interactions in the Falkland Islands trawl fishery" Amanda Kuepfer, Michaël Gras, Joost Pompert.

8.3. ICES Annual Scientific Meeting - 2016

Annual Scientific Meetings are organised by the International Council for the Exploration of the Seas (ICES). In 2016, the meeting was held in Riga, Latvia between 19 and 24 September. Participants from FIFD: A. Arkhipkin and A. Winter. One report was presented by A. Winter: 'Predatory impact on Patagonian squid populations after sudden range expansion of Argentine squid'; prepared by A. Arkhipkin, T. Zawadowski, Z. Shcherbich, A. Winter; and another one by A. Arkhipkin 'Direct methods in age and growth studies of cephalopods'.

9 Publications from scientific work carried out in FIG Fisheries Department in 2016 (or in collaboration with FIG personnel)

9.1. Peer-reviewed publications (appeared in 2016)

Arkhipkin, A.I. 2016. If not getting hooked why make one? Reply to Landman *et al*. *J. Moll. Stud.*, **82** (2): 355–356.

Brickle, P., Schuchert, P.C., Arkhipkin, A., Reid, M.R., Randhawa, H.S. 2016. Otolith trace elemental analyses of South American austral hake, *Merluccius australis* (Hutton, 1872) indicates complex salinity structuring on their spawning/larval grounds. *PLoS ONE*, **11**(1): e0145479.

Doubleday, Z.A., Prowse, T.A.A, Arkhipkin, A., Pierce, G.J., Semmens, J., Steer M., Leporati S.C., Lourenço, S., Quetglas, A., Sauer, W., Gillanders, B.M. 2016. Global proliferation of cephalopods. *Current Biology*, **26** (10): R406–R407.

Gras, M., Safi, G., Lebredonchel, H., Quinquis, J., Foucher, E., Kouéta, N., and Robin, J.-P. 2016. Stock structure of the English Channel common cuttlefish *Sepia officinalis* (Linnaeus, 1758) during the reproduction period. Journal of the Marine Biological Association of the UK, **96**: 167–176.

Hoving, H.J.T., Arkhipkin, A.I., Laptikhovsky, V.V., Marian, J.E.A.R. 2016. Mating tactics in the sub-Antarctic deep-sea squid *Onykia ingens* (Cephalopoda: Onychoteuthidae). *Polar Biology*, **39** (7): 1319-1328.

Mann, B.Q., Lee, B., and Cowley, P.D. 2016. Growth rate of speckled snapper *Lutjanus rivulatus* (Teleostei: Lutjanidae) based on tag-recapture data from the iSimangaliso Wetland Park, South Africa. *African Journal of Marine Science* 38: 111-118.

9.2. Technical reports:

Brewin, P., Winter, A., Arkhipkin, A. 2016. Sustainability measures, 2015 – 2016. Patagonian toothfish (*Dissostichus eleginoides*). *Tech. Rep. FIG Fisheries Dept.*, 13 p.

FIFD. 2016. Vessel Units, Allowable Effort, and Allowable Catch 2017. *Tech. Rep. FIG Fisheries Dept.*, 54 p.

Gras, M. 2016. Linear models to predict the horizontal net opening of the DNR Fisheries trawl. *Tech. Rep. FIG Fisheries Dept.*, 5 pp.

Gras, M., Pompert, J., Blake, A., Boag, T., Grimmer, A., Iriarte, V., and Sanchez, B. 2016. Finfish and rock cod biomass survey. *Tech. Rep. FIG Fisheries Dept.*, 72 pp.

Iriarte, V. and Pompert, J. 2016. Preliminary information on the by-catch of pinnipeds by finfish and squid trawlers in the Falkland Islands. *Tech. Rep. FIG Fisheries Dept.*, 13pp.

Kuepfer, A. 2016. FIFD Seabird by-catch in the Falkland Islands trawl fishery 2014-2015. An assessment of seabird by-catch in Falkland Islands trawl fisheries July 2014 to June 2015. *Tech. Rep. FIG Fisheries Dept.*, 33pp.

Kuepfer, A. 2016. FIFD Seabird by-catch in the Falkland Islands trawl fisheries 2015-2016. An assessment of seabird by-catch in Falkland Islands trawl fisheries July 2015 to June 2016. *Tech. Rep. FIG Fisheries Dept.*, 39pp.

Kuepfer, A., Gras, M., and Pompert, J. 2016. Discard management as a seabird bycatch mitigation tool: the effect of batch-discarding on seabird interactions in the Falkland Islands trawl fishery. *Tech. Rep. FIG Fisheries Dept.*, 8 pp.

Pompert, J. 2016. Review of Conversion Factors used in the Falkland Islands fishing fleet (trawlers & jiggers), *Tech. Rep. FIG Fisheries Dept.*, 38 pp.

Pompert, J. 2016. Patagonian Toothfish Conversion Factor on the CFL Gambler 2006-2016 & proposed CF for use on the CFL Hunter from 2017. *Tech. Rep. FIG Fisheries Dept.*, 3 pp.

Randhawa, H.S, Lee, B. 2016. Toothfish tagging Cruise ZDLC2-06-2016. *Tech. Rep. FIG Fisheries Dept.*, 20 pp.

Winter, A. 2016. Falkland calamari Stock Assessment, 1st Season 2016. *Tech. Rep. FIG Fisheries Dept.*, 27 p.

Winter, A. 2016. Falkland calamari Stock Assessment, 2nd Season 2016. *Tech. Rep. FIG Fisheries Dept.*, 28 p.

Winter, A. 2016. Skate (Rajiformes) stock assessment, 2015. *Tech. Rep. FIG Fisheries Dept.*, 13 p.

Winter, A. 2016. Stock assessment for Patagonian toothfish in the Falkland Islands, 2015. *Tech. Rep. FIG Fisheries Dept.*, 17 p.

Winter, A., Herrera, D. 2016. Invertebrate bycatch in the skate-license trawl fishery, 2007 – 2016. *Tech. Rep. FIG Fisheries Dept.*, 25 p.

Winter, A., Jones, J., Shcherbich, Z., Iriarte, V. 2016. Falkland calamari stock assessment survey, 2nd season 2016. *Tech. Doc. FIG Fisheries Dept.*, 22 p.

Winter, A., Pompert, J. 2016. Initial analyses of whale depredation in the Falkland Islands toothfish longline fishery. *FIG Directorate Nat. Res.*, 18 p.

Winter, A., Zawadowski, T., Shcherbich, Z., Bradley, K., Kuepfer, A. 2016. Falkland calamari stock assessment survey, 1st season 2016. *Tech. Doc. FIG Fisheries Dept.*, 19 p.

Alexander Arkhipkin (Editor), sections 1.1-1.3; 3; 6; 7;

Alex Blake, sections 1.11-1.16

Michaël Gras, sections 1.4-1.6; 2.1

Amanda Kuepfer, section 4

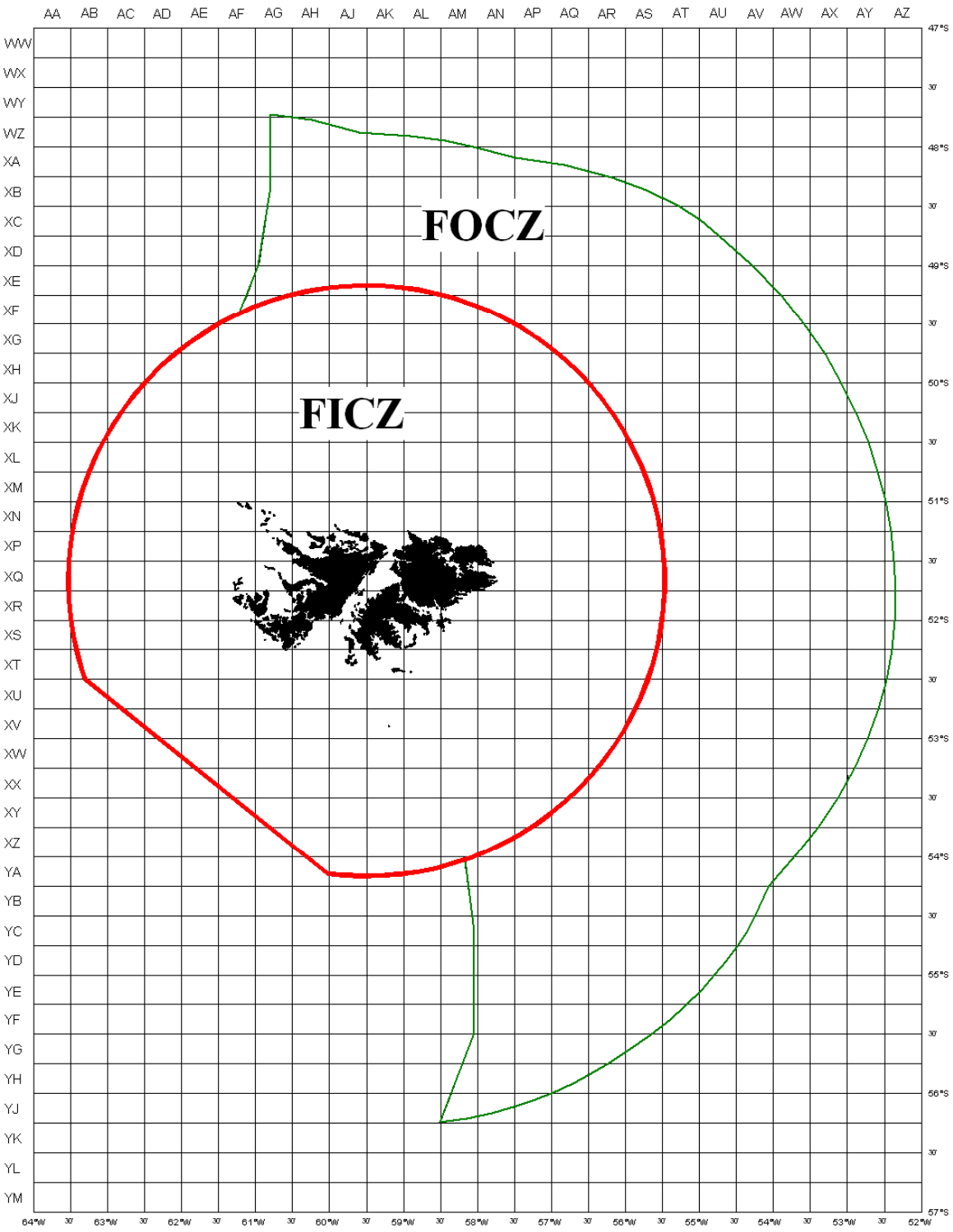
Joost Pompert, sections 2.2; 4, 5, 7

Haseeb Randhawa: sections 1.7-1.9, 2.2

Andreas Winter, sections 1.2; 1.10.

Introduction

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-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 - 2017

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 longliners 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 Scallop 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 2016

Quota Owner	FISHERY 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	8.15%			18.75%		11.22%		2.00%		18.75%
Beauchene	3.10%			12.97%				1.88%		12.97%
Bold Ventures						15.30%		22.21%		
Byron Fishing Ltd	2.28%					10.355%		19.97%		
CFL									100%	
FIG							70%			
Fortuna	24.96%			27.53%		0.04%	30%	0.27%		27.53%
J.K. (Marine)					36.80%			0.86%		
Pioneer Seafoods	7.86%					2.52%				
RBC	38.33%			10.45%		15.625%		4.01%		10.45%
Seafish				4.40%	29.20%	14.14%		19.95%		4.40%
Seaview				14.34%						14.34%
Southern Cross	4.18%			11.56%		7.71%		10.42%		11.56%
Sulivan Shipping	11.14%				34.00%	23.09%		18.43%		
Total	100.00%	0.00%	0.00%	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
A	40	33	17	13	4	10	5	5	4	9
B	161	144	170	165	156	164	120	113	92	79
C	46	38	16	20	21	22	17	19	15	14
E	8	5	-	2	1	6	6	5	6	9
F	-	-	-	-	-	-	4	5	-	-
G	-	-	-	-	-	-	-	-	19	27
L	-	-	-	-	-	-	-	-	-	-
R	-	-	-	-	-	9	10	11	10	2
S	-	-	-	-	-	-	-	-	-	-
W	-	-	11	16	14	30	29	28	9	16
X	23	20	19	23	30	27	23	24	21	20
Y	70	17	15	6	5	10	9	6	11	8
Z	24	35	40	46	43	47	60	43	36	27
	372	**292**	**288**	**291**	**274**	**325**	**283**	**259**	**223**	**211**

LICENCE	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
A	11	10	6	6	6	8	9	11	11	23
B	86	109	116	125	122	90	71	43	56	44
C	17	17	16	17	16	16	16	16	16	17
E	8	5	1	1	8	8	12	8	6	4
F	-	4	1	9	4	7	4	-	1	8
G	30	16	19	19	24	17	12	20	18	23
L	-	3	6	6	8	5	4	6	6	2
R	8	7	9	8	10	11	11	11	10	-
S	2	3	3	4	3	4	2	2	2	3
W	21	11	13	10	23	25	17	21	14	27
X	18	15	19	17	18	18	16	16	17	19
Y	8	4	8	8	12	9	12	16	18	-
Z	34	27	18	18	22	23	18	24	25	-
	243	**231**	**235**	**248**	**276**	**241**	**204**	**194**	**200**	**170**

LICENCE	2009	2010	2011	2012	2013	2014	2015	2016
A*	21	22	29	29	31	29	26	22
B	21	76	94	100	99	106	106	106
C	17	18	17	18	17	17	16	17
E	7	5	5	6	8	5	8	4
F**	8	8	7	8	8	8	8	8
G	27	23	25	25	25	22	21	22
L	1	1	1	1	2	2	1	1
R	-	-	-	-	-	-	-	-
S	4	3	1	3	1	1	1	1
W***	30	30	27	25	28	26	28	25
X	18	17	17	16	16	17	16	17
Y	-	-	-	-	-	-	-	-
Z	-	-	-	-	-	-	-	-
	154	**203**	**223**	**231**	**235**	**233**	**231**	**223**

* - 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
AU	-	-	-	-	-	-	-	-	-	3	3	-	-	-
BG	9	14	8	6	2	-	-	-	-	-	-	-	-	-
BZ	-	-	-	-	-	-	1	-	-	-	2	5	2	1
CB	-	-	-	-	-	-	-	-	-	-	-	2	1	1
CL	1	1	-	3	2	8	8	4	3	2	3	1	1	1
CN	-	-	-	-	-	-	-	-	-	2	4	9	20	25
ES	99	72	66	74	74	108	100	69	52	64	76	41	45	48
FK	7	4	2	3	3	8	19	37	32	43	49	47	55	48
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
KR	30	32	42	55	60	86	105	112	98	48	71	84	67	70
NA	-	-	-	-	-	-	-	-	3	1	2	-	-	-
NL	1	1	-	-	-	-	-	-	-	-	-	-	-	-
NO	-	2	-	-	-	-	-	1	1	-	-	-	-	-
PA	-	-	5	4	3	3	2	3	1	1	2	-	-	2
PL	68	53	40	21	8	8	4	2	-	-	-	-	-	-
PT	7	7	4	4	3	4	8	4	-	-	-	1	-	-
RU	-	-	-	-	-	1	-	-	-	-	-	-	1	-
SC	-	-	-	-	-	-	-	-	3	-	-	-	-	-
SL	-	-	-	1	1	1	-	-	-	-	-	-	-	-
TW	32	17	39	49	77	43	8	3	3	2	4	16	22	26
UK	11	1	1	-	1	3	2	5	3	3	5	3	3	3
UR	-	-	-	-	-	1	-	-	-	-	-	-	-	-
US	-	-	-	-	-	-	-	1	-	-	-	-	-	-
UY	-	-	-	-	-	-	-	-	-	-	-	-	1	1
VC	-	-	-	-	-	-	-	-	-	-	-	-	1	-
	372	**292**	**288**	**291**	**274**	**325**	**283**	**259**	**223**	**211**	**243**	**231**	**235**	**248**

Licences

Table B.2 Licence allocations by fishing fleet and year

FISHING FLEET	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BZ	3	1	1	-	1	-	-	-	-	-	-	-	-	-
CB	1	1	-	-	-	-	-	1	1	2	1	-	-	-
CL	1	2	-	1	2	1	-	1	-	-	-	2	-	-
CN	21	7	3	2	4	-	-	-	-	-	-	-	-	-
DE	-	-	-	-	-	-	-	-	-	1	-	-	-	-
EE	-	1	-	2	-	-	-	-	-	-	-	-	-	-
ES	46	48	36	59	65	59	61	55	61	63	67	64	64	59
FK	80	71	73	69	62	54	55	58	58	57	60	52	52	49
GH	-	-	-	1	-	-	-	-	-	-	-	-	-	-
JP	14	7	2	1	1	1	1	1	1	1	-	-	-	-
KR	62	59	43	42	41	38	21	34	35	35	36	36	35	34
NA	-	2	-	-	-	-	-	-	-	-	-	-	-	-
NZ	1	-	-	-	-	-	-	-	-	-	-	-	-	-
PA	2	2	2	1	1	-	-	-	-	-	-	-	-	-
RU	6	-	-	-	-	-	-	1	-	-	-	-	-	-
SH	-	-	-	-	-	-	2	-	-	-	-	-	-	-
SL	-	-	-	-	-	-	-	2	-	1	-	-	-	-
TW	33	34	34	10	19	13	8	45	61	67	65	71	71	73
UK	4	4	6	4	4	4	6	4	4	4	4	4	5	4
UY	2	2	2	2	-	-	-	-	-	-	-	-	-	-
VU	-	-	2	-	-	-	-	1	2	-	2	4	4	4
	276	**241**	**204**	**194**	**200**	**170**	**154**	**203**	**223**	**231**	**235**	**233**	**231**	**223**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	3	12	11	11	15	17	19	17	15	14
FK	8	10	9	10	12	11	11	11	10	7
KR	-	-	-	-	1	-	-	-	-	-
UK	-	1	1	1	1	1	1	1	1	1
	11	**23**	**21**	**22**	**29**	**29**	**31**	**29**	**26**	**22**

Licences

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BZ	1	-	-	-	-	-	-	-	-	-
CB	-	-	-	1	1	2	1	-	-	-
CN	4	-	-	-	-	-	-	-	-	-
FK	-	-	-	-	1	-	-	-	-	-
KR	32	31	13	27	29	30	31	31	31	29
SL	-	-	-	2	-	1	-	-	-	-
TW	19	13	8	45	61	67	65	71	71	73
VU	-	-	-	1	2	-	2	4	4	4
	56	**44**	**21**	**76**	**94**	**100**	**99**	**106**	**106**	**106**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	-	1	2	1	2	2	1	2	1	2
FK	14	15	14	16	14	15	15	14	14	14
PA	1	-	-	-	-	-	-	-	-	-
UK	1	1	1	1	1	1	1	1	1	1
	16	**17**	**17**	**18**	**17**	**18**	**17**	**17**	**16**	**17**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	-	-	-	1	-	-	-	-	-	-
DE	-	-	-	-	-	1	-	-	-	-
ES	1	2	1	-	1	-	-	-	1	-
FK	6	2	2	3	4	5	8	5	5	4
KR	-	-	-	-	-	-	-	-	1	-
RU	-	-	-	1	-	-	-	-	-	-
SH	-	-	2	-	-	-	-	-	-	-
UK	-	-	2	-	-	-	-	-	1	-
	7	**4**	**7**	**5**	**5**	**6**	**8**	**5**	**8**	**4**

Licences

Table B.7 Licence 'F' (Skates and rays - first season in 1999-2007, both seasons from 2008) allocations by fishing fleet and year

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	4	2	2	4	3	4	4	4	6	5
KR	7	6	6	4	4	4	4	4	2	3
	11	**8**	**8**	**8**	**7**	**8**	**8**	**8**	**8**	**8**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	25	19	22	17	18	21	21	20	20	18
FK	2	4	5	6	7	4	4	2	1	4
	27	**23**	**27**	**23**	**25**	**25**	**25**	**22**	**21**	**22**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	1	-	-	-	-	-	-	1	-	-
FK	4	2	1	1	1	1	2	1	1	1
KR	1	-	-	-	-	-	-	-	-	-
	6	**2**	**1**	**1**	**1**	**1**	**2**	**2**	**1**	**1**

Table B.10 Licence 'R' (Skates and rays - second season) allocations by fishing fleet and year

FISHING FLEET	2007
ES	3
KR	7
	10

Licences

Table B.11 Licence 'S' (Blue Whiting and Hoki - surimi vessels) allocations by fishing fleet and year

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	1	1	-	-	-	-	-	1	-	-
FK	-	1	3	2	-	2	1	-	1	1
JP	1	1	1	1	1	1	-	-	-	-
	2	**3**	**4**	**3**	**1**	**3**	**1**	**1**	**1**	**1**

Table B.12 Licence 'W' (Restricted finfish - first season, 1998-2007; both seasons since 2008) allocations by fishing fleet and year

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015
ES	10	20	22	20	20	18	21	19	20	18
FK	3	5	5	6	5	5	5	5	6	4
KR	-	1	2	3	1	1	1	1	1	2
UK	1	1	1	1	1	1	1	1	1	1
	14	**27**	**30**	**30**	**27**	**25**	**28**	**26**	**28**	**25**

Table B.13 Licence 'X' (Patagonian squid - second season) allocations by fishing fleet and year

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	1	3	1	2	2	1	1	2	1	2
FK	15	15	16	14	14	14	14	14	14	14
UK	1	1	1	1	1	1	1	1	1	1
	17	**19**	**18**	**17**	**17**	**16**	**16**	**17**	**16**	**17**

Table B.14 Licence 'Y' (Unrestricted finfish - second season) allocations by fishing fleet and year

FISHING FLEET	2007
ES	11
FK	7
	18

Table B.15 Licence 'Z' (Restricted finfish - second season) allocations by fishing fleet and year

FISHING FLEET	2007
ES	19
FK	4
KR	1
UK	1
	25

Licences

Table B.16 Annual revenue (Pounds sterling) by licence type

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

LICENCE	1996	1997	1998	1999	2000	2001	2002
A	300,154	191,586	186,858	247,467	264,667	153,200	229,589
B	12,176,224	12,189,748	9,578,864	9,349,734	14,609,416	16,408,604	15,504,408
C	3,915,269	3,489,634	3,694,139	3,840,651	4,063,638	4,515,400	4,495,703
E	107,022	180,956	460,752	471,163	190,113	0	0
F	117,243	.	.	0	83,714	41,311	218,114
G	.	654,702	900,493	1,321,513	755,274	1,001,852	1,176,222
L	.	.	.	0	237,250	581,856	581,856
R	446,767	429,579	73,733	452,362	252,959	405,492	221,071
S	.	.	.	326,903	980,410	914,033	792,191
W	842,504	590,818	868,281	872,436	418,455	303,832	268,804
X	2,297,557	1,745,260	2,157,595	1,802,191	1,596,130	2,014,142	1,759,362
Y	174,748	284,846	327,707	235,446	276,522	375,871	384,723
Z	1,536,543	1,474,175	1,329,126	1,262,615	1,051,854	969,460	920,040
	21,977,242	**21,296,309**	**19,577,548**	**20,182,480**	**24,780,401**	**27,685,053**	**26,552,083**

LICENCE	2003	2004	2005	2006	2007	2008	2009
A*	312,757	239,533	160,585	296,901	428,227	1,129,012	1,129,011
B	12,122,222	2,926,562	2,441,087	4,509,716	6,151,234	4,430,958	0
C	1,446,088	1,509,446	1,534,994	1,763,009	1,734,547	1,939,301	1,939,301
E	34,500	56,925	84,150	95,600	0	0	0
F**	85,855	156,778	49,701	0	7,699	274,579	247,121
G	1,085,814	558,859	374,079	909,945	627,065	769,004	769,004
L	493,873	581,855	533,368	579,782	907,704	760,700	760,700
R	240,511	263,006	405,720	285,453	278,912	.	
S	895,352	1,237,335	449,067	525,669	554,748	543,770	543,770
W***	515,383	905,319	524,877	488,818	506,479	1,219,240	1,219,240
X	1,804,098	2,090,748	2,510,109	3,263,140	3,263,140	4,242,081	4,242,082
Y	434,158	407,128	650,185	656,810	459,542	.	.
Z	995,807	978,825	834,434	1,026,697	474,296	.	.
	20,466,419	**11,912,319**	**10,552,357**	**14,401,541**	**15,393,593**	**15,308,645**	**10,850,229**

Licences

Table B.16 Annual revenue (Pounds sterling) by licence type (continue)

LICENCE	2010	2011	2012	2013	2014	2015	2016
A	1,129,012	1,129,012	1,129,012	1,129,012	1,129,012	1,129,012	1,129,012
B	798,205	8,996,154	9,522,332	10,597,284	10,616,032	11,208,479	3,346,467
C	1,939,301	2,133,230	2,133,230	2,133,230	2,133,230	2,133,230	2,133,230
E	-	-	-	-	-	-	-
F	247,121	247,121	247,121	247,121	247,121	247,121	247,121
G	845,900	845,900	845,900	845,900	845,900	845,900	845,900
L	760,700	836,770	836,770	836,770	836,770	836,770	836,770
S	181,257	181,257	181,257	181,257	60,419	60,419	60,419
W	1,341,160	1,341,160	1,341,160	1,341,160	1,341,160	1,341,160	1,341,160
X	4,242,082	4,242,082	4,242,082	4,242,082	4,242,082	4,242,082	4,242,082
	11,484,738	**19,952,686**	**20,478,864**	**21,553,816**	**21,451,726**	**22,044,173**	**14,182,161**

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

Catch summary tables

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

VESSEL TYPE	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
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
LO	-	-	-	131	10	2,855	1,901	992	1,241	1,787
TR	172,270	143,561	115,853	147,601	106,257	126,262	177,332	119,303	77,542	128,976
	426,814	**284,516**	**304,503**	**314,957**	**251,605**	**196,798**	**245,172**	**194,991**	**230,326**	**210,874**

VESSEL TYPE	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
JI	254,026	182,925	146,066	13,001	101,754	1,661	7,775	81,766	157,637	100,348
LO	2,077	2,092	1,684	1,754	1,832	2,076	1,791	1,622	1,539	1,511
PO	-	-	-	-	-	-	-	295	85	-
TR	120,935	134,089	117,449	86,224	105,511	99,361	117,551	129,832	142,907	168,193
	377,038	**319,107**	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**

VESSEL TYPE	2009	2010	2011	2012	2013	2014	2015	2016
JI	3	11,645	73,704	84,619	139,137	291,770	332,826	2,299
LO	1,254	1,056	1,401	1,216	1,470	1,361	1,250	1,153
PO	-	2	-	-	6	7	5	-
TR	152,386	196,463	150,496	180,194	123,975	157,825	128,362	107,965
	153,643	**209,166**	**225,601**	**266,030**	**264,588**	**450,963**	**462,442**	**111,417**

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

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

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

SPECIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
BAC	9,313	6,551	3,896	2,617	2,285	2,781	2,467	3,472	5,195	4,076
BLU	28,564	23,371	25,735	24,908	20,798	28,554	17,047	20,532	22,204	13,209
COX	-	-	-	-	-	-	8,641	21,012	30,386	60,601
ILL	266,201	189,709	150,631	13,411	103,375	1,720	7,937	85,622	161,506	106,189
KIN	2,602	1,875	1,625	1,224	1,275	1,841	1,936	2,822	3,592	2,227
LOL	34,866	64,493	53,560	23,712	47,422	26,835	58,813	43,064	42,003	52,260
MAR	29	-	147	1	31	24	-	-	4	-
HAK	-	-	-	-	-	-	-	8,410**	11,909*	8,806*
PAT	4,224	3,069	1,978	1,678	1,967	1,926	2,735*	23***	-	-
RAY	4,785	3,853	4,309	3,364	3,988	5,151	5,698	4,683	5,669	3,861
TOO	2,988	2,318	1,754	1,793	1,707	2,002	1,677	1,568	1,520	1,429
WHI	18,765	19,831	19,471	26,970	23,815	25,905	16,723	19,769	16,669	15,908
GRX	-	-	-	-	-		778	800	629	943
ZYP	-	-	76	59	685	1,279	1,358	1,161	14	6
OTH	4,701	4,037	2,018	1,242	1,748	5,080	1,309	578	869	536
	377,038	**319,107**	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**

SPECIES	2009	2010	2011	2012	2013	2014	2015	2016
BAC	5,120	3,129	4,210	4,629	5,164	3,467	3,340	3,143
BLU	10,395	6,471	3,940	1,596	2,698	3,612	2,790	5,415
COX	58,236	76,451	55,705	63,510	32,435	56,693	29,085	7,008
ILL	44	12,111	79,391	87,002	142,619	306,111	357,687	2,357
KIN	3,390	3,639	3,867	3,510	3,977	2,881	2,983	1,614
LOL	31,474	66,543	34,675	70,894	40,168	48,702	30,317	46,446
MAR	0	-	-	-	-	10	0	2
HAK	13,049*	13,606*	9,904*	10,489*	12,308*	14,875*	21,054**	23,352**
PAT ***	-	-	-	-	-	-	14***	532***
RAY	5,873	5,891	6,970	6,654	5,932	5,555	6,393	5,897
TOO	1,418	1,403	1,560	1,311	1,423	1,297	1,227	1,499
WHI	23,404	19,227	22,979	15,867	16,849	7,392	6,845	11,555
GRX	965	455	2,062	225	517	216	367	2,327
ZYP	13	3	11	-	-	1	1	8
OTH	263	238	327	341	497	148	339	264
	153,643	**209,166**	**225,601**	**266,030**	**264,588**	**450,963**	**462,442**	**111,417**

