



Fish and invertebrate bycatch in New Zealand deepwater fisheries from 1990–91 until 2013–14

New Zealand Aquatic Environment and Biodiversity Report No. 181

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ISSN 1179-6480 (online)
ISBN 978-1-77665-509-0 (online)

February 2017



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EXECUTIVE SUMMARY

Anderson, O.F. (2017). Fish and invertebrate bycatch in New Zealand deepwater fisheries from 1990–91 until 2013–14.

New Zealand Aquatic Environment and Biodiversity Report No. 181. 75 p.

Commercial catch-effort data and fisheries observer records of catch by species provided by the Ministry for Primary Industries (MPI) were used to estimate the weight of individual fish and invertebrate species bycatch in each fishing year from 1990–91 to 2013–14 for the following Tier-1 deepwater fisheries: the arrow squid (SQU), hoki/hake ling (HOK/HAK/LIN), southern blue whiting (SBW), orange roughy (ORH), oreo (OEO), and scampi (SCI) trawl fisheries; and the ling (LIN) longline fishery. For the jack mackerel (JMA) fishery the period covered was limited to 2002–03 to 2013–14, to match the period examined in the more detailed assessment of bycatch and discards in this fishery (Anderson et al. 2017).

The estimation process for the jack mackerel trawl fishery was stratified according to standardised areas as defined in the 2015 Aquatic Environment and Biodiversity Annual Review (Ministry for Primary Industries 2016), and estimates of precision were calculated using bootstrap methods. Bootstrap-based precision estimates were also calculated for the hoki, hake, ling trawl fishery to 2012–13, the ling longline fishery to 2011–12, and the arrow squid trawl fishery to 2010–11. For the remaining fisheries no stratification was used and no estimates of precision were calculated.

Summary tables were made for each fishery, and for all fisheries combined, to provide an easy reference for examining temporal changes in the bycatch of each species or species group caught. This report should be used as a coarse filter to identify trends in bycatch weight that may be of concern for particular species for further investigation. Improvements in species identification, introduction of new codes, changes in observer recording practices or fishing effort can all have an effect on the apparent increase or decrease in the bycatch of some taxa and need to be considered when interpreting trends.

All of the fisheries examined showed measurable declines or increases in bycatch of certain species over time, and consistent declines or increases (statistically significant or otherwise) were seen for a few species across six or more of the eight fisheries. Those increasing were; deepsea skates (*Notoraja* spp.) (none significant), Baxters lantern dogfish (*Etomopterus baxteri*) (significant in two fisheries), pale ghost shark (*Hydrolagus bemisi*) (significant in three fisheries), and rough skates (*Zearaja nasuta*) (significant in one fishery). Those declining were; seal sharks (*Dalatias licha*) (significant in two fisheries) and skates (Rajidae and Arhynchobatidae) (significant in three fisheries). Care in interpretation of slope needs to be taken into account, especially for species with few instances of catch, and some trends are driven by greater specificity in observer reporting over time. For example, the increasing trends in rough skates and the decreasing trend in skates are likely to have been a result of greater specificity in identification, there are also known identification issues with deep water sharks, including seal sharks and baxters lantern dogfish (which MPI is attempting to address with a current research project). Overall, bycatch weights are highly variable across fisheries. The hoki, hake, ling trawl fishery had the highest bycatch weights in most years, while fisheries with low annual bycatch weights included the oreo, scampi, and southern blue whiting trawl fisheries, and the ling longline fishery. Weights of bycatch are a product of both the effort in the fishery and the rate of capture, so even though some fisheries, e.g. scampi, may have a high bycatch rate the weight of bycatch is relatively low due to relatively low effort in this fishery.

1. INTRODUCTION

This report was prepared as an output from the Ministry for Primary Industries project DAE2010-02 “Bycatch monitoring and quantification of deepwater stocks” and addresses the following Specific objective for year-5.

4. To provide annual estimates of bycatch for nine Tier-1 species fisheries (SQU, SCI, HAK, HOK, JMA, ORH, OEO, LIN, SBW).

The purpose of this research was to compile a list of all fish and invertebrate bycatch species in New Zealand deepwater fisheries, with estimates of annual catch weights, which could be relatively rapidly produced and regularly updated. This would allow early detection of any downward (or upward) trends in bycatch of individual species in all Tier-1 deepwater fisheries, not just in the single fishery typically examined in any one year. By fine-tuning these estimates for the fishery under closer examination in each year (in this year the jack mackerel trawl fishery) and providing estimates of precision, an overall picture of the annual bycatch of a large number of species, across each fishery, can be built up over multiple years—with increasing precision in each year.

This report provides the fourth iteration of this plan, updating the most recent report (Ballara 2015) which provided estimates with precision for the hoki, hake, ling and arrow squid trawl fisheries and the ling longline fishery, and only point estimates of annual bycatch for the remaining fisheries.

2. METHODS

Observer bycatch data were extracted from the MPI *cod* database for each of the Tier-1 species target fisheries (hoki/hake/ling trawl, jack mackerel trawl, orange roughy trawl, oreo trawl, southern blue whiting trawl, scampi trawl, arrow squid trawl, and ling longline) for the period 1990–91 to 2013–14. These data were subjected to the same error-checking procedures described for the jack mackerel trawl fishery in Anderson et al. (2017).

The total catch and frequency of capture of each bycatch species was examined in each fishery, and those species for which there was less than 1 t of estimated catch in at least one year were disregarded (except for the hoki/hake/ling fishery, reported on previously by Ballara (2015), which did not exclude any species). These species were disregarded because there is a high chance that such rare captures were the result of the species code being incorrectly recorded by the observer; the number excluded varies among fishery but was generally small (less than ten). Annual bycatch ratios for the remaining individual QMS and non-QMS species (fish and invertebrates) were then calculated for each fishery.

Commercial catch records were also obtained from the Ministry for Primary Industries for each fishery, groomed according to the procedures described in Anderson et al. (2017), then used to calculate annual effort (number of tows or longline sets) for each fishery.

For the fisheries without precision estimated, the annual species specific bycatch ratios were multiplied by the annual effort in the fishery, without stratification, to produce simple estimates of total annual bycatch without any estimates of precision. An indication of whether the bycatch of each species increased, decreased, or stayed relatively unchanged over time was calculated in the form of a slope coefficient for a loglinear regression fitted to the data. The number of species showing increases or decreases in catch over time for each fishery were noted, as were the number of species showing significant increases or decreases in catch.

For the fisheries with fine-tuned estimates, the procedure was similar but was extended to include an estimate of precision derived from an area-stratified bootstrapping procedure used for the combined

species groups (QMS, non-QMS, and invertebrates) (see, e.g., Anderson et al. 2017). This procedure rounds the estimates of total annual catch to the nearest 0.1 t and so species with less than this weight of catch in at least one year (variable among fisheries but generally less than ten) are excluded.

See Anderson et al. (2017) for a more detailed description of the general methodology used to extract and groom observer and commercial fishing return data, calculate bycatch ratios and annual weights, and estimate precision.

Tables were constructed for each fishery showing the annual estimated bycatch for each species and the slope coefficient. Where available for the fisheries using the fine-tuned approach, the CV for each estimate was also shown. A colour-coded summary table is also provided, in order to clearly indicate the species in each fishery with significantly declining or increasing catch weights.

3. RESULTS

Annual bycatch estimates for individual species in each of the nine Tier-1 fisheries are given in Tables 1 to 8. The following is a brief summary of these tables, including figures showing the annual bycatch of species showing the greatest increase and decrease over time.

Note that in some cases the apparent increase or decrease in bycatch of a species is likely to be due to improvements in species identification, or changes in observer recording practices, over time. For example, in the arrow squid fishery, recent bycatch of smooth red swimming crabs (*Nectocarcinus bennetti*) appears to be at the expense of bycatch of the similar-looking paddle crabs (*Ovalipes catharus*), and the increase in bycatch of certain starfish and crab species in the scampi trawl fishery may mostly reflect the introduction and uptake of new species codes in recent years. Where the possibility of these effects was likely for any species figured, it was noted on the figures or in the figure captions. For some species, e.g., slender jack mackerel, the changes in bycatch may reflect real changes in species abundance.

Arrow squid trawl fishery

- Of the 187 bycatch species examined, 50 have shown a decrease in catch over time and 137 an increase in catch; with 5 having shown a significant decrease and 21 a significant increase in catch.
- The species showing the greatest decline were paddle crabs (PAD), slender jack mackerel (*Trachurus murphyi*, JMM), and unspecified crab (CRB) (Figure 1a).
- The species showing the greatest increase were silver dory (*Cyttus novaezealandiae*, SDO), giant spider crab (*Jacquinotia edwardsii*, GSC), and smooth red swimming crab (NCB) (Figure 1a).
- The twelve most common bycatch species are shown in Figure 1b. The most commonly caught bycatch species were barracouta (*Thyrsites atun*, BAR), silver warehou (*Seriolella punctata*, SWA), and jack mackerels (*Trachurus* spp., JMA).

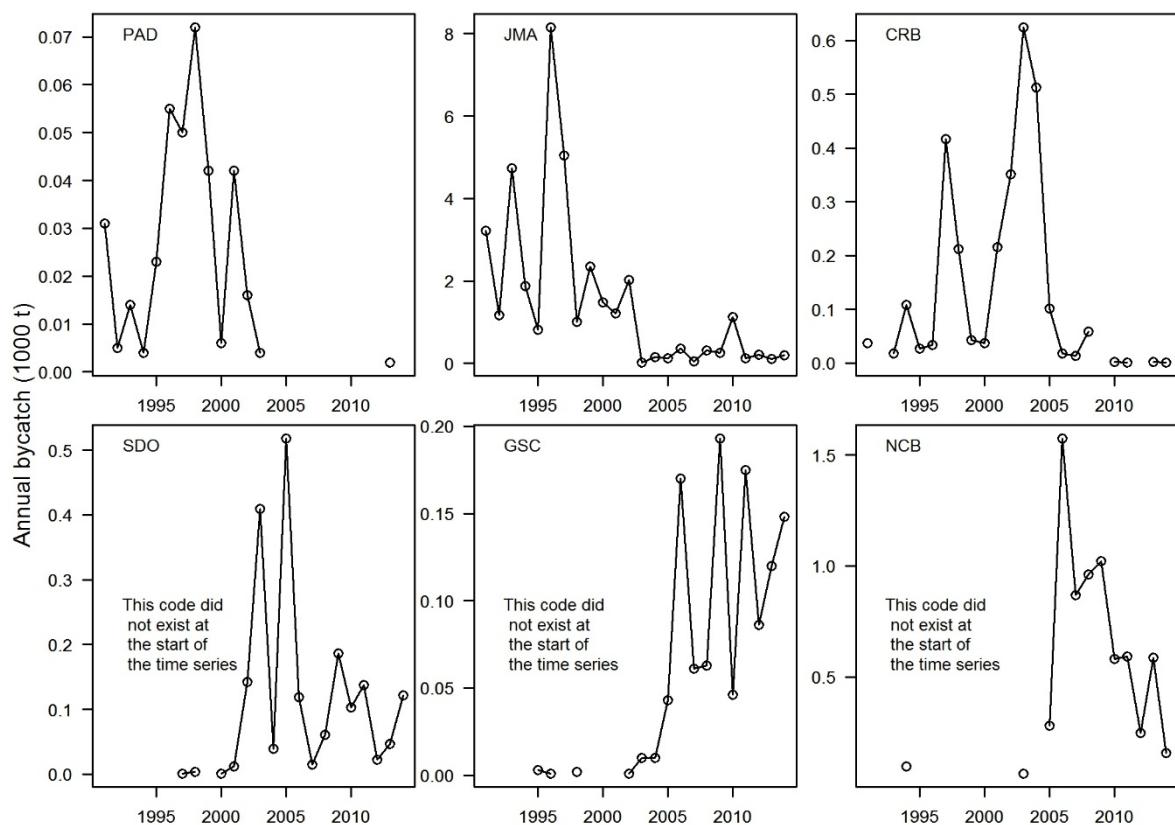


Figure 1a: Annual bycatch estimates in the arrow squid trawl fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 1990–91 and 2013–14. See text above for explanation of the species codes. The decrease in PAD and increase in NCB may be due to NCB being erroneously recorded as PAD before 2003–04; and the code CRB (unspecified crab) is likely to have become replaced over time with specific codes. Trends implied by codes which did not exist at the start of the time series are indicated on the graphs. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

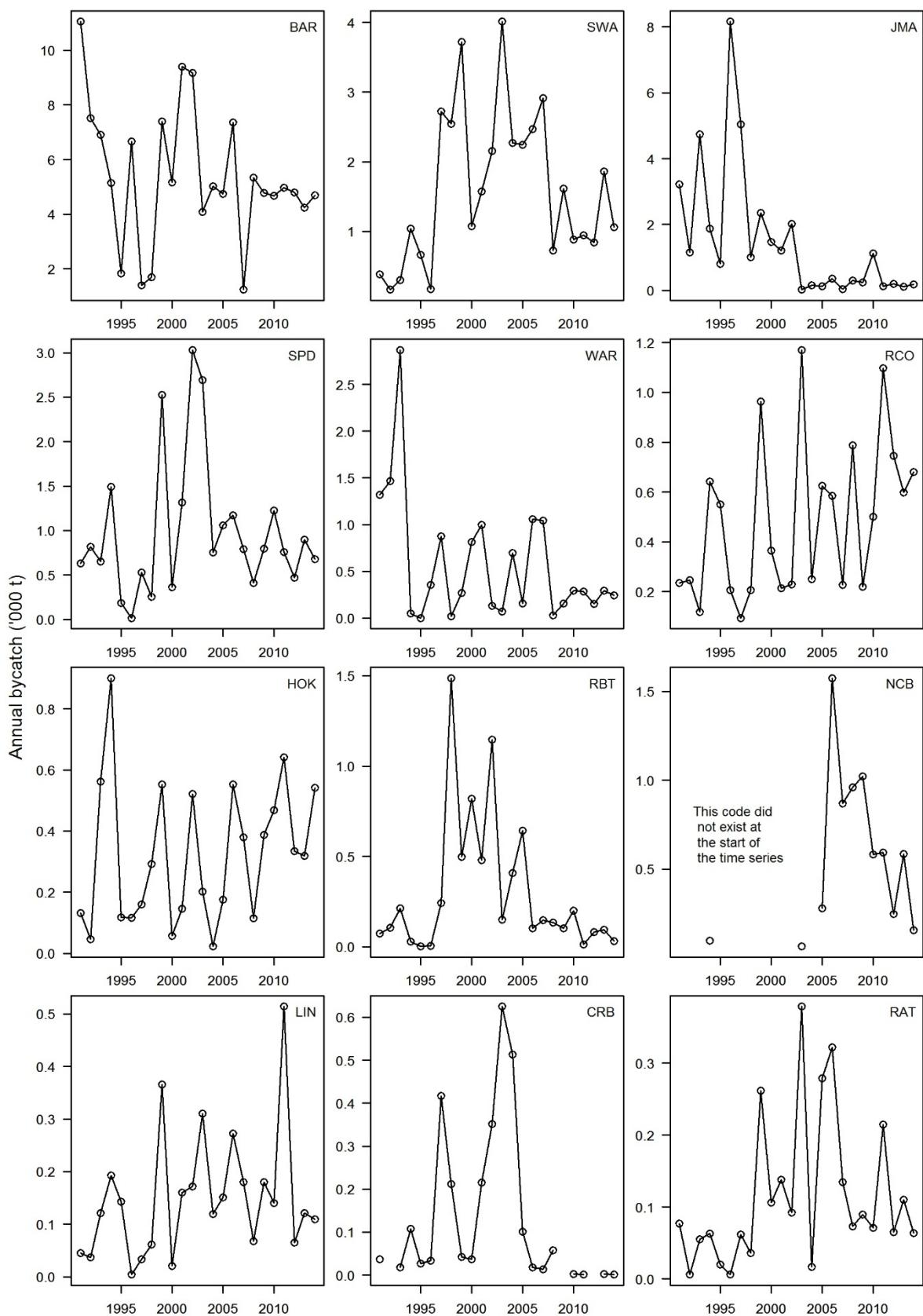


Figure 1b: Annual bycatch estimates for key arrow squid fishery bycatch species between 1990–91 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. Trends implied by codes which did not exist at the start of the time series are indicated on the graphs. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Southern blue whiting trawl fishery

- Of the 67 bycatch species examined, 39 have shown a decrease in catch over time and 28 an increase in catch; with 2 having shown a significant decrease and 2 a significant increase in catch.
- The species showing the greatest decline were dark ghost shark (*Hydrolagus novaezealandiae*, GSH), hoki (*Macruronus novaezealandiae*, HOK), and moonfish (*Lampris guttatus*, MOO) (Figure 2a).
- The species showing the greatest increase were ray's bream (*Brama brama*, RBM), pale ghost shark (*Hydrolagus bemisi*, GSP), and opah (*Lampris immaculatus*, PAH) (Figure 2a).
- The twelve most common bycatch species are shown in Figure 2b. The most commonly caught bycatch species were hoki (HOK), ling (*Genypterus blacodes*, LIN), and hake (*Merluccius australis*, HAK).