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

MONTH	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
January	6,605	5,213	6,497	3,536	5,881	2,901	1,712	2,181	2,381	4,072
February	29,626	47,924	10,926	12,306	16,612	9,405	7,562	10,867	11,142	14,326
March	98,631	94,536	81,574	17,335	91,036	15,081	27,436	48,141	40,210	38,998
April	104,827	63,840	71,936	13,811	37,830	11,292	10,581	46,987	86,244	65,736
May	73,790	48,684	38,621	15,504	5,680	4,930	3,870	28,058	69,293	46,779
June	12,665	2,854	2,199	1,473	1,385	727	712	1,840	8,694	16,356
July	2,313	2,502	1,299	253	877	6,771	11,786	10,168	12,356	10,254
August	13,364	16,528	17,380	11,863	21,491	14,344	22,575	23,414	26,175	20,967
September	11,853	16,874	15,306	5,751	14,513	10,571	17,115	15,654	20,049	23,084
October	9,857	8,333	12,413	5,668	8,831	13,552	11,010	13,520	14,000	15,444
November	7,138	7,306	4,933	8,638	3,981	8,412	9,646	8,895	9,768	9,967
December	6,370	4,513	2,112	4,841	980	5,114	3,113	3,790	1,856	4,070
	377,038	**319,107**	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**

MONTH	2009	2010	2011	2012	2013	2014	2015	2016
January	3,804	2,742	4,972	625	3,755	142	216	3,456
February	12,426	12,883	11,113	17,747	8,684	4,171	18,846	10,230
March	20,338	40,980	75,909	75,157	39,915	84,243	132,180	15,689
April	18,753	30,748	37,109	54,365	72,663	155,780	164,812	19,468
May	17,809	16,801	18,677	26,086	68,741	102,398	89,835	9,265
June	5,955	6,947	8,223	7,749	7,817	23,927	11,268	4,861
July	14,481	17,796	15,422	13,018	8,021	16,832	6,445	6,611
August	16,506	28,251	18,735	30,540	18,436	22,030	14,284	19,324
September	15,139	22,304	13,130	19,041	20,021	18,972	9,696	13,086
October	13,499	12,286	10,381	12,185	8,965	10,816	5,215	6,789
November	9,328	9,881	6,693	5,829	4,275	8,681	3,756	1,281
December	5,605	7,546	5,237	3,688	3,293	2,996	5,874	1,357
	153,643	**209,166**	**225,601**	**266,030**	**264,588**	**450,963**	**462,442**	**111,417**

Catch summary tables

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	6	7	5	-
400-599	3,143	3,334	-	98	761	936	1,245	2,579	-	-
600-799	83,300	59,162	11,607	16,215	30,329	35,335	42,597	69,012	55,821	5,024
800-999	83,529	63,277	24,345	28,166	65,861	75,209	102,413	213,006	264,122	21,477
1,000-1,499	62,057	66,884	61,335	75,938	67,286	73,867	72,146	102,123	90,257	31,244
1,500-1,999	33,023	36,509	29,991	44,703	35,080	41,916	24,506	35,706	28,176	29,247
2,000-2,999	24,454	32,065	18,921	37,934	21,060	37,005	21,246	26,848	24,061	24,356
>2,999	12,663	8,820	7,443	6,112	5,225	1,763	428	1,681	-	70
	302,169	**270,051**	**153,643**	**209,166**	**225,601**	**266,030**	**264,588**	**450,963**	**462,442**	**111,417**

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

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	928	1,850	2,046	730	2,831	936	1,720	2,823	640	980
45-49	43,248	33,442	17,394	16,171	15,274	20,185	21,635	28,768	28,004	8,292
50-54	61,387	46,470	9,721	14,478	28,350	35,270	34,419	65,488	51,575	12,278
55-59	43,062	38,916	18,719	28,268	39,304	40,970	47,934	64,761	65,173	10,207
60-64	49,661	53,845	38,835	47,299	54,956	63,919	63,906	89,550	88,513	26,391
65-69	53,223	45,478	27,193	43,688	40,815	48,645	42,539	82,334	91,901	21,220
70-79	30,851	32,694	27,880	42,230	32,516	44,114	45,844	107,662	129,563	24,056
80-89	3,798	4,303	2,303	4,666	3,121	5,250	2,919	3,770	3,315	3,800
>89	16,009	13,052	9,552	11,635	8,435	6,743	3,672	5,805	3,758	4,194
	302,169	**270,051**	**153,643**	**209,166**	**225,601**	**266,030**	**264,588**	**450,963**	**462,442**	**111,417**

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

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	2	-	-	830	7	5	-
1,000-1,199	-	-	-	730	1,797	936	1,714	2,816	635	980
1,200-1,399	27,772	18,662	2,172	3,748	6,975	9,397	12,329	17,228	17,544	22
1,400-1,599	63,734	44,902	21,362	18,828	35,041	37,641	39,414	69,097	55,472	15,239
1,600-1,799	42,502	37,163	15,174	20,935	19,209	22,881	25,948	43,895	40,720	9,185
1,800-1,999	68,201	56,969	37,936	55,212	62,542	69,147	64,523	93,089	88,214	22,715
2,000-2,499	47,343	55,382	40,877	49,759	57,046	63,413	66,348	131,972	147,083	25,944
2,500-2,999	11,512	11,072	5,067	9,755	13,727	19,821	25,479	52,965	78,890	9,007
3,000-3,999	21,232	28,380	18,577	33,923	18,069	31,568	18,479	22,797	20,737	19,684
>3,999	19,872	17,522	12,478	16,274	11,194	11,227	9,525	17,097	13,142	8,642
	302,169	**270,051**	**153,643**	**209,166**	**225,601**	**266,030**	**264,588**	**450,963**	**462,442**	**111,417**

Catch summary tables

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

FISHING FLEET	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
AU	-	-	-	-	-	-	-	-	-	3593
BG	13,503	22,369	21,888	8,981	2,976	-	-	-	-	-
BZ	-	-	-	-	-	-	585	-	-	-
CL	1,150	1,884	-	3,145	1,514	5,223	9,997	6,638	8,199	8849
CN	-	-	-	-	-	-	-	-	-	1177
ES	82,345	65,908	57,605	87,763	58,143	67,191	89,284	40,842	20,510	40307
FK	781	5,853	1,470	1,846	1,978	5,906	27,184	31,520	17,117	43578
FR	-	-	-	-	-	1,945	7,369	4,600	1,545	4177
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
KR	51,133	32,996	61,614	72,489	65,228	42,987	63,236	73,861	129,546	45082
NA	-	-	-	-	-	-	-	-	303	676
NL	4,587	3,369	-	-	-	-	-	-	-	-
NO	-	1,384	-	-	-	-	-	319	210	-
PA	-	-	2,425	4,027	1,060	598	459	706	-	1098
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
UK	11,685	1,383	1,992	-	445	1,255	2,083	4,357	2,302	3575
UR	-	-	-	-	-	21	-	-	-	-
UY	-	-	-	-	-	-	-	-	-	36
	426,814	**284,516**	**304,503**	**314,957**	**251,605**	**196,798**	**245,172**	**194,991**	**230,326**	**210,874**

FISHING FLEET	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
AU	3,711	-	-	-	-	-	-	-	-	-
BZ	4,511	6,729	2,581	136	2,788	42	61	-	2,285	-
CB	-	2,768	1,204	33	857	17	-	-	-	-
CL	5,491	2,749	8,014	9,252	6,490	9,752	-	2,131	3,948	1,640
CN	7,301	11,641	18,838	1,203	12,652	99	99	3,555	8,575	-
EE	-	-	-	-	-	226	-	1,427	-	-
ES	35,909	30,732	29,170	23,972	20,169	22,488	24,559	42,057	56,187	72,152
FK	39,131	62,947	59,820	35,732	60,596	43,320	71,204	65,255	65,809	76,969
FR	2,381	2,053	-	-	-	-	-	-	-	-
GH	-	-	-	-	-	-	-	1,244	-	-
JP	57,971	41,737	27,913	14,485	18,923	15,062	11,230	12,049	9,042	8,820
KR	207,795	128,940	86,587	12,637	53,677	6,008	10,076	61,748	101,162	81,267
NA	746	-	-	-	-	1,181	-	-	-	-
NZ	-	-	-	-	69	-	-	-	-	-
PA	61	-	-	-	-	-	194	585	1,254	-
PT	-	66	-	-	-	-	-	-	-	-
RU	-	-	228	-	6,891	31	-	-	-	-
TW	8,771	23,243	25,380	1,190	22,057	866	3,106	18,554	49,985	24,353
UK	3,259	5,501	3,564	2,279	3,238	2,703	5,100	3,742	3,923	4,850
UY	-	-	81	61	690	1,303	1,369	1,169	-	-
VC	-	-	1,820	-	-	-	-	-	-	-
VU	-	-	-	-	-	-	120	-	-	-
	377,038	**319,107**	**265,198**	**100,979**	**209,097**	**103,098**	**127,118**	**213,516**	**302,169**	**270,051**

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

FISHING FLEET	2009	2010	2011	2012	2013	2014	2015	2016
CB	-	94	1,144	1,695	1,468	-	-	-
CL	-	-	-	-	-	1,728	-	-
ES	80,267	88,060	77,862	84,914	59,001	81,262	68,438	48,135
FK	58,549	93,186	62,191	85,826	60,467	67,682	52,449	55,219
JP	7,443	6,018	4,745	109	-	-	-	-
KR	3,317	9,407	26,310	32,786	52,216	107,337	101,277	2,742
RU	-	2	-	-	-	-	-	-
SL	-	178	-	340	-	-	-	-
TW	-	5,808	48,667	55,327	86,147	178,375	223,334	2,061
UK	4,067	6,271	2,861	5,033	2,968	3,528	3,749	3,183
VU	-	142	1,821	-	2,322	11,051	13,195	77
	153,643	**209,166**	**225,601**	**266,030**	**264,588**	**450,963**	**462,442**	**111,417**

Illex argentinus—Illex squid

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
JI	157,637	100,348	3	11,645	73,704	84,619	139,137	291,760	332,826	2,299
TR	3,869	5,841	41	466	5,688	2,383	3,481	14,351	24,861	58
	161,506	**106,189**	**44**	**12,111**	**79,391**	**87,002**	**142,619**	**306,111**	**357,687**	**2,357**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	15	0	-	-	-	1	-	-	-	1
February	3,071	952	1	134	990	9,247	195	13	13,916	83
March	22,741	11,010	30	9,847	60,959	40,558	20,910	66,649	110,705	2,054
April	71,559	48,116	11	2,128	17,382	29,213	57,455	137,647	153,163	197
May	58,883	34,119	1	1	59	7,959	59,361	87,699	75,544	19
June	5,237	11,991	0	-	0	23	4,695	14,007	4,352	2
July	-	1	-	-	-	-	2	94	6	0
August	-	-	-	-	-	-	2	1	0	0
September	-	-	-	0	-	-	0	0	1	0
October	-	-	-	1	-	0	-	-	-	1
November	-	-	-	-	0	-	-	-	-	-
December	-	-	-	-	0	-	-	-	-	0
	161,506	**106,189**	**44**	**12,111**	**79,391**	**87,002**	**142,619**	**306,111**	**357,687**	**2,357**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
BZ	2,285	-	-	-	-	-	-	-	-	-
CB	-	-	-	94	1,144	1,695	1,468	-	-	-
CN	8,575	-	-	-	-	-	-	-	-	-
ES	3,297	2,747	33	187	2,035	509	2,798	9,527	9,809	46
FK	537	442	8	67	2,828	572	650	2,873	11,889	12
KR	96,792	78,642	3	5,635	22,892	28,554	49,236	104,251	98,552	161
SL	-	-	-	178	-	340	-	-	-	-
TW	49,985	24,353	-	5,808	48,667	55,327	86,147	178,375	223,334	2,061
UK	35	4	0	-	4	6	0	36	909	-
VU	-	-	-	142	1,821	-	2,322	11,051	13,195	77
	161,506	**106,189**	**44**	**12,111**	**79,391**	**87,002**	**142,619**	**306,111**	**357,687**	**2,357**

Illex argentinus—Illex squid

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	3,143	3,334	-	98	761	936	1,245	2,579	-	-
600-799	73,793	49,960	3	4,089	21,395	24,365	35,080	61,701	49,495	71
800-999	66,537	43,678	6	6,589	46,510	53,107	85,758	192,663	246,465	2,039
1,000-1,499	16,007	8,709	34	1,151	8,369	7,596	20,137	46,919	49,271	233
1,500-1,999	2,026	438	1	90	1,184	51	398	2,131	5,474	11
2,000-2,999	-	69	0	-	1,173	1	0	119	6,981	3
>2,999	-	-	-	94	-	947	-	0	-	-
	161,506	**106,189**	**44**	**12,111**	**79,391**	**87,002**	**142,619**	**306,111**	**357,687**	**2,357**

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

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	-	122	0	98	871	936	1,245	2,579	-	-
45-49	28,877	17,756	4	1,277	5,339	6,641	11,649	19,696	19,412	18
50-54	49,352	39,216	4	3,491	17,241	20,295	24,564	51,798	40,664	24
55-59	31,487	20,214	1	2,545	19,804	20,272	30,711	52,916	54,414	353
60-64	21,695	14,494	18	2,248	17,785	20,030	30,256	49,784	59,696	236
65-69	23,356	14,015	3	2,058	12,886	13,263	21,274	53,085	72,725	737
70-79	6,740	361	14	393	5,081	5,565	22,920	76,242	108,638	988
80-89	-	11	-	-	144	-	-	6	965	0
>89	-	1	0	-	240	-	0	4	1,172	0
	161,506	**106,189**	**44**	**12,111**	**79,391**	**87,002**	**142,619**	**306,111**	**357,687**	**2,357**

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

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	-	-	-	98	761	936	1,245	2,579	-	-
1,200-1,399	25,462	16,162	-	947	5,208	6,132	9,847	14,863	16,070	22
1,400-1,599	45,158	30,225	5	3,404	20,671	21,118	27,651	52,921	42,309	93
1,600-1,799	30,794	21,606	17	1,710	6,848	9,705	15,714	33,633	32,999	114
1,800-1,999	36,704	18,927	7	2,981	21,969	23,298	33,067	60,353	62,945	265
2,000-2,499	20,278	14,772	14	2,025	15,346	18,238	34,337	90,078	117,934	947
2,500-2,999	3,075	4,423	0	946	7,488	7,565	17,615	43,778	71,528	788
3,000-3,999	35	62	0	-	793	7	0	144	5,753	2
>3,999	-	12	-	-	307	2	3,144	7,763	8,149	126
	161,506	**106,189**	**44**	**12,111**	**79,391**	**87,002**	**142,619**	**306,111**	**357,687**	**2,357**

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	3,143	3,334	-	98	761	936	1,245	2,579	-	-
600-799	73,381	49,496	-	4,068	21,000	24,327	34,767	60,482	48,489	67
800-999	66,038	40,714	3	6,364	45,192	51,662	85,278	188,189	242,580	2,030
1,000-1,499	13,253	6,804	1	1,021	6,751	6,748	17,848	40,510	41,756	202
1,500-1,999	1,822	-	-	-	-	-	-	-	-	-
2,000-2,999	-	-	-	-	-	-	-	-	-	-
>2,999	-	-	-	94	-	947	-	-	-	-
	157,637	**100,348**	**3**	**11,645**	**73,704**	**84,619**	**139,137**	**291,760**	**332,826**	**2,299**

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

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	-	-	-	98	761	936	1,245	2,579	-	-
45-49	28,127	17,342	-	1,256	4,973	6,610	11,326	18,780	18,136	14
50-54	49,208	36,428	2	3,273	16,346	18,870	24,287	48,080	37,818	19
55-59	31,007	20,091	-	2,527	19,081	19,894	30,141	51,404	52,549	346
60-64	20,066	13,045	0	2,154	16,409	19,619	28,849	45,361	53,934	210
65-69	22,629	13,443	-	1,967	12,291	13,163	20,896	50,906	67,815	726
70-79	6,601	-	1	370	3,843	5,529	22,393	74,650	102,574	984
80-89	-	-	-	-	-	-	-	-	-	-
>89	-	-	-	-	-	-	-	-	-	-
	157,637	**100,348**	**3**	**11,645**	**73,704**	**84,619**	**139,137**	**291,760**	**332,826**	**2,299**

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

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	-	-	-	98	761	936	1,245	2,579	-	-
1,200-1,399	25,256	16,102	-	946	5,208	6,127	9,621	14,306	15,739	22
1,400-1,599	44,620	29,644	-	3,386	20,053	21,034	27,247	50,110	40,864	82
1,600-1,799	30,256	20,533	3	1,643	6,419	9,424	15,402	31,772	31,527	94
1,800-1,999	34,787	18,255	1	2,879	20,887	22,837	32,067	57,113	59,107	250
2,000-2,499	19,643	14,039	-	1,959	13,948	18,068	32,901	86,651	111,649	938
2,500-2,999	3,075	1,774	-	734	6,428	6,194	17,510	41,478	67,731	788
3,000-3,999	-	-	-	-	-	-	-	-	-	-
>3,999	-	-	-	-	-	-	3,144	7,752	6,210	125
	157,637	**100,348**	**3**	**11,645**	**73,704**	**84,619**	**139,137**	**291,760**	**332,826**	**2,299**

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	412	464	3	21	394	38	314	1,219	1,006	4
800-999	499	2,965	4	225	1,318	1,445	480	4,474	3,885	9
1,000-1,499	2,754	1,905	34	130	1,619	848	2,289	6,409	7,515	32
1,500-1,999	204	438	1	90	1,184	51	398	2,131	5,474	11
2,000-2,999	-	69	0	-	1,173	1	0	119	6,981	3
>2,999	-	-	-	-	-	-	-	0	-	-
	3,869	**5,841**	**41**	**466**	**5,688**	**2,383**	**3,481**	**14,351**	**24,861**	**58**

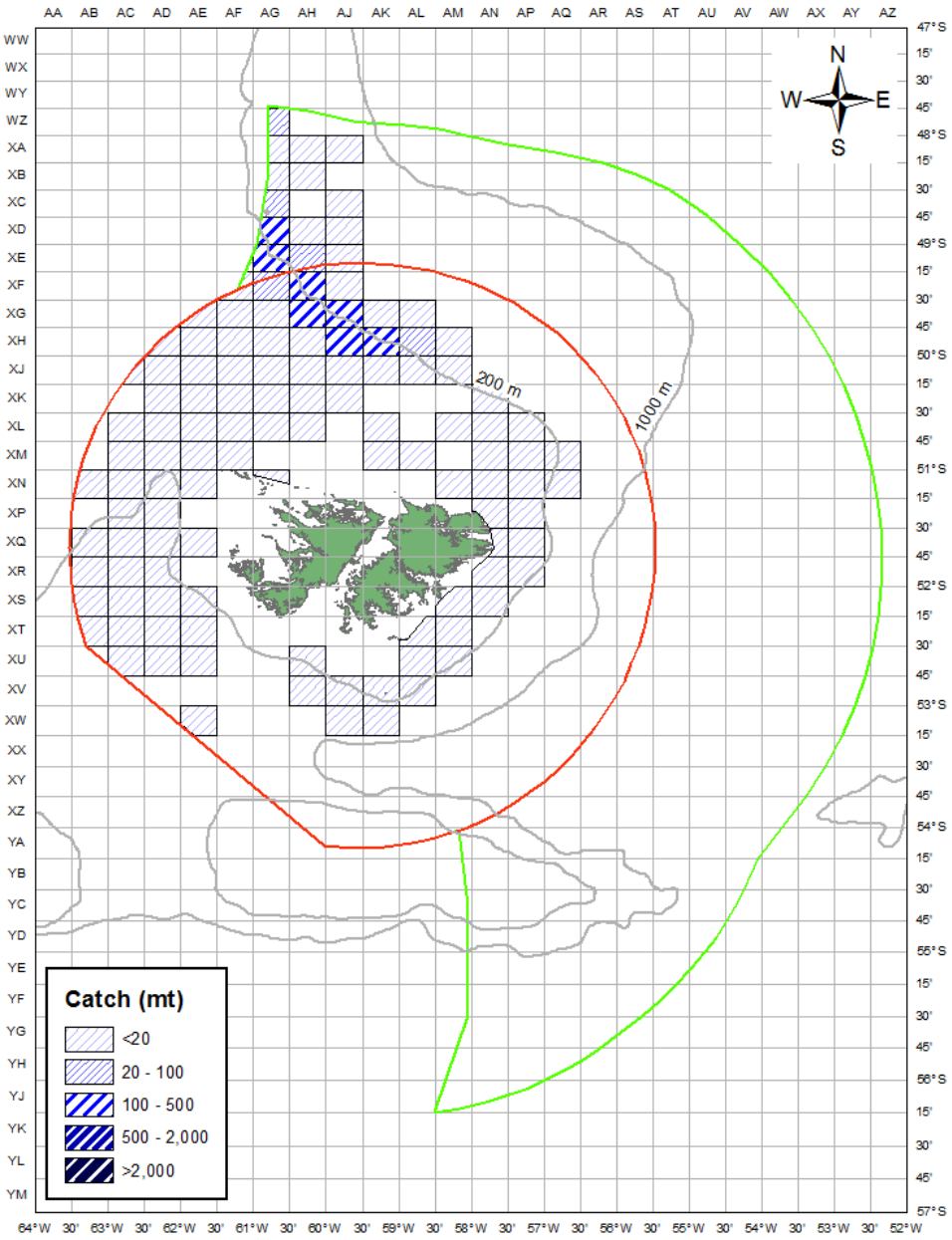
Table D.11 Total catch (tonnes) of trawlers by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	-	122	0	-	110	-	-	-	-	-
45-49	750	414	4	21	367	32	323	916	1,276	4
50-54	144	2,788	1	218	895	1,425	277	3,718	2,846	5
55-59	480	123	1	18	723	378	570	1,512	1,866	8
60-64	1,629	1,449	18	94	1,375	412	1,406	4,423	5,762	26
65-69	727	572	3	91	595	100	378	2,179	4,911	11
70-79	139	361	13	23	1,238	36	526	1,592	6,064	4
80-89	-	11	-	-	144	-	-	6	965	0
>89	-	1	0	-	240	-	0	4	1,172	0
	3,869	**5,841**	**41**	**466**	**5,688**	**2,383**	**3,481**	**14,351**	**24,861**	**58**

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

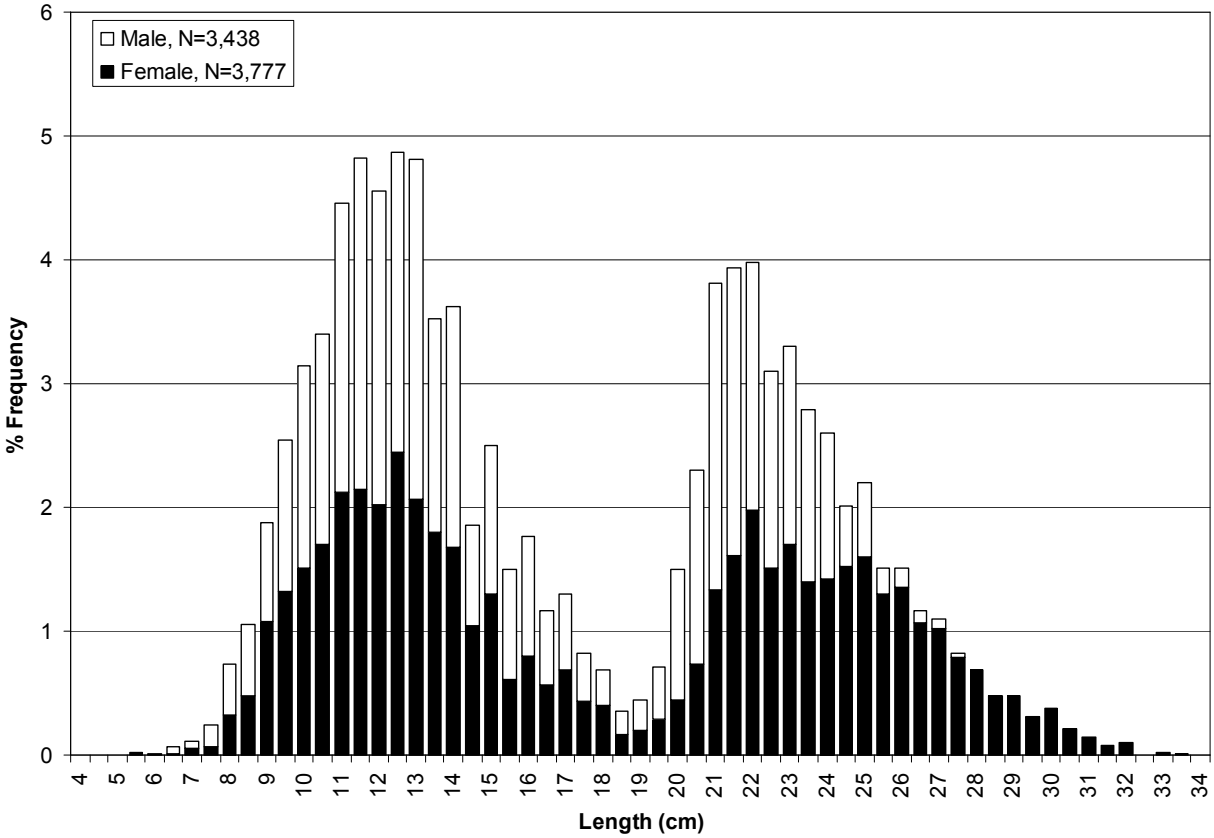
BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	-	-	-	-	-	-	-	-	-	-
1,200-1,399	206	61	-	1	-	6	225	557	331	-
1,400-1,599	538	581	5	18	618	85	404	2,811	1,445	11
1,600-1,799	538	1,073	15	66	429	280	311	1,861	1,472	20
1,800-1,999	1,918	672	6	103	1,081	461	1,000	3,240	3,838	15
2,000-2,499	634	732	14	67	1,399	170	1,435	3,427	6,286	8
2,500-2,999	-	2,648	0	212	1,061	1,371	105	2,300	3,797	0
3,000-3,999	35	62	0	-	793	7	0	144	5,753	2
>3,999	-	12	-	-	307	2	-	10	1,939	1
	3,869	**5,841**	**41**	**466**	**5,688**	**2,383**	**3,481**	**14,351**	**24,861**	**58**

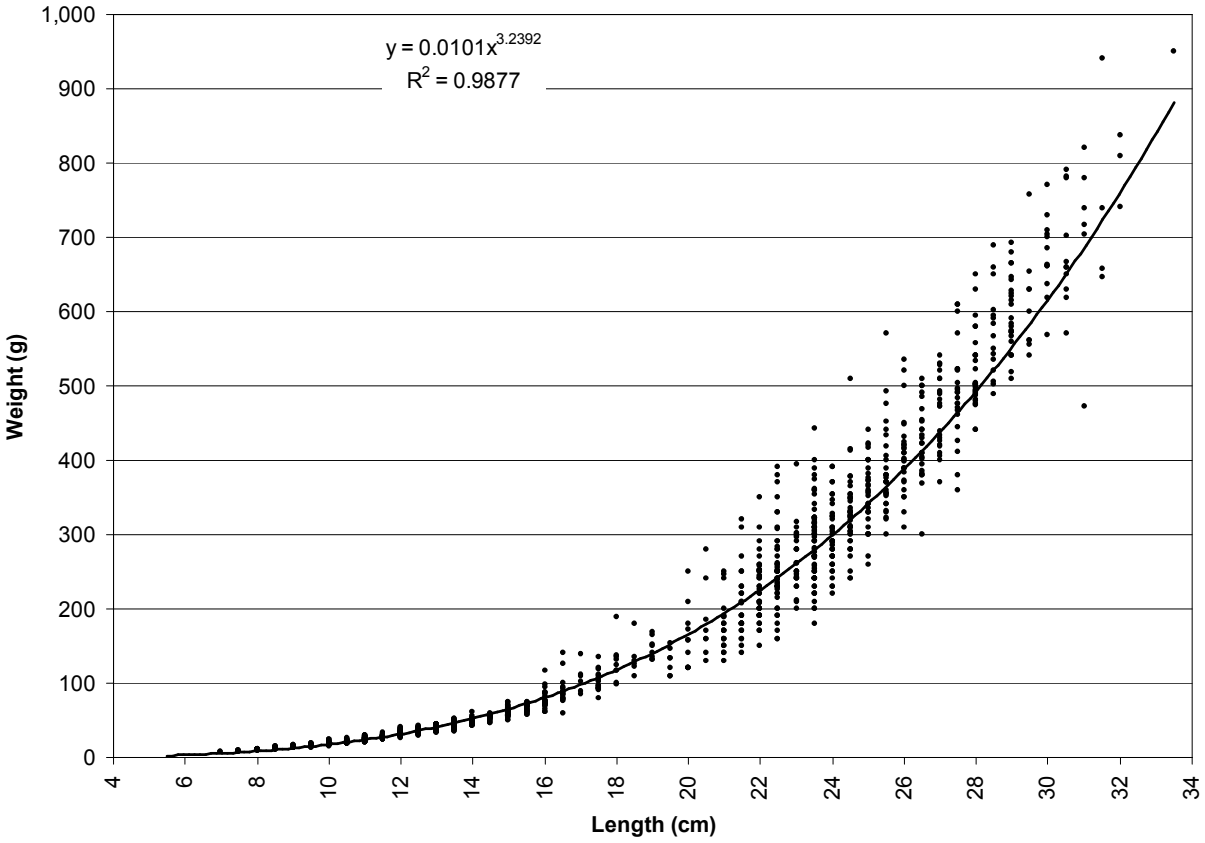
Illex argentinus
First Season 2016 (01 Jan to 30 Jun)