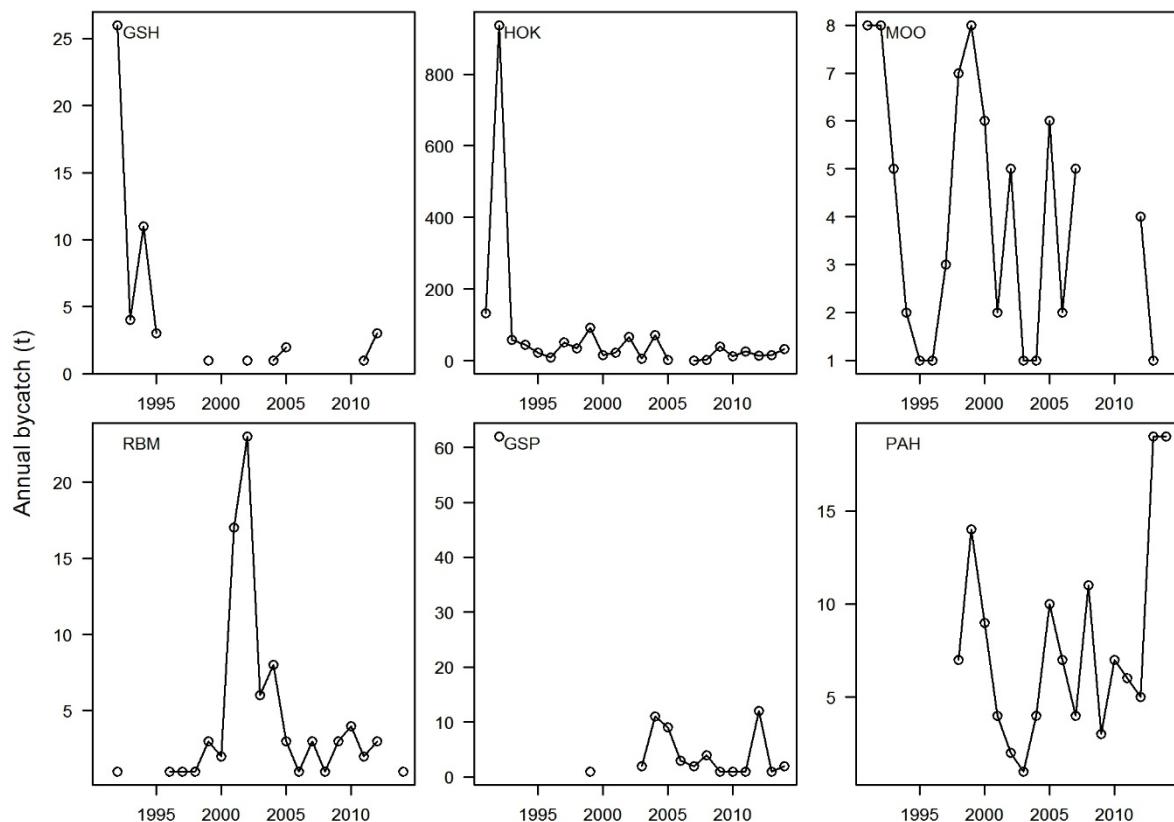


Figure 2a: Annual bycatch estimates in the southern blue whiting trawl fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 1990–91 and 2013–14. See text above for explanation of the species codes. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

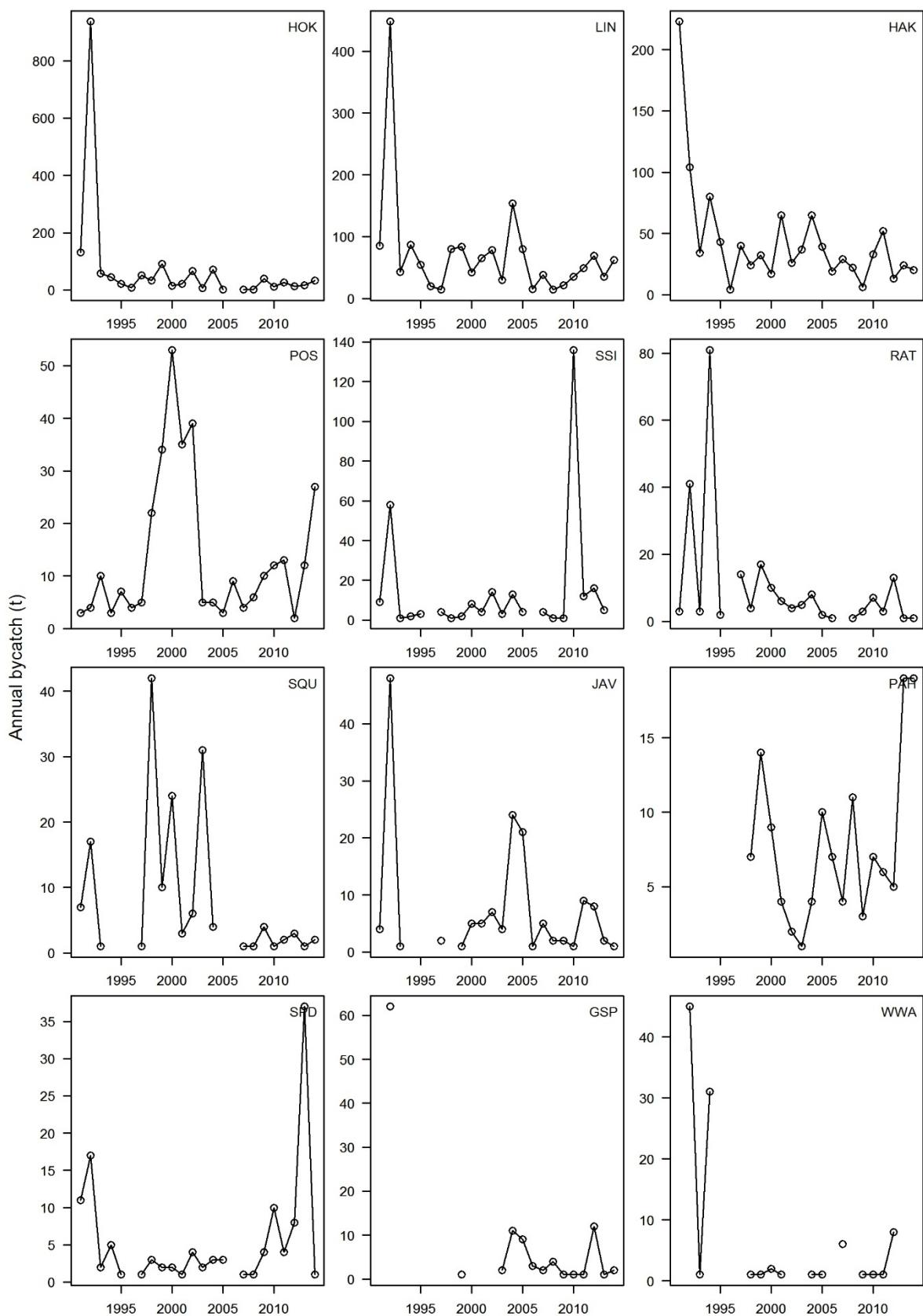


Figure 2b: Annual bycatch estimates for key southern blue whiting fishery bycatch species between 1990–91 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Scampi trawl fishery

- Of the 276 bycatch species examined, 121 have shown a decrease in catch over time and 155 an increase in catch; with 15 having shown a significant decrease and 21 a significant increase in catch.
- The species showing the greatest decline were skates (Rajidae and Arhynchobatidae, SKA), bluenose (*Hyperoglyphe antarctica*, BNS) and alfonsino (*Beryx* spp., BYX) (Figure 3a).
- The species showing the greatest increase were the geometric star (*Psilaster acuminatus*, PSI), Garrick's masking crab (*Leptomithrax garricki*, GMC), and spiny masking crab (*Teratomaia richardsoni*, SMK) (Figure 3a).
- The twelve most common bycatch species are shown in Figure 3b. The most commonly caught bycatch species were javelinfish (*Lepidorhynchus denticulatus*, JAV), unspecified rattails (Macrouridae, RAT), and sea perch (*Helicolenus* spp., SPE).

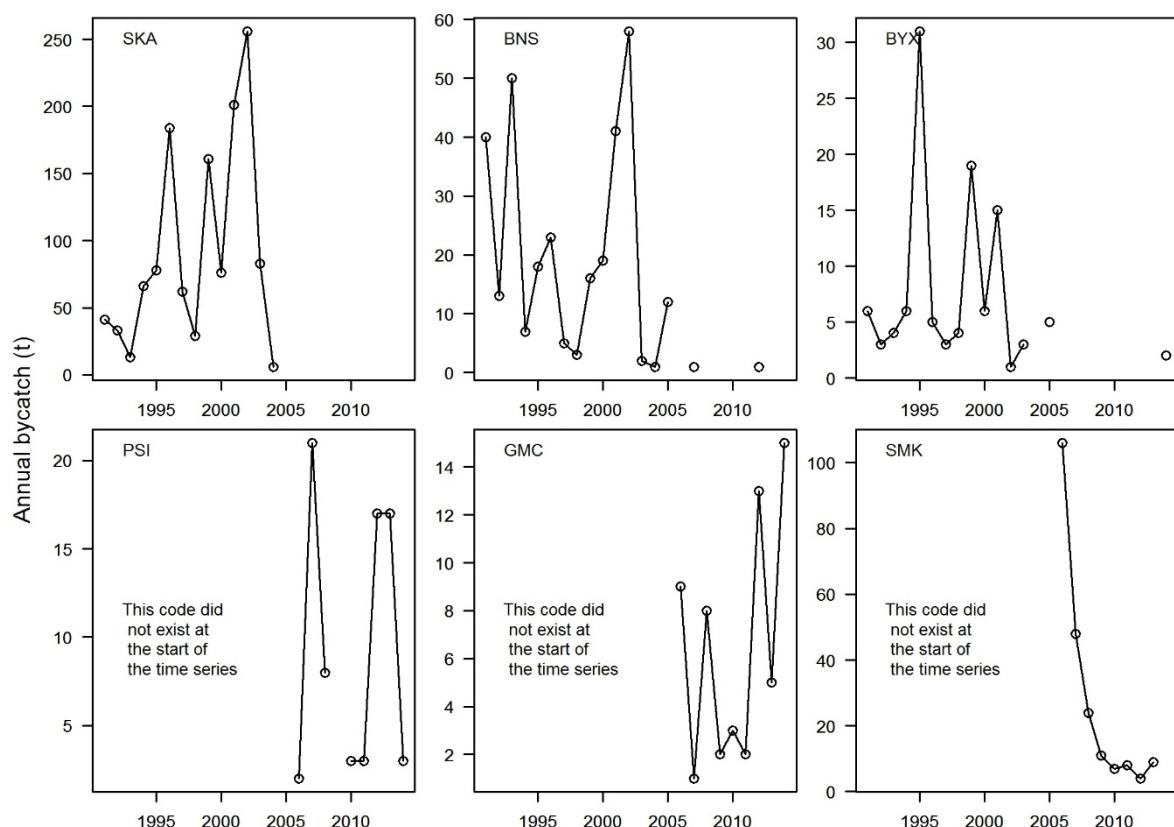


Figure 3a: Annual bycatch estimates in the scampi trawl fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 1990–91 and 2013–14. See text above for explanation of the species codes. Skates (SKA) were mainly recorded as rough skate (RSK) or smooth skate (SSK) after 2002–03. Trends implied by codes which did not exist at the start of the time series are indicated on the graphs. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

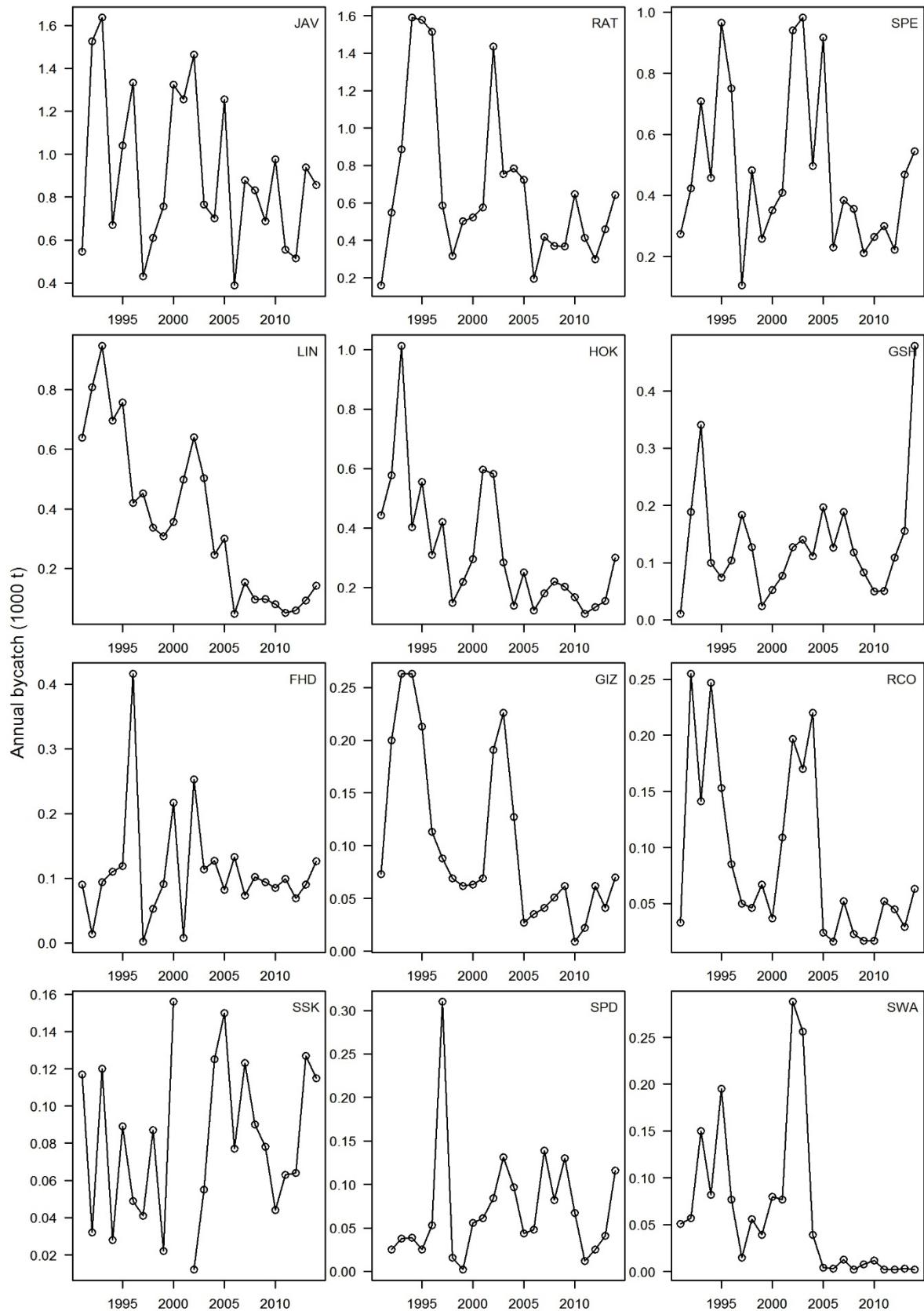


Figure 3b: Annual bycatch estimates for key scampi trawl fishery bycatch species between 1990–91 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Jack mackerel trawl fishery

- Of the 45 bycatch species examined, 13 have shown a decrease in catch over time and 31 an increase in catch; with 1 having shown a significant decrease and 6 a significant increase in catch.
- The species showing the greatest decline were capro dory (*Capromimus abbreviatus*, CDO), hoki (HOK), and leatherjacket (*Meuschenia scaber*, LEA). (Figure 4a).
- The species showing the greatest increase were albacore tuna (*Thunnus alalunga*, ALB), kahawai (*Arripis trutta*, ATT), and slender tuna (*Allothunnus fallai*, STU) (Figure 4a).
- The twelve most common bycatch species are shown in Figure 4b. The most commonly caught bycatch species were barracouta (BAR), blue mackerel (*Scomber australasicus*, EMA), and frostfish (*Lepidopus caudatus*, FRO).

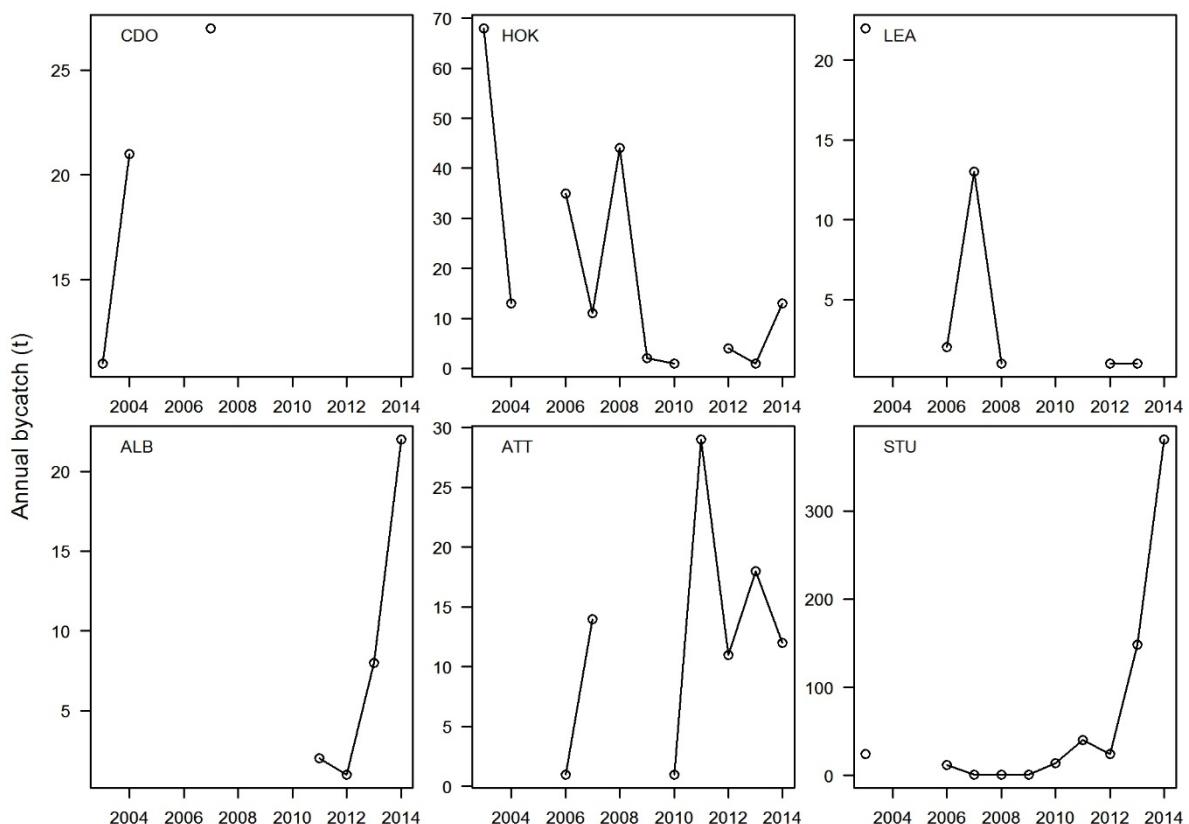


Figure 4a: Annual bycatch estimates in the jack mackerel trawl fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 2002–03 and 2013–14. See text above for explanation of the species codes. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

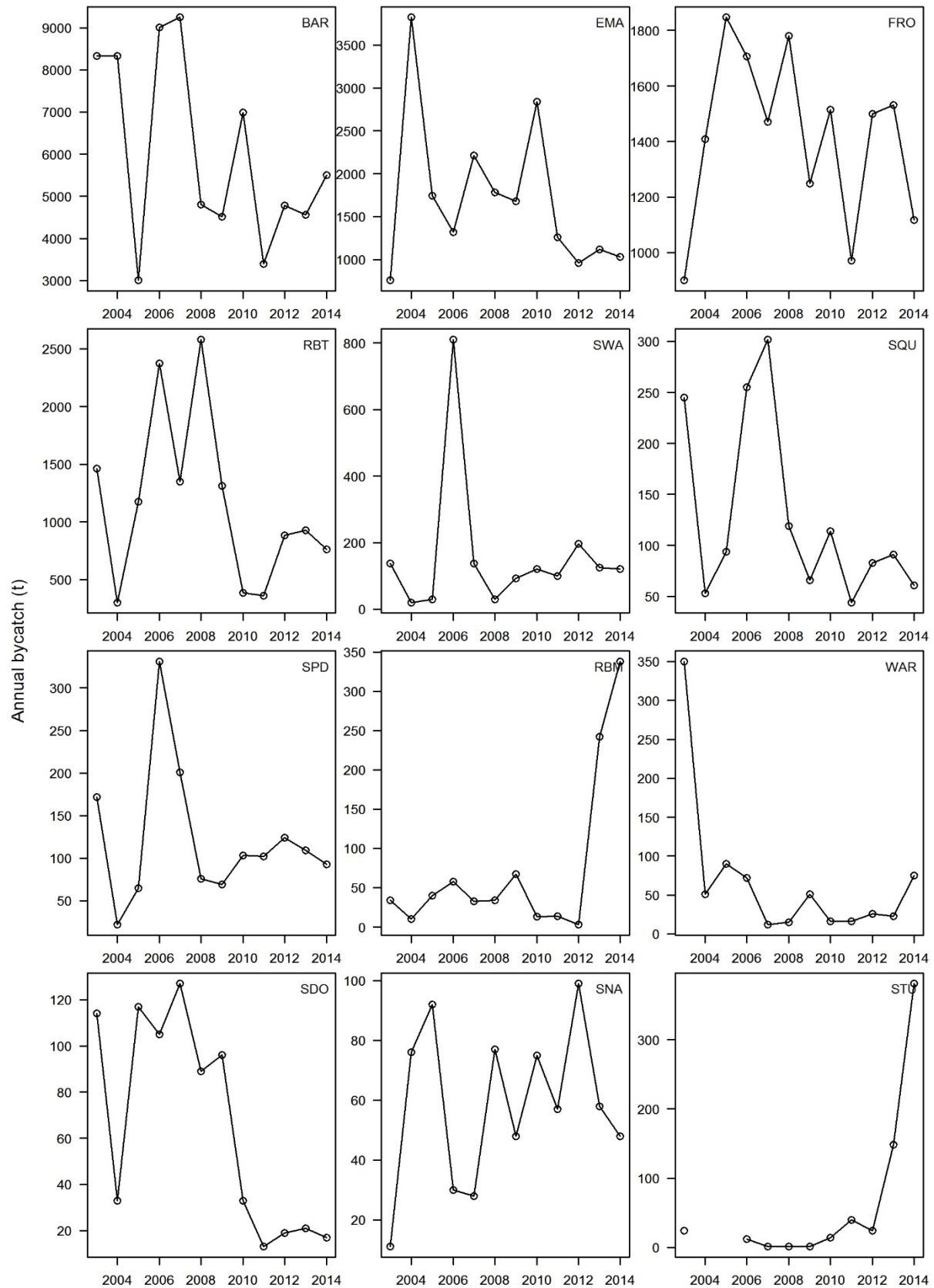


Figure 4b: Annual bycatch estimates for key jack mackerel trawl fishery bycatch species between 2002–03 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Orange roughy trawl fishery

- Of the 211 bycatch species examined, 112 have shown a decrease in catch over time and 99 an increase in catch; with 16 having shown a significant decrease and 3 a significant increase in catch.
- The species showing the greatest decline were black oreo (*Allocyttus niger*, BOE), cardinalfishes (Epigonidae, CDL), and alfonsino (*Beryx* spp., BYX) (Figure 5a).
- The species showing the greatest increase were morid cods (Moridae, MOD), longnose velvet dogfish (*Centroscymnus crepidater*, CYP), and bushy hard coral (*Goniocorella dumosa*, GDU) (Figure 5a).
- The twelve most common bycatch species are shown in Figure 5b. The most commonly caught bycatch species were smooth oreo (*Pseudocyttus maculatus*, SSO), black oreo (*Allocyttus niger*, BOE), and black cardinalfish (*Epigonus telescopus*, CDL).

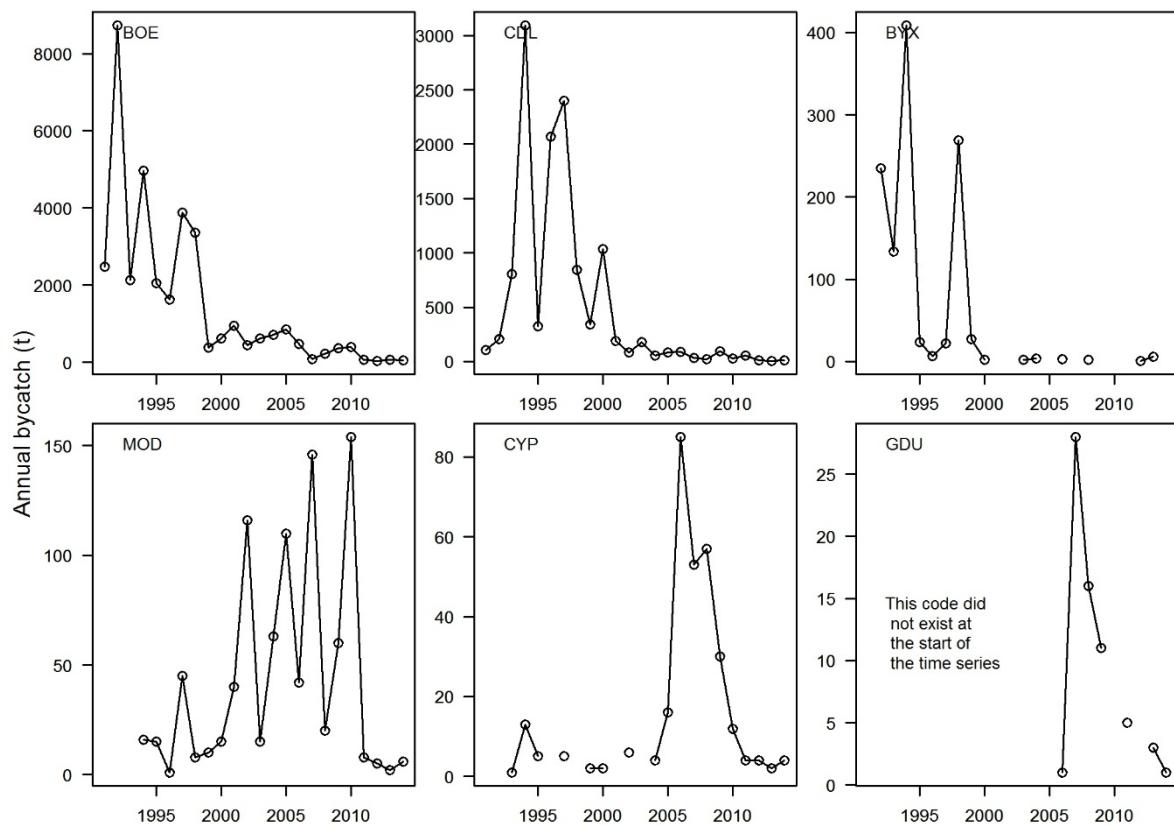


Figure 5a: Annual bycatch estimates in the orange roughy trawl fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 1990–91 and 2013–14. See text above for explanation of the species codes. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

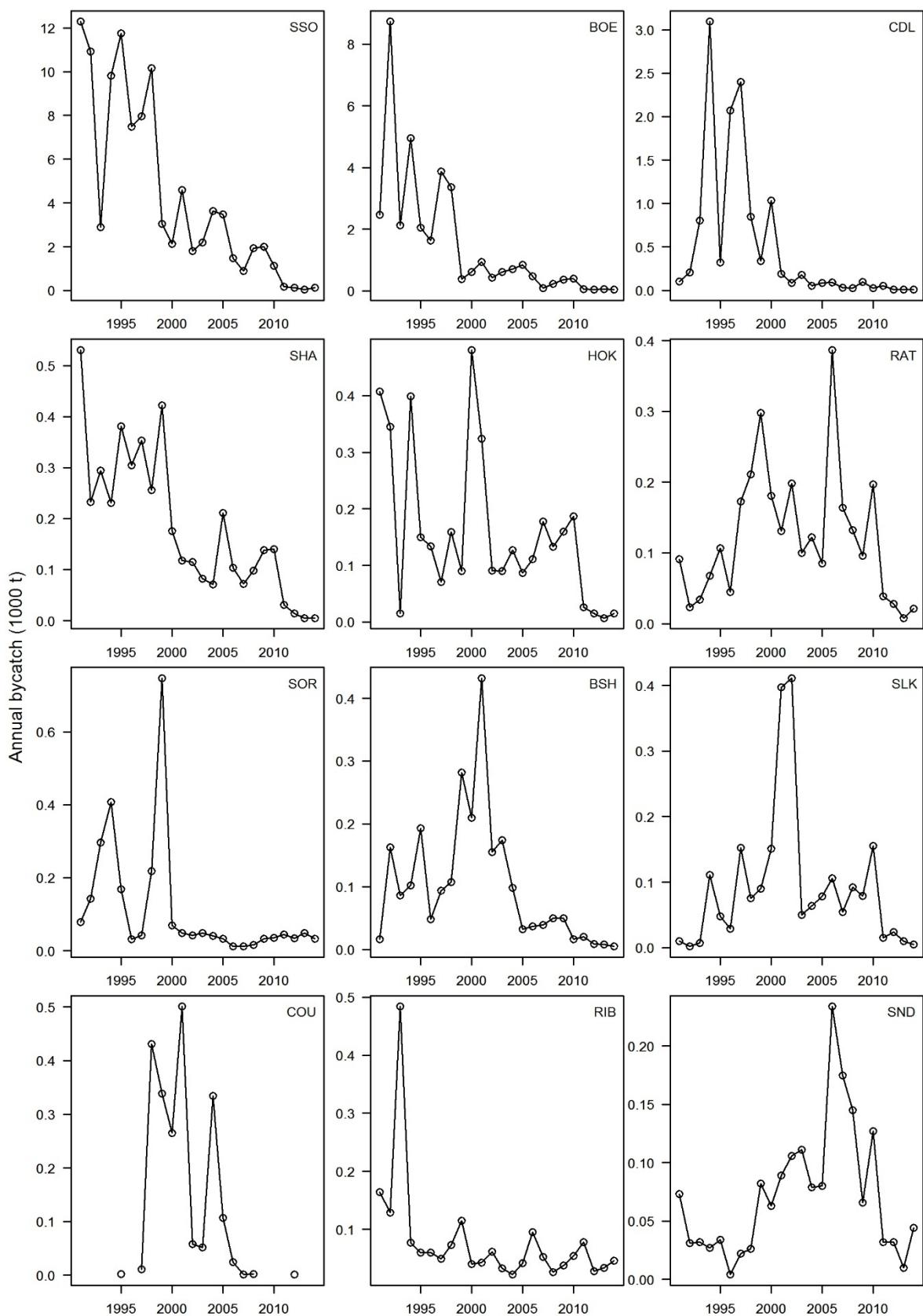


Figure 5b: Annual bycatch estimates for key orange roughy trawl fishery bycatch species between 1990–91 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. The code for unspecified coral species (COU) may have been replaced over time with more specific codes. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Oreo trawl fishery

- Of the 120 bycatch species examined, 50 have shown a decrease in catch over time and 70 an increase in catch; with 2 having shown a significant decrease and 10 a significant increase in catch.
- The species showing the greatest decline were dark ghost shark (GSH), unspecified shark (SHA), and ling (LIN) (Figure 6a).
- The species showing the greatest increase were pale ghost shark (GSP), Baxter's lantern dogfish (*Etmopterus baxteri*, ETB), and ridge-scaled rattail (*Macrourus carinatus*, MCA) (Figure 6a).
- The twelve most common bycatch species are shown in Figure 6b. The most commonly caught bycatch species were orange roughy (*Hoplostethus atlanticus*, ORH), unspecified shark (SHA), and hoki (HOK).