Illex argentinus—Illex squid

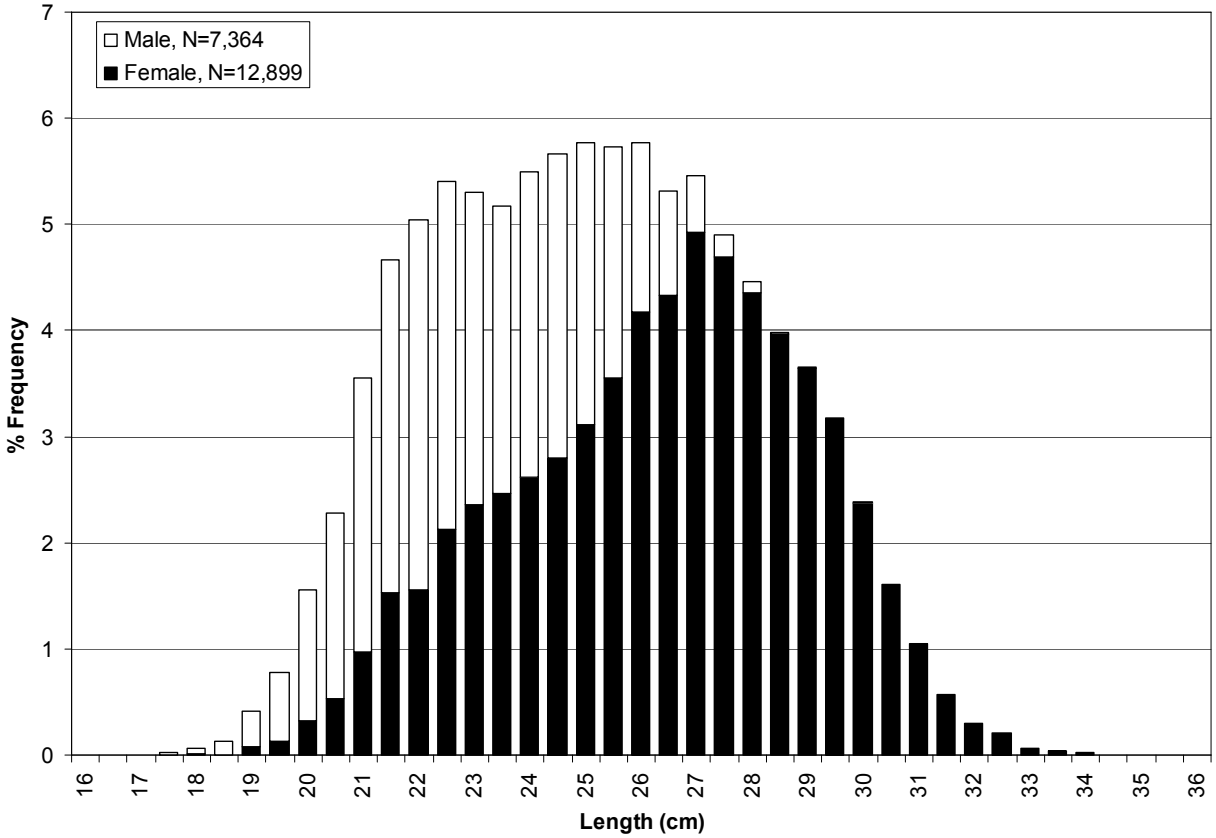
Length– frequency distribution and length-weight relationship in trawler fleet in 2016

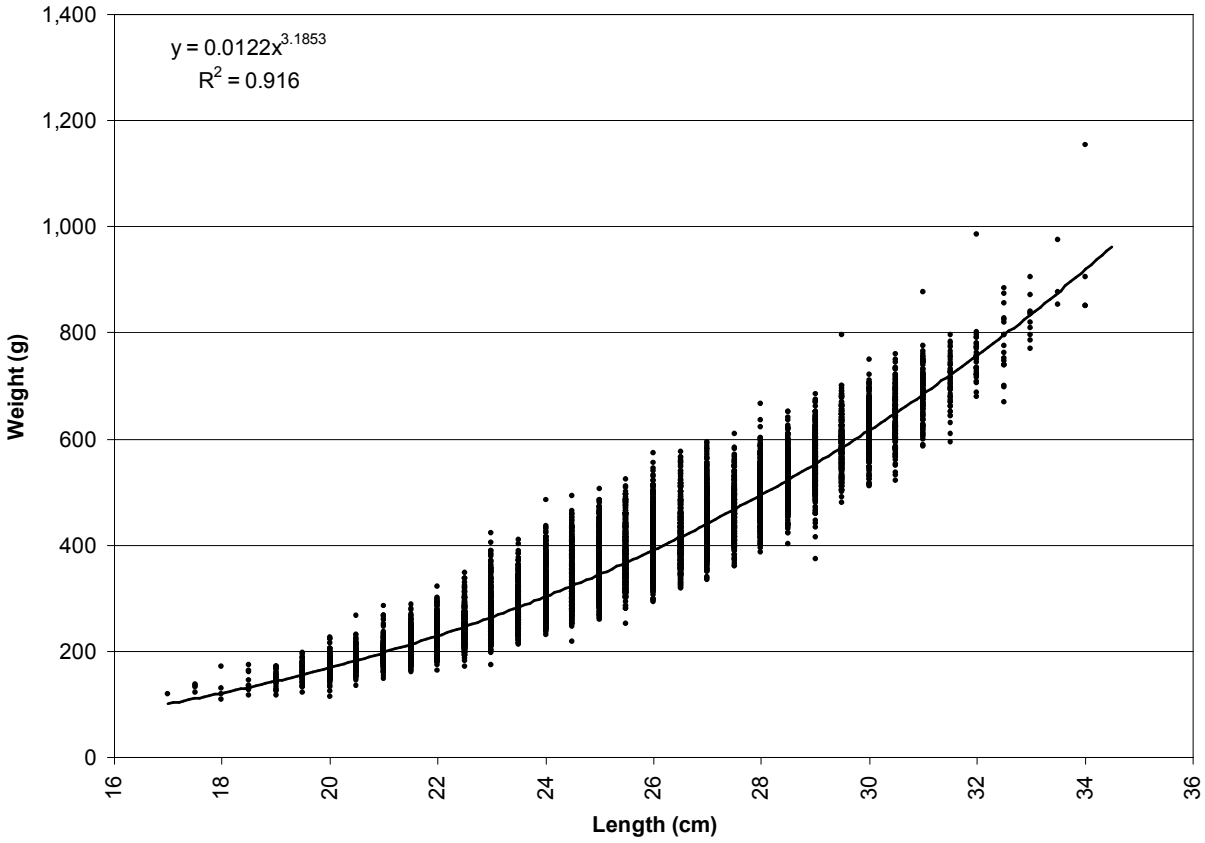




Illex argentinus—Illex squid

Length– frequency distribution and length-weight relationship in jigger fleet in 2016





Doryteuthis gahi - Falkland Calamari

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TR	42,003	52,260	31,474	66,543	34,675	70,894	40,168	48,702	30,317	46,446
	42,003	**52,260**	**31,474**	**66,543**	**34,675**	**70,894**	**40,168**	**48,702**	**30,317**	**46,446**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	0	-	0	0	-	-	-	-	-	0
February	729	3,972	2,013	4,455	1,308	3,885	1,293	2,167	2,048	1,222
March	10,271	15,406	8,573	16,963	10,276	21,154	12,983	13,832	14,630	8,711
April	6,388	5,633	2,403	7,733	3,826	9,917	5,724	12,318	3,007	12,831
May	35	4	17	5	20	18	35	47	115	55
June	10	18	8	3	11	22	9	15	4	17
July	6,325	5,611	8,228	11,013	7,075	6,362	5,006	4,800	1,176	1,877
August	14,435	10,780	8,102	16,654	8,186	17,595	7,740	9,643	8,056	12,746
September	3,743	10,780	2,030	9,622	3,856	11,781	7,223	5,778	1,204	7,766
October	56	52	82	80	99	145	132	92	55	1,217
November	9	4	19	16	18	15	21	11	20	2
December	1	-	-	0	-	1	1	-	3	-
	42,003	**52,260**	**31,474**	**66,543**	**34,675**	**70,894**	**40,168**	**48,702**	**30,317**	**46,446**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	134	3,055	1,756	3,723	2,614	3,353	2,261	2,444	1,676	2,851
FK	38,090	45,684	27,180	58,016	30,580	62,668	35,243	42,927	26,478	40,821
JP	2	1	0	0	-	-	-	-	-	-
KR	22	6	2	34	54	87	34	39	2	7
PA	1,075	-	-	-	-	-	-	-	-	-
UK	2,681	3,515	2,535	4,770	1,426	4,786	2,629	3,292	2,161	2,767
	42,003	**52,260**	**31,474**	**66,543**	**34,675**	**70,894**	**40,168**	**48,702**	**30,317**	**46,446**

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	29	14	179	76	45	97	58	30	13	48
800-999	2,221	2,883	1,840	3,039	1,897	3,411	2,157	2,371	1,598	2,509
1,000-1,499	7,529	8,428	5,208	10,760	5,964	11,164	7,006	7,908	5,056	7,935
1,500-1,999	12,577	15,577	9,972	20,173	9,553	21,277	11,973	14,603	9,377	13,774
2,000-2,999	19,645	25,358	14,275	32,494	17,212	34,932	18,969	23,784	14,272	22,178
>2,999	2	1	0	0	4	13	7	5	-	-
	42,003	**52,260**	**31,474**	**66,543**	**34,675**	**70,894**	**40,168**	**48,702**	**30,317**	**46,446**

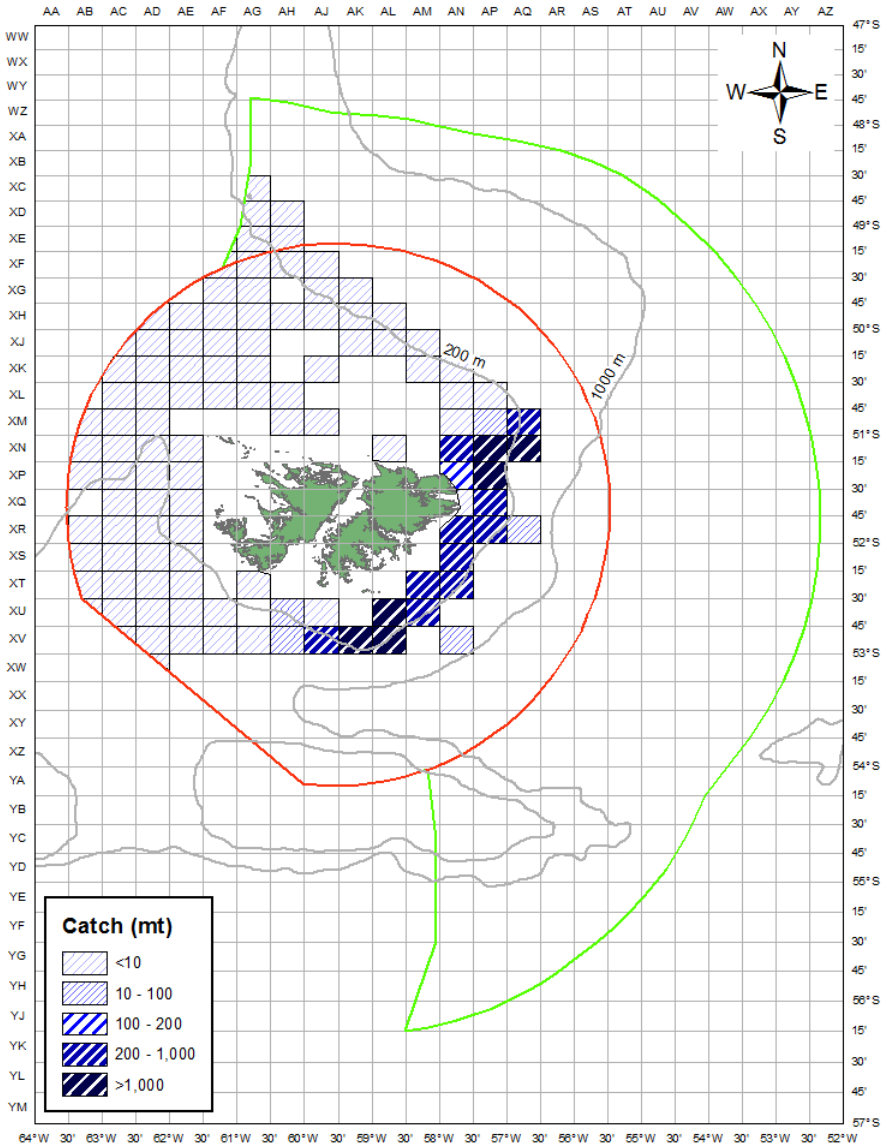
Table E.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	4	6	3	0	12	-	1	0	3	2
45-49	2,208	2,876	1,909	2,793	1,726	3,406	2,163	2,344	1,590	2,478
50-54	2,309	15	95	47	59	96	45	49	17	34
55-59	51	2,799	1,928	3,848	1,939	3,926	2,435	2,867	2,062	3,255
60-64	9,521	12,138	7,110	15,224	7,938	15,714	9,018	10,380	6,800	9,651
65-69	8,039	10,227	6,563	13,790	6,014	13,992	8,109	9,834	6,271	9,085
70-79	13,456	17,067	9,972	21,171	12,007	23,356	13,036	16,268	9,171	14,700
80-89	3,438	3,778	2,048	4,504	2,385	4,835	2,620	3,355	2,169	3,565
>89	2,977	3,355	1,848	5,165	2,594	5,568	2,740	3,604	2,234	3,676
	42,003	**52,260**	**31,474**	**66,543**	**34,675**	**70,894**	**40,168**	**48,702**	**30,317**	**46,446**

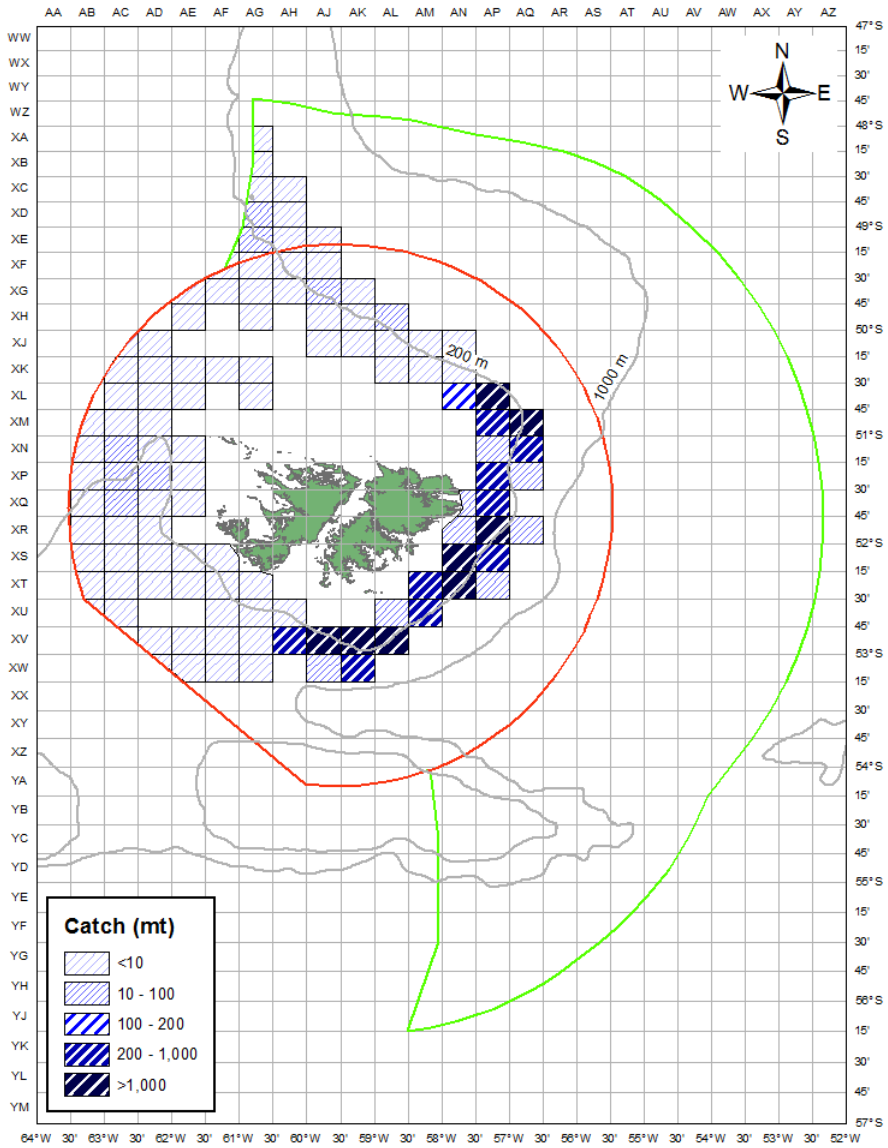
Table E.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	1	-	-	-
1,000-1,199	-	-	-	0	6	-	1	0	3	2
1,200-1,399	-	-	-	-	-	0	1	-	-	-
1,400-1,599	2,338	155	380	349	180	101	71	46	28	114
1,600-1,799	1,965	103	29	35	29	770	324	56	10	274
1,800-1,999	2,226	5,389	3,222	6,141	3,520	6,324	4,283	4,538	3,192	4,903
2,000-2,499	9,001	13,702	8,620	17,504	9,415	18,202	10,654	12,969	8,183	12,559
2,500-2,999	4,071	3,360	1,850	5,196	2,637	5,635	2,764	3,635	2,236	3,687
3,000-3,999	15,913	21,741	12,915	27,595	13,668	29,341	16,250	20,127	12,031	17,704
>3,999	6,491	7,810	4,458	9,722	5,218	10,520	5,818	7,331	4,633	7,203
	42,003	**52,260**	**31,474**	**66,543**	**34,675**	**70,894**	**40,168**	**48,702**	**30,317**	**46,446**

Doryteuthis gahi
First Season 2016 (01 Jan to 30 Jun)

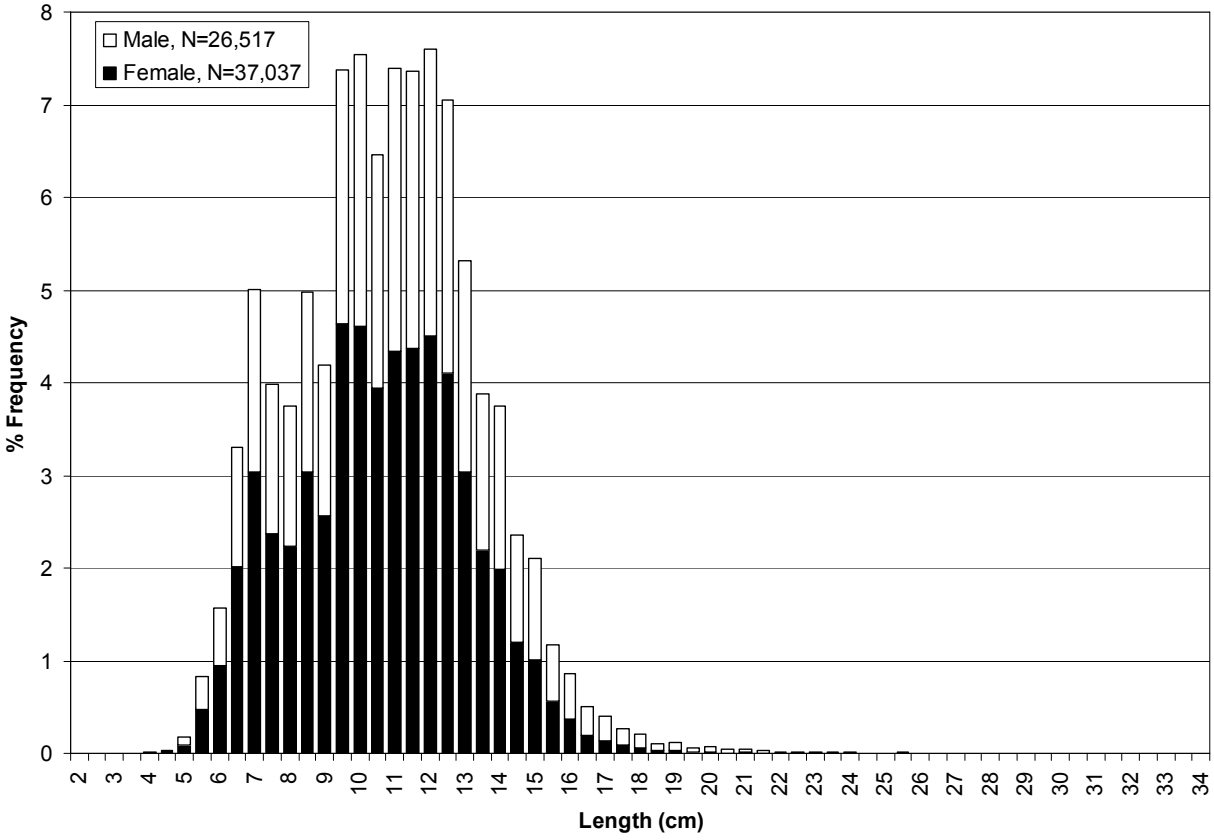


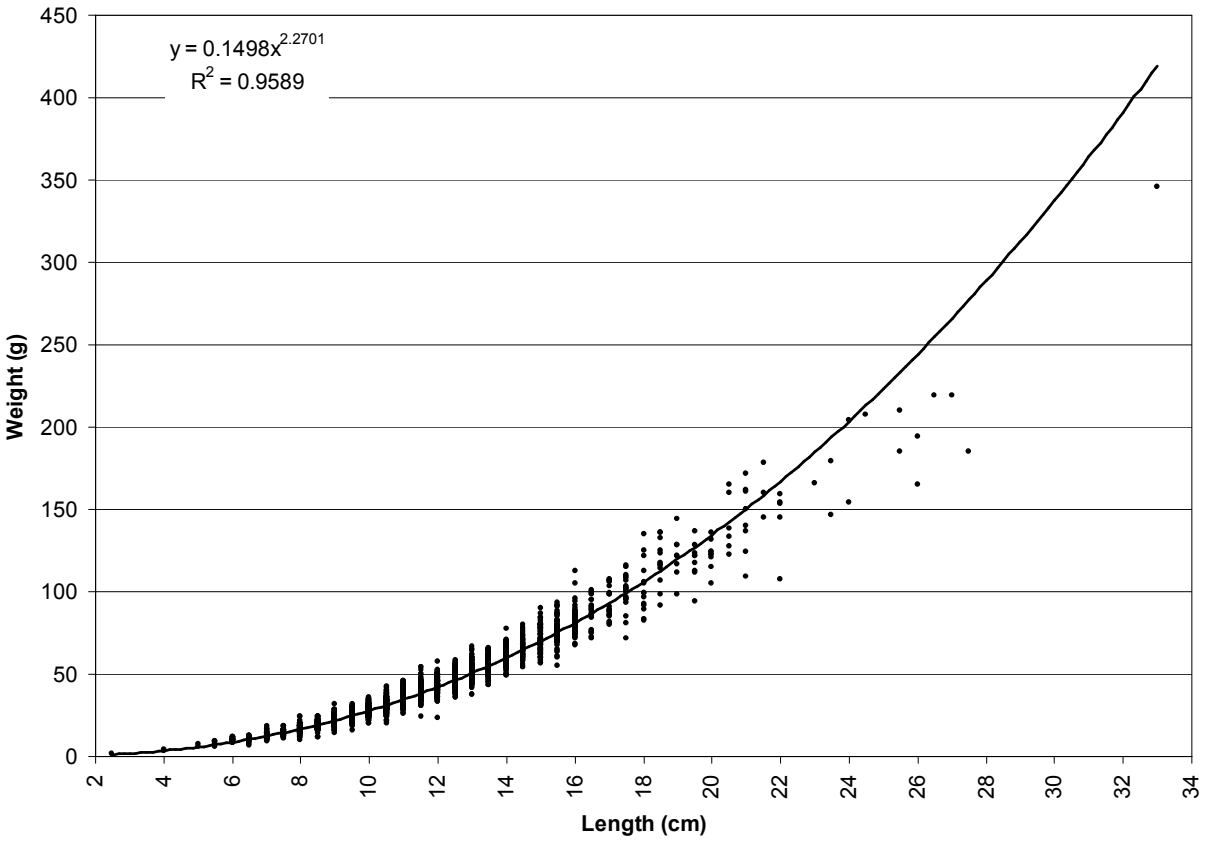
Doryteuthis gahi
Second Season 2016 (01 Jul to 31 Dec)



Doryteuthis gahi - Falkland Calamari

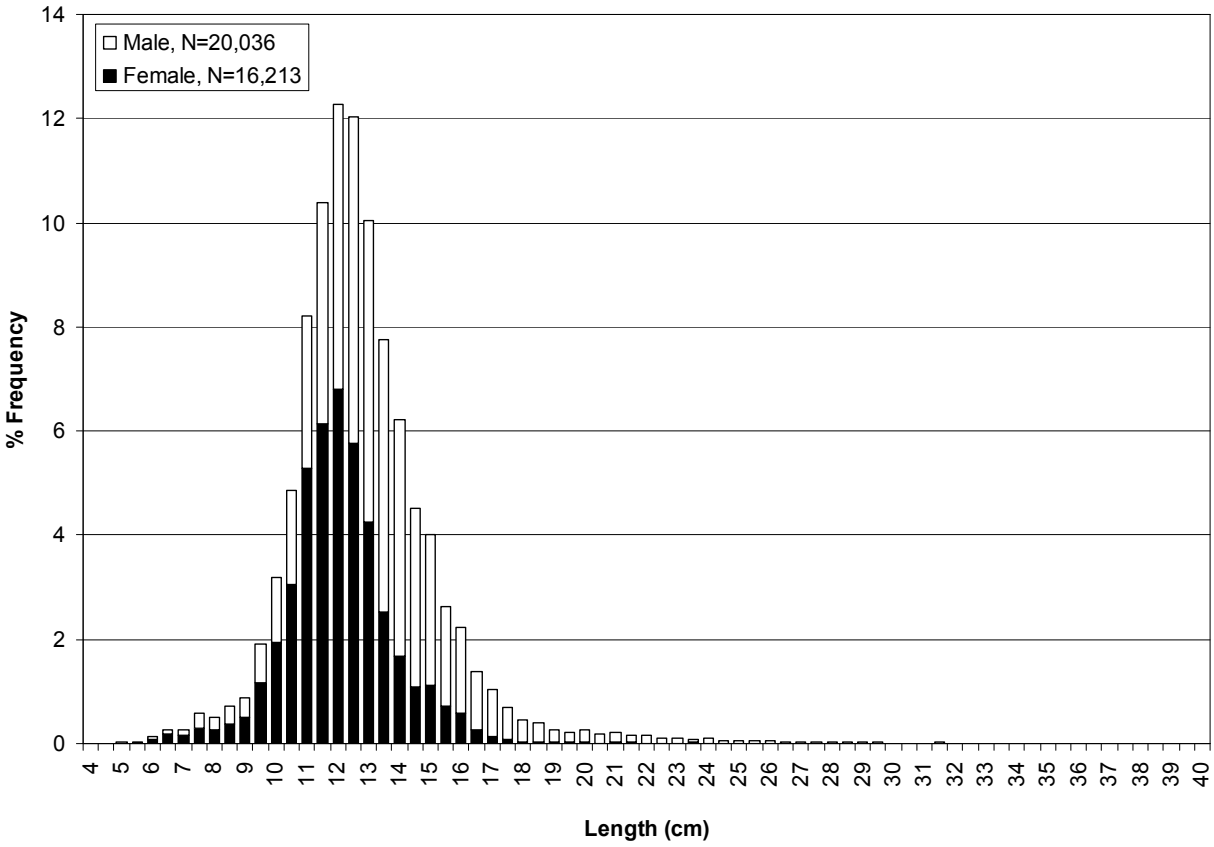
Length– frequency distribution and length-weight relationship during first season 2016

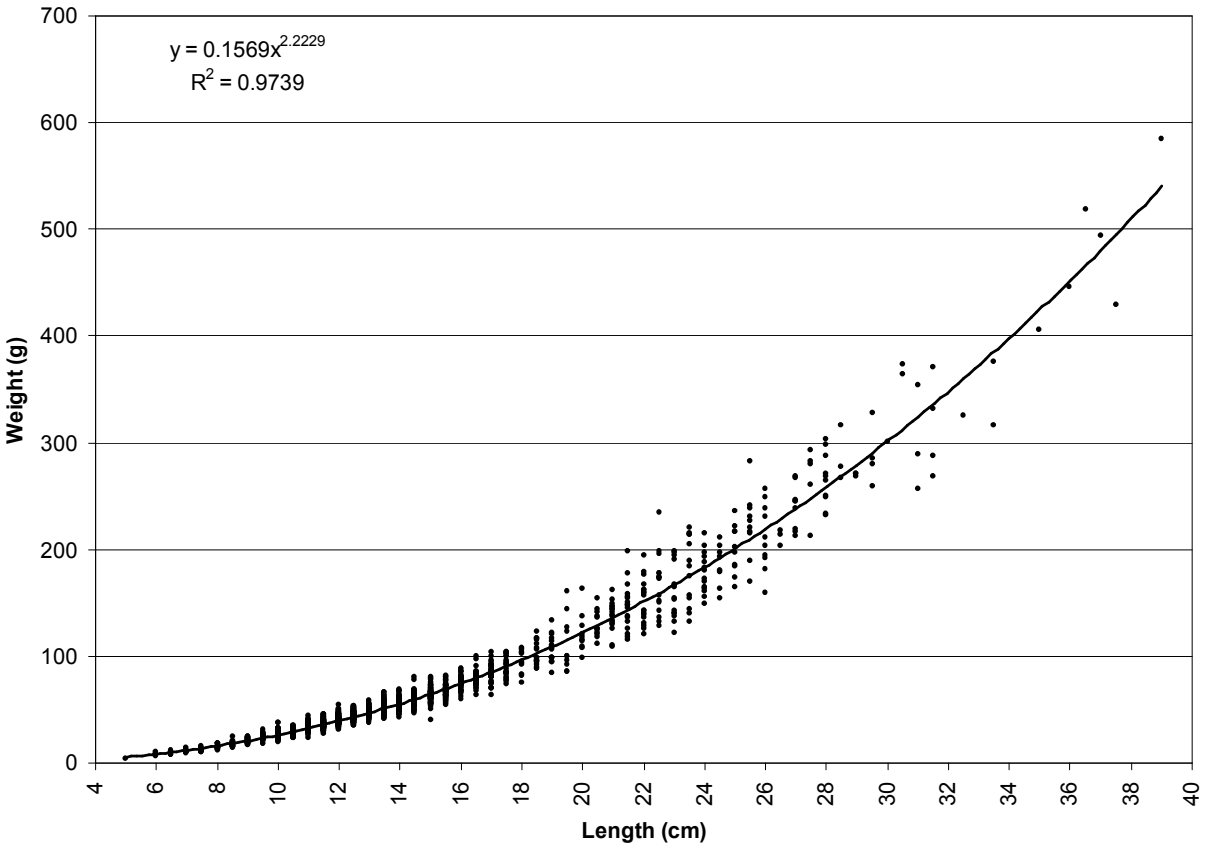




Doryteuthis gahi - Falkland Calamari

Length– frequency distribution and length-weight relationship during second season 2016