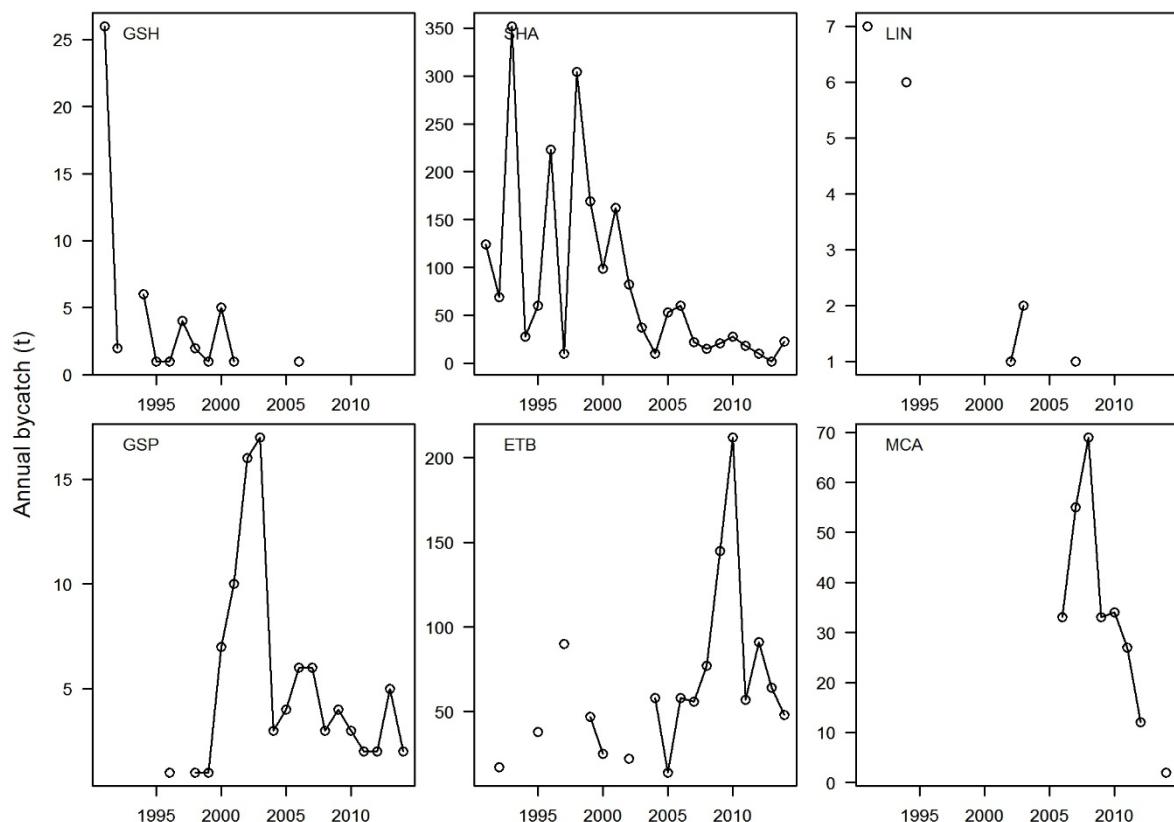


Figure 6a: Annual bycatch estimates in the oreo trawl fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 1990–91 and 2013–14. See text above for explanation of the species codes. Sharks (SHA) may have been identified to an increasingly higher taxonomic level over time; rattails such as MCA may not have been well identified in earlier years. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

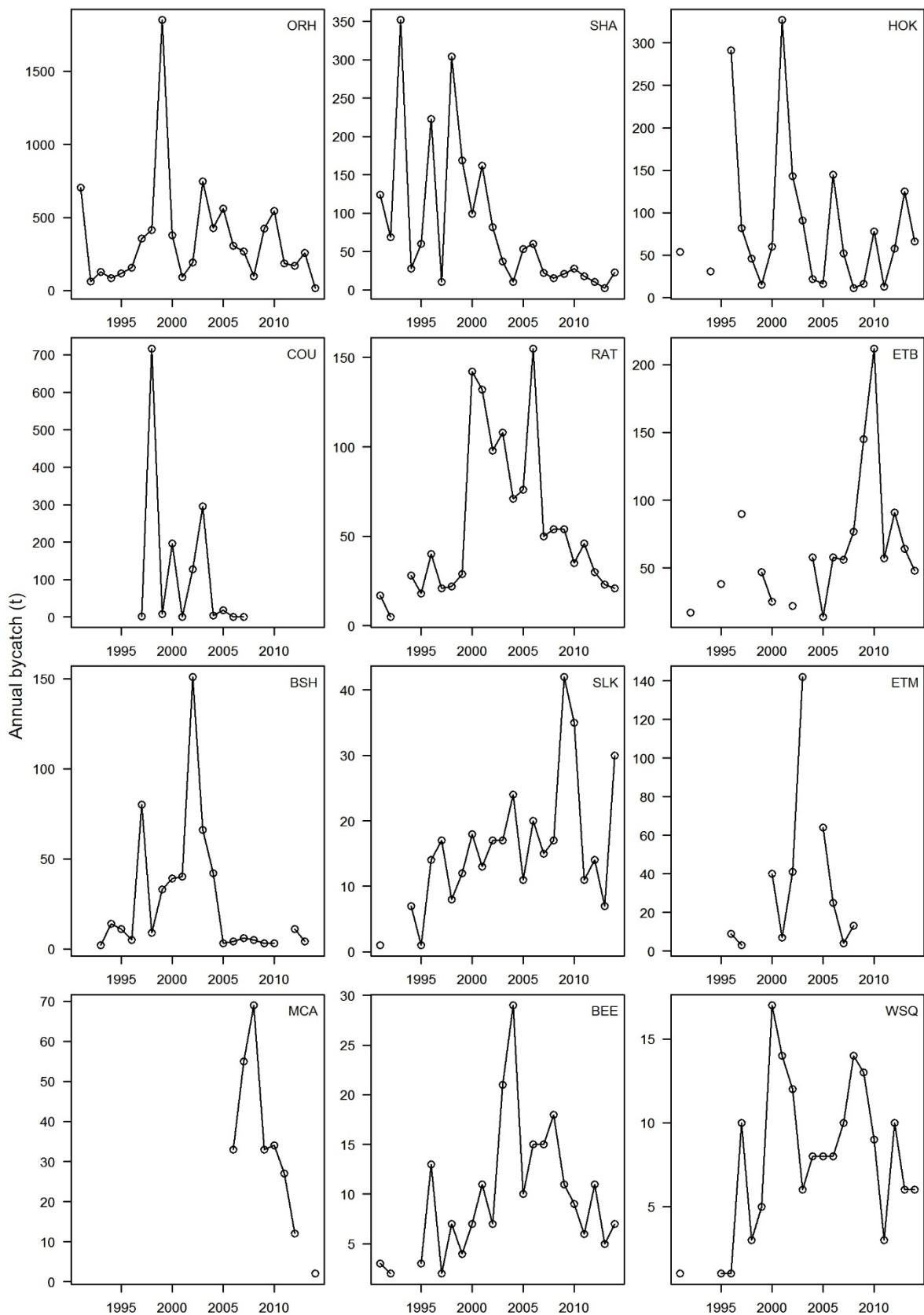


Figure 6b: Annual bycatch estimates for key oreo trawl fishery bycatch species between 1990–91 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. The codes for unspecified coral (COU) and shark (SHA) species may have been replaced over time with more specific codes; rattails such as MCA may not have been well identified in earlier years. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Hoki, hake, ling trawl fishery

- Of the 357 bycatch species examined, 151 have shown a decrease in catch over time and 206 an increase in catch; with 21 having shown a significant decrease and 47 a significant increase in catch.
- The species showing the greatest decline were skates (SKA), jack mackerels (JMA), and dogfishes (*Etomopterus* spp., ETM) (Figure 7a).
- The species showing the greatest increase were baxters lantern dogfish (*Etomopterus baxteri*, ETB), umbrella octopus (*Opisthoteuthis* spp., OPI), and floppy tubular sponge (*Hyalascus* sp., HYA), (Figure 7a). The increase in ETB and decrease in ETM are likely to be linked, with improving identification over time resulting in declining use of the generic ETM code by observers.
- The twelve most common bycatch species are shown in Figure 7b. The most commonly caught bycatch species were silver warehou (SWA), javelinfish (JAV), and unspecified rattails (Macrouridae, RAT).

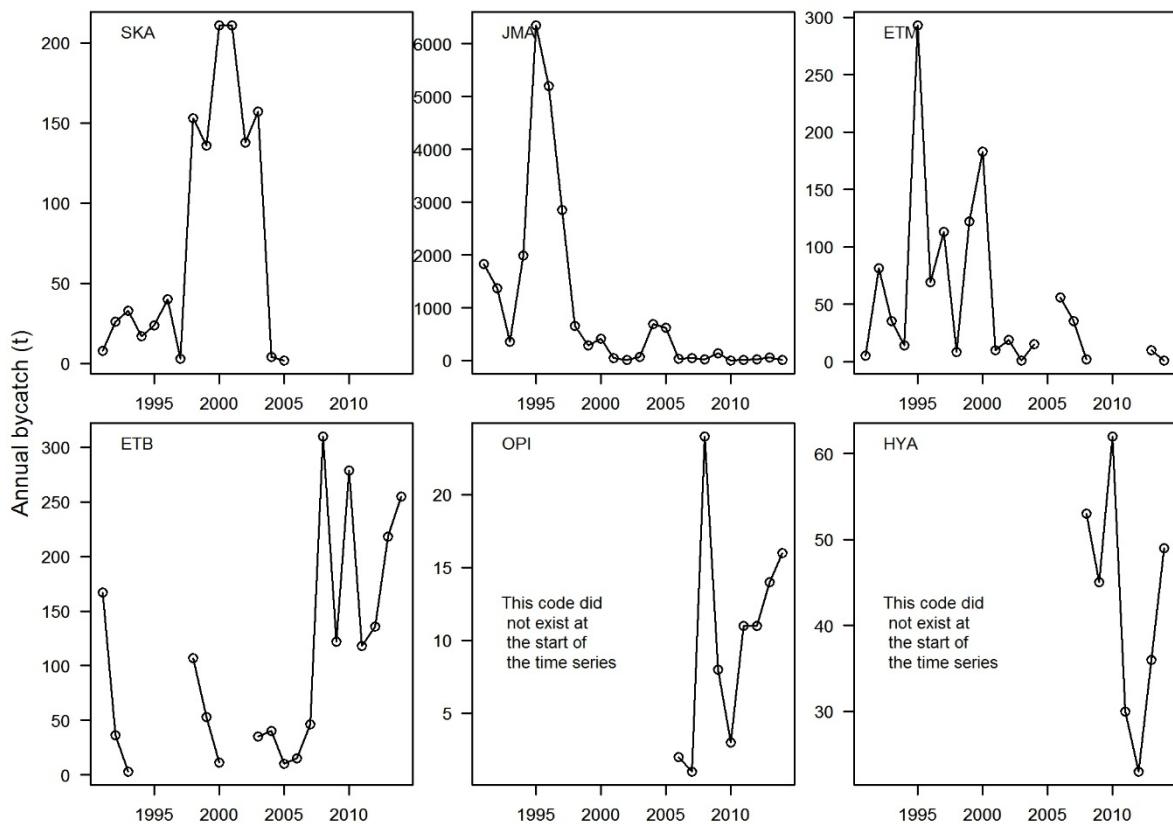


Figure 7a: Annual bycatch estimates in the hoki, hake, ling trawl fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 1990–91 and 2013–14. See text above for explanation of the species codes. Note: skates (SKA) were mainly recorded as rough skate (RSK) or smooth skate (SSK) after 2002–03. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

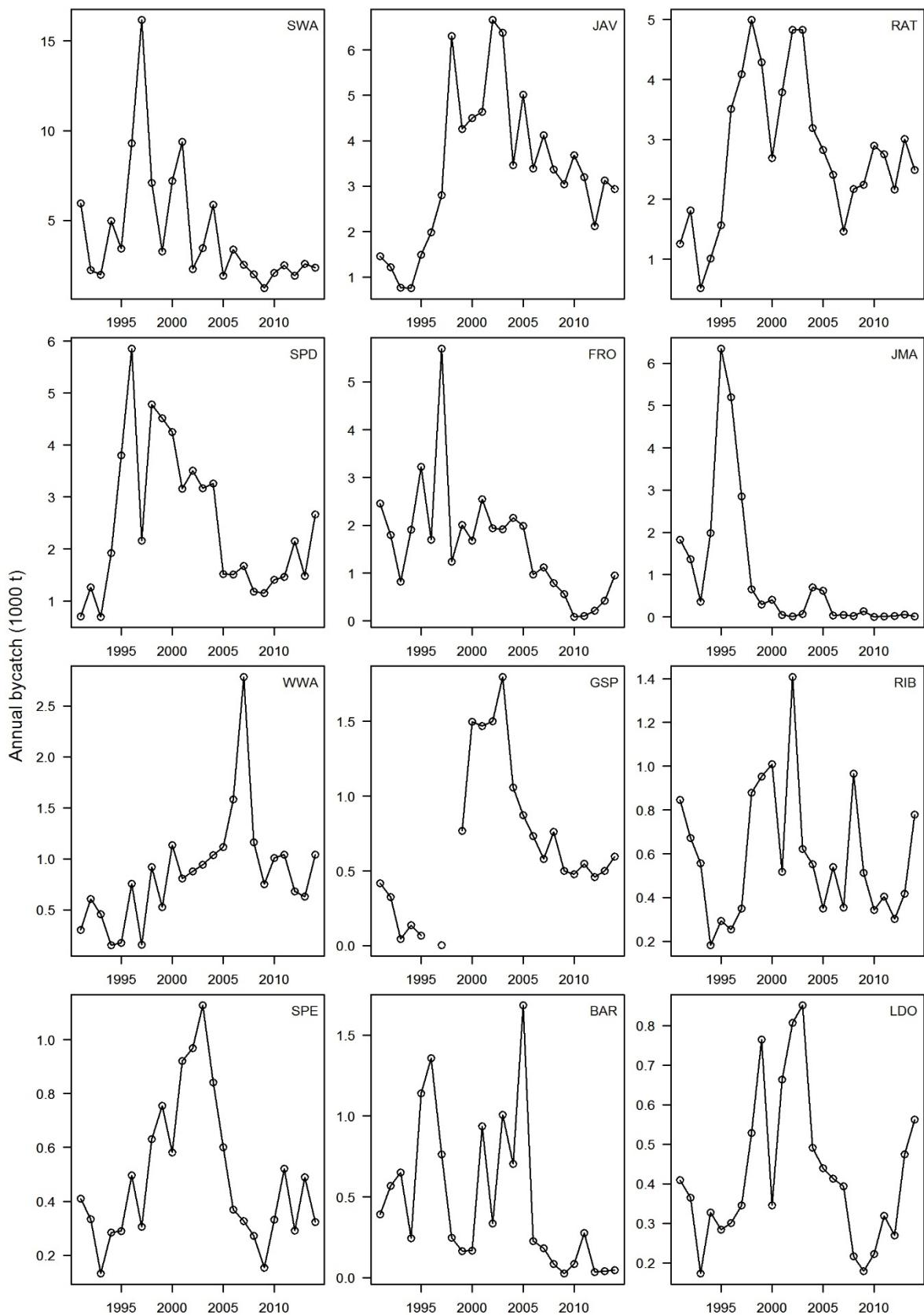


Figure 7b: Annual bycatch estimates for key hoki, hake, ling trawl fishery bycatch species between 1990–91 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Ling longline fishery

- Observers began monitoring this fishery in 1992–93, therefore bycatch estimates are not available for 1990–91 and 1991–92.
- Of the 83 bycatch species examined, 63 have shown a decrease in catch over time and 20 an increase in catch; with 13 having shown a significant decrease and none a significant increase in catch.
- The species showing the greatest decline were Ray's bream (*Brama brama*, RBM), Antarctic rock cods (Nototheniidae, NOT), and skates (SKA) (Figure 8a).
- The species showing the greatest increase were the leafscale gulper shark (*Centrophorus squamosus*, CSQ), rough skate (*Zearaja nasuta*, RSK), and hairy conger (*Bassanago hirsutus*, HCO) (Figure 8a).
- The twelve most common bycatch species are shown in Figure 8b. The most commonly caught bycatch species were spiny dogfish (SPD), ribaldo (*Mora moro*, RIB), and smooth skate (*Dipturus innominatus*, SSK).

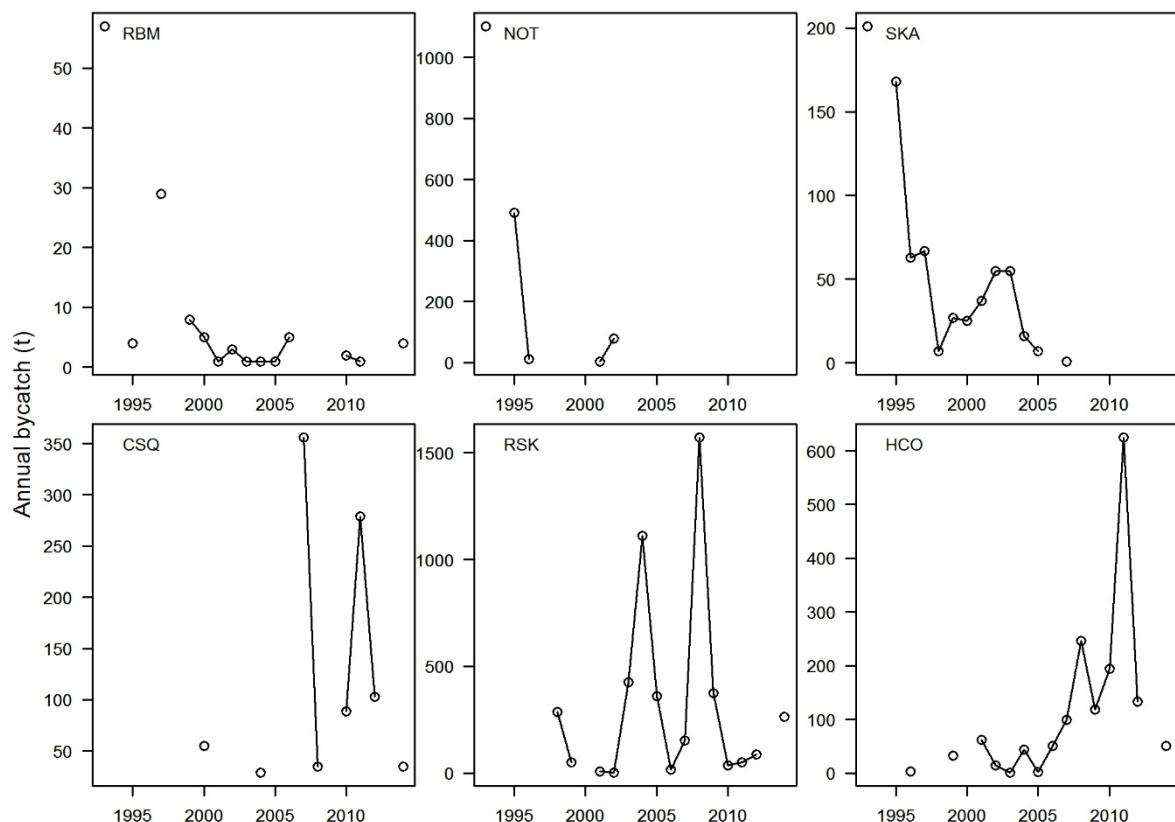


Figure 8a: Annual bycatch estimates in the ling longline fishery for the species which have shown the greatest decrease (top) and greatest increase (bottom) between 1992–93 and 2013–14. See text above for explanation of the species codes. Skates (SKA) were mainly recorded as rough skate (RSK) or smooth skate (SSK) after 2002–03. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years

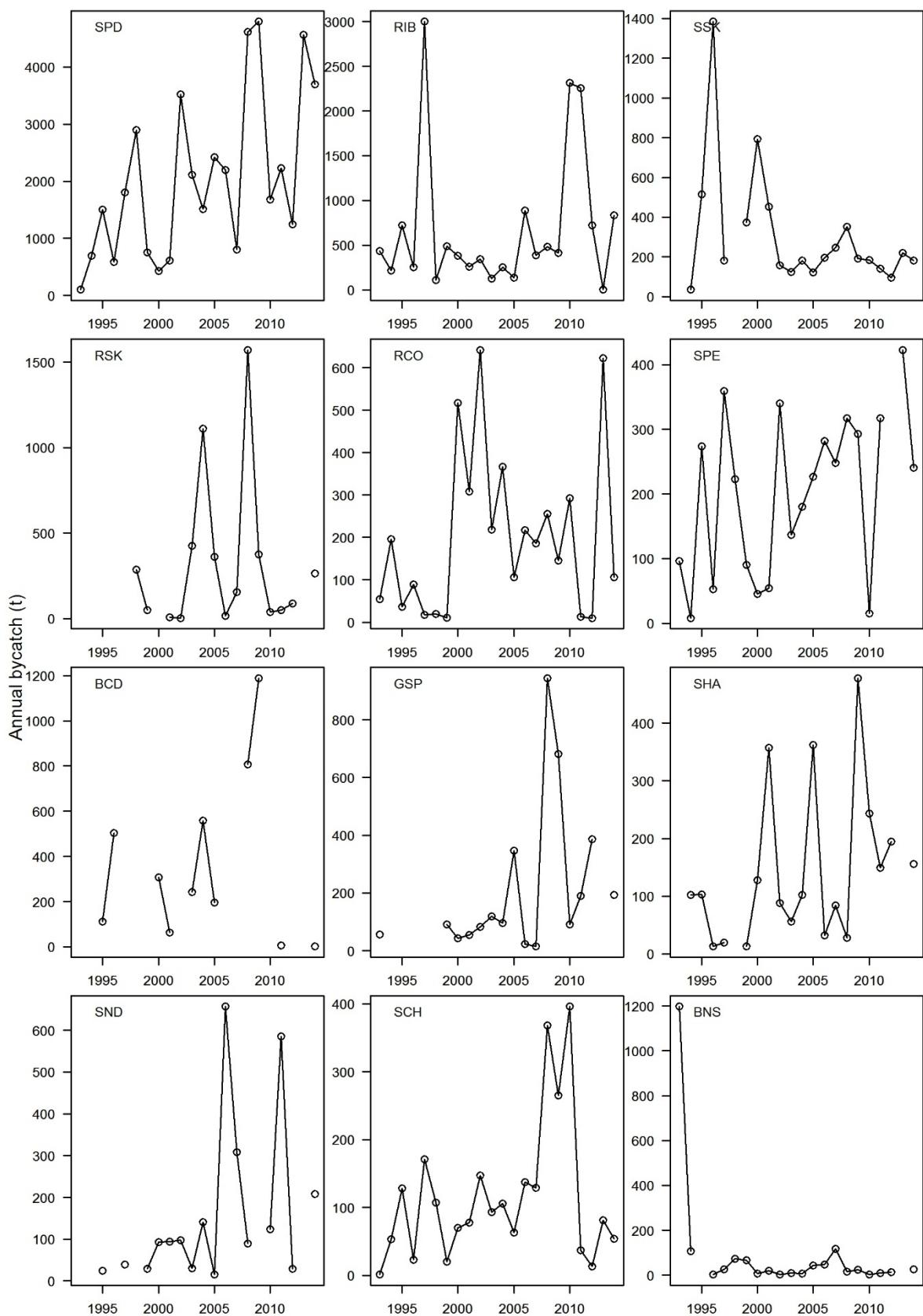


Figure 8b: Annual bycatch estimates for key ling longline fishery bycatch species between 1990–91 and 2013–14. See <http://marlin.niwa.co.nz> for species code definitions. Note: the scale changes on the y-axis between plots; lines are joined only where there are data points for consecutive years.

Total annual bycatch is variable among fisheries (Figure 9). Bycatch in the hoki, hake, ling trawl fishery rose markedly during the 1990s then dropped again during the 2000s; in most years this fishery produced the highest bycatch weight. Bycatch in the orange roughy fishery has steadily reduced during the period. Overall, bycatch weights were the lowest in the oreo, scampi, and southern blue whiting trawl fisheries, and the ling longline fishery.

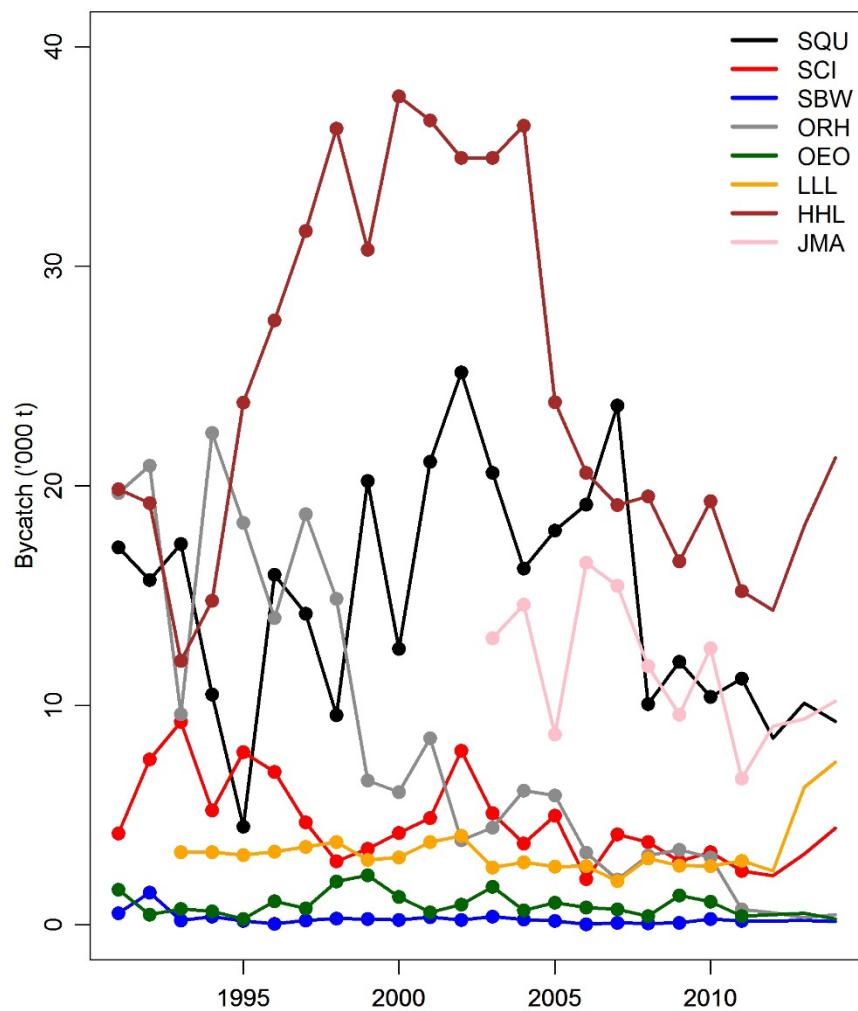


Figure 9: Bycatch in all deepwater fisheries. (Dots denote precision based estimates; no dots denote coarse based estimates).

4. ACKNOWLEDGMENTS

Thanks to Sira Ballara (NIWA) for her review of this report. This project was funded by the Ministry for Primary Industries (Project DAE2010/02).

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Table 1: Arrow squid trawl fishery. Total annual bycatch estimates (t) (with estimated CVs in parentheses where available—see text) for individual species, based on observer catch rates. Species are ordered by decreasing total catch. The slope of a regression through the data points is shown in parentheses alongside each species code. See <http://marlin.niwa.co.nz> for species code definitions). From Anderson (2013).

	1990–91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
BAR ⁽⁰⁾	8220(16)	7010(31)	6220(11)	2650(21)	1250(17)	6380(12)	990(22)	1420(14)	6960(16)	3880(11)	10200(12)	7930(16)	3740(23)	5250(26)	3480(19)	5700(20)	850(30)	3750(18)	2410(23)	3220(20)	2880(19)
SWA ^(0.1)	250(28)	150(45)	780(49)	640(130)	360(68)	100(47)	1780(29)	2090(23)	3350(23)	970(14)	2150(12)	2390(24)	5280(25)	3190(14)	3170(40)	2020(19)	11280(31)	570(13)	1000(22)	790(13)	710(24)
SPD ⁽⁰⁾	420(39)	710(36)	570(39)	1600(16)	120(41)	10(39)	340(41)	210(29)	2230(43)	430(47)	1850(16)	3170(21)	2660(18)	800(20)	2220(39)	860(24)	3410(28)	290(20)	530(27)	840(29)	510(27)
JMA ^(-0.2)	1530(46)	420(34)	1680(27)	560(47)	350(35)	3520(19)	4190(20)	610(30)	670(44)	970(26)	500(29)	2240(21)	10(22)	140(39)	190(48)	170(33)	20(82)	110(64)	110(41)	410(35)	60(91)
RCO ⁽⁰⁾	360(40)	310(33)	280(46)	820(35)	480(29)	160(41)	80(23)	140(82)	980(29)	530(32)	600(23)	480(14)	1890(15)	470(26)	1190(20)	610(24)	370(17)	950(21)	230(30)	660(27)	1160(20)
JMM ^(-0.3)	130(100)	540(49)	2050(53)	160(59)	100(36)	4560(26)	260(52)	190(47)	1280(66)	60(63)	230(31)	90(44)	10(69)	20(41)	20(71)	70(91)	0(–)	80(92)	10(87)	310(55)	0(–)
WAR ⁽⁰⁾	900(48)	1280(46)	2260(24)	40(56)	0(–)	150(102)	460(82)	10(104)	230(59)	560(32)	610(20)	80(36)	60(63)	710(37)	100(50)	690(57)	640(30)	20(53)	90(42)	180(60)	170(61)
NCB ^(0.5)	0(–)	0(–)	0(–)	110(92)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	50(98)	0(–)	410(21)	1970(21)	950(26)	1380(22)	1360(21)	1010(16)	620(23)
HOK ⁽⁰⁾	120(25)	40(58)	740(39)	700(114)	100(29)	110(14)	170(20)	260(34)	490(55)	40(36)	370(82)	560(20)	200(20)	30(28)	370(72)	380(47)	1260(31)	120(19)	250(28)	310(28)	500(21)
RBT ^(0.1)	40(112)	90(64)	150(59)	10(62)	0(–)	0(–)	150(54)	1210(39)	400(73)	570(42)	290(27)	750(39)	100(18)	410(44)	430(47)	70(42)	70(82)	80(83)	40(122)	130(61)	10(51)
RAT ^(0.1)	110(47)	10(30)	100(50)	60(42)	20(51)	10(17)	70(29)	30(46)	230(43)	130(37)	510(18)	410(24)	500(13)	30(40)	960(29)	340(19)	380(25)	90(25)	110(24)	70(19)	220(16)
CRB ^(-0.2)	50(63)	0(–)	30(79)	40(60)	40(26)	40(25)	410(39)	260(37)	40(53)	40(32)	200(29)	360(23)	630(18)	1180(34)	130(55)	20(38)	20(37)	80(63)	0(–)	0(–)	0(–)
LIN ^(0.1)	30(72)	30(57)	150(47)	90(29)	90(53)	0(–)	20(47)	40(57)	320(58)	20(29)	120(29)	210(20)	290(18)	110(58)	190(27)	200(24)	290(20)	50(41)	90(40)	90(38)	340(23)
GSH ^(0.1)	10(63)	0(–)	30(64)	20(53)	10(73)	0(–)	10(54)	10(57)	70(44)	30(52)	360(45)	420(34)	330(18)	20(49)	300(38)	40(44)	630(29)	10(57)	10(42)	40(59)	80(27)
STU ^(-0.1)	30(23)	80(26)	120(34)	190(47)	70(63)	240(10)	170(48)	10(26)	60(90)	50(15)	40(28)	20(19)	10(26)	10(22)	680(35)	40(24)	10(28)	40(33)	30(41)	20(62)	20(34)
RBM ^(-0.2)	160(20)	30(92)	410(29)	10(17)	30(23)	140(28)	150(25)	20(60)	20(27)	20(59)	270(14)	180(31)	70(38)	10(17)	80(36)	70(38)	40(37)	10(22)	0(–)	0(–)	10(24)
SDO ^(0.4)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(19)	90(42)	420(19)	30(63)	440(48)	80(46)	20(42)	40(35)	90(94)	70(40)	90(40)
TAR ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(52)	10(88)	0(–)	280(30)	750(33)	0(–)	160(38)	0(–)	40(50)	0(–)	0(–)	0(–)	0(–)	0(–)
SPE ^(0.1)	10(53)	20(67)	20(75)	0(–)	10(45)	0(–)	0(–)	10(45)	30(40)	0(–)	300(101)	60(30)	180(19)	20(35)	180(42)	10(60)	70(48)	0(–)	0(–)	20(64)	40(31)
STA ^(0.1)	20(30)	20(42)	40(66)	20(24)	20(48)	0(–)	10(30)	10(14)	60(50)	20(23)	30(18)	90(21)	140(14)	20(30)	60(25)	50(21)	180(14)	20(17)	20(25)	50(16)	50(23)
JAV ^(0.3)	0(–)	0(–)	20(58)	0(–)	0(–)	0(–)	0(–)	60(52)	0(–)	50(115)	120(54)	30(27)	10(110)	50(59)	120(40)	410(54)	10(28)	10(69)	10(73)	20(51)	
JMD ^(-0.2)	500(86)	70(59)	0(–)	0(–)	40(122)	10(50)	40(66)	0(–)	80(74)	0(–)	50(74)	20(66)	0(–)	0(–)	30(95)	20(75)	0(–)	0(–)	0(–)	20(53)	0(–)
HAP ^(0.1)	10(67)	0(–)	20(48)	10(64)	60(29)	10(41)	0(–)	20(21)	30(25)	30(18)	60(12)	90(19)	110(11)	60(20)	150(17)	40(23)	40(13)	20(31)	30(61)	50(21)	20(25)
GSC ^(0.4)	0(–)	0(–)	0(–)	0(–)	10(32)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(61)	50(20)	180(29)	60(21)	70(22)	140(30)	70(20)	210(17)
SKI ^(-0.2)	100(14)	120(76)	70(42)	20(39)	30(49)	0(–)	10(30)	10(22)	10(24)	0(–)	0(–)	120(25)	240(12)	10(20)	40(31)	10(47)	10(24)	0(–)	0(–)	0(–)	10(94)
BSK ^(0.2)	0(–)	0(–)	0(–)	30(144)	0(–)	0(–)	0(–)	80(80)	90(36)	290(104)	10(122)	120(37)	30(125)	0(–)	0(–)	100(35)	20(91)	10(155)	0(–)	20(114)	
SSK ⁽⁰⁾	10(57)	10(35)	30(77)	10(41)	10(52)	0(–)	10(49)	0(–)	140(49)	20(41)	50(21)	70(29)	160(21)	30(51)	40(22)	20(37)	110(33)	10(51)	0(–)	0(–)	10(24)
WWA ^(0.1)	0(–)	20(86)	10(108)	10(82)	0(–)	0(–)	10(73)	20(58)	70(52)	90(52)	50(23)	150(29)	50(51)	10(57)	10(30)	190(50)	0(–)	10(91)	20(98)	20(48)	
SCH ^(0.3)	0(–)	10(33)	0(–)	0(–)	0(–)	10(42)	0(–)	20(28)	10(52)	30(16)	50(23)	90(20)	10(40)	70(37)	30(19)	20(20)	20(22)	10(30)	20(25)	40(32)	
FRO ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(86)	0(–)	30(110)	90(34)	100(42)	0(–)	80(65)	10(74)	100(72)	0(–)	0(–)	0(–)	0(–)	
PAD ^(-0.3)	50(37)	10(73)	20(77)	0(–)	40(62)	60(42)	50(76)	90(41)	40(84)	10(32)	40(48)	10(81)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
RSK ^(0.3)	0(–)	0(–)	20(80)	0(–)	10(55)	0(–)	0(–)	0(–)	20(148)	0(–)	0(–)	0(–)	0(–)	80(86)	50(27)	30(22)	60(28)	20(31)	20(24)	40(19)	70(18)
NCA ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	20(63)	0(–)	0(–)	0(–)	0(–)	0(–)	80(42)	90(87)	0(–)	0(–)	150(79)	0(–)	0(–)	0(–)	0(–)	0(–)
SSI ^(0.2)	0(–)	0(–)	0(–)	0(–)	20(106)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(19)	0(–)	30(26)	20(49)	150(28)	50(65)	10(30)	0(–)	10(14)	