Micromesistius australis - Southern Blue Whiting

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TR	22,204	13,209	10,395	6,471	3,940	1,596	2,698	3,612	2,790	5,415
	22,204	**13,209**	**10,395**	**6,471**	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	84	12	129	1,439	199	36	162	-	-	1,189
February	515	243	139	32	233	39	375	123	184	1,420
March	172	252	339	107	26	219	205	137	28	1,002
April	84	150	126	414	220	95	116	127	5	816
May	11	42	51	76	27	7	84	0	4	83
June	0	0	6	9	10	3	8	15	-	1
July	56	70	3	2	7	9	47	14	1	2
August	865	662	608	296	543	727	897	55	97	580
September	8,126	2,817	2,519	248	496	138	758	1,670	121	116
October	6,549	3,914	1,947	537	5	211	14	212	147	40
November	5,400	3,165	1,877	2,171	1,369	31	1	1,211	1,687	52
December	342	1,881	2,651	1,141	805	81	32	47	517	114
	22,204	**13,209**	**10,395**	**6,471**	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	3,260	1,527	-	-	-	-	-	1,155	-	-
ES	6,810	2,809	2,450	1,010	818	1,157	834	578	2,488	4,578
FK	3,074	1,753	1,670	375	764	412	1,669	1,795	273	800
JP	8,896	6,859	6,173	5,062	2,282	24	-	-	-	-
KR	96	237	1	24	31	3	32	2	0	8
UK	69	24	100	1	45	1	163	82	29	29
	22,204	**13,209**	**10,395**	**6,471**	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**

Micromesistius australis - Southern Blue Whiting

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	940	606	250	347	65	165	127	29	28	499
800-999	1,037	353	728	269	145	152	299	171	569	1,118
1,000-1,499	3,135	1,462	841	244	204	225	703	810	1,449	1,845
1,500-1,999	4,762	3,155	2,290	518	1,018	873	864	455	597	1,812
2,000-2,999	174	773	113	31	226	158	705	991	148	140
>2,999	12,156	6,859	6,173	5,062	2,282	24	-	1,155	-	-
	22,204	**13,209**	**10,395**	**6,471**	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**

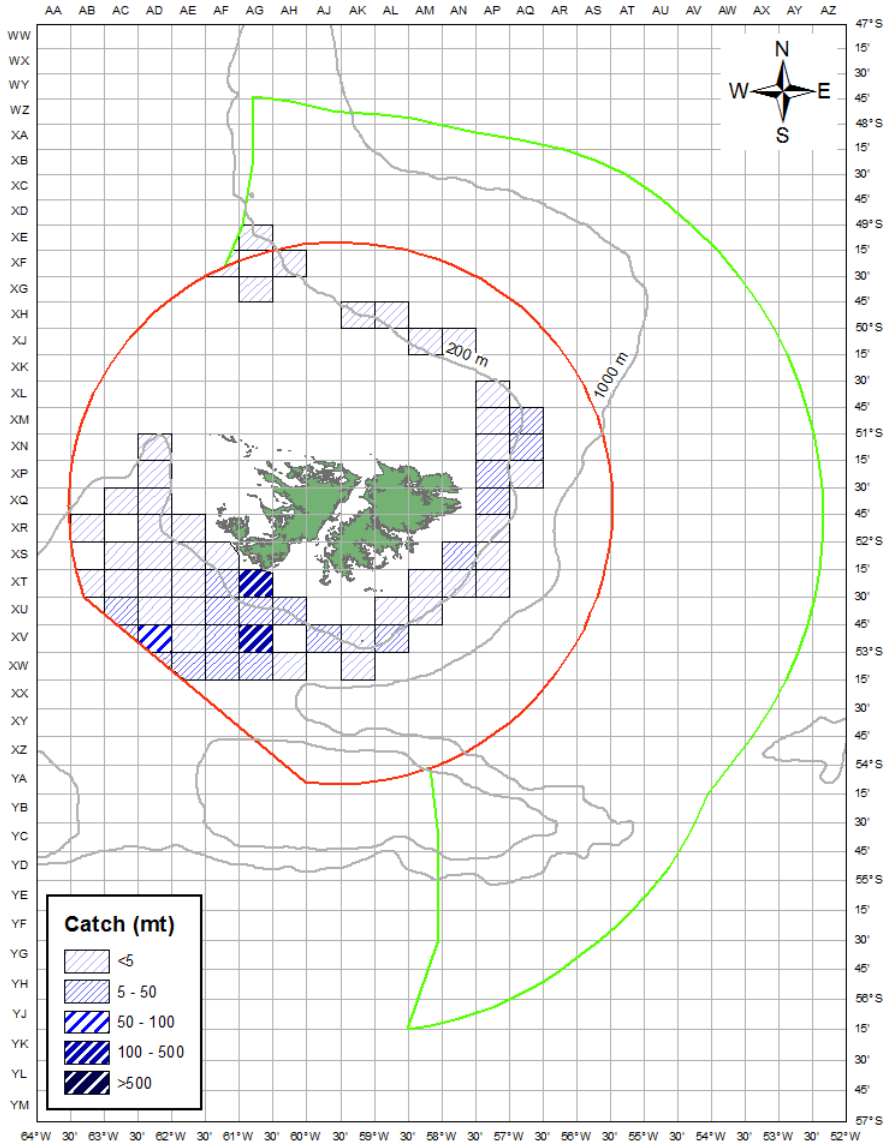
Table F.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	5	52	17	15	1	-	-	-	132	26
45-49	1,198	638	362	312	63	136	164	106	84	388
50-54	426	240	481	83	76	85	125	60	194	890
55-59	1,410	123	194	233	97	130	347	48	193	411
60-64	1,583	1,131	749	114	280	178	619	809	846	1,529
65-69	3,538	2,991	1,572	556	661	874	588	264	698	1,392
70-79	1,827	666	846	73	289	130	458	723	566	754
80-89	25	24	0	1	91	27	133	221	23	18
>89	12,192	7,345	6,173	5,084	2,384	35	265	1,381	56	7
	22,204	**13,209**	**10,395**	**6,471**	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**

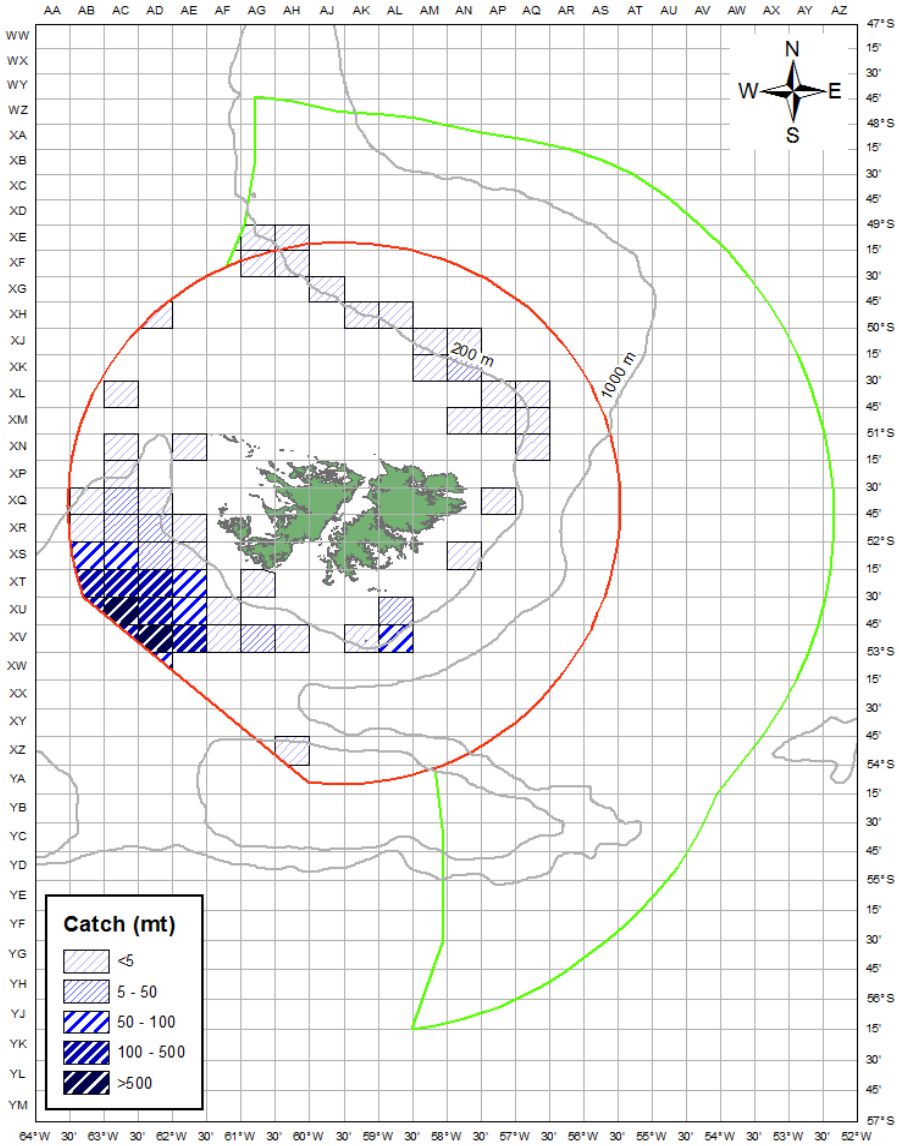
Table F.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	-	-	-	15	-	-	-	-	132	26
1,200-1,399	3	-	5	51	-	14	4	1	-	-
1,400-1,599	1,637	682	897	451	158	249	260	92	403	1,540
1,600-1,799	536	193	92	79	9	72	70	70	428	1,316
1,800-1,999	4,363	1,512	1,618	646	674	956	709	477	765	1,323
2,000-2,499	3,165	2,916	1,386	113	496	89	651	727	875	913
2,500-2,999	132	722	1	44	133	33	350	240	61	35
3,000-3,999	182	288	213	9	78	120	470	626	98	145
>3,999	12,187	6,895	6,183	5,064	2,392	64	183	1,377	29	117
	22,204	**13,209**	**10,395**	**6,471**	**3,940**	**1,596**	**2,698**	**3,612**	**2,790**	**5,415**

Micromesistius australis
Second Season 2016 (01 Jul to 31 Dec)

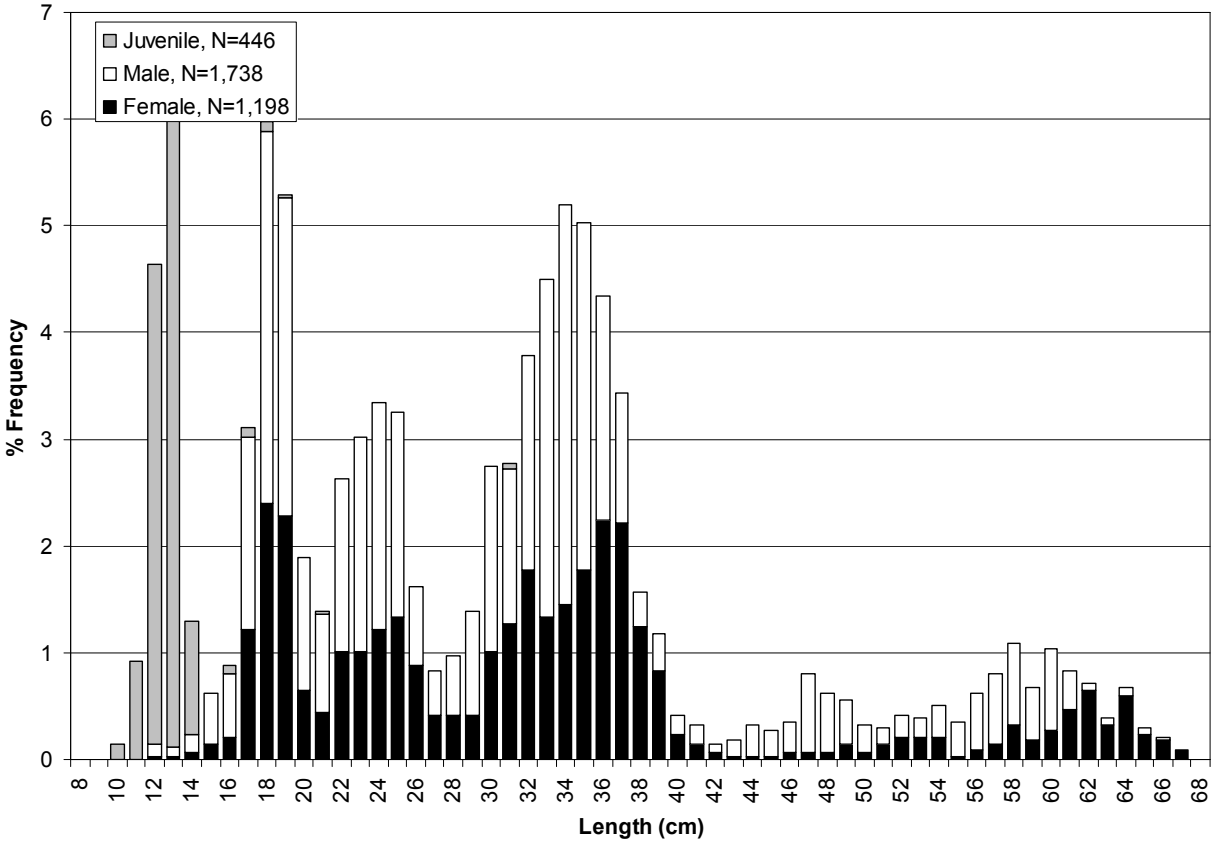


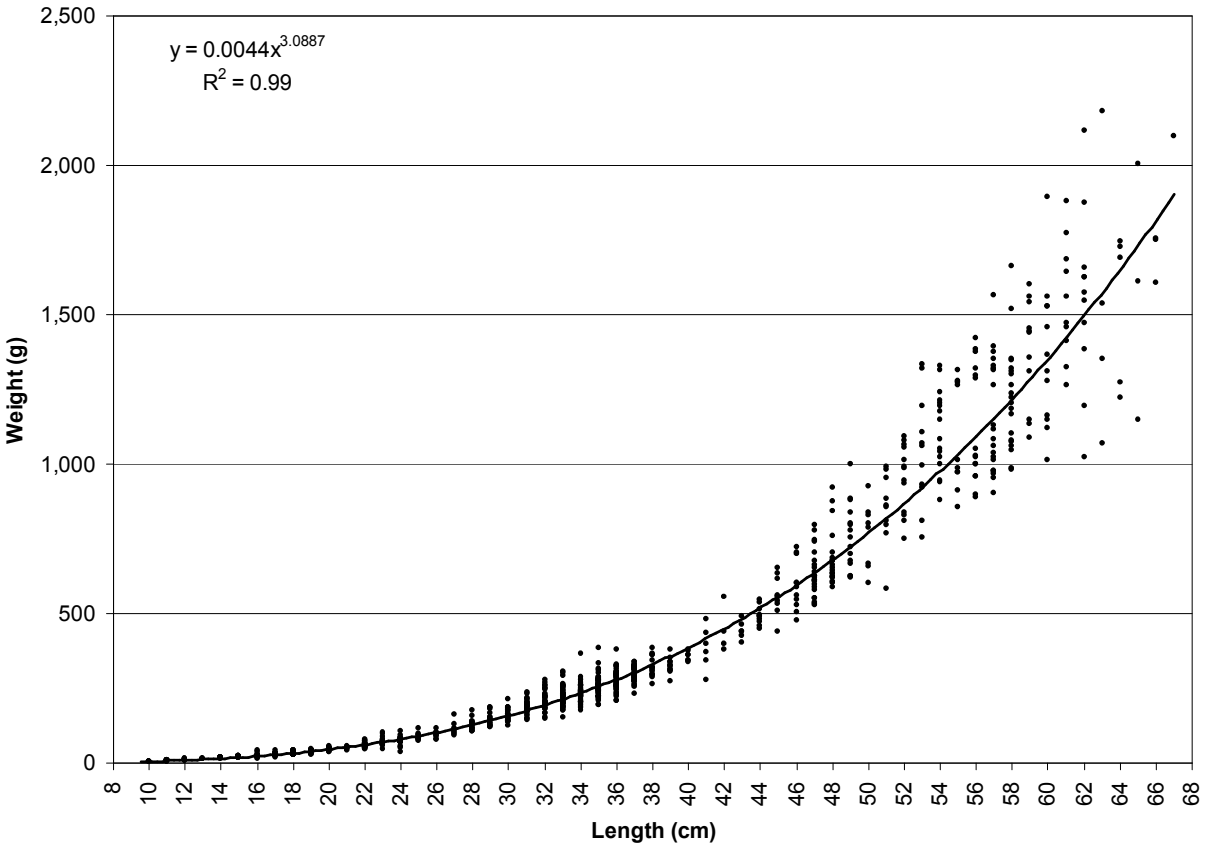
Micromesistius australis
First Season 2016 (01 Jan to 30 Jun)



Micromesistius australis - Southern Blue Whiting

Length– frequency distribution and length-weight relationship in 2016





Macruronus magellanicus—Hoki

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TR	16,669	15,908	23,404	19,227	22,979	15,867	16,849	7,392	6,845	11,555
	16,669	**15,908**	**23,404**	**19,227**	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,555**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	1,265	505	395	179	635	230	2,010	-	-	211
February	2,365	1,134	2,552	1,834	1,289	535	2,196	754	484	4,655
March	1,376	865	4,653	1,893	1,264	2,414	1,745	1,521	3,836	2,277
April	2,080	1,342	3,377	2,772	5,769	2,508	3,043	2,811	1,610	2,593
May	1,591	1,012	2,278	1,270	2,609	652	3,414	774	256	1,079
June	245	395	646	205	1,143	311	553	350	36	99
July	513	593	1,069	351	2,775	839	233	56	5	25
August	1,720	1,903	933	2,374	2,387	1,739	761	82	64	90
September	1,065	1,716	2,258	2,127	978	557	1,239	800	181	6
October	2,447	4,152	1,446	856	357	3,617	362	9	35	45
November	1,580	1,560	2,911	4,125	1,082	2,183	1,091	229	239	290
December	422	730	885	1,239	2,690	283	203	6	101	185
	16,669	**15,908**	**23,404**	**19,227**	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,555**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	343	114	-	-	-	-	-	207	-	-
ES	10,350	9,386	15,177	13,511	15,867	11,628	11,569	5,275	5,705	8,882
FK	5,065	4,135	5,994	4,033	3,808	3,433	4,755	1,889	959	2,375
JP	141	1,956	1,267	917	2,457	85	-	-	-	-
KR	600	249	792	667	594	712	481	20	147	211
PA	4	-	-	-	-	-	-	-	-	-
UK	166	69	174	98	253	10	45	1	35	87
	16,669	**15,908**	**23,404**	**19,227**	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,555**

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	2,426	1,934	3,528	2,795	2,714	2,568	1,478	497	1,051	1,155
800-999	2,948	2,004	5,217	3,580	3,477	4,106	3,238	1,634	1,845	3,569
1,000-1,499	7,774	5,714	8,888	7,474	8,618	6,816	9,546	3,477	3,055	2,989
1,500-1,999	2,750	3,917	4,166	4,223	5,480	2,097	2,371	1,566	858	3,809
2,000-2,999	287	383	339	237	221	100	214	8	38	31
>2,999	484	1,956	1,267	917	2,469	181	2	210	-	1
	16,669	**15,908**	**23,404**	**19,227**	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,555**

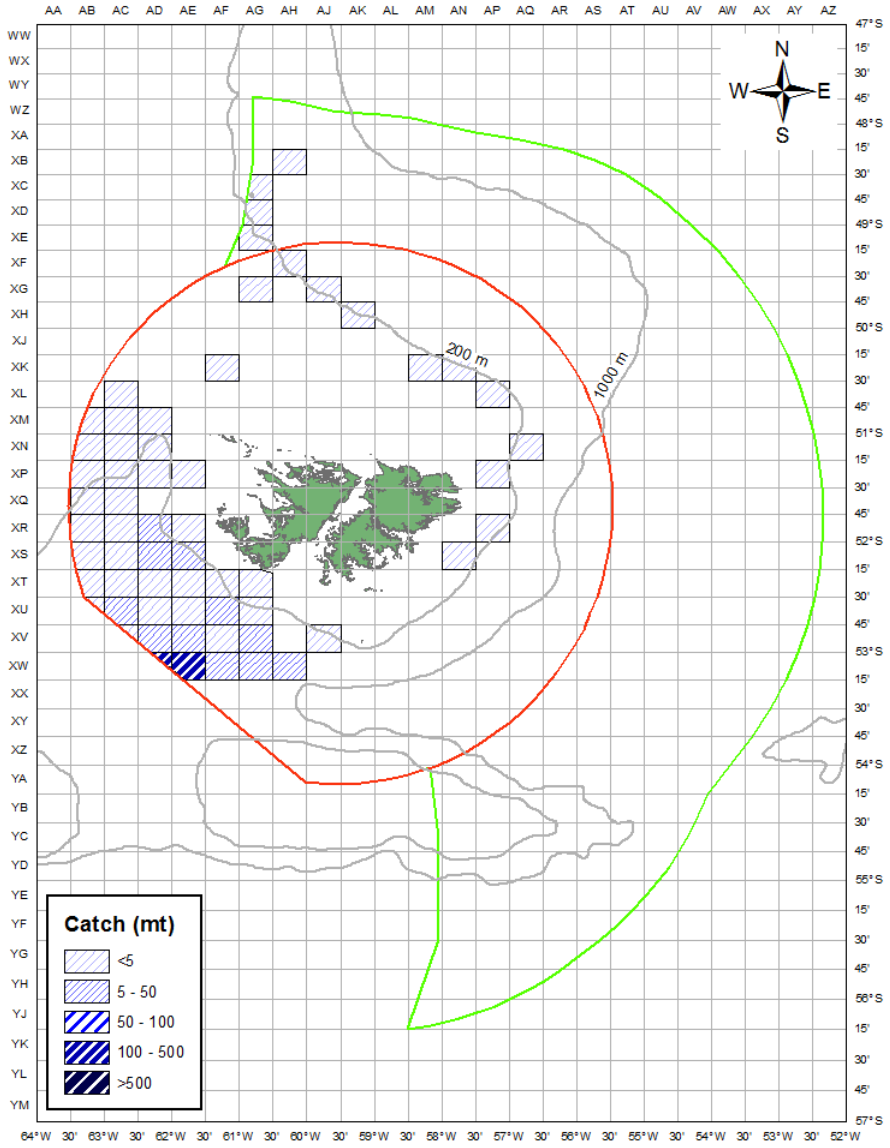
Table G.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	293	544	737	155	217	-	-	-	10	167
45-49	3,120	2,419	3,768	2,309	1,732	2,036	1,358	335	839	1,061
50-54	1,906	649	2,016	1,923	2,215	2,894	2,014	1,309	978	2,574
55-59	1,605	1,317	3,251	2,879	3,404	3,017	3,433	800	1,652	1,225
60-64	3,067	3,854	6,024	4,191	5,704	4,001	5,196	1,856	1,456	2,512
65-69	3,893	2,583	2,896	3,276	4,082	1,782	2,592	2,081	622	2,334
70-79	2,212	2,466	3,326	3,462	3,066	1,933	2,198	800	1,280	1,681
80-89	48	67	85	27	27	21	31	1	1	0
>89	526	2,008	1,301	1,004	2,532	183	26	210	6	1
	16,669	**15,908**	**23,404**	**19,227**	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,555**

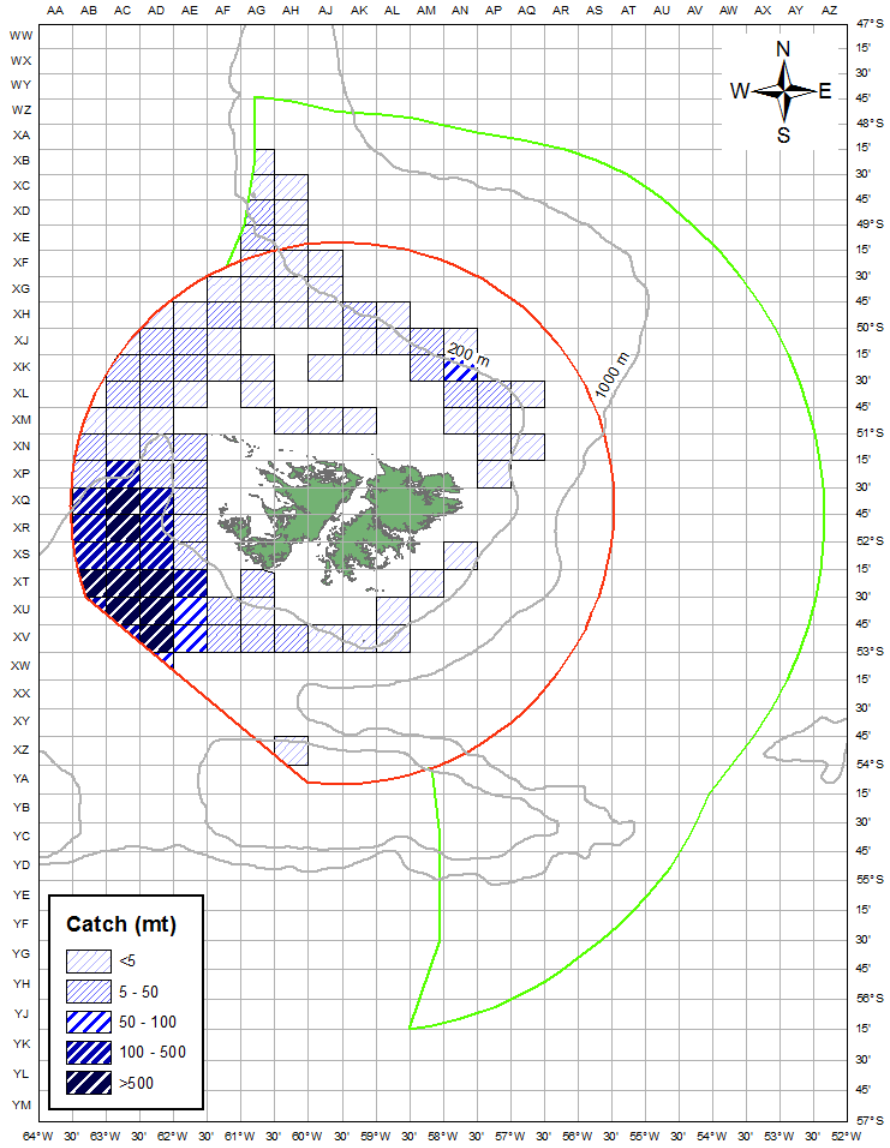
Table G.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	-	-	-	155	54	-	-	-	10	167
1,200-1,399	271	191	453	442	310	327	276	67	119	-
1,400-1,599	4,129	2,826	6,722	3,441	3,264	4,216	3,263	1,704	2,006	3,859
1,600-1,799	1,349	1,310	1,882	2,997	2,253	1,089	1,611	688	912	1,490
1,800-1,999	4,602	3,791	4,854	5,385	6,899	4,248	5,661	2,114	1,205	2,386
2,000-2,499	4,788	5,134	6,955	4,982	6,352	4,101	4,837	2,257	1,797	2,476
2,500-2,999	593	291	790	637	937	1,594	964	345	729	464
3,000-3,999	364	332	393	221	397	182	205	10	65	120
>3,999	574	2,033	1,353	965	2,513	109	31	208	1	594
	16,669	**15,908**	**23,404**	**19,227**	**22,979**	**15,867**	**16,849**	**7,392**	**6,845**	**11,555**

Macruronus magellanicus
Second Season 2016 (01 Jul to 31 Dec)

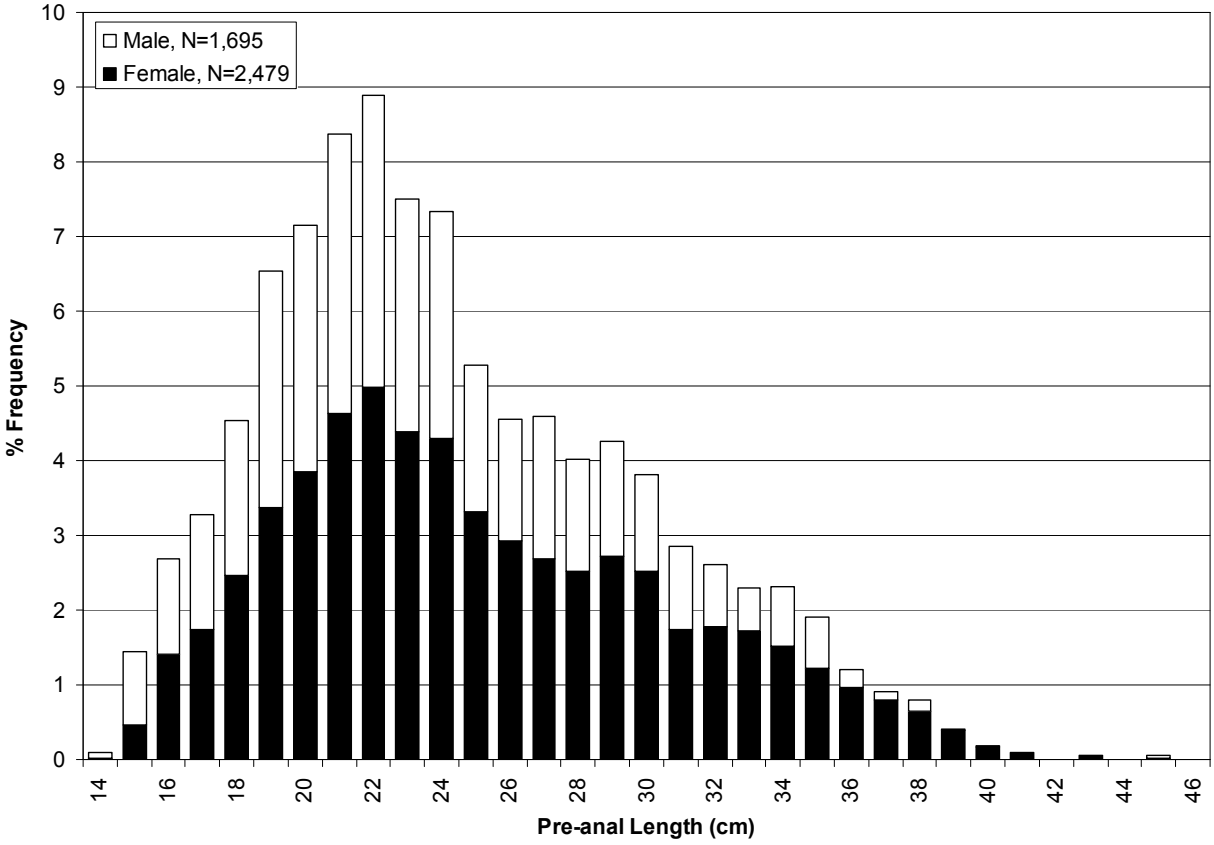


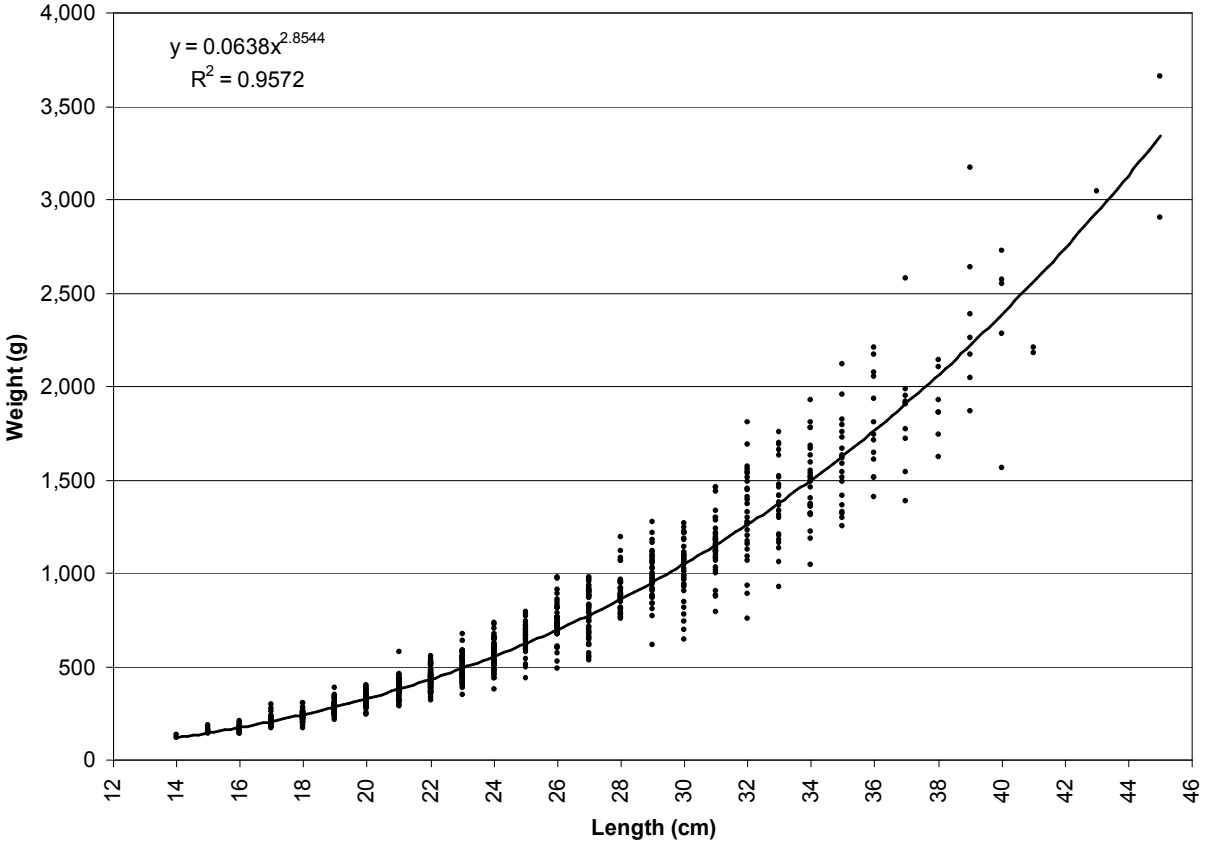
Macruronus magellanicus
First Season 2016 (01 Jan to 30 Jun)



Macruronus magellanicus—Hoki

Length– frequency distribution and length-weight relationship in trawler fleet in 2016





Salilota australis - Red cod

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
LO	-	-	-	-	-	-	0	-	-	-
TR	5,195	4,076	5,120	3,129	4,210	4,629	5,164	3,467	3,340	3,143
	5,195	**4,076**	**5,120**	**3,129**	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	82	110	148	29	100	62	215	-	0	143
February	290	189	328	193	236	351	480	114	63	479
March	423	506	530	387	157	341	311	221	557	181
April	502	350	480	649	438	340	325	477	685	270
May	504	426	603	215	749	370	514	768	310	527
June	77	59	159	69	213	125	77	398	131	198
July	338	101	214	75	309	150	162	135	174	139
August	905	421	669	361	605	656	1,199	376	161	369
September	1,043	987	662	340	474	580	1,299	195	329	135
October	770	668	819	284	273	615	283	532	631	562
November	234	189	378	321	436	626	230	189	200	74
December	27	71	131	207	221	411	68	63	99	66
	5,195	**4,076**	**5,120**	**3,129**	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	3,997	3,140	3,778	2,267	2,851	3,441	3,592	2,530	2,776	2,237
FK	1,127	900	1,308	801	1,316	1,167	1,522	874	505	878
JP	1	-	0	0	0	-	-	-	-	-
KR	49	17	11	19	6	16	33	57	47	18
UK	22	20	23	41	36	5	17	5	12	10
	5,195	**4,076**	**5,120**	**3,129**	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**

Salilota australis - Red cod

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	652	467	598	327	484	633	467	508	401	480
800-999	977	749	776	524	632	750	610	600	648	785
1,000-1,499	1,939	1,164	1,881	1,218	1,715	1,955	2,728	1,399	1,387	793
1,500-1,999	1,574	1,535	1,734	996	1,254	1,202	1,111	881	869	1,051
2,000-2,999	52	161	131	64	124	89	248	77	34	34
>2,999	1	-	0	0	0	-	-	2	-	0
	5,195	**4,076**	**5,120**	**3,129**	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**

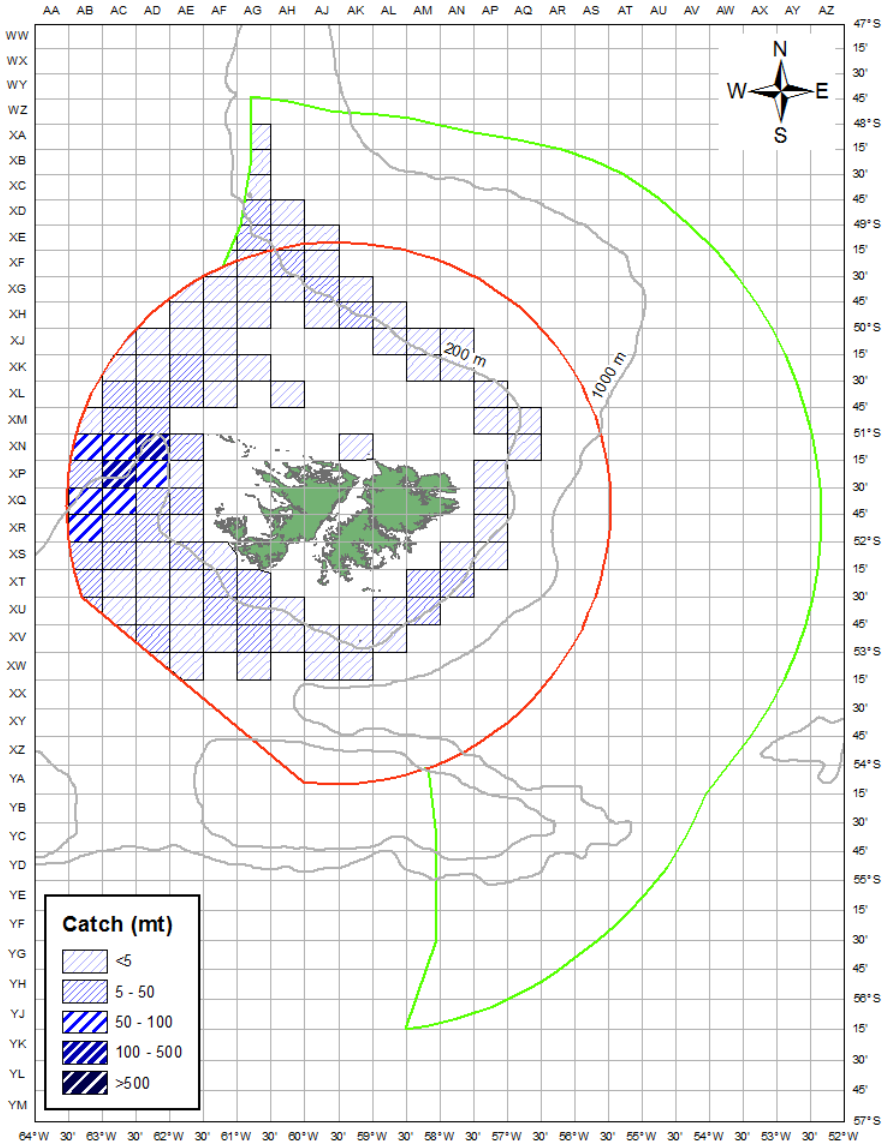
Table H.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	244	235	145	17	78	-	9	3	8	56
45-49	802	656	555	291	339	578	403	453	340	497
50-54	416	182	246	220	353	488	475	478	400	470
55-59	605	326	751	630	886	837	706	334	501	340
60-64	913	666	1,275	586	966	1,058	1,772	929	786	587
65-69	1,669	1,318	1,434	1,057	1,178	1,268	1,048	769	818	634
70-79	518	616	648	304	350	329	628	476	480	558
80-89	20	42	12	4	4	2	20	16	3	0
>89	9	34	53	19	55	68	103	9	5	2
	5,195	**4,076**	**5,120**	**3,129**	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**

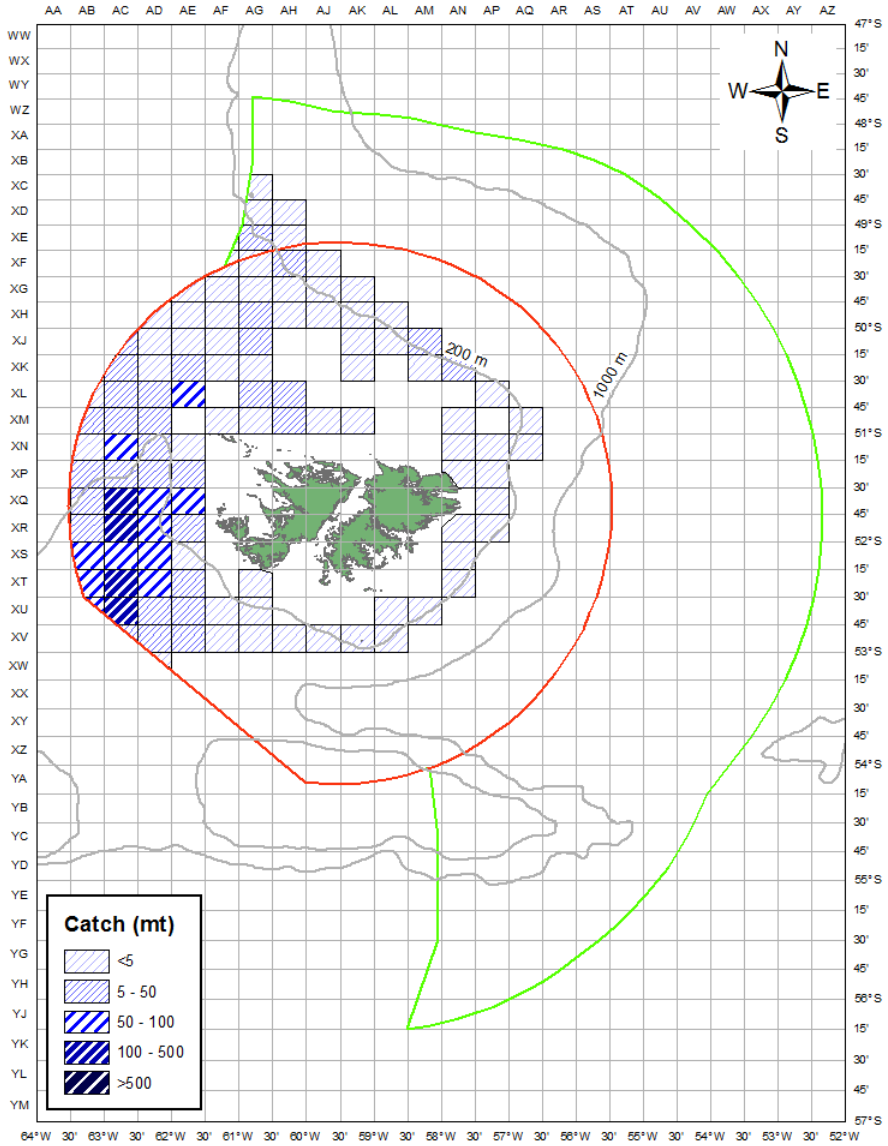
Table H.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	5	-	-	-
1,000-1,199	-	-	-	17	22	-	9	3	8	56
1,200-1,399	112	40	83	58	89	100	77	54	43	-
1,400-1,599	1,280	933	851	448	749	934	744	800	779	1,003
1,600-1,799	539	367	529	451	419	358	359	279	313	281
1,800-1,999	2,132	1,603	1,827	1,346	1,710	2,082	1,800	1,017	1,142	746
2,000-2,499	1,008	932	1,657	676	1,011	825	1,696	1,021	853	826
2,500-2,999	57	51	63	33	102	303	303	215	156	106
3,000-3,999	46	105	88	82	101	23	142	61	38	43
>3,999	20	46	20	17	7	4	29	17	6	83
	5,195	**4,076**	**5,120**	**3,129**	**4,210**	**4,629**	**5,164**	**3,467**	**3,340**	**3,143**

Salilota australis
Second Season 2016 (01 Jul to 31 Dec)

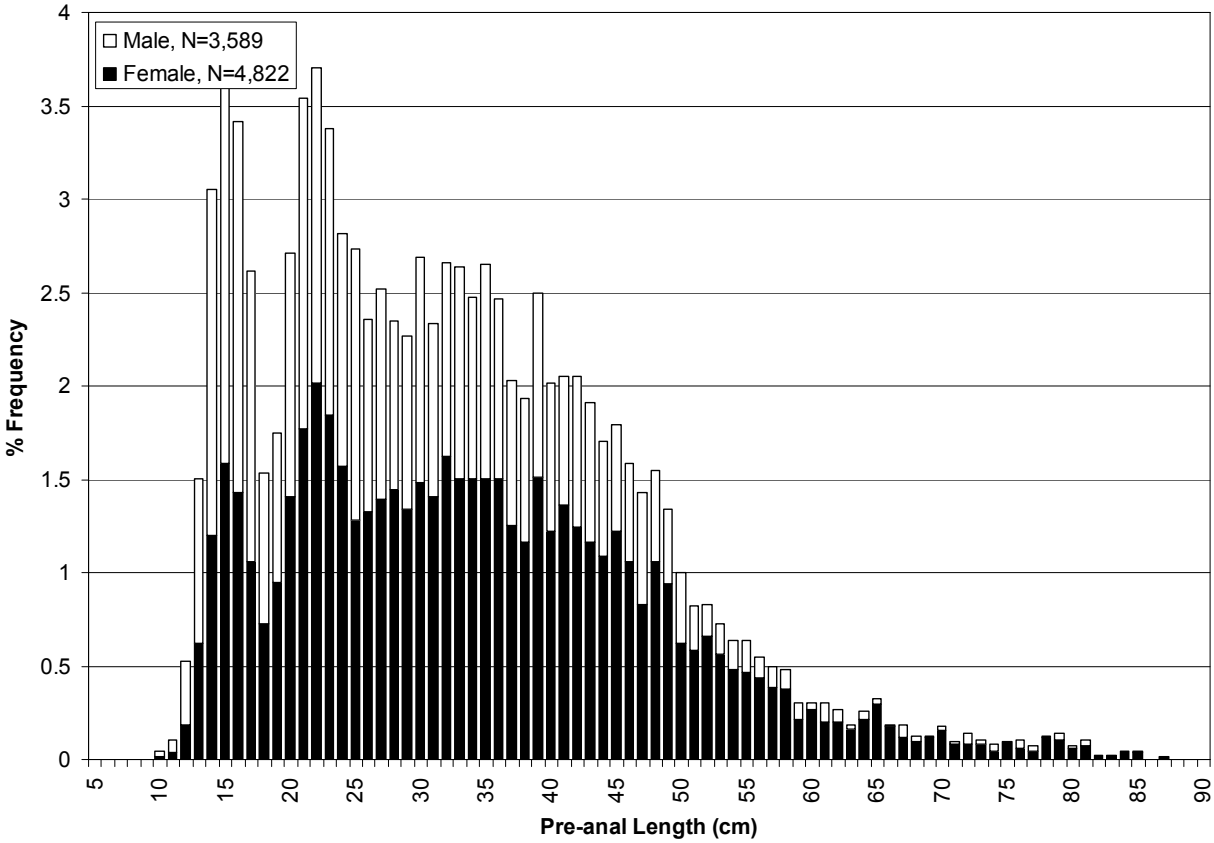


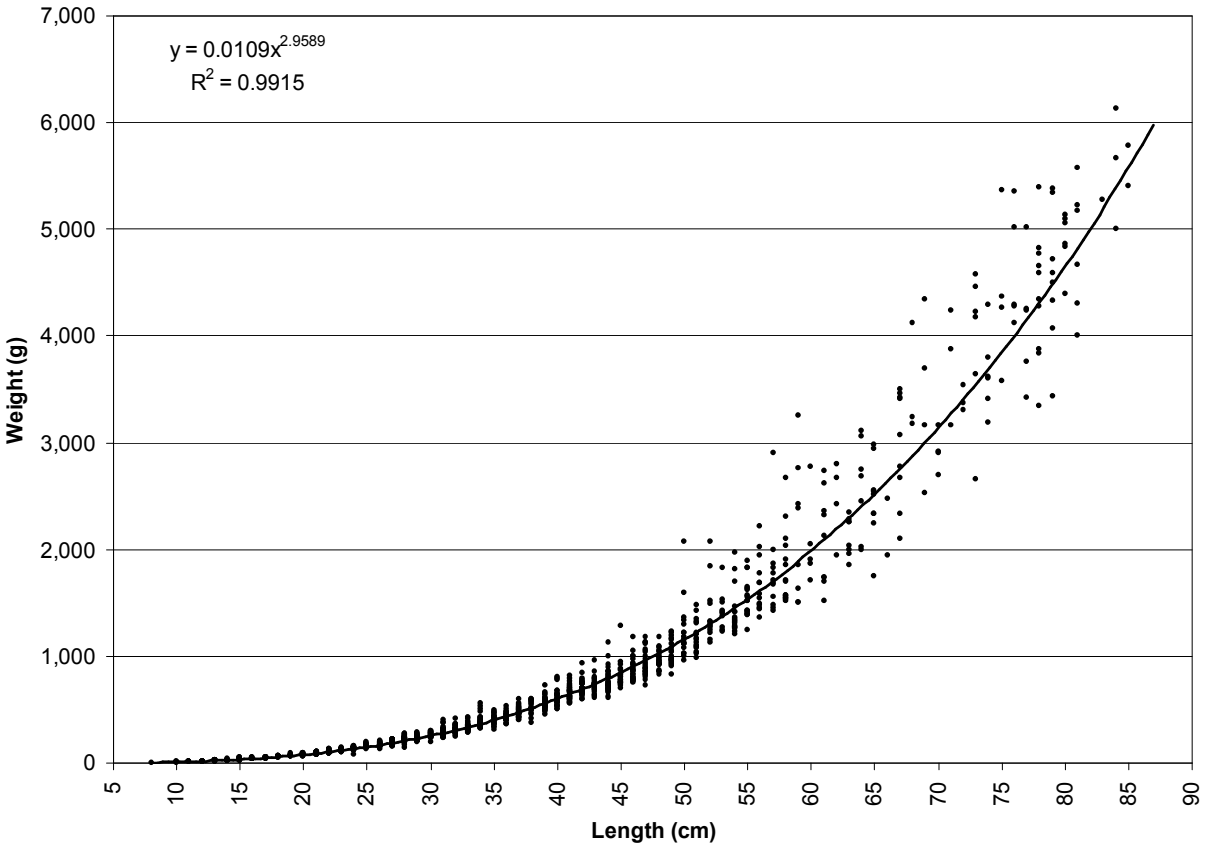
Salilota australis
First Season 2016 (01 Jan to 30 Jun)



Salilota australis - Red cod

Length– frequency distribution and length-weight relationship in trawler fleet in 2016





Merluccius spp - Hakes

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
LO	-	-	-	-	-	-	0	-	-	-
TR	11,909	8,806	13,049	13,606	9,904	10,489	12,308	14,875	21,068	23,884
	11,909	**8,806**	**13,049**	**13,606**	**9,904**	**10,489**	**12,308**	**14,875**	**21,068**	**23,884**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	31	4	38	3	12	4	56	-	1	62
February	215	68	152	106	199	65	166	30	29	231
March	556	356	474	873	260	517	232	224	382	155
April	1,089	1,115	2,059	2,492	2,005	1,388	1,169	680	1,266	821
May	3,134	2,078	2,667	2,584	1,947	1,895	1,615	3,168	3,277	5,837
June	2,321	1,372	1,044	773	726	1,125	1,129	2,506	1,912	3,500
July	1,975	970	1,238	1,340	858	946	1,225	2,065	3,508	3,461
August	1,879	1,161	1,413	2,245	1,145	2,473	2,460	2,717	3,619	3,453
September	462	766	2,340	2,145	1,598	1,260	2,638	2,431	5,153	3,273
October	201	794	1,488	853	930	644	1,480	862	1,823	3,054
November	42	113	131	168	201	151	135	189	62	27
December	2	10	5	23	22	21	4	3	36	10
	11,909	**8,806**	**13,049**	**13,606**	**9,904**	**10,489**	**12,308**	**14,875**	**21,068**	**23,884**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	-	-	-	-	-	-	-	0	-	-
ES	7,604	5,327	8,036	8,459	5,987	6,950	7,245	10,465	15,429	18,858
FK	4,022	3,021	4,696	4,565	3,506	3,185	4,884	4,196	5,072	4,728
JP	-	0	-	0	1	-	-	-	-	-
KR	163	118	90	181	221	283	130	159	351	191
UK	120	341	228	401	190	71	50	56	215	106
	11,909	**8,806**	**13,049**	**13,606**	**9,904**	**10,489**	**12,308**	**14,875**	**21,068**	**23,884**

Merluccius spp - Hakes

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	1,199	872	1,211	1,439	1,138	1,178	1,251	1,815	2,201	2,172
800-999	2,059	1,251	1,982	1,546	1,116	1,114	1,715	2,055	3,843	4,452
1,000-1,499	5,760	4,613	6,827	7,743	5,703	6,663	7,399	7,927	10,035	12,016
1,500-1,999	2,346	1,742	2,523	2,625	1,832	1,410	1,866	3,030	4,115	5,023
2,000-2,999	545	328	505	253	90	42	70	41	874	213
>2,999	-	0	-	0	25	81	7	7	-	9
	11,909	**8,806**	**13,049**	**13,606**	**9,904**	**10,489**	**12,308**	**14,875**	**21,068**	**23,884**

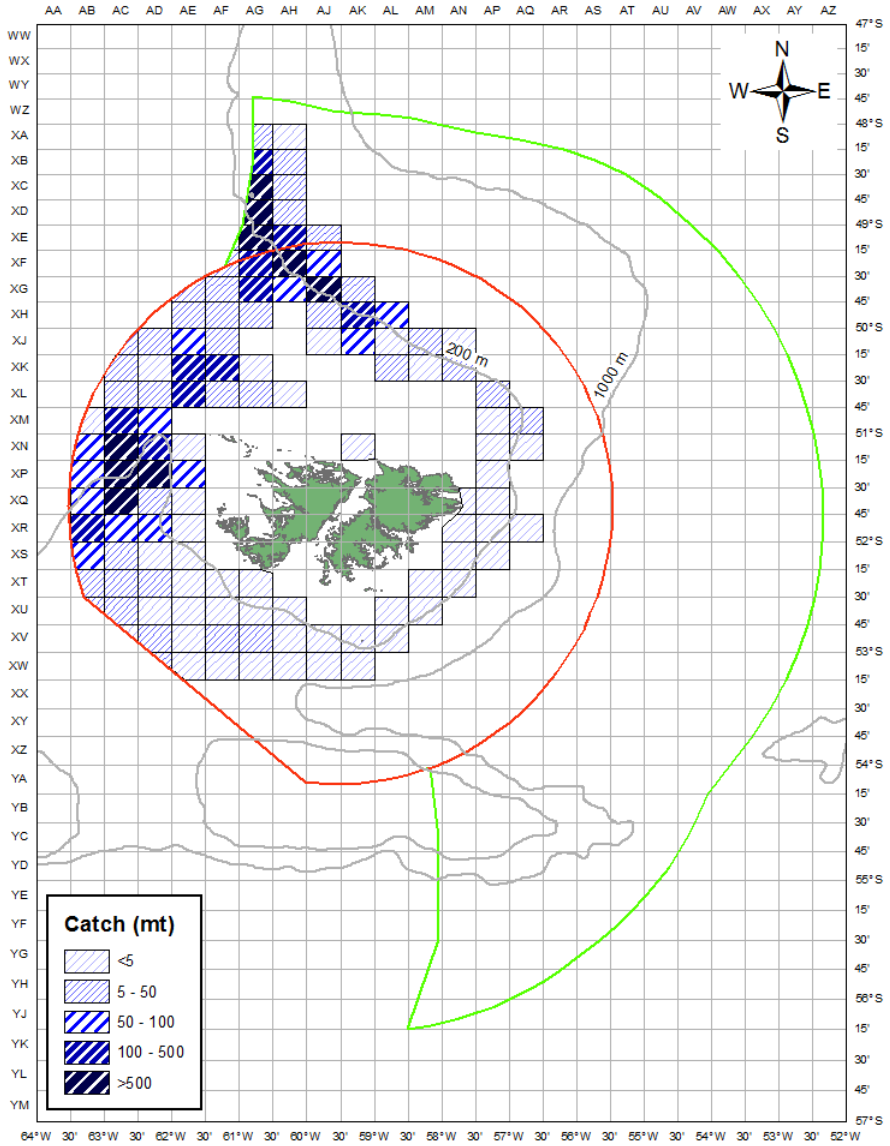
Table I.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	49	188	270	5	165	-	6	15	42	51
45-49	1,782	1,283	2,232	1,544	1,171	1,102	1,579	1,826	2,804	3,013
50-54	1,756	448	334	673	552	941	1,045	1,512	2,712	3,028
55-59	2,395	1,750	2,281	2,629	2,107	2,395	3,082	1,952	2,492	3,124
60-64	1,811	2,470	3,873	3,767	2,983	3,274	3,735	5,534	6,584	8,060
65-69	3,024	1,838	1,631	2,600	1,642	1,547	1,226	1,976	3,072	3,711
70-79	1,088	801	2,388	2,386	1,248	1,108	1,625	2,053	3,358	2,880
80-89	5	13	20	2	6	39	1	0	2	2
>89	0	15	20	0	31	83	9	7	2	16
	11,909	**8,806**	**13,049**	**13,606**	**9,904**	**10,489**	**12,308**	**14,875**	**21,068**	**23,884**