Table 1: Arrow squid trawl fishery.—continued

	1990–91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11
POS ⁽⁰⁾	0(–)	10(42)	10(28)	0(–)	0(–)	10(33)	10(26)	20(25)	30(20)	20(13)	30(24)	50(23)	20(17)	10(28)	10(32)	10(35)	20(37)	0(–)	0(–)	10(22)	10(24)
WIT ^(0.2)	10(20)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(32)	0(–)	10(22)	0(–)	20(22)	10(33)	40(26)	10(10)	40(26)	0(–)	10(14)	10(10)	10(17)
CAR ^(0.3)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	30(29)	0(–)	30(18)	10(75)	10(22)	10(40)	50(17)	0(–)	10(24)	10(32)	40(35)	
SBW ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	100(97)	0(–)	0(–)	0(–)	30(139)	0(–)	0(–)	0(–)	10(45)	0(–)	0(–)	10(37)	
SPI ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(41)	10(93)	0(–)	20(41)	0(–)	10(32)	80(62)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SPO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	30(131)	0(–)	0(–)	0(–)	0(–)	100(85)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
MAK ^(-0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	10(37)	10(77)	20(39)	20(36)	10(55)	40(86)	0(–)	10(47)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BWS ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	90(31)	10(14)	0(–)	0(–)	0(–)	10(14)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
FHD ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(17)	0(–)	100(28)	0(–)	0(–)	0(–)	0(–)	0(–)
JMN ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	110(93)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
PIG ^(0.3)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(14)	0(–)	20(43)	10(28)	10(28)	10(24)	10(33)	10(14)	30(20)
BCO ^(0.1)	0(–)	0(–)	10(73)	0(–)	0(–)	0(–)	10(47)	0(–)	0(–)	0(–)	10(41)	0(–)	10(50)	10(54)	0(–)	0(–)	20(40)	0(–)	0(–)	0(–)	30(53)
HPB ^(-0.1)	20(38)	30(39)	30(31)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(68)	0(–)	10(65)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BCD ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(44)	0(–)	0(–)	60(37)	10(32)	0(–)	10(14)	
GON ^(0.3)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(14)	10(17)	10(17)	10(24)	10(24)	10(20)	10(22)	10(28)	10(20)		
HAK ⁽⁰⁾	0(–)	0(–)	10(58)	0(–)	0(–)	0(–)	0(–)	70(67)	0(–)	0(–)	0(–)	10(17)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
LDO ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(56)	10(30)	0(–)	0(–)	0(–)	10(17)	0(–)	60(26)	0(–)	0(–)	0(–)	0(–)	0(–)
SSC ^(-0.1)	0(–)	0(–)	30(92)	50(88)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
CBE ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	50(96)	0(–)	0(–)	0(–)	20(93)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
CDO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	30(66)	40(68)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
RDO ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(97)	0(–)	0(–)	0(–)	0(–)	50(92)	10(59)			
BEL ^(0.1)	0(–)	0(–)	0(–)	10(160)	0(–)	0(–)	0(–)	0(–)	0(–)	10(104)	10(37)	0(–)	0(–)	0(–)	0(–)	0(–)	10(89)	0(–)	0(–)	20(57)	
OCT ^(0.1)	0(–)	0(–)	0(–)	10(24)	0(–)	0(–)	0(–)	20(49)	0(–)	0(–)	10(17)	0(–)	10(33)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(10)	
TOA ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(14)	0(–)	0(–)	10(22)	20(18)	0(–)	10(10)	0(–)	10(20)		
GUR ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	40(49)	10(36)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BSH ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	40(85)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
COF ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	40(87)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SQI ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(160)	0(–)	0(–)	20(86)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
LAN ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(75)	10(85)	0(–)	0(–)	10(59)	
STN ^(-0.1)	0(–)	10(28)	0(–)	0(–)	0(–)	10(36)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(28)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BAS ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(32)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BBE ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(50)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BYS ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	20(82)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
GFL ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(106)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(10)
MDO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(26)	0(–)	0(–)	0(–)	0(–)	0(–)	10(66)	0(–)	0(–)	0(–)	0(–)	0(–)
ONG ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(86)	0(–)	10(56)	0(–)		

Table 1: Arrow squid trawl fishery.—continued

	1990–91	1991–92	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	
OPE ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(212)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(126)	0(–)
QSC ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(89)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(41)
SKA ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(37)	0(–)	0(–)	0(–)	0(–)	0(–)	10(44)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SNA ⁽⁰⁾	0(–)	0(–)	0(–)	10(97)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(183)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
THR ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(24)	10(66)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
YCO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(17)	0(–)	10(17)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
ASR ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(22)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BGZ ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(46)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BRA ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(95)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BTH ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(58)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
BYX ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(51)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
CON ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(122)
CRA ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(99)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
CRU ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(68)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
DSK ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(40)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
DSP ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(46)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
EEX ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(69)
FLA ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(40)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
GMU ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(147)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
GSP ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(53)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
JFI ^(-0.1)	10(58)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
JGU ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(52)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
LSK ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(22)	0(–)	0(–)	0(–)	0(–)	0(–)
MOK ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(39)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SCD ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(87)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SHA ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(75)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SNI ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(82)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
WPS ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(86)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
WSQ ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	10(30)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)

Table 1b: Arrow squid trawl fishery. Total annual bycatch estimates (t) for individual species with at least 1 t of bycatch in at least one year for the 2011–12 to 2013–14 fishing years, based on observer catch rates; – means less than 1 t. (see <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species																			
year	BAR	SWA	JMA	SPD	WAR	RCO	HOK	RBT	NCB	LIN	CRB	RAT	SDO	STU	RBM	GSH	GSC	GIZ		
2012	4 793	840	202	472	154	746	335	82	247	65	–	65	22	39	14	18	86	34		
2013	4 246	1 863	110	896	296	598	319	94	586	121	2	110	47	37	49	46	120	49		
2014	4 700	1 061	189	680	242	680	542	31	156	109	1	64	122	20	5	59	148	68		
Fishing	Species																			
year	HAP	RSO	SSK	BSK	SCH	RSK	JAV	WWA	SPE	FRO	PAD	NCA	UFISH	NMP	POS	CAR	SPO	HPB		
2012	21	3	6	21	23	20	9	28	18	1	–	–	–	3	3	6	2	2		
2013	30	7	15	72	35	64	52	33	22	2	2	–	–	2	2	15	3	1		
2014	35	20	14	–	48	49	20	20	16	5	–	–	–	2	3	22	1	13		
Fishing	Species																			
year	SBW	HAK	SSI	BCO	MAK	SPI	GON	WIT	RDO	CBE	CDO	OCT	BEL	BCD	PIG	THR	SSC	SUN		
2012	18	10	2	3	2	–	4	1	–	5	–	6	–	13	2	1	–	1		
2013	14	3	10	3	1	–	12	5	–	1	–	2	–	1	4	1	–	10		
2014	2	26	2	2	2	–	5	5	–	5	–	5	–	–	2	–	–	9		
Fishing	Species																			
year	JFI	OPE	STN	TOA	SQI	BWS	GFL	BSH	ASR	SHA	LDO	QSC	ONG	GSP	BGZ	SNA	SKA	BBE		
2012	–	12	–	1	–	–	5	–	–	1	9	1	1	–	–	–	–	–		
2013	19	7	1	1	–	2	5	–	1	–	–	3	2	4	1	–	–	–		
2014	18	4	1	–	–	3	3	–	1	1	1	3	–	1	4	–	–	–		
Fishing	Species																			
year	LAN	FLA	BNS	BAS	BRA	GMU	WPS	YCO	SCD	POR	SNI	GUR	CSQ	WSQ	SND	CBD	OPA	CRA		
2012	5	6	1	–	–	–	–	–	–	2	–	–	–	–	–	–	–	1	–	
2013	–	–	–	–	–	–	–	–	1	2	–	–	–	3	1	–	3	4	–	
2014	–	–	–	–	–	–	–	–	1	1	–	–	–	–	1	–	–	1	–	
Fishing	Species																			
year	FHD	ETL	RBY	LLC	SFL	CRM	CSH	MDO	JGU	CRU	CON	TOD	DSP	TOR	GSQ	BIG	HYA	HEX		
2012	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	
2013	–	1	–	5	–	1	–	–	–	–	1	–	–	–	1	–	–	–	–	
2014	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
Fishing	Species																			
year	NOT	EEX	ALB	CHQ	YFN	ETB	RIB	SEV	STG	CAS	COF	BYS	CBB	ERA	SMO	SSH	EZE	PHO		
2012	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	
2013	–	–	–	–	4	–	1	–	1	–	4	–	–	–	1	1	1	–	–	
2014	–	–	–	–	2	–	–	–	–	–	1	–	–	–	1	–	1	2	–	
Fishing	Species																			
year	CBO	YEM	MUU	API	SCM	STR	PDG	BOT	MOK	ETM	SMI	EMA	COU	EPL	APR	CHC	GMC	TUR		
2012	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	
2013	2	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	1	–	
2014	–	–	–	–	–	–	–	–	1	–	–	–	–	2	–	–	–	–	–	

Table 1b: Arrow squid trawl fishery—*continued*.

Fishing	Species																	
year	SLS	CRN	BYX	NSD	BAT	SCA	CUC	FMA	HTH	ACS	URP	PSK	LSK	SKJ	SMK	MOO	BFL	BCA
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Fishing	Species																	
year	CSP	LSO	SBO	FLO	SMA	CMT	ANZ	BTH	ROC	LEA	CCR	SBR	ANT	TRU	HCO	PLS	DSK	FTU
2012	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-

Fishing	Species					
year	OPL	MAN	PHW	BOC	RSQ	NTO
2012	-	-	-	-	-	-
2013	-	-	-	-	-	-
2014	-	-	-	-	-	-

Table 2: Southern blue whiting trawl fishery. Total annual bycatch estimates (t) for individual species with at least 1 t of bycatch in at least one year, based on observer catch rates; -means less than 1 t. The slope of a regression through the data points is shown after fishing year (see <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species																		
year	HOK	LIN	HAK	POS	SSI	RAT	SQU	JAV	PAH	SPD	GSP	WWA	SBI	RBM	MOO	GSH	SWA	WSQ	
1991	132	85	223	3	9	3	7	4	-	11	-	-	-	-	8	-	-	9	
1992	937	448	104	4	58	41	17	48	-	17	62	45	-	1	8	26	-	6	
1993	58	43	34	10	1	3	1	1	-	2	-	1	-	-	5	4	1	1	
1994	44	87	80	3	2	81	-	-	-	5	-	31	-	-	2	11	-	-	
1995	22	54	43	7	3	2	-	-	-	1	-	-	-	-	1	3	-	-	
1996	9	20	4	4	-	-	-	-	-	-	-	-	-	-	1	1	-	1	
1997	52	14	40	5	4	14	1	2	-	1	-	-	-	-	1	3	-	1	
1998	34	80	24	22	1	4	42	-	7	3	-	1	-	1	7	-	-	-	
1999	92	84	32	34	2	17	10	1	14	2	1	1	-	3	8	1	-	1	
2000	15	42	17	53	8	10	24	5	9	2	-	2	-	2	6	-	-	1	
2001	22	65	65	35	4	6	3	5	4	1	-	1	-	17	2	-	-	1	
2002	66	78	26	39	14	4	6	7	2	4	-	-	-	23	5	1	1	6	
2003	6	30	37	5	3	5	31	4	1	2	2	-	-	6	1	-	-	1	
2004	72	154	65	5	13	8	4	24	4	3	11	1	-	8	1	1	-	3	
2005	2	80	39	3	4	2	-	21	10	3	9	1	84	3	6	2	-	1	
2006	-	15	19	9	-	1	-	1	7	-	3	-	-	1	2	-	-	-	
2007	1	38	29	4	4	-	1	5	4	1	2	6	-	3	5	-	-	1	
2008	2	14	22	6	1	1	1	2	11	1	4	-	-	1	-	-	-	1	
2009	40	21	6	10	1	3	4	2	3	4	1	1	-	3	-	-	-	1	
2010	12	35	33	12	136	7	1	1	7	10	1	1	-	4	-	-	-	2	
2011	26	49	52	13	12	3	2	9	6	4	1	1	-	2	-	1	-	1	
2012	14	69	13	2	16	13	3	8	5	8	12	8	-	3	4	3	-	2	
2013	16	35	24	12	5	1	1	2	19	37	1	-	-	-	1	-	40	1	
2014	33	62	20	27	-	1	2	1	19	1	2	-	-	1	-	-	1	-	
slope	-0.12	-0.04	-0.05	0.02	0.00	-0.07	-0.01	0.06	0.06	0.23	0.02	0.13	-0.04	0.02	0.08	-0.14	-0.09	0.06	-0.02

Fishing	Species																		
year	JMA	LCH	SBO	LDO	PIG	MAK	ONG	RCO	CBO	BRS	UFISH	SPI	RSK	WIT	MAN	ETB	MIQ	SKA	
1991	-	-	-	1	7	-	-	1	8	-	-	-	-	-	-	-	-	-	
1992	-	7	-	6	3	-	3	1	-	-	3	-	-	1	4	2	3	1	
1993	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	-	4	20	1	-	-	-	-	-	-	1	-	-	-	-	-	1	3	
1995	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	1	-	1	-	-	7	-	-	-	-	-	-	-	-	
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	
2002	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
2003	21	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	-	1	-	3	2	-	2	1	-	-	6	5	2	-	-	-	-	-	
2005	-	1	-	1	-	-	1	-	-	-	-	-	2	-	2	-	-	-	
2006	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
2011	-	-	-	1	-	-	2	-	-	-	-	-	1	-	-	-	-	-	
2012	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2013	-	1	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	
2014	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
slope	0.00	0.02	-0.04	-0.01	-0.08	0.03	-0.03	0.04	-0.04	-0.01	-0.07	0.00	0.02	-0.01	-0.04	-0.02	-0.05	-0.05	

Table 2: Southern blue whiting trawl fishery. — *continued*.