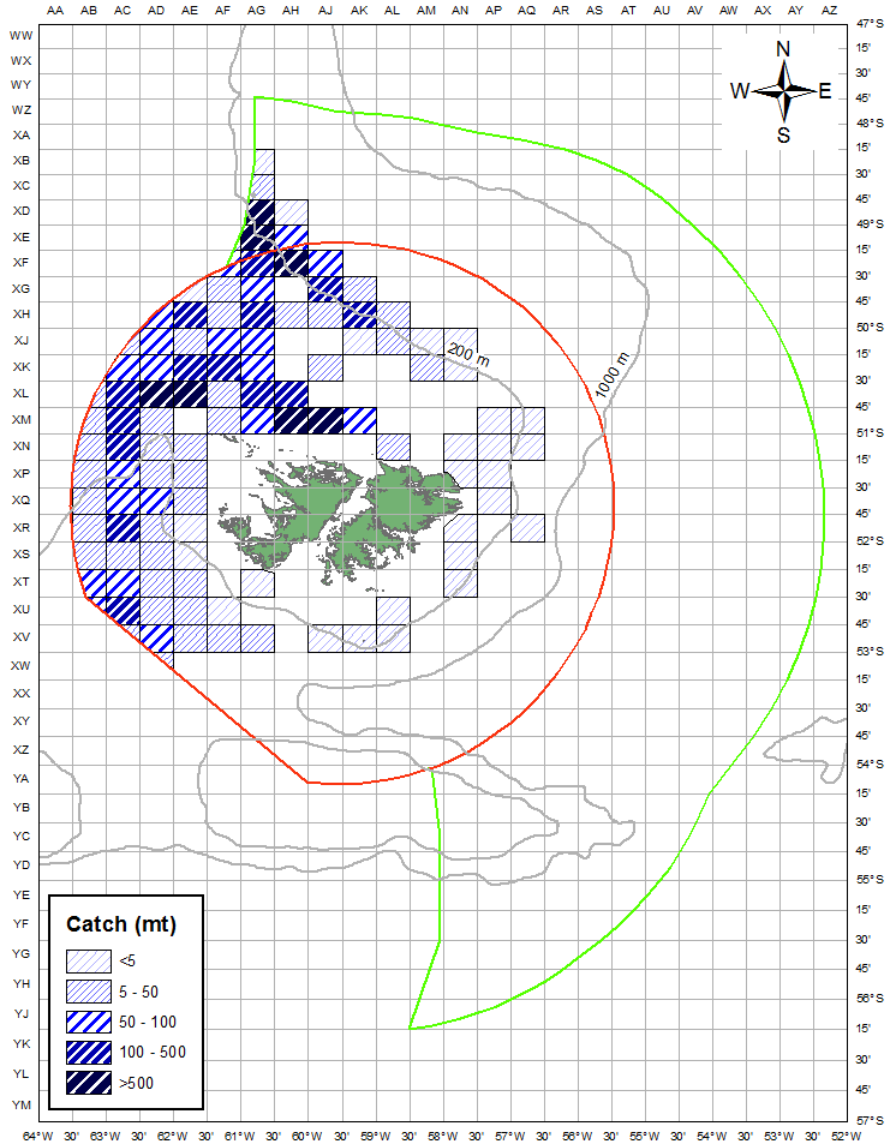
Table I.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	-	-	-	-
1,000-1,199	-	-	-	5	54	-	6	15	42	51
1,200-1,399	56	202	173	326	128	307	405	338	454	-
1,400-1,599	2,777	1,109	1,684	1,302	1,165	1,340	1,690	2,735	3,752	4,485
1,600-1,799	1,166	1,696	2,104	2,773	1,671	1,526	1,789	2,339	2,503	3,865
1,800-1,999	5,247	3,615	4,528	5,209	4,059	5,084	5,180	5,414	6,883	9,084
2,000-2,499	1,869	1,403	3,745	3,163	2,328	1,626	2,703	3,400	5,453	4,891
2,500-2,999	130	126	101	170	196	414	412	532	894	1,105
3,000-3,999	659	640	693	651	292	154	124	103	1,086	318
>3,999	5	16	21	5	11	39	1	0	2	86
	11,909	**8,806**	**13,049**	**13,606**	**9,904**	**10,489**	**12,308**	**14,875**	**21,068**	**23,884**

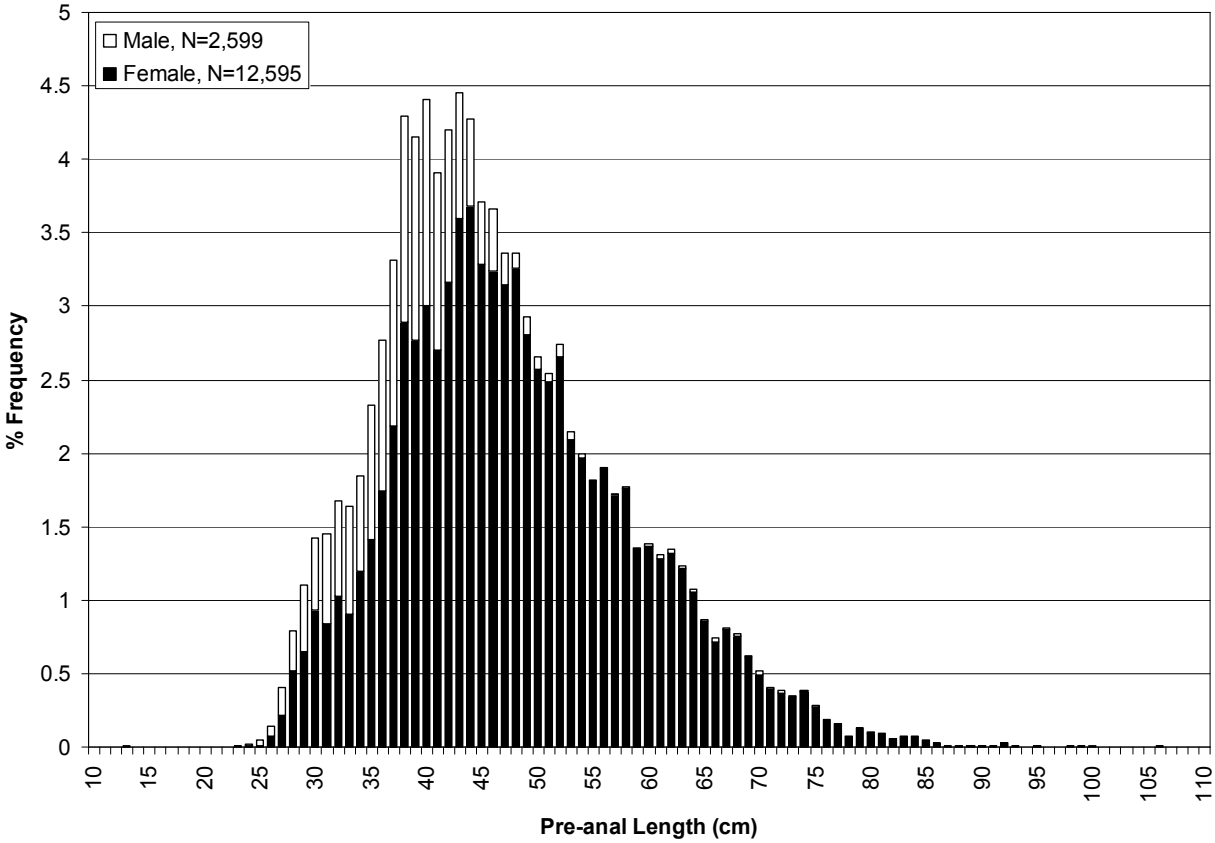
Merluccius spp.
Second Season 2016 (01 Jul to 31 Dec)

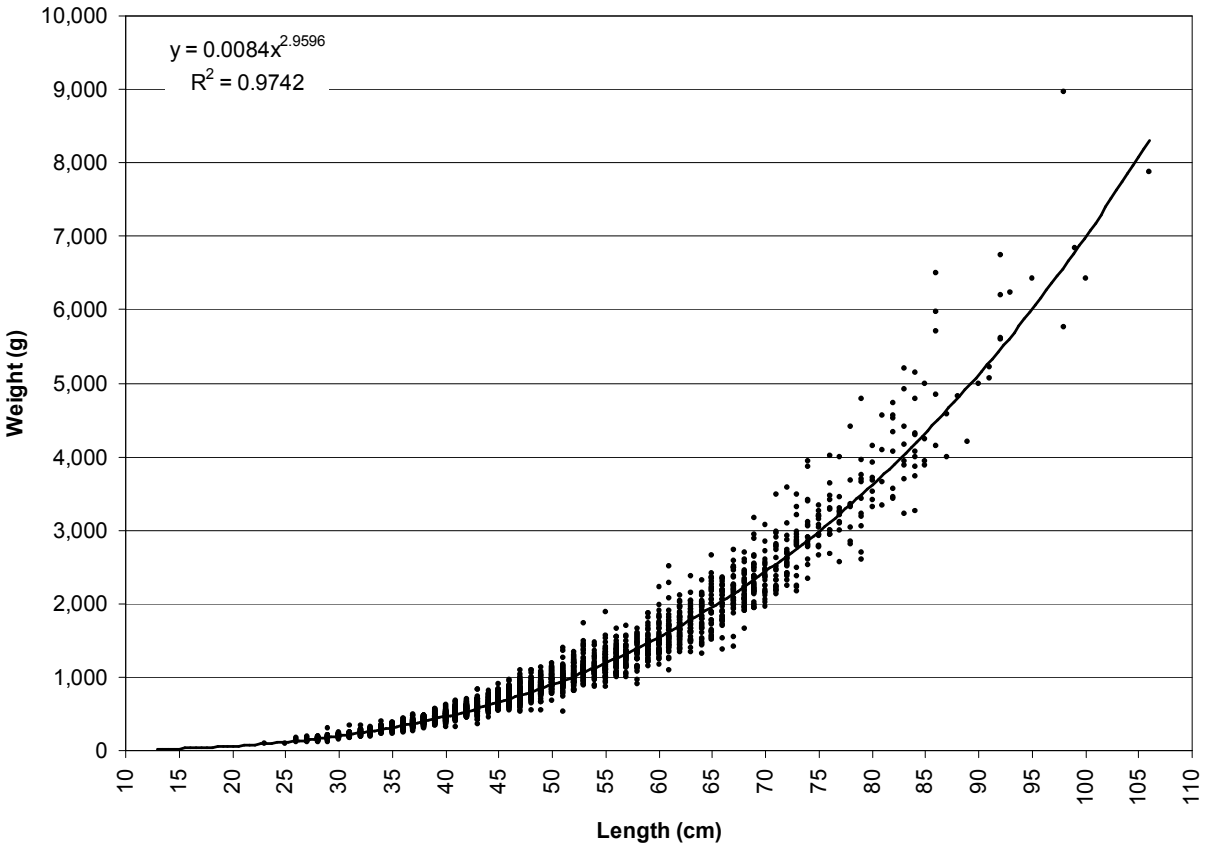


Merluccius spp.
First Season 2016 (01 Jan to 30 Jun)



Length– frequency distribution and length-weight relationship in *M.hubbsi* in trawler fleet in 2016





Genypterus blacodes - Kingclip

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
TR	3,592	2,227	3,390	3,639	3,867	3,510	3,977	2,881	2,983	1,614
	3,592	**2,227**	**3,390**	**3,639**	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,614**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	84	80	70	15	163	12	108	-	1	62
February	327	107	138	110	296	138	188	65	50	175
March	370	231	209	300	214	277	153	141	200	52
April	460	222	320	580	429	338	281	189	250	134
May	330	234	437	416	728	389	358	372	314	207
June	60	54	179	202	141	134	114	324	288	78
July	204	107	258	89	226	170	140	296	159	155
August	711	326	481	366	421	570	835	387	226	234
September	498	437	428	446	462	390	843	357	491	142
October	356	240	548	377	309	420	653	491	503	337
November	166	142	195	445	310	432	234	203	265	23
December	25	48	126	294	167	240	67	57	237	15
	3,592	**2,227**	**3,390**	**3,639**	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,614**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ES	2,735	1,691	2,619	2,835	2,933	2,583	3,053	2,219	2,370	1,280
FK	740	479	726	677	851	858	843	548	502	313
JP	2	0	1	0	0	-	-	-	-	-
KR	84	31	33	101	47	62	72	107	90	19
UK	31	26	11	26	35	7	9	7	22	1
	3,592	**2,227**	**3,390**	**3,639**	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,614**

Genypterus blacodes - Kingclip

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	458	393	675	460	481	518	410	291	338	141
800-999	826	490	639	614	564	640	904	710	612	434
1,000-1,499	1,573	792	1,300	1,538	1,887	1,817	2,070	1,181	1,350	544
1,500-1,999	692	533	756	1,012	925	529	578	683	648	465
2,000-2,999	41	18	18	15	11	5	14	13	36	30
>2,999	2	0	1	0	0	1	0	2	-	0
	3,592	**2,227**	**3,390**	**3,639**	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,614**

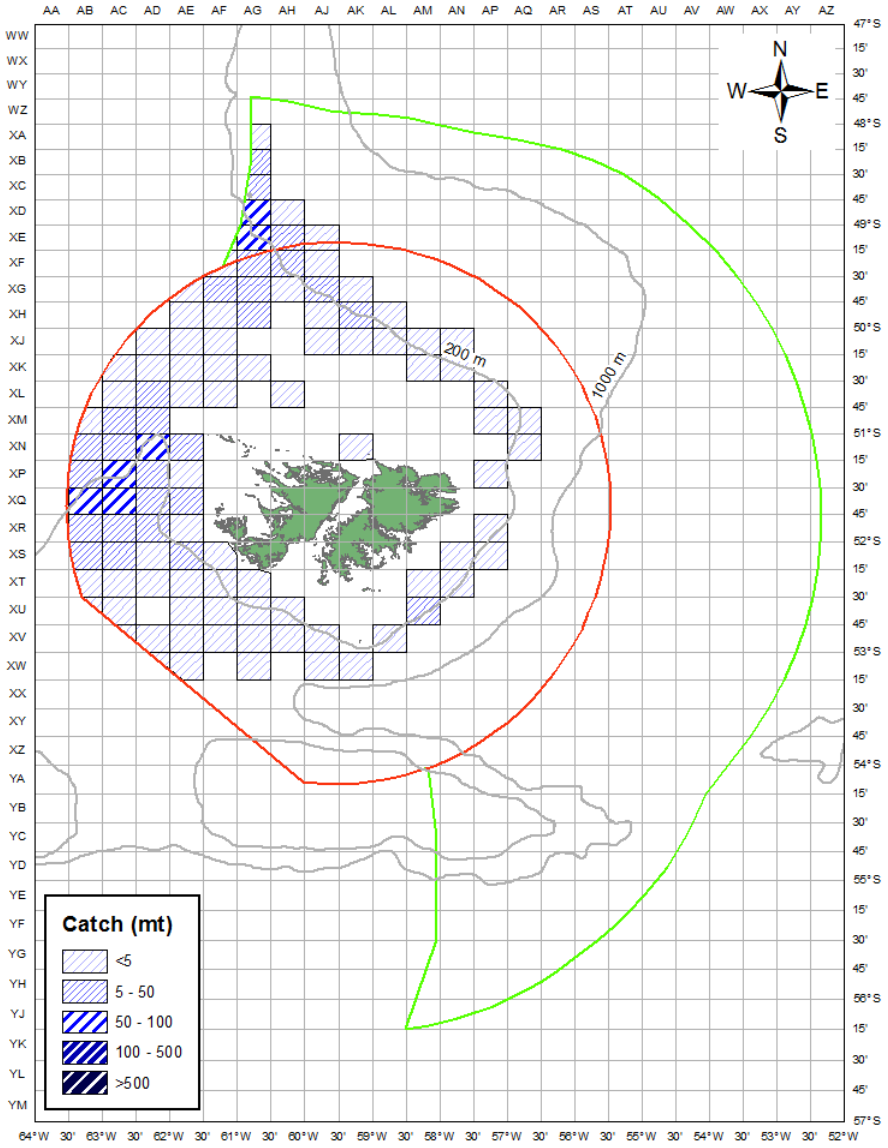
Table J.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	148	181	209	12	101	-	11	13	24	41
45-49	553	365	504	364	314	394	329	170	342	142
50-54	338	237	330	364	367	514	610	620	407	274
55-59	500	205	420	578	830	856	874	404	374	221
60-64	866	517	927	867	1,012	960	1,218	682	847	371
65-69	829	444	655	1,069	883	544	578	710	674	299
70-79	333	275	343	385	360	237	354	278	315	266
80-89	16	1	1	-	0	0	0	2	-	-
>89	7	2	1	1	1	4	3	2	-	0
	3,592	**2,227**	**3,390**	**3,639**	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,614**

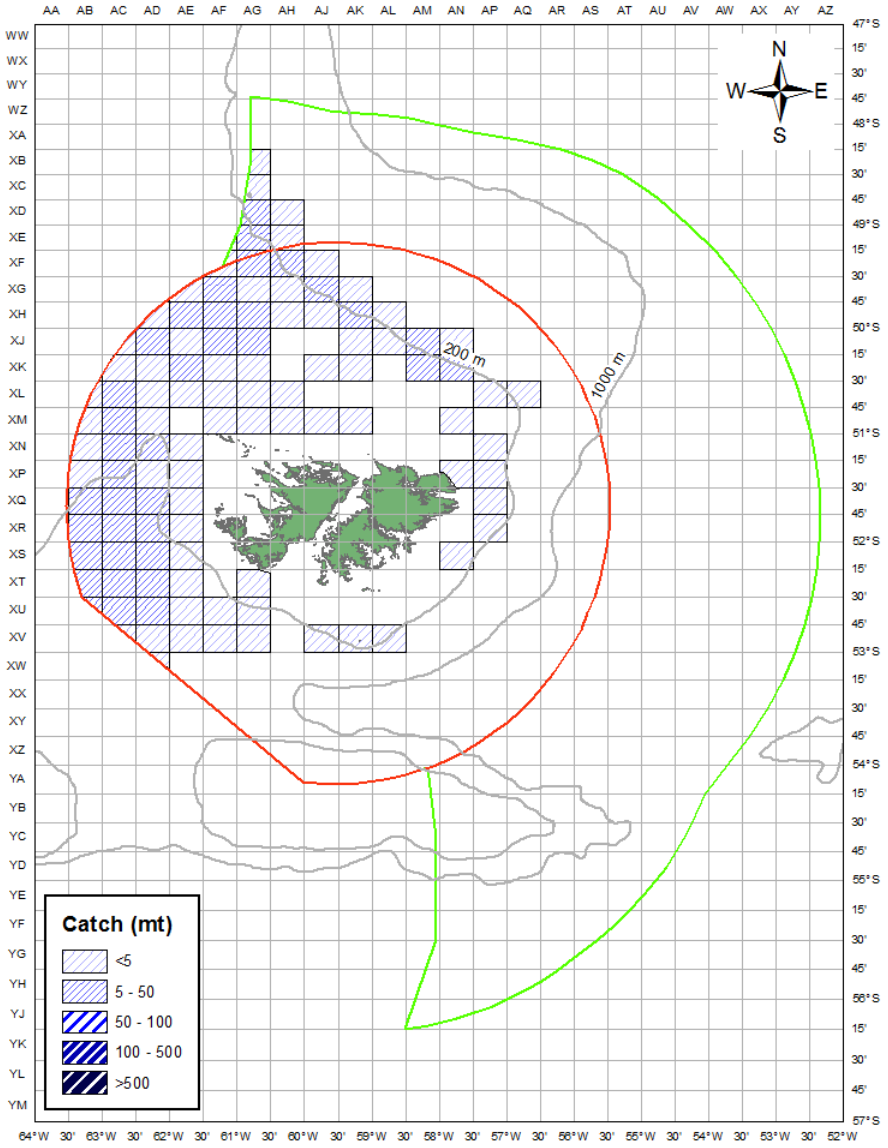
Table J.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	-	-	-	18	-	-	-
1,000-1,199	-	-	-	12	29	-	11	13	24	41
1,200-1,399	133	57	127	113	77	107	86	45	34	-
1,400-1,599	894	661	914	513	643	799	821	609	631	384
1,600-1,799	427	265	338	608	474	289	288	217	245	172
1,800-1,999	1,194	638	1,036	1,552	1,597	1,345	1,353	972	1,085	447
2,000-2,499	787	532	912	726	928	776	1,081	691	717	396
2,500-2,999	88	32	32	73	74	183	298	312	190	119
3,000-3,999	51	41	28	41	45	10	20	21	58	31
>3,999	18	1	2	0	0	1	0	2	-	24
	3,592	**2,227**	**3,390**	**3,639**	**3,867**	**3,510**	**3,977**	**2,881**	**2,983**	**1,614**

Genypterus blacodes
Second Season 2016 (01 Jul to 31 Dec)

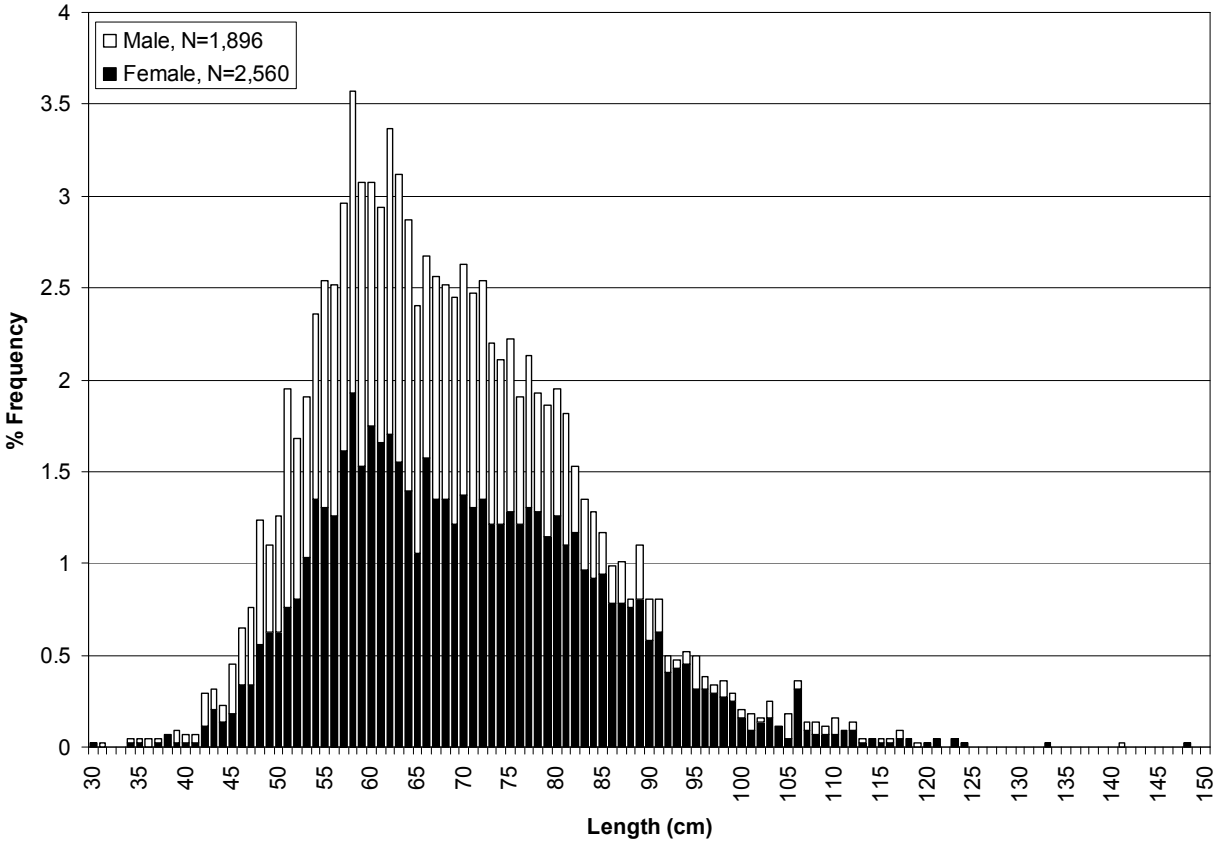


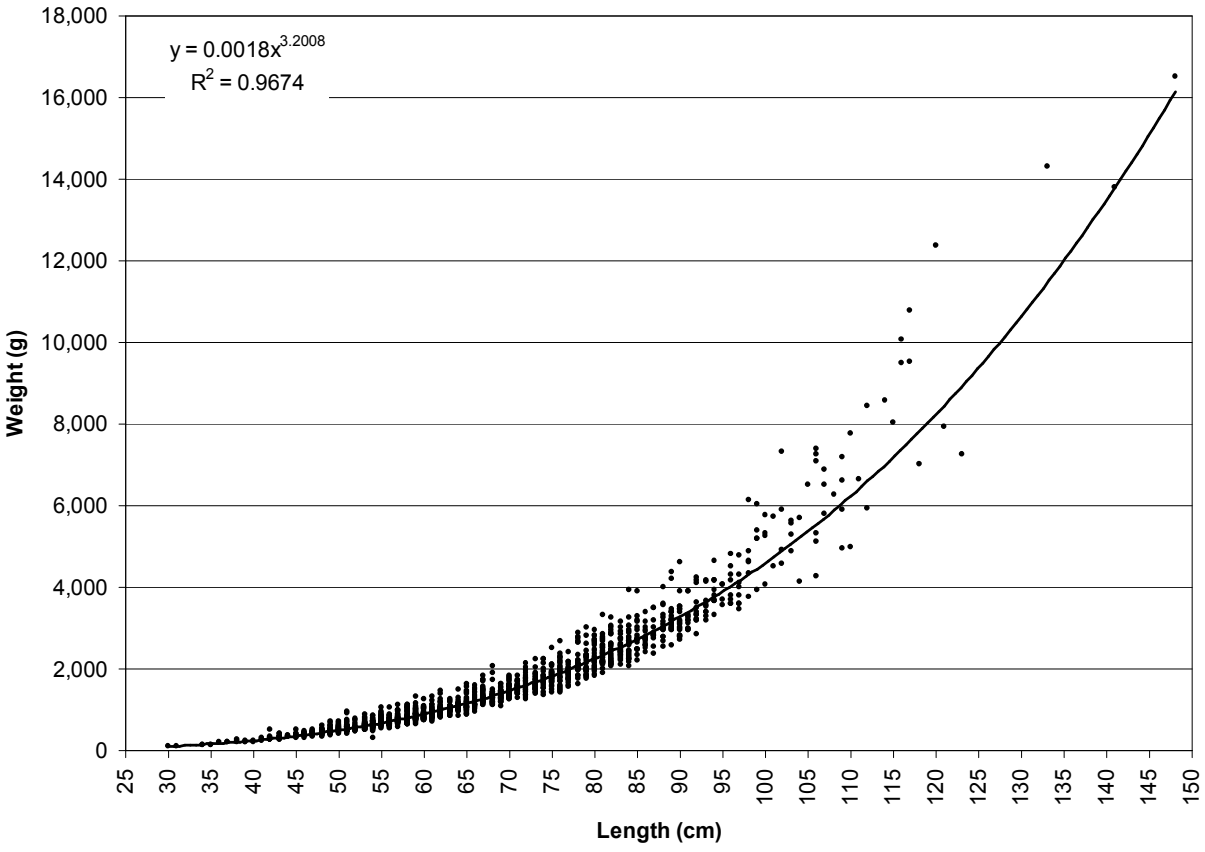
Genypterus blacodes
First Season 2016 (01 Jan to 30 Jun)



Genypterus blacodes - Kingclip

Length– frequency distribution and length-weight relationship in trawler fleet in 2016





Dissostichus eleginoides - Toothfish

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
LO	1,407	1,368	1,134	943	1,221	1,085	1,303	1,252	1,123	1,023
PO	59	-	-	0	-	-	-	-	-	-
TR	54	61	285	460	339	226	120	45	103	476
	1,520	**1,429**	**1,418**	**1,403**	**1,560**	**1,311**	**1,423**	**1,297**	**1,227**	**1,499**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	123	248	123	129	131	136	140	125	161	172
February	116	181	163	141	138	159	91	109	111	146
March	103	159	210	207	85	122	133	72	142	218
April	50	193	84	169	182	159	193	121	118	157
May	106	93	116	167	161	131	153	36	71	156
June	61	51	98	62	82	91	22	72	49	105
July	56	113	91	136	180	133	128	130	134	160
August	138	116	129	100	216	162	196	37	130	217
September	168	52	184	106	165	101	210	234	34	31
October	124	10	80	23	55	19	2	115	19	46
November	209	102	26	52	30	23	8	107	18	36
December	266	111	115	112	136	76	146	139	239	55
	1,520	**1,429**	**1,418**	**1,403**	**1,560**	**1,311**	**1,423**	**1,297**	**1,227**	**1,499**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	301	-	-	-	-	-	-	353	-	-
ES	35	37	203	366	260	155	81	34	87	367
FK	1,123	1,391	1,210	1,028	1,286	1,150	1,342	911	1,134	1,122
KR	60	1	-	6	7	7	1	0	5	10
RU	-	-	-	0	-	-	-	-	-	-
UK	1	0	5	2	6	0	-	-	0	-
	1,520	**1,429**	**1,418**	**1,403**	**1,560**	**1,311**	**1,423**	**1,297**	**1,227**	**1,499**

Dissostichus eleginoides - Toothfish

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	67	10	33	45	31	44	10	7	5	35
800-999	1,113	1,374	1,173	998	1,268	1,125	1,197	906	1,141	1,198
1,000-1,499	325	15	102	223	119	64	179	370	51	77
1,500-1,999	14	30	85	131	135	77	34	15	29	174
2,000-2,999	0	1	25	6	6	2	3	-	1	16
>2,999	-	-	-	-	-	-	-	-	-	-
	1,520	**1,429**	**1,418**	**1,403**	**1,560**	**1,311**	**1,423**	**1,297**	**1,227**	**1,499**

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

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	2	-	3	2	7	-	-	-	5	21
45-49	67	10	31	34	21	41	10	4	4	26
50-54	521	982	1,146	975	1,243	1,109	1,187	904	1,135	1,146
55-59	592	392	28	46	35	33	139	4	5	47
60-64	315	7	36	62	87	24	35	365	38	45
65-69	16	24	74	179	114	66	28	15	24	137
70-79	7	15	90	105	53	36	24	5	16	73
80-89	-	-	6	-	-	1	-	-	-	0
>89	0	-	5	0	-	1	0	-	-	3
	1,520	**1,429**	**1,418**	**1,403**	**1,560**	**1,311**	**1,423**	**1,297**	**1,227**	**1,499**