Fishing	Species																	
year	SOP	BOA	DSP	GSQ	SHA	GIZ	SSK	FRO	BSH	BCO	BTH	HYA	CON	OPA	BBE	ASR	GLS	POR
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	-	4	-	-	-	1	1	-	1	2	2	-	1	-	-	-	1	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
1994	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
1996	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	
2006	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2011	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	1	1	1	1	-	-	-	2	-	-	-	-	-	-	
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
slope	0.02	-0.03	-0.02	0.00	0.00	0.00	0.00	0.00	-0.01	-0.03	-0.03	0.02	-0.02	-0.02	-0.02	0.00	0.01	-0.02

Fishing	Species											
year	EMA	BAR	BSQ	POM	STU	TOP	MIC	SRB	DEA	SQX	OCT	RBT
1991	-	-	-	-	1	-	-	-	-	-	-	-
1992	-	-	1	-	-	1	1	-	-	-	-	-
1993	-	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	1	-	-	-	-
2003	1	1	-	-	-	-	-	-	-	-	1	-
2004	-	-	-	-	-	-	-	-	-	1	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	1	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	1	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	1	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-
slope	0.00	0.00	-0.02	0.01	-0.02	-0.02	-0.02	0.02	0.00	0.02	0.00	0.00

Table 3: Hoki, hake, and ling trawl fishery. Total annual bycatch estimates (t) (with estimated CVs in parentheses—see text) for individual species, based on observer catch rates. Species are ordered by decreasing total catch. The slope of a regression through the data points is shown in parentheses alongside each species code. See <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species									
year	SWA	JAV	RAT	SPD	FRO	WWA	GSP	JMA	RIB	SPE
1991	4 580 (21)	1 120 (14)	1 000 (13)	700 (18)	1 830 (24)	220 (36)	350 (35)	1 320 (28)	760 (9)	300 (23)
1992	2 000 (24)	1 350 (26)	2 160 (42)	1 060 (26)	1 300 (39)	550 (34)	520 (55)	1 020 (33)	670 (7)	470 (24)
1993	2 020 (30)	1 460 (18)	630 (25)	650 (15)	500 (13)	350 (51)	40 (32)	560 (92)	620 (44)	280 (40)
1994	3 690 (21)	660 (21)	860 (24)	1 670 (18)	1 390 (15)	180 (43)	140 (32)	1 410 (39)	180 (18)	250 (23)
1995	2 660 (13)	1 610 (21)	1 710 (26)	3 590 (21)	2 020 (26)	170 (51)	60 (61)	4 430 (36)	320 (15)	360 (20)
1996	5 540 (17)	1 860 (40)	3 460 (29)	5 530 (17)	800 (21)	790 (31)	- (-)	2 170 (72)	230 (27)	450 (47)
1997	8 740 (23)	2 700 (28)	4 100 (19)	3 970 (16)	2 200 (32)	210 (32)	- (-)	1 080 (53)	400 (30)	340 (32)
1998	5 840 (20)	5 480 (13)	4 430 (15)	5 370 (19)	920 (19)	840 (39)	- (-)	510 (56)	860 (20)	500 (17)
1999	3 160 (14)	4 560 (17)	4 330 (13)	5 070 (16)	1 680 (35)	450 (26)	790 (28)	260 (42)	800 (13)	870 (8)
2000	7 240 (19)	4 950 (16)	3 360 (13)	6 930 (16)	1 160 (19)	1 020 (32)	1 570 (23)	270 (52)	930 (20)	850 (30)
2001	9 360 (22)	4 420 (15)	3 610 (11)	3 680 (13)	2 090 (21)	770 (19)	1 400 (15)	30 (75)	540 (17)	870 (21)
2002	2 780 (26)	7 110 (19)	5 040 (21)	3 800 (21)	1 700 (28)	840 (27)	1 610 (13)	10 (53)	1 210 (22)	970 (19)
2003	3 140 (27)	6 640 (13)	4 830 (20)	4 920 (22)	1 610 (20)	860 (20)	1 860 (11)	50 (63)	570 (15)	1 210 (18)
2004	6 430 (14)	4 800 (11)	4 670 (30)	4 860 (36)	1 200 (23)	1 430 (21)	1 600 (9)	330 (83)	570 (10)	1 220 (38)
2005	2 010 (13)	5 380 (20)	2 970 (31)	2 110 (17)	960 (15)	1 380 (14)	970 (17)	370 (271)	420 (13)	620 (9)
2006	3 260 (14)	3 730 (16)	2 720 (17)	1 910 (16)	600 (17)	1 720 (28)	860 (17)	20 (34)	480 (24)	410 (21)
2007	2 670 (15)	4 110 (18)	1 530 (10)	1 780 (30)	640 (26)	2 650 (31)	570 (14)	30 (104)	400 (23)	340 (18)
2008	2 320 (36)	3 700 (11)	2 540 (25)	1 480 (17)	420 (39)	980 (19)	700 (14)	20 (56)	950 (17)	310 (16)
2009	1 300 (18)	4 010 (12)	3 210 (21)	1 230 (12)	240 (26)	700 (16)	450 (12)	80 (134)	920 (18)	260 (14)
2010	2 710 (25)	4 760 (17)	3 760 (17)	1 280 (12)	80 (22)	740 (27)	460 (22)	10 (14)	290 (25)	430 (31)
2011	2 310 (19)	2 890 (12)	2 480 (16)	1 340 (12)	100 (28)	710 (31)	430 (16)	10 (109)	380 (38)	470 (31)
2012	2 010 (16)	2 090 (15)	2 170 (15)	2 140 (10)	160 (25)	580 (18)	430 (13)	40 (44)	290 (33)	300 (13)
2013	2 480 (14)	3 250 (10)	3 200 (11)	1 360 (10)	290 (38)	580 (20)	490 (14)	70 (67)	410 (12)	500 (32)
slope	-0.03	0.05	0.03	-0.01	-0.11	0.06	0.18	-0.22	0.00	0.00

Fishing	Species									
year	LDO	BAR	SQU	BOE	GSH	SND	SHA	GIZ	SBW	RBM
1991	320 (26)	310 (33)	260 (19)	130 (61)	530 (15)	400 (17)	- (-)	320 (32)	- (-)	40 (16)
1992	460 (17)	400 (41)	370 (16)	540 (45)	780 (19)	430 (29)	- (-)	320 (25)	40 (59)	40 (30)
1993	220 (34)	360 (82)	200 (48)	30 (47)	550 (32)	290 (64)	10 (234)	140 (46)	- (-)	250 (27)
1994	300 (15)	180 (44)	300 (23)	160 (35)	440 (21)	290 (51)	- (-)	60 (18)	- (-)	160 (23)
1995	340 (15)	1 020 (55)	450 (10)	160 (74)	620 (29)	130 (27)	10 (103)	140 (25)	50 (81)	170 (27)
1996	260 (30)	610 (30)	180 (27)	120 (114)	630 (24)	110 (67)	- (-)	320 (39)	- (-)	480 (27)
1997	300 (35)	340 (125)	100 (13)	- (-)	530 (30)	90 (45)	- (-)	180 (42)	- (-)	780 (42)
1998	450 (18)	230 (62)	160 (17)	920 (60)	1 420 (20)	270 (25)	10 (44)	240 (13)	30 (69)	550 (33)
1999	840 (17)	140 (54)	220 (16)	260 (40)	590 (28)	210 (22)	20 (115)	330 (12)	20 (80)	410 (58)
2000	420 (15)	150 (49)	270 (29)	110 (62)	380 (29)	990 (38)	- (-)	210 (13)	50 (52)	500 (32)
2001	660 (13)	750 (82)	620 (34)	320 (88)	370 (31)	300 (25)	70 (48)	410 (18)	80 (47)	550 (26)
2002	750 (15)	260 (94)	550 (26)	380 (85)	180 (27)	920 (43)	- (-)	380 (24)	50 (67)	140 (26)
2003	890 (15)	620 (82)	490 (41)	300 (60)	180 (35)	290 (30)	- (-)	330 (14)	290 (48)	320 (30)
2004	580 (8)	390 (37)	410 (20)	770 (47)	180 (21)	350 (28)	10 (91)	360 (14)	220 (65)	180 (41)
2005	460 (16)	780 (50)	310 (19)	90 (54)	160 (28)	270 (20)	- (-)	290 (14)	20 (143)	70 (17)
2006	420 (11)	140 (37)	300 (13)	360 (57)	80 (30)	380 (17)	- (-)	270 (11)	- (-)	30 (35)
2007	410 (28)	120 (51)	290 (15)	290 (48)	80 (53)	250 (30)	- (-)	200 (12)	10 (51)	30 (21)
2008	240 (9)	80 (74)	190 (15)	540 (38)	90 (51)	560 (18)	- (-)	190 (13)	400 (60)	60 (31)
2009	250 (17)	10 (77)	100 (10)	80 (105)	90 (39)	360 (20)	- (-)	140 (24)	420 (68)	50 (37)
2010	270 (16)	90 (122)	200 (16)	400 (31)	260 (63)	200 (15)	- (-)	220 (25)	20 (80)	60 (21)
2011	300 (17)	240 (52)	290 (21)	20 (54)	120 (50)	260 (24)	- (-)	170 (16)	160 (41)	80 (21)
2012	270 (13)	30 (54)	220 (13)	560 (44)	270 (76)	130 (34)	- (-)	150 (41)	60 (53)	60 (19)
2013	470 (14)	50 (39)	320 (15)	580 (55)	160 (24)	290 (16)	- (-)	210 (14)	40 (61)	60 (15)
slope	0.00	-0.10	0.00	0.06	-0.09	0.00	-0.10	0.00	0.24	-0.07

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	RSO	SSK	BSH	RCO	WSQ	ETB	BYS	ONG	BSK	ORH
1991	210 (59)	120 (20)	70 (20)	200 (31)	150 (11)	180 (19)	- (-)	10 (50)	130 (96)	480 (49)
1992	110 (20)	150 (22)	70 (30)	200 (25)	160 (31)	80 (56)	- (-)	200 (76)	90 (186)	210 (79)
1993	120 (29)	40 (22)	120 (46)	90 (25)	110 (63)	10 (96)	- (-)	- (-)	- (-)	200 (80)
1994	200 (22)	110 (44)	50 (48)	140 (35)	80 (23)	- (-)	10 (53)	40 (91)	110 (110)	250 (86)
1995	50 (32)	180 (13)	30 (24)	290 (23)	130 (14)	- (-)	320 (158)	- (-)	30 (230)	90 (102)
1996	90 (24)	140 (40)	20 (32)	350 (22)	100 (20)	- (-)	10 (49)	- (-)	- (-)	190 (107)
1997	90 (27)	80 (35)	30 (35)	150 (25)	70 (34)	- (-)	- (-)	60 (90)	140 (108)	10 (86)
1998	80 (31)	150 (28)	230 (44)	190 (43)	240 (18)	100 (76)	- (-)	80 (53)	640 (67)	10 (68)
1999	- (-)	110 (31)	470 (39)	280 (28)	170 (17)	40 (71)	40 (69)	390 (37)	290 (56)	40 (87)
2000	80 (53)	70 (53)	270 (38)	120 (38)	210 (26)	10 (96)	60 (62)	850 (57)	30 (87)	380 (89)
2001	50 (27)	160 (34)	220 (22)	120 (27)	190 (24)	- (-)	210 (31)	180 (37)	110 (71)	20 (104)
2002	70 (24)	190 (35)	120 (32)	70 (24)	410 (24)	- (-)	10 (26)	890 (28)	10 (169)	50 (36)
2003	240 (14)	240 (25)	260 (49)	70 (17)	180 (18)	30 (50)	220 (91)	130 (37)	190 (116)	480 (77)
2004	560 (12)	240 (18)	120 (29)	250 (40)	200 (11)	50 (46)	30 (33)	20 (128)	250 (71)	70 (56)
2005	390 (23)	140 (12)	210 (46)	190 (27)	90 (20)	20 (60)	230 (107)	80 (96)	300 (96)	50 (111)
2006	160 (31)	220 (18)	90 (29)	90 (17)	60 (13)	10 (84)	20 (28)	70 (100)	- (-)	20 (112)
2007	30 (23)	130 (19)	80 (24)	170 (23)	50 (15)	40 (58)	160 (57)	10 (84)	- (-)	60 (80)
2008	10 (35)	140 (14)	140 (19)	60 (21)	70 (12)	340 (58)	90 (47)	30 (54)	- (-)	90 (61)
2009	30 (33)	130 (20)	90 (28)	40 (28)	40 (14)	80 (26)	20 (26)	40 (117)	- (-)	110 (113)
2010	30 (28)	150 (14)	40 (33)	60 (31)	80 (12)	220 (44)	330 (33)	20 (50)	- (-)	10 (55)
2011	160 (55)	180 (14)	70 (26)	90 (35)	40 (15)	100 (27)	40 (73)	40 (105)	20 (135)	- (-)
2012	30 (28)	130 (14)	10 (36)	120 (41)	50 (21)	120 (26)	10 (39)	10 (47)	- (-)	10 (100)
2013	140 (22)	240 (12)	40 (19)	110 (29)	80 (10)	230 (19)	90 (70)	50 (62)	10 (280)	30 (73)
slope	-0.02	0.03	-0.02	-0.04	-0.05	0.21	0.26	0.09	-0.21	-0.14

Fishing	Species									
year	SOR	SSI	BNS	LCH	RBT	POS	WAR	RUD	BBE	CSQ
1991	180 (25)	10 (48)	130 (26)	60 (17)	- (-)	40 (23)	220 (44)	50 (34)	20 (62)	20 (116)
1992	110 (46)	70 (31)	90 (17)	110 (22)	10 (42)	30 (28)	280 (72)	30 (55)	20 (52)	50 (56)
1993	120 (49)	150 (26)	100 (19)	20 (39)	130 (96)	50 (24)	10 (65)	110 (22)	50 (44)	20 (73)
1994	50 (49)	20 (73)	60 (37)	40 (27)	120 (75)	50 (38)	50 (30)	50 (28)	10 (17)	- (-)
1995	20 (35)	40 (29)	70 (20)	60 (28)	10 (47)	70 (26)	170 (170)	100 (17)	40 (43)	10 (58)
1996	30 (75)	20 (51)	290 (28)	50 (42)	20 (62)	110 (26)	100 (47)	120 (41)	90 (56)	20 (64)
1997	10 (47)	20 (47)	190 (29)	40 (54)	10 (336)	170 (18)	70 (69)	90 (21)	20 (77)	20 (80)
1998	130 (41)	200 (45)	340 (22)	80 (27)	80 (366)	280 (15)	90 (167)	80 (23)	50 (53)	20 (89)
1999	190 (54)	90 (52)	100 (17)	90 (25)	- (-)	160 (21)	10 (51)	80 (20)	70 (39)	- (-)
2000	330 (38)	30 (38)	140 (50)	150 (25)	20 (35)	210 (15)	- (-)	140 (22)	50 (43)	10 (89)
2001	160 (26)	20 (21)	80 (21)	60 (32)	100 (38)	160 (17)	150 (124)	130 (21)	80 (46)	10 (73)
2002	160 (52)	60 (36)	50 (30)	140 (26)	40 (45)	100 (22)	- (-)	50 (22)	70 (46)	10 (73)
2003	60 (44)	150 (21)	40 (21)	200 (17)	40 (95)	70 (29)	10 (28)	90 (18)	140 (42)	20 (134)
2004	70 (33)	140 (49)	50 (15)	220 (13)	60 (155)	30 (26)	10 (26)	80 (22)	360 (66)	10 (62)
2005	160 (62)	60 (32)	50 (20)	180 (30)	60 (33)	30 (26)	- (-)	70 (30)	90 (30)	30 (55)
2006	40 (77)	100 (57)	70 (16)	110 (24)	50 (21)	30 (40)	- (-)	40 (19)	50 (40)	70 (36)
2007	100 (36)	160 (71)	50 (22)	70 (22)	30 (53)	10 (35)	- (-)	30 (24)	140 (63)	60 (27)
2008	180 (42)	120 (44)	30 (27)	100 (15)	40 (52)	10 (28)	- (-)	40 (20)	20 (27)	140 (16)
2009	40 (28)	50 (17)	30 (15)	50 (14)	70 (94)	20 (28)	- (-)	40 (28)	30 (40)	110 (20)
2010	40 (22)	50 (62)	50 (54)	50 (22)	40 (22)	20 (27)	80 (184)	70 (21)	70 (48)	60 (19)
2011	70 (26)	50 (59)	30 (19)	50 (24)	20 (37)	20 (17)	20 (99)	40 (14)	80 (56)	80 (13)
2012	60 (19)	50 (39)	20 (26)	100 (14)	40 (15)	20 (30)	- (-)	40 (21)	10 (46)	110 (12)
2013	50 (32)	50 (32)	30 (25)	80 (12)	110 (19)	30 (21)	- (-)	60 (15)	80 (39)	160 (14)
slope	-0.01	0.04	-0.08	0.02	0.11	-0.08	-0.31	-0.02	0.03	0.15