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

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	0	-	-	-	-	-	-
1,000-1,199	-	-	-	2	5	-	-	-	5	21
1,200-1,399	59	-	-	9	4	0	120	1	0	-
1,400-1,599	1,120	1,382	1,191	1,011	1,271	1,149	1,204	1,262	1,135	1,182
1,600-1,799	304	5	20	30	15	6	9	6	5	6
1,800-1,999	15	23	67	206	122	87	40	16	26	127
2,000-2,499	19	17	110	131	121	56	46	10	48	115
2,500-2,999	1	1	5	6	8	12	1	2	6	29
3,000-3,999	1	1	19	8	12	0	3	-	1	12
>3,999	-	-	6	-	-	1	-	-	0	7
	1,520	**1,429**	**1,418**	**1,403**	**1,560**	**1,311**	**1,423**	**1,297**	**1,227**	**1,499**

Dissostichus eleginoides - Toothfish

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
800-999	1,106	1,368	1,134	943	1,221	1,085	1,184	900	1,123	1,023
1,000-1,499	301	-	-	-	-	-	120	353	-	-
	1,407	**1,368**	**1,134**	**943**	**1,221**	**1,085**	**1,303**	**1,252**	**1,123**	**1,023**

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

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
50-54	516	976	1,134	943	1,221	1,085	1,184	900	1,123	1,023
55-59	590	392	-	-	-	-	120	-	-	-
60-64	301	-	-	-	-	-	-	353	-	-
	1,407	**1,368**	**1,134**	**943**	**1,221**	**1,085**	**1,303**	**1,252**	**1,123**	**1,023**

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

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1,200-1,399	-	-	-	-	-	-	120	-	-	-
1,400-1,599	1,106	1,368	1,134	943	1,221	1,085	1,184	1,252	1,123	1,023
1,600-1,799	301	-	-	-	-	-	-	-	-	-
	1,407	**1,368**	**1,134**	**943**	**1,221**	**1,085**	**1,303**	**1,252**	**1,123**	**1,023**

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
600-799	8	10	33	45	31	44	10	7	5	35
800-999	7	6	39	55	47	40	13	6	18	175
1,000-1,499	24	15	102	223	119	64	59	17	51	77
1,500-1,999	14	30	85	131	135	77	34	15	29	174
2,000-2,999	0	1	25	6	6	2	3	-	1	16
	54	**61**	**285**	**460**	**339**	**226**	**120**	**45**	**103**	**476**

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

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	2	-	3	2	7	-	-	-	5	21
45-49	8	10	31	34	21	41	10	4	4	26
50-54	5	6	12	32	22	24	4	5	12	123
55-59	2	-	28	46	35	33	19	4	5	47
60-64	14	7	36	62	87	24	35	12	38	45
65-69	16	24	74	179	114	66	28	15	24	137
70-79	7	15	90	105	53	36	24	5	16	73
80-89	-	-	6	-	-	1	-	-	-	0
>89	0	-	5	0	-	1	0	-	-	3
	54	**61**	**285**	**460**	**339**	**226**	**120**	**45**	**103**	**476**

Dissostichus eleginoides - Toothfish

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

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1,000-1,199	-	-	-	2	5	-	-	-	5	21
1,200-1,399	-	-	-	9	4	0	-	1	0	-
1,400-1,599	14	14	58	68	51	64	20	10	11	159
1,600-1,799	3	5	20	30	15	6	9	6	5	6
1,800-1,999	15	23	67	206	122	87	40	16	26	127
2,000-2,499	19	17	110	131	121	56	46	10	48	115
2,500-2,999	1	1	5	6	8	12	1	2	6	29
3,000-3,999	1	1	19	8	12	0	3	-	1	12
>3,999	-	-	6	-	-	1	-	-	0	7
	54	**61**	**285**	**460**	**339**	**226**	**120**	**45**	**103**	**476**

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
600-799	59	-	-	0	-	-	-	-	-	-
	59	**-**	**-**	**0**	**-**	**-**	**-**	**-**	**-**	**-**

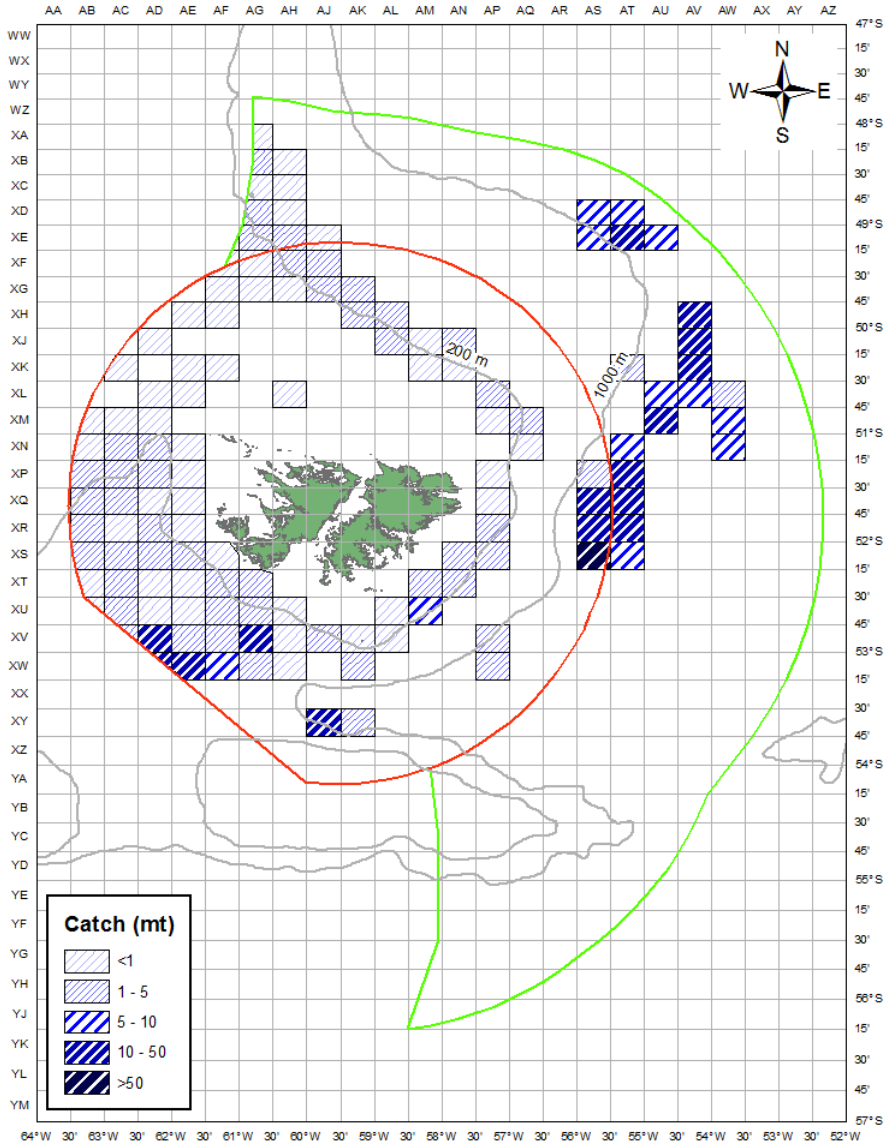
Table K.14 Total catch (tonnes) of potting vessels by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
45-49	59	-	-	-	-	-	-	-	-	-
50-54	-	-	-	0	-	-	-	-	-	-
	59	**-**	**-**	**0**	**-**	**-**	**-**	**-**	**-**	**-**

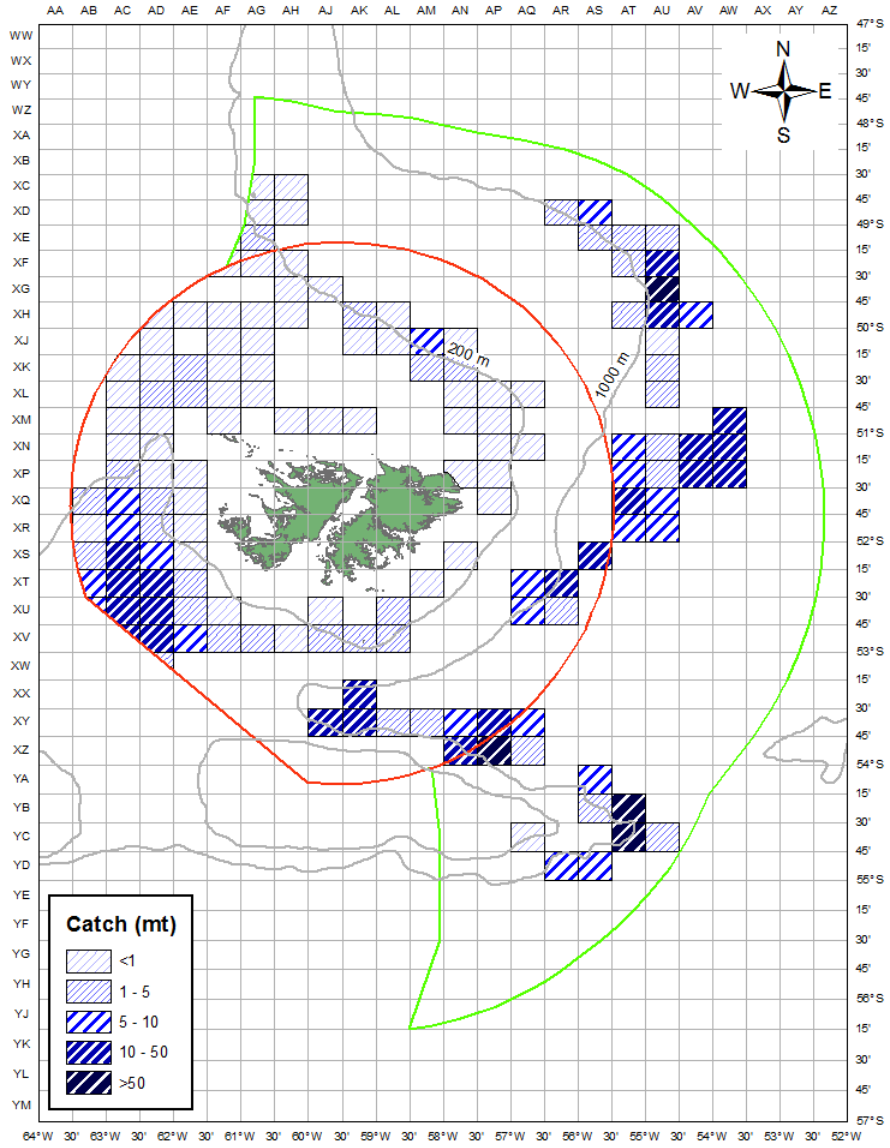
Table K.15 Total catch (tonnes) of potting vessels by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	0	-	-	-	-	-	-
1,200-1,399	59	-	-	-	-	-	-	-	-	-
	59	**-**	**-**	**0**	**-**	**-**	**-**	**-**	**-**	**-**

Dissostichus eleginoides
Second Season 2016 (01 Jul to 31 Dec)1.4

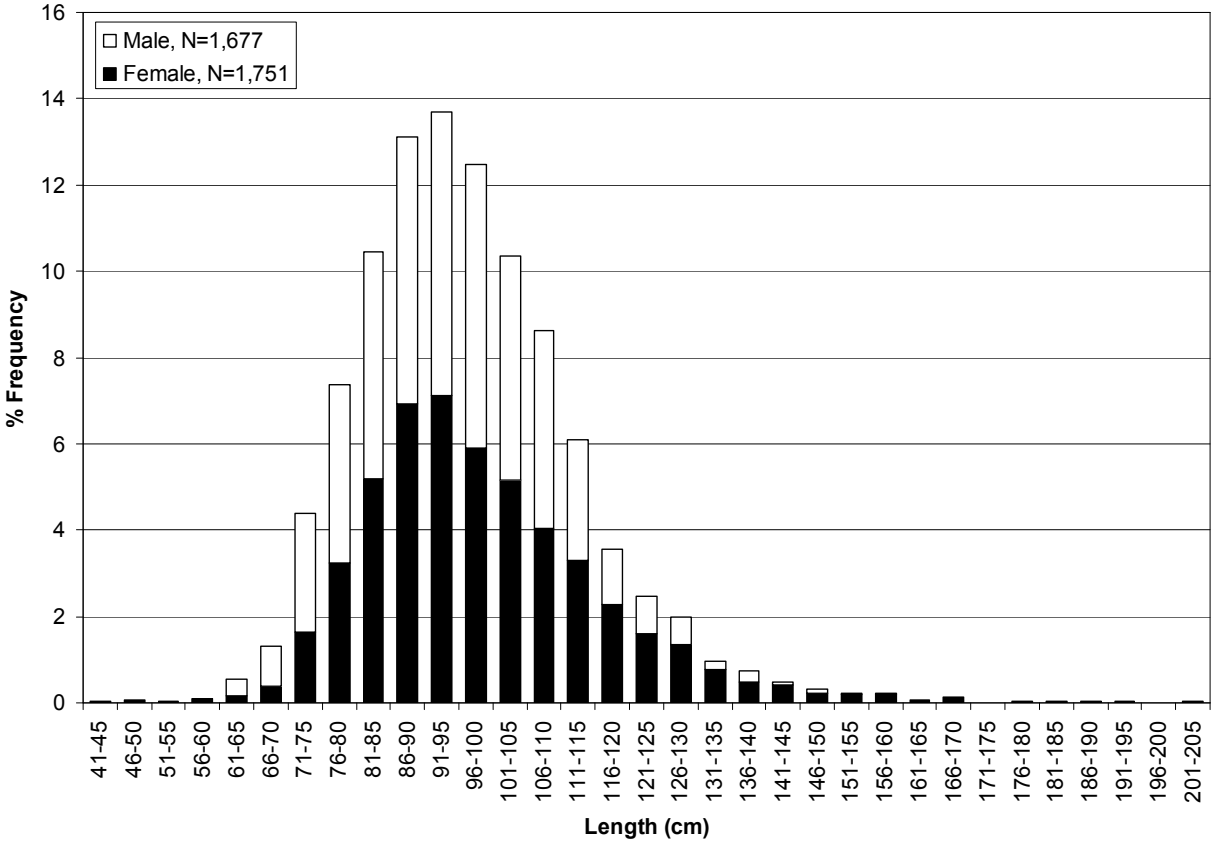


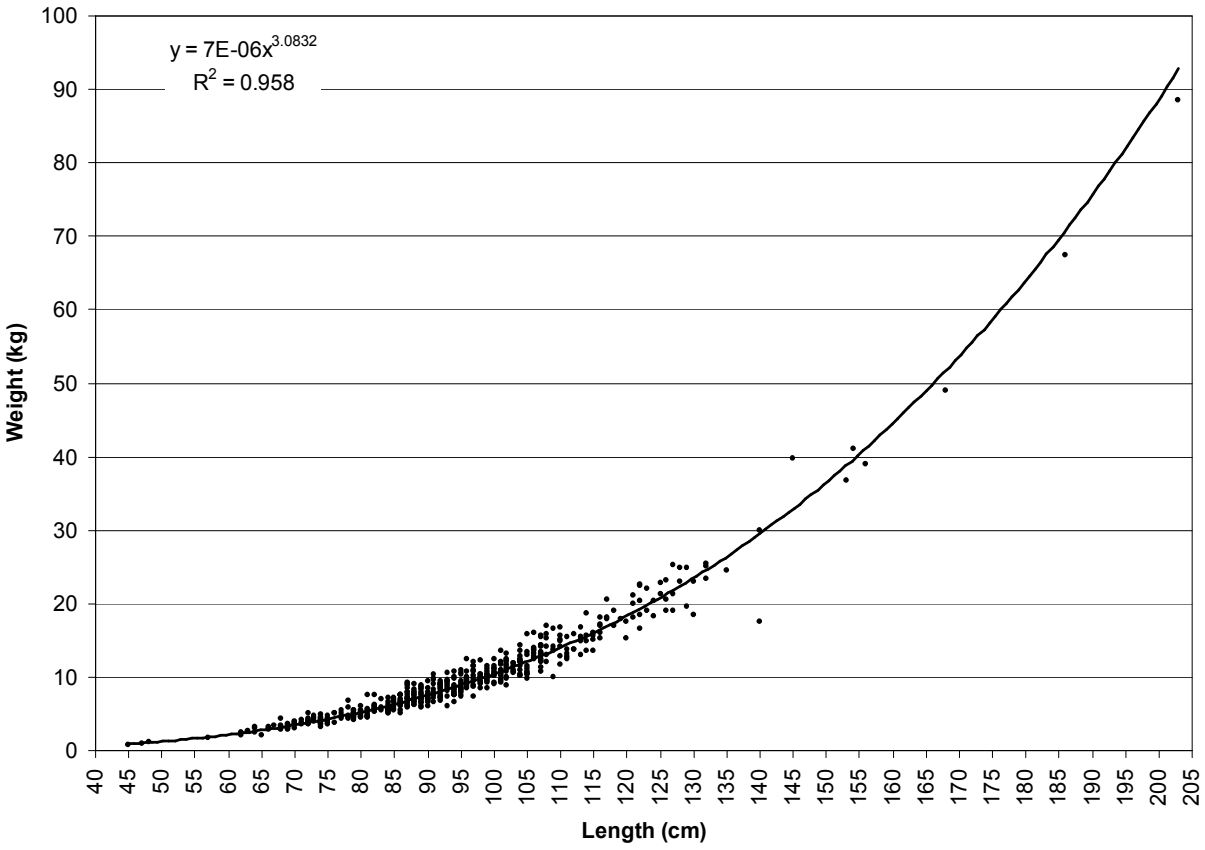
Dissostichus eleginoides
First Season 2016 (01 Jan to 30 Jun)



Dissostichus eleginoides - Toothfish

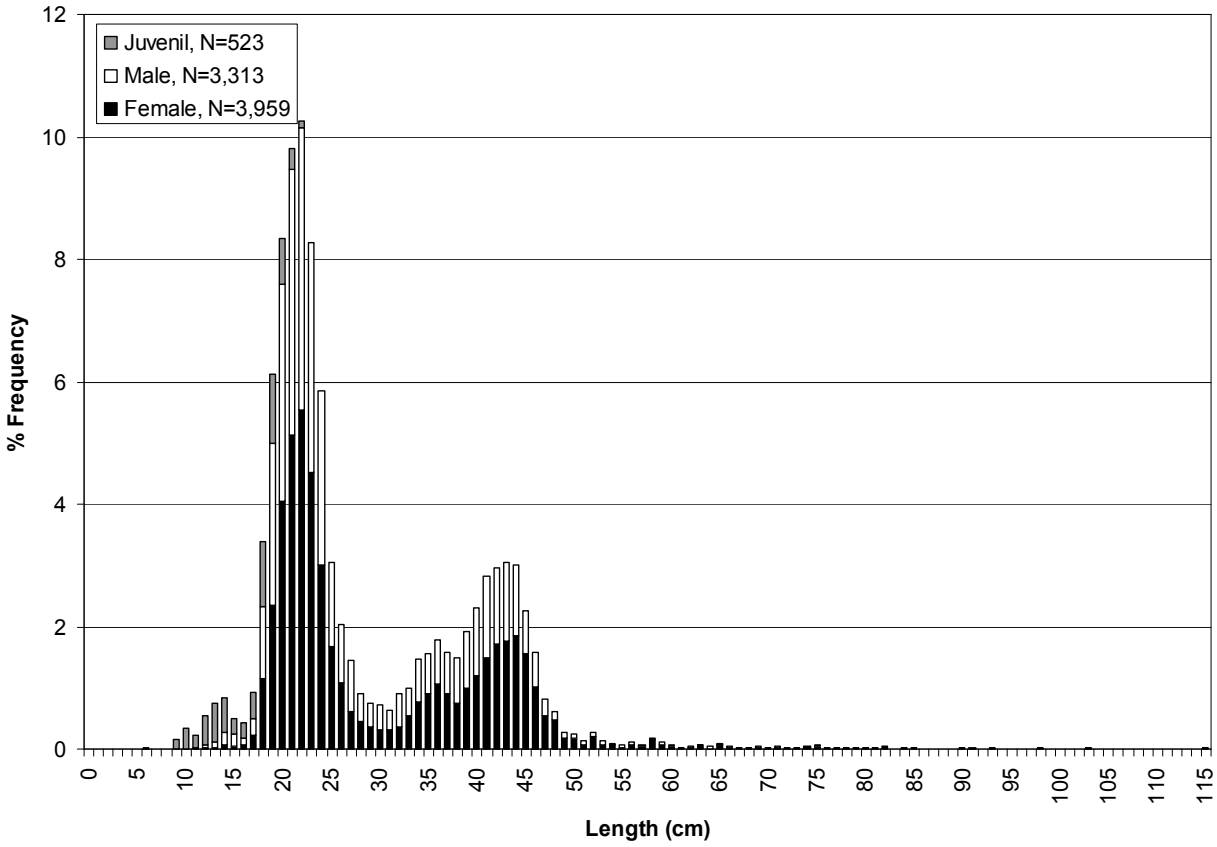
Length– frequency distribution and length-weight relationship in longliner fleet in 2016

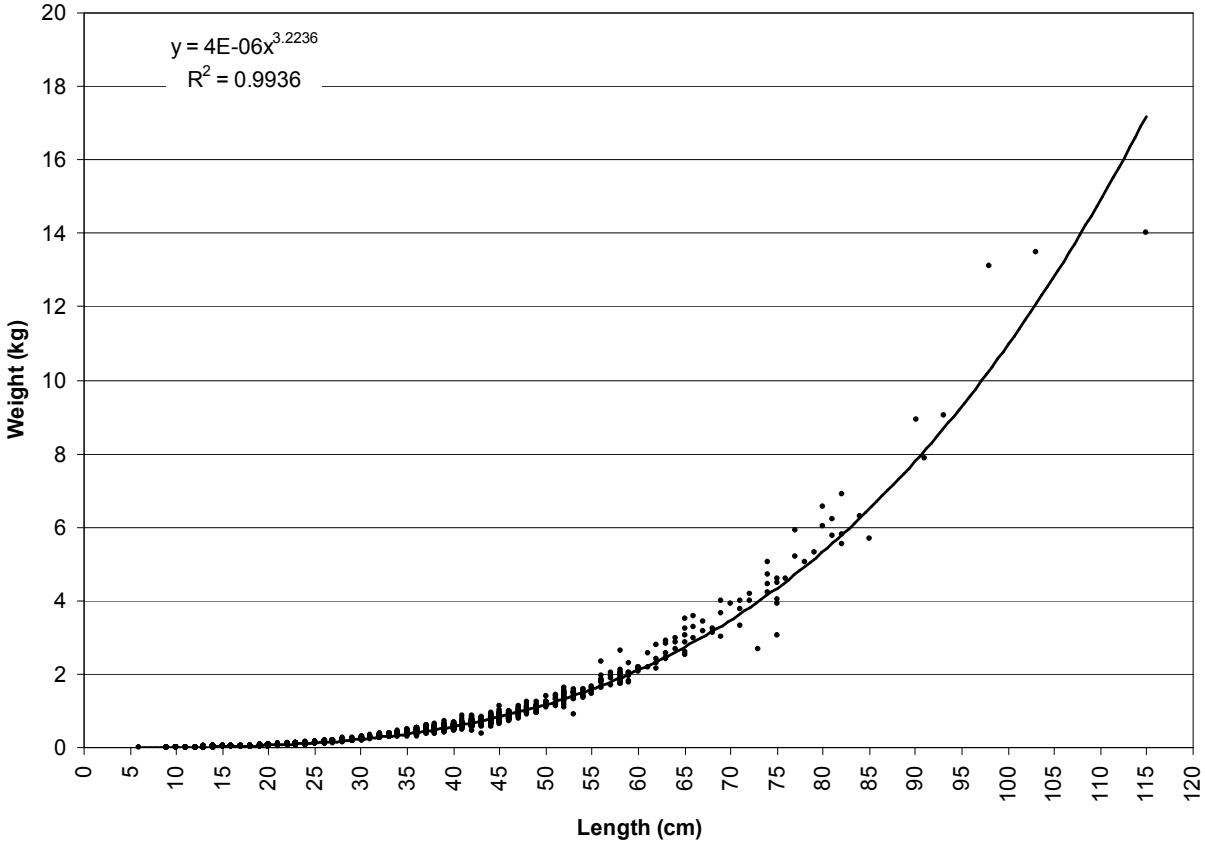




Dissostichus eleginoides - Toothfish

Length– frequency distribution and length-weight relationship in trawler fleet in 2016





Rajidae - Skates and Rays

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
LO	42	28	22	23	55	32	78	32	28	29
PO	-	-	-	0	-	-	-	-	-	-
TR	5,626	3,833	5,851	5,868	6,915	6,622	5,854	5,523	6,365	5,868
	5,669	**3,861**	**5,873**	**5,891**	**6,970**	**6,654**	**5,932**	**5,555**	**6,393**	**5,897**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	108	120	96	43	185	15	278	5	8	592
February	173	200	179	167	360	216	288	125	154	440
March	179	142	178	168	126	511	219	144	119	129
April	176	187	304	333	588	320	413	208	184	225
May	190	189	555	474	878	397	428	394	348	658
June	124	95	662	338	398	404	267	267	693	668
July	394	516	570	323	849	703	394	289	878	522
August	2,004	1,238	1,330	1,650	1,446	1,568	1,227	1,373	1,110	625
September	1,109	668	851	1,146	992	802	867	1,479	1,359	585
October	722	220	407	326	691	1,099	868	560	829	1,201
November	141	119	511	418	317	438	369	523	330	120
December	350	167	229	505	141	181	313	188	380	132
	5,669	**3,861**	**5,873**	**5,891**	**6,970**	**6,654**	**5,932**	**5,555**	**6,393**	**5,897**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	12	-	-	-	-	-	-	3	-	-
ES	1,745	1,518	2,665	2,514	2,843	2,490	2,284	2,244	3,637	3,206
FK	675	420	902	912	1,837	1,332	1,742	1,120	837	658
KR	3,203	1,899	2,262	2,394	2,219	2,797	1,884	2,174	1,894	1,995
RU	-	-	-	0	-	-	-	-	-	-
UK	34	25	44	71	71	35	23	13	24	38
	5,669	**3,861**	**5,873**	**5,891**	**6,970**	**6,654**	**5,932**	**5,555**	**6,393**	**5,897**

Rajidae - Skates and Rays

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	1,235	957	1,214	1,133	616	731	449	592	220	167
800-999	2,276	1,409	1,885	1,804	2,016	2,370	1,749	1,899	2,755	2,866
1,000-1,499	1,646	1,195	2,102	2,156	2,817	2,263	2,682	2,080	2,537	1,751
1,500-1,999	461	249	581	758	979	753	588	639	743	983
2,000-2,999	51	52	91	40	119	47	67	58	138	72
>2,999	-	-	-	-	424	489	396	287	-	59
	5,669	**3,861**	**5,873**	**5,891**	**6,970**	**6,654**	**5,932**	**5,555**	**6,393**	**5,897**

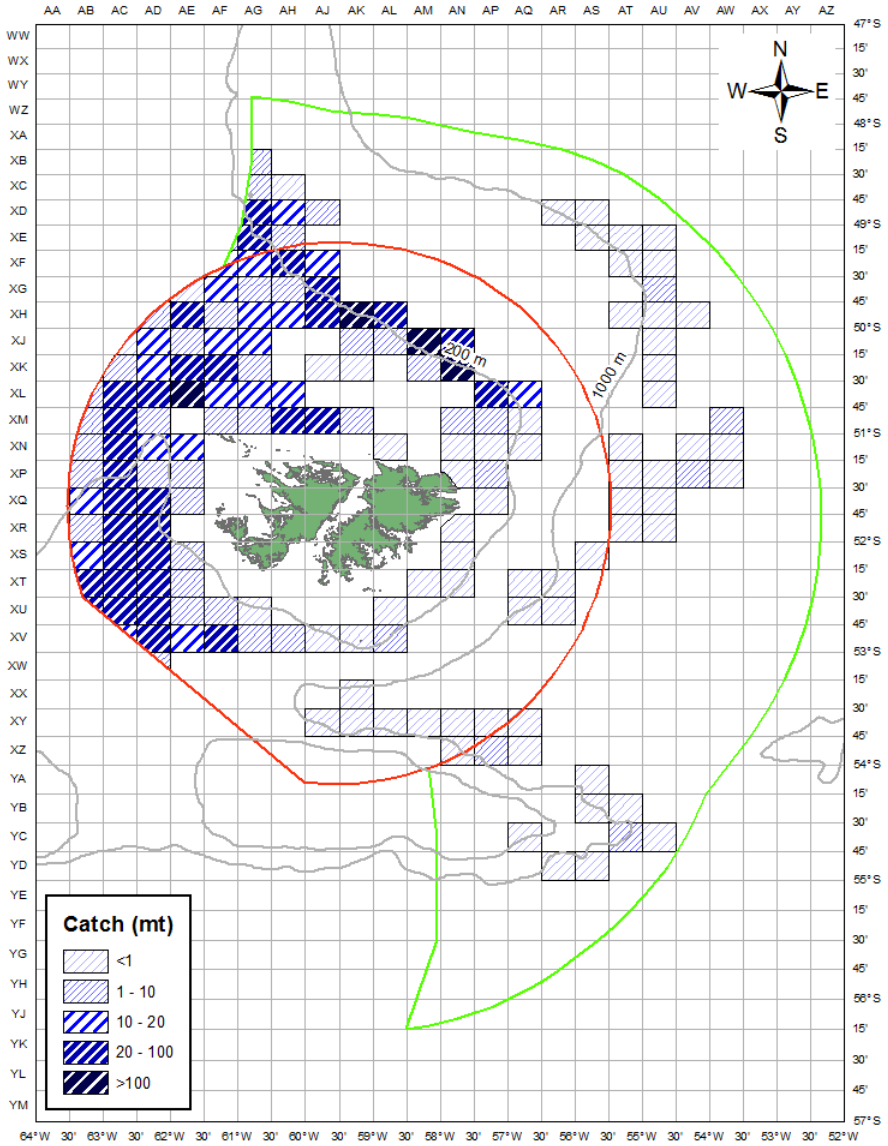
Table L.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	24	48	76	18	54	-	19	1	46	46
45-49	1,038	856	990	782	419	371	370	232	253	209
50-54	1,974	1,159	1,574	2,010	2,064	2,636	1,746	2,203	2,543	2,610
55-59	989	496	805	542	984	822	934	337	684	471
60-64	779	665	1,116	953	1,209	1,025	1,208	1,288	1,517	1,253
65-69	608	310	468	824	802	619	632	589	570	736
70-79	254	317	842	762	1,014	687	627	614	776	510
80-89	1	6	-	-	-	0	-	-	-	1
>89	1	2	1	0	426	495	396	291	4	62
	5,669	**3,861**	**5,873**	**5,891**	**6,970**	**6,654**	**5,932**	**5,555**	**6,393**	**5,897**

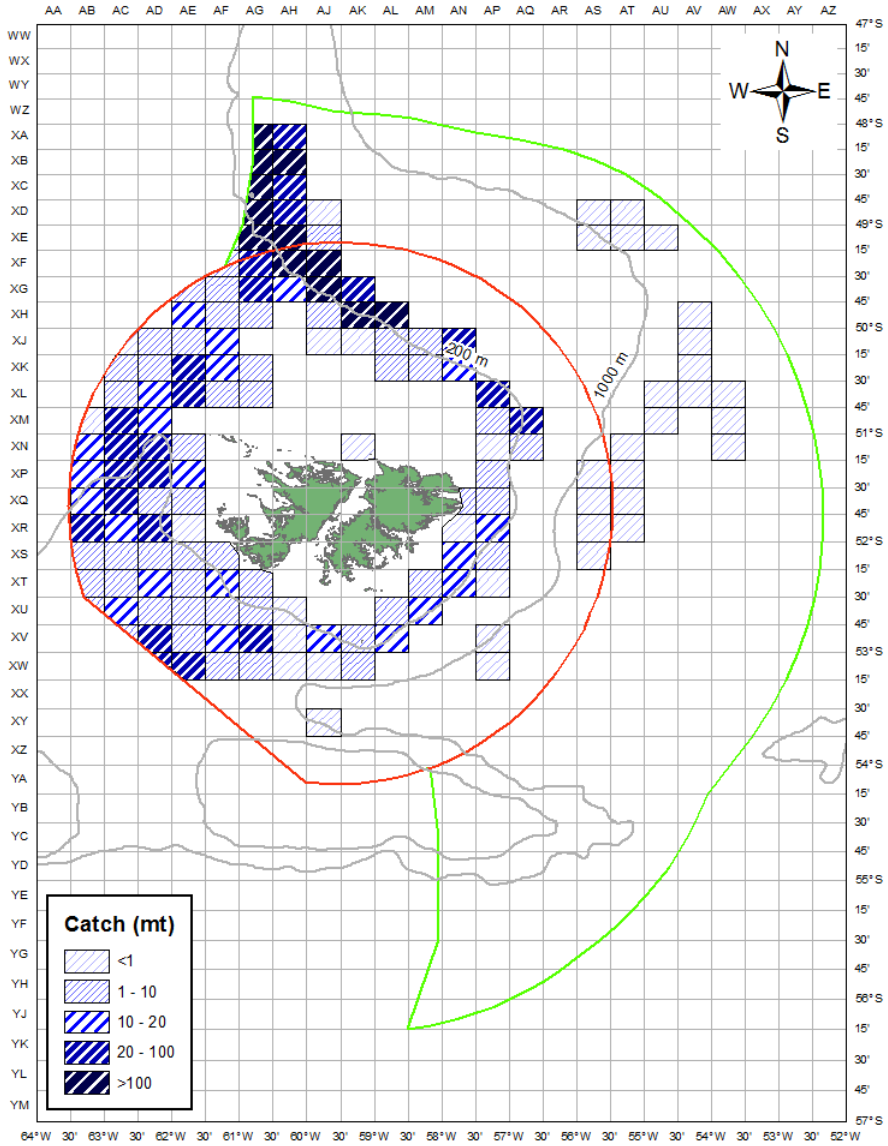
Table L.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	0	-	-	24	-	-	-
1,000-1,199	-	-	-	18	35	-	19	1	46	46
1,200-1,399	57	50	52	40	42	49	62	20	19	-
1,400-1,599	529	313	556	305	489	568	491	545	900	923
1,600-1,799	149	264	437	689	562	648	611	451	712	711
1,800-1,999	979	533	894	1,215	1,528	1,414	1,360	774	1,142	1,039
2,000-2,499	1,025	913	1,837	1,451	2,137	1,362	1,464	1,848	1,477	955
2,500-2,999	2,845	1,714	1,962	2,062	1,558	2,044	1,412	1,563	1,930	2,003
3,000-3,999	82	67	134	111	612	566	486	354	158	165
>3,999	1	6	1	-	7	4	3	1	8	55
	5,669	**3,861**	**5,873**	**5,891**	**6,970**	**6,654**	**5,932**	**5,555**	**6,393**	**5,897**

Rajidae
First Season 2016 (01 Jan to 30 Jun)



Rajidae
Second Season 2016 (01 Jul to 31 Dec)



Patagonotothen ramsayi—Rock Cod

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PO	-	-	-	0	-	-	-	-	-	-
TR	30,386	60,601	58,236	76,451	55,705	63,510	32,435	56,693	29,085	7,008
	30,386	**60,601**	**58,236**	**76,451**	**55,705**	**63,510**	**32,435**	**56,693**	**29,085**	**7,008**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	563	2,918	2,746	892	3,521	112	743	-	32	933
February	3,108	7,170	6,061	5,674	5,993	3,086	3,197	560	1,780	1,024
March	3,659	9,907	4,961	10,163	2,502	9,016	2,847	1,251	1,527	750
April	3,808	8,356	9,532	13,402	6,205	10,051	3,837	1,170	4,442	1,163
May	4,431	8,522	11,050	11,580	11,150	14,240	2,751	9,128	9,544	525
June	553	2,290	3,136	5,281	4,578	5,500	922	5,940	3,806	124
July	2,459	1,832	2,801	4,449	2,571	3,680	675	8,922	390	224
August	3,428	4,116	2,820	4,027	3,697	4,945	2,935	7,334	756	922
September	3,747	4,824	3,811	6,007	4,036	3,288	4,898	5,984	729	986
October	2,661	5,364	6,637	8,929	7,536	5,352	5,086	7,925	1,093	235
November	1,562	4,477	3,239	2,064	2,889	1,877	2,111	5,997	841	72
December	407	826	1,442	3,984	1,028	2,361	2,435	2,482	4,145	51
	30,386	**60,601**	**58,236**	**76,451**	**55,705**	**63,510**	**32,435**	**56,693**	**29,085**	**7,008**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	18	-	-	-	-	-	-	0	-	-
ES	18,830	41,276	42,580	52,869	39,646	52,389	25,024	45,833	23,985	3,564
FK	10,711	18,440	14,610	22,388	15,051	10,754	7,079	10,314	4,605	3,191
JP	-	-	-	0	-	-	-	-	-	-
KR	7	62	110	337	215	255	305	511	170	119
PA	104	-	-	-	-	-	-	-	-	-
RU	-	-	-	0	-	-	-	-	-	-
UK	716	824	937	857	794	111	28	36	325	133
	30,386	**60,601**	**58,236**	**76,451**	**55,705**	**63,510**	**32,435**	**56,693**	**29,085**	**7,008**

Patagonotothen ramsayi—Rock Cod

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	-	-	-	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	2,405	3,862	3,907	5,439	3,263	5,020	3,247	3,504	2,052	176
800-999	3,349	8,775	9,910	9,036	8,051	8,275	4,520	9,916	4,384	1,139
1,000-1,499	15,657	34,620	33,983	43,221	30,025	35,142	19,092	29,919	15,803	2,348
1,500-1,999	5,563	8,473	7,056	13,973	12,488	13,461	4,639	11,617	5,342	1,768
2,000-2,999	3,395	4,871	3,380	4,782	1,864	1,586	921	1,727	1,504	1,576
>2,999	18	-	-	0	14	26	16	10	-	0
	30,386	**60,601**	**58,236**	**76,451**	**55,705**	**63,510**	**32,435**	**56,693**	**29,085**	**7,008**

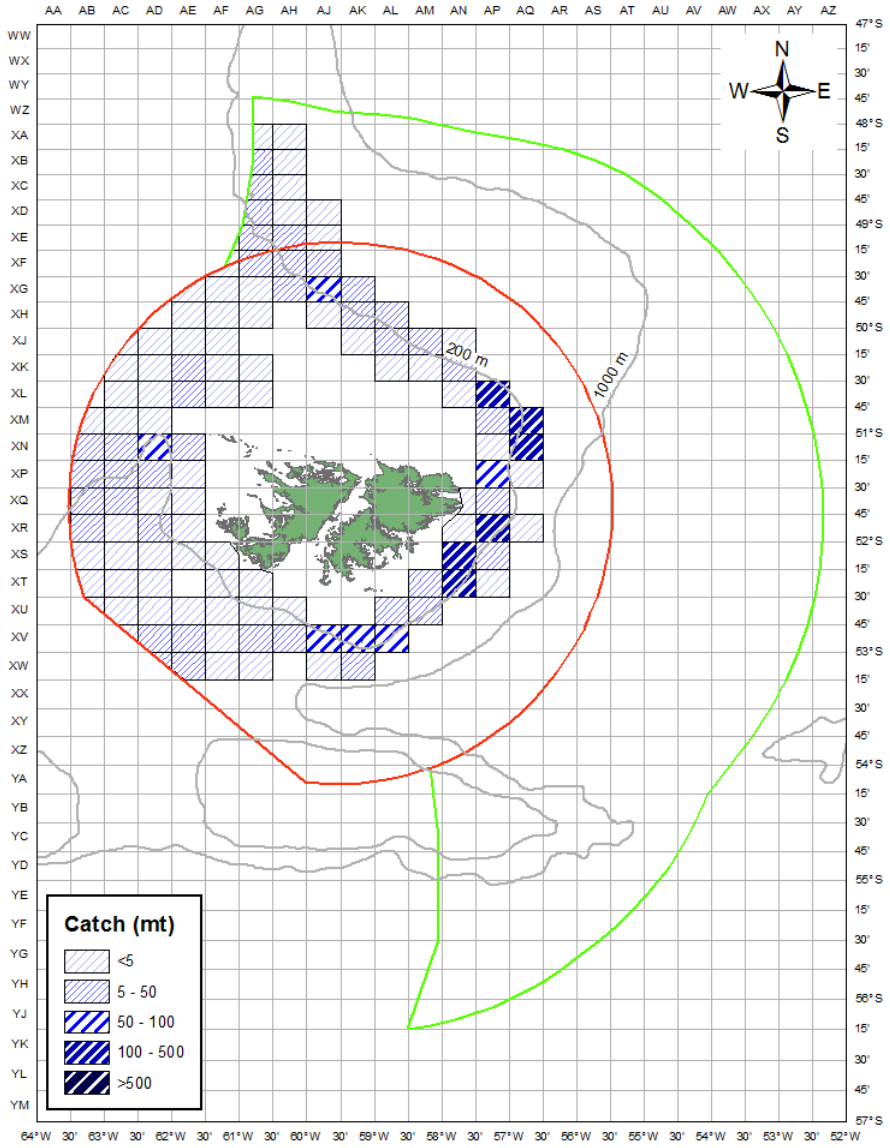
Table M.5 Total catch (tonnes) by length overall (m) (LOA) and year

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	153	447	581	406	1,320	-	423	206	341	32
45-49	3,461	6,334	6,985	6,398	4,042	5,446	3,589	3,586	2,304	390
50-54	2,285	3,238	3,382	4,559	4,022	6,086	2,357	6,457	2,313	615
55-59	3,344	11,264	8,982	14,261	9,111	8,607	5,175	5,094	2,776	511
60-64	8,463	17,866	17,626	19,211	15,229	17,588	10,483	17,822	9,724	1,701
65-69	8,032	10,892	11,095	18,160	12,406	14,543	6,245	12,916	6,317	1,617
70-79	4,136	9,922	9,318	13,009	8,946	10,628	3,926	10,176	4,893	1,523
80-89	235	359	129	127	463	308	111	161	150	209
>89	276	280	138	320	167	302	125	276	268	410
	30,386	**60,601**	**58,236**	**76,451**	**55,705**	**63,510**	**32,435**	**56,693**	**29,085**	**7,008**

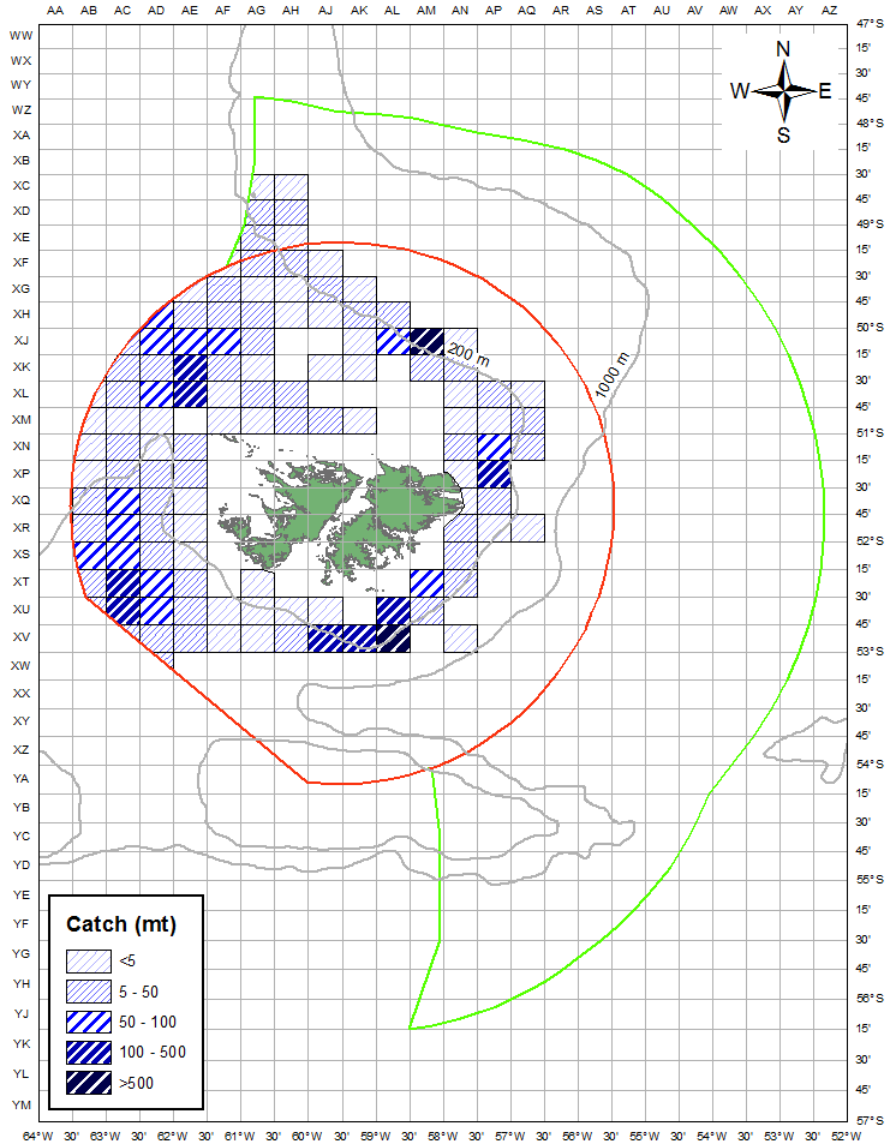
Table M.6 Total catch (tonnes) by brake horsepower (BHP) and year

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	0	-	-	777	-	-	-
1,000-1,199	-	-	-	406	829	-	423	206	341	32
1,200-1,399	1,590	1,922	1,278	1,759	1,116	2,358	1,442	1,829	804	-
1,400-1,599	3,674	6,287	7,987	7,410	6,276	7,034	2,940	8,277	3,326	862
1,600-1,799	5,181	11,351	9,680	11,480	6,858	8,410	4,838	6,066	2,515	592
1,800-1,999	10,556	20,096	19,088	30,393	20,282	24,136	10,812	17,336	9,710	1,888
2,000-2,499	4,833	14,870	15,482	18,777	16,983	17,959	8,803	18,926	9,548	1,662
2,500-2,999	370	341	241	573	571	2,011	1,345	2,321	1,125	546
3,000-3,999	3,618	5,056	4,050	5,192	2,056	1,140	746	1,345	1,412	1,091
>3,999	565	679	430	462	733	463	309	387	303	333
	30,386	**60,601**	**58,236**	**76,451**	**55,705**	**63,510**	**32,435**	**56,693**	**29,085**	**7,008**

Patagonotothen ramsayi
Second Season 2016 (01 Jul to 31 Dec)

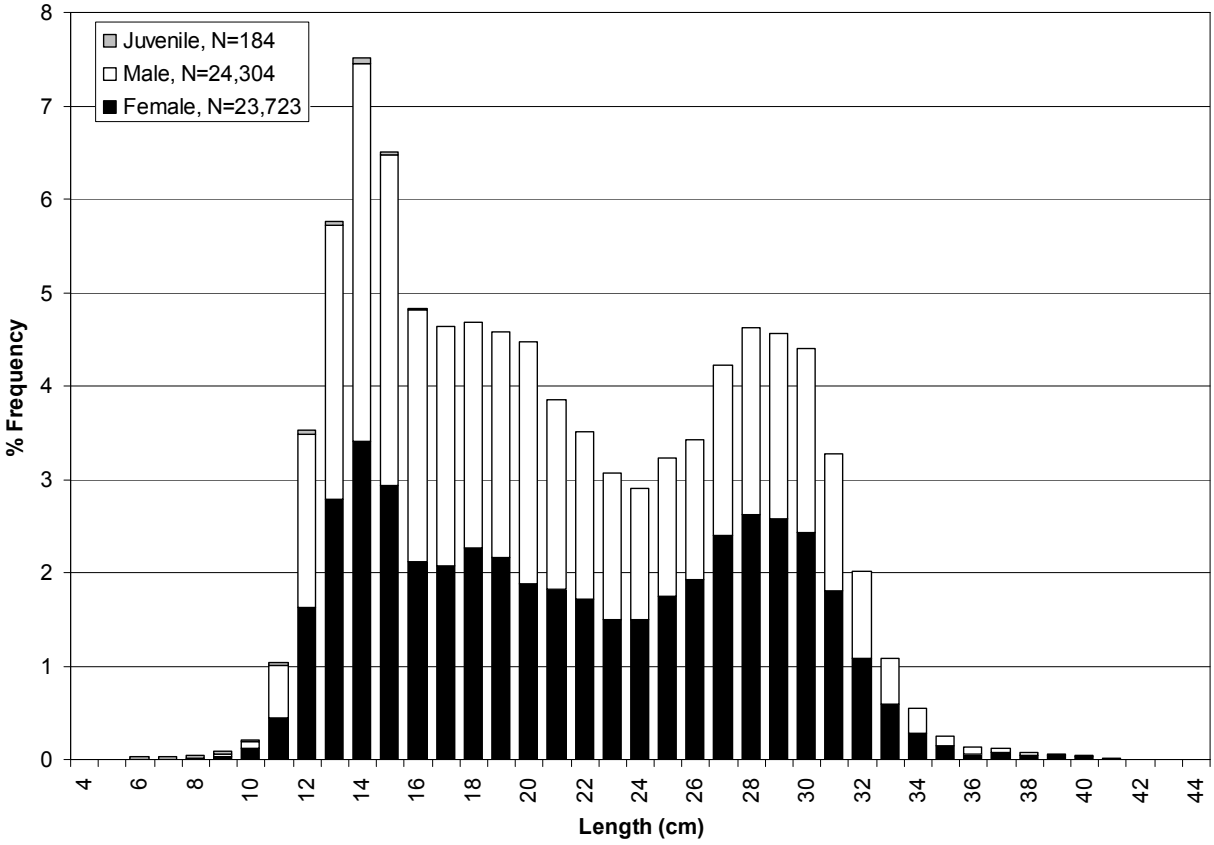


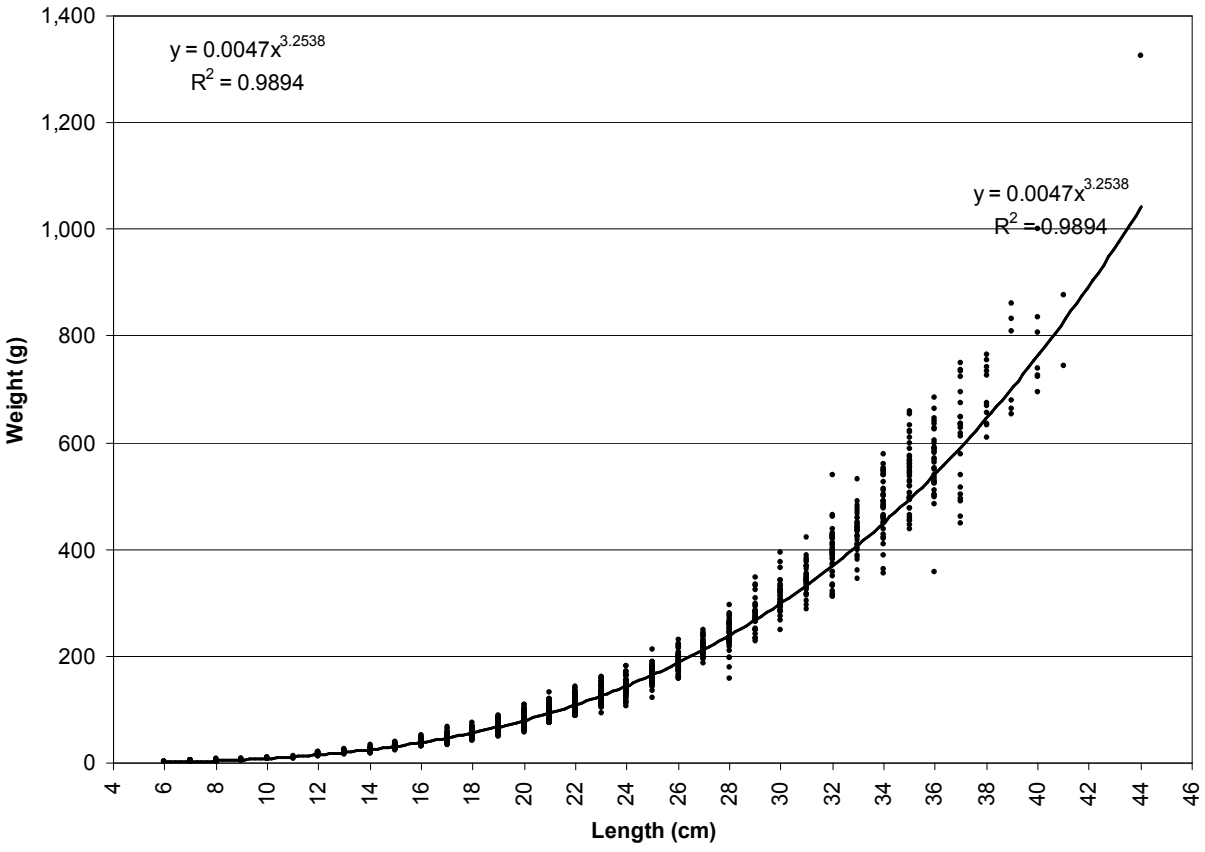
Patagonotothen ramsayi
First Season 2016 (01 Jan to 30 Jun)



Patagonotothen ramsayi—Rock Cod

Length– frequency distribution and length-weight relationship in 2016





Others

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

VESSEL TYPE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
LO	90	115	98	91	125	99	89	76	99	101
PO	26	-	-	1	-	-	6	7	5	-
TR	1,382	1,365	1,130	600	2,264	468	920	281	603	2,489
	1,498	**1,479**	**1,228**	**692**	**2,389**	**567**	**1,014**	**365**	**706**	**2,590**

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

MONTH	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
January	25	74	59	14	27	17	43	11	12	91
February	230	109	700	36	68	24	216	75	29	355
March	354	159	171	71	32	29	178	45	54	156
April	44	72	55	77	65	37	106	32	78	259
May	77	60	33	14	349	26	27	11	16	120
June	5	31	18	6	921	10	21	35	5	68
July	35	341	9	17	572	26	10	32	22	45
August	88	243	21	178	89	104	184	26	66	89
September	87	38	56	118	73	145	45	44	109	46
October	114	30	45	20	126	63	85	20	89	51
November	425	96	41	99	40	54	75	22	100	583
December	13	226	21	41	26	32	25	11	125	727
	1,498	**1,479**	**1,228**	**692**	**2,389**	**567**	**1,014**	**365**	**706**	**2,590**

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

FISHING FLEET	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
CL	14	-	-	-	-	-	-	10	-	-
ES	647	1,166	970	318	2,008	258	261	114	475	2,266
FK	631	300	233	320	353	295	740	235	195	310
JP	1	4	2	38	5	0	-	-	-	-
KR	86	7	14	10	23	11	9	6	19	3
PA	70	-	-	-	-	-	-	-	-	-
RU	-	-	-	1	-	-	-	-	-	-
UK	48	2	9	4	0	3	5	0	17	12
	1,498	**1,479**	**1,228**	**692**	**2,389**	**567**	**1,014**	**365**	**706**	**2,590**

Others

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

GRT	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<400	-	-	-	-	-	-	6	7	5	-
400-599	-	-	-	-	-	-	-	-	-	-
600-799	96	87	11	66	97	16	20	27	16	80
800-999	185	310	186	167	184	159	267	81	262	1,368
1,000-1,499	711	172	165	209	1,863	161	604	132	264	712
1,500-1,999	255	860	827	203	227	187	83	86	125	372
2,000-2,999	249	46	36	9	12	43	34	28	34	58
>2,999	1	4	2	38	6	0	-	3	-	-
	1,498	**1,479**	**1,228**	**692**	**2,389**	**567**	**1,014**	**365**	**706**	**2,590**

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

LOA	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<45	6	28	4	0	6	-	6	7	30	539
45-49	144	250	54	67	107	32	20	7	33	70
50-54	103	106	115	133	157	124	251	98	213	615
55-59	84	30	76	77	104	73	98	6	19	249
60-64	649	37	81	76	1,764	66	366	100	218	445
65-69	216	835	803	119	148	145	219	94	110	535
70-79	266	182	86	177	95	105	48	25	70	119
80-89	10	2	1	2	1	16	3	9	2	3
>89	20	9	10	41	6	6	4	19	11	16
	1,498	**1,479**	**1,228**	**692**	**2,389**	**567**	**1,014**	**365**	**706**	**2,590**

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

BHP	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<1,000	-	-	-	1	-	-	6	7	5	-
1,000-1,199	-	-	-	0	1	-	0	-	25	539
1,200-1,399	29	38	-	3	1	2	9	1	1	-
1,400-1,599	196	328	173	194	175	133	278	107	203	793
1,600-1,799	94	5	45	83	71	7	334	91	78	365
1,800-1,999	181	841	792	138	181	173	259	77	117	504
2,000-2,499	570	190	156	209	1,920	180	78	44	198	201
2,500-2,999	149	11	21	13	23	27	13	22	33	124
3,000-3,999	268	42	36	9	11	25	32	3	37	51
>3,999	11	25	4	40	6	20	6	12	9	13
	1,498	**1,479**	**1,228**	**692**	**2,389**	**567**	**1,014**	**365**	**706**	**2,590**

Others

Table N.7 Total catch (tonnes) of others by species in 2016

Common name	Latin Name	Catch mt
Blue Antimora	*Antimora rostrata*	24
Butterfish	*Stromateus brasiliensis*	21.1
Cataetyx messieri	*Cataetyx messieri*	0
Chinese Baby Face	*Neophrynichthys marmoratus*	0
Dogfish, Spurdog	*Squalus acanthias*	55.5
Dogfish/Catshark	*Schroederichthys bivius*	6
Eelpout	*Iluocoetes fimbriatus*	0.4
Falkland Herring	*Sprattus fuegensis*	4.7
Flat fish	*Mancopstta tricholepsis*	0.2
Frogmouth	*Cottoperca gobio*	41.5
Greater Hooked Squid	*Moroteuthis ingens*	15.1
Greenland Shark	*Somniiosus microcephalus*	3.2
Hagfish	*Myxinidae sp.*	0
Horsefish	*Congiopodus peruvianus*	0
Icefish	*Champsocephalus esox*	14.6
Lobster Krill	*Mundia gregaria*	13.7
Moonfish	*Lampris immaculatus*	1.2
Mullet	*Eleginops maclovinus*	0
Myctophid	*Myctophidae sp.*	0.1
Notothenid	*Patagonotothen tessellata*	12
Octopus	*Octopoda sp.*	2.9
Physiculus marginatus	*Physiculus marginatus*	1.7
Porbeagle	*Lamna nasus*	3.2
Red Fish	*Sebastes oculatus*	3.9
Sculpin	*Cottunculus granulosus*	0.1
Sea Urchin	*Strongylocentotus sp.*	0.1
Slender Tuna	*Allothunnus fallai*	19.8
Spiny Dogfish	*Squalidae sp.*	14
Spongiformes	*Spongiformes sp.*	5.7
Stone King Crab	*Lithodes maia*	0.3
ZZOthers	*Others*	5.5
		270.5

FALKLAND ISLANDS COMMERCIAL FISH & SHELLFISH