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	CON	BYX	BEN	FHD	DEA	SSO	SKA	SCH	RHY	ETM
1991	10 (45)	60 (103)	- (-)	10 (14)	20 (26)	60 (52)	10 (37)	20 (37)	- (-)	10 (56)
1992	20 (50)	50 (50)	- (-)	30 (27)	30 (27)	60 (34)	30 (55)	20 (22)	- (-)	80 (66)
1993	20 (50)	50 (43)	- (-)	10 (24)	300 (37)	10 (48)	30 (59)	20 (57)	- (-)	40 (29)
1994	10 (17)	110 (52)	- (-)	10 (22)	70 (54)	30 (100)	20 (32)	10 (28)	- (-)	20 (27)
1995	- (-)	70 (46)	30 (172)	30 (13)	80 (32)	10 (42)	40 (52)	20 (17)	- (-)	310 (20)
1996	10 (53)	150 (90)	10 (107)	40 (69)	50 (41)	- (-)	40 (67)	30 (27)	10 (28)	70 (53)
1997	20 (45)	160 (84)	- (-)	10 (84)	40 (18)	60 (88)	10 (119)	30 (29)	- (-)	130 (54)
1998	30 (40)	740 (71)	- (-)	30 (39)	300 (56)	10 (26)	140 (32)	30 (38)	- (-)	10 (47)
1999	10 (42)	20 (80)	20 (89)	30 (26)	50 (36)	10 (73)	130 (21)	100 (40)	- (-)	90 (56)
2000	10 (66)	10 (103)	90 (43)	20 (37)	90 (38)	110 (45)	240 (21)	80 (34)	- (-)	150 (58)
2001	20 (29)	20 (108)	80 (75)	40 (29)	200 (30)	40 (92)	210 (20)	60 (40)	10 (100)	10 (50)
2002	110 (52)	- (-)	30 (103)	100 (41)	10 (33)	90 (103)	130 (18)	40 (26)	30 (69)	20 (88)
2003	80 (31)	20 (42)	150 (60)	110 (20)	30 (16)	110 (67)	160 (17)	40 (27)	10 (32)	- (-)
2004	60 (25)	- (-)	130 (32)	120 (24)	30 (64)	30 (87)	- (-)	40 (19)	40 (88)	10 (65)
2005	40 (35)	- (-)	50 (44)	80 (27)	10 (99)	10 (127)	- (-)	40 (27)	20 (103)	- (-)
2006	20 (41)	- (-)	90 (35)	60 (22)	10 (28)	20 (41)	- (-)	30 (19)	20 (21)	70 (81)
2007	40 (57)	10 (49)	10 (45)	50 (32)	10 (26)	70 (88)	- (-)	30 (40)	10 (64)	30 (98)
2008	170 (19)	- (-)	10 (32)	60 (31)	10 (39)	40 (58)	- (-)	30 (35)	20 (17)	- (-)
2009	130 (21)	10 (274)	10 (54)	60 (19)	10 (39)	- (-)	- (-)	20 (24)	30 (13)	- (-)
2010	50 (33)	20 (78)	40 (18)	50 (29)	10 (20)	20 (54)	- (-)	40 (36)	60 (92)	- (-)
2011	80 (66)	10 (24)	20 (30)	50 (24)	20 (16)	- (-)	- (-)	30 (21)	10 (37)	- (-)
2012	40 (42)	50 (92)	10 (32)	30 (23)	20 (19)	20 (107)	- (-)	40 (17)	150 (127)	- (-)
2013	100 (33)	10 (46)	20 (11)	70 (19)	20 (23)	120 (72)	- (-)	40 (17)	30 (27)	10 (125)
slope	0.13	-0.18	0.24	0.07	-0.10	-0.04	-0.36	0.02	0.34	-0.28

Fishing	Species									
year	SDO	RSK	TOA	ETL	ASR	CYP	CDL	SWO	HYA	SSH
1991	20 (61)	10 (45)	- (-)	- (-)	- (-)	20 (117)	10 (50)	10 (59)	- (-)	- (-)
1992	- (-)	10 (53)	10 (22)	50 (73)	- (-)	10 (10)	- (-)	10 (52)	- (-)	10 (44)
1993	- (-)	10 (52)	- (-)	- (-)	- (-)	- (-)	20 (56)	20 (49)	- (-)	- (-)
1994	- (-)	10 (33)	- (-)	- (-)	- (-)	- (-)	10 (58)	10 (40)	- (-)	- (-)
1995	- (-)	10 (33)	- (-)	10 (26)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	10 (66)	30 (61)	- (-)	10 (50)	- (-)	- (-)	- (-)	- (-)
1997	10 (30)	- (-)	20 (51)	30 (83)	- (-)	- (-)	- (-)	10 (101)	- (-)	- (-)
1998	40 (40)	20 (91)	30 (20)	10 (47)	- (-)	20 (77)	20 (76)	40 (38)	- (-)	- (-)
1999	70 (64)	50 (101)	40 (22)	20 (48)	- (-)	- (-)	- (-)	50 (27)	- (-)	- (-)
2000	10 (51)	- (-)	50 (16)	20 (27)	- (-)	- (-)	30 (42)	50 (25)	- (-)	10 (56)
2001	30 (49)	- (-)	50 (21)	20 (39)	- (-)	10 (58)	30 (377)	60 (28)	- (-)	10 (45)
2002	30 (44)	- (-)	50 (33)	40 (51)	- (-)	- (-)	20 (20)	10 (41)	- (-)	20 (102)
2003	50 (43)	- (-)	100 (25)	50 (44)	- (-)	30 (66)	20 (43)	20 (42)	- (-)	30 (46)
2004	20 (39)	100 (29)	110 (23)	10 (42)	- (-)	20 (49)	10 (26)	10 (42)	- (-)	20 (80)
2005	30 (23)	40 (37)	90 (37)	10 (62)	- (-)	- (-)	- (-)	- (-)	- (-)	40 (29)
2006	10 (26)	40 (39)	50 (31)	20 (42)	- (-)	10 (35)	10 (20)	- (-)	- (-)	- (-)
2007	10 (65)	20 (19)	10 (60)	30 (23)	- (-)	20 (34)	10 (36)	- (-)	- (-)	- (-)
2008	40 (131)	50 (73)	20 (21)	30 (16)	- (-)	70 (55)	10 (26)	10 (28)	60 (42)	10 (48)
2009	10 (66)	20 (19)	10 (36)	30 (20)	10 (53)	10 (56)	10 (39)	10 (20)	60 (88)	- (-)
2010	60 (103)	40 (20)	20 (34)	40 (31)	- (-)	40 (26)	10 (65)	10 (32)	60 (143)	10 (51)
2011	20 (54)	20 (37)	20 (26)	20 (32)	- (-)	10 (26)	20 (77)	10 (52)	20 (98)	20 (45)
2012	20 (63)	20 (32)	10 (36)	10 (22)	- (-)	30 (50)	10 (44)	10 (37)	20 (48)	20 (35)
2013	30 (37)	40 (17)	20 (17)	60 (17)	- (-)	40 (31)	10 (39)	20 (22)	40 (38)	50 (36)
slope	0.22	0.12	0.19	0.16	0.03	0.18	0.12	-0.01	0.30	0.20

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	MIQ	SCO	HAP	GLS	SNA	NSD	SRH	SCI	BEL	SLK
1991	20 (56)	- (-)	10 (79)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	30 (50)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (35)	- (-)
1993	50 (56)	10 (55)	10 (65)	- (-)	- (-)	- (-)	- (-)	10 (64)	- (-)	- (-)
1994	10 (28)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	10 (26)	10 (41)	- (-)	- (-)	10 (75)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	10 (64)	- (-)	- (-)	- (-)	- (-)	40 (80)	- (-)	- (-)
1997	- (-)	- (-)	10 (68)	- (-)	- (-)	- (-)	- (-)	10 (63)	10 (69)	- (-)
1998	- (-)	- (-)	10 (72)	- (-)	170 (120)	- (-)	- (-)	20 (38)	10 (44)	- (-)
1999	- (-)	- (-)	10 (54)	- (-)	- (-)	- (-)	- (-)	20 (30)	50 (97)	- (-)
2000	- (-)	- (-)	20 (28)	- (-)	20 (98)	- (-)	- (-)	20 (39)	10 (71)	10 (50)
2001	10 (101)	- (-)	30 (23)	- (-)	160 (115)	10 (49)	- (-)	40 (26)	10 (62)	- (-)
2002	- (-)	- (-)	30 (34)	- (-)	- (-)	20 (239)	10 (74)	20 (21)	- (-)	20 (42)
2003	- (-)	10 (26)	20 (24)	- (-)	- (-)	30 (55)	10 (28)	20 (35)	- (-)	30 (81)
2004	- (-)	10 (52)	60 (26)	70 (72)	- (-)	10 (57)	10 (24)	20 (25)	20 (73)	110 (91)
2005	10 (75)	- (-)	20 (20)	- (-)	- (-)	30 (30)	- (-)	10 (24)	- (-)	10 (26)
2006	- (-)	50 (84)	10 (10)	210 (95)	- (-)	10 (91)	20 (68)	10 (33)	10 (72)	10 (35)
2007	- (-)	- (-)	10 (39)	10 (150)	- (-)	20 (35)	- (-)	- (-)	- (-)	- (-)
2008	10 (114)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (10)	40 (58)	30 (25)
2009	20 (44)	10 (70)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (10)	10 (37)	20 (40)
2010	40 (68)	- (-)	10 (32)	- (-)	- (-)	10 (69)	10 (67)	10 (22)	10 (63)	- (-)
2011	10 (52)	40 (91)	- (-)	- (-)	- (-)	20 (44)	20 (25)	10 (22)	10 (448)	- (-)
2012	10 (32)	- (-)	- (-)	30 (49)	- (-)	10 (26)	10 (32)	- (-)	10 (33)	- (-)
2013	10 (47)	60 (36)	10 (44)	- (-)	- (-)	20 (32)	40 (31)	10 (26)	- (-)	- (-)
slope	0.05	0.12	-0.06	0.12	-0.05	0.23	0.23	0.08	0.10	0.11

Fishing	Species									
year	NMP	THR	RBY	SBK	CBO	MAK	HJO	STN	WHX	SCM
1991	10 (68)	10 (33)	30 (154)	- (-)	10 (55)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	10 (56)	10 (78)	10 (75)	10 (102)	80 (81)	- (-)	10 (39)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	10 (161)	30 (42)	10 (28)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	10 (35)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	10 (20)	20 (40)	10 (36)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	20 (25)	30 (32)	10 (17)	- (-)	- (-)	60 (87)	- (-)	- (-)	- (-)	10 (73)
1997	20 (32)	30 (46)	10 (87)	- (-)	- (-)	60 (88)	- (-)	- (-)	- (-)	- (-)
1998	20 (26)	10 (30)	30 (94)	- (-)	- (-)	70 (69)	10 (68)	- (-)	- (-)	50 (92)
1999	10 (57)	60 (32)	- (-)	- (-)	- (-)	20 (43)	10 (96)	- (-)	- (-)	- (-)
2000	10 (45)	- (-)	10 (89)	10 (35)	- (-)	10 (35)	- (-)	10 (36)	- (-)	10 (82)
2001	70 (54)	30 (44)	- (-)	- (-)	- (-)	20 (44)	- (-)	10 (64)	10 (70)	30 (75)
2002	- (-)	20 (39)	10 (151)	10 (107)	- (-)	10 (66)	80 (113)	10 (75)	40 (102)	- (-)
2003	- (-)	10 (35)	10 (128)	10 (44)	- (-)	20 (43)	30 (54)	10 (88)	- (-)	- (-)
2004	10 (52)	- (-)	20 (44)	10 (32)	- (-)	10 (68)	10 (82)	20 (51)	10 (71)	10 (47)
2005	10 (51)	- (-)	20 (63)	10 (49)	- (-)	10 (49)	- (-)	10 (41)	- (-)	20 (58)
2006	- (-)	- (-)	- (-)	10 (42)	- (-)	10 (28)	- (-)	- (-)	20 (58)	10 (79)
2007	- (-)	- (-)	- (-)	10 (24)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (39)
2008	- (-)	- (-)	- (-)	10 (40)	40 (111)	- (-)	10 (97)	- (-)	50 (89)	10 (60)
2009	- (-)	- (-)	- (-)	20 (28)	- (-)	10 (33)	10 (57)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	10 (28)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (58)
2011	- (-)	- (-)	- (-)	10 (39)	- (-)	- (-)	- (-)	- (-)	10 (64)	10 (62)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	20 (28)	30 (76)	- (-)	- (-)	20 (37)	- (-)	- (-)
slope	-0.21	-0.23	-0.27	0.16	-0.06	-0.05	0.00	0.07	0.10	0.10

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	ERA	COL	PLS	SPO	OPI	HOR	PDG	BEE	HCO	SQX
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	30 (82)	- (-)	40 (128)	- (-)	- (-)	- (-)	10 (20)	10 (26)	- (-)
1993	- (-)	- (-)	10 (26)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	10 (10)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (41)	- (-)	- (-)
1996	10 (82)	- (-)	- (-)	190 (142)	- (-)	- (-)	10 (88)	- (-)	- (-)	- (-)
1997	10 (26)	- (-)	- (-)	240 (121)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	10 (14)	- (-)	- (-)	190 (119)	- (-)	10 (71)	- (-)	- (-)	10 (42)	20 (42)
1999	- (-)	- (-)	- (-)	20 (66)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (44)
2000	10 (28)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	30 (35)	10 (58)
2001	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	- (-)	- (-)	10 (55)	- (-)	- (-)	- (-)	- (-)	10 (62)	10 (37)	10 (39)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	30 (90)	10 (44)	- (-)	- (-)
2004	10 (17)	- (-)	- (-)	- (-)	- (-)	140 (125)	- (-)	- (-)	- (-)	20 (23)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	20 (61)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (44)	- (-)
2008	10 (14)	40 (74)	- (-)	- (-)	20 (30)	- (-)	- (-)	10 (32)	- (-)	- (-)
2009	10 (17)	30 (181)	10 (36)	- (-)	20 (64)	- (-)	- (-)	20 (34)	- (-)	- (-)
2010	- (-)	- (-)	10 (32)	- (-)	- (-)	- (-)	10 (52)	- (-)	- (-)	- (-)
2011	10 (41)	- (-)	20 (38)	- (-)	10 (57)	- (-)	10 (17)	10 (79)	- (-)	10 (39)
2012	- (-)	20 (78)	10 (22)	- (-)	10 (72)	- (-)	10 (57)	- (-)	- (-)	- (-)
2013	10 (28)	10 (64)	10 (26)	- (-)	10 (33)	- (-)	10 (14)	- (-)	- (-)	10 (39)
slope	0.05	0.12	0.17	-0.19	0.20	0.00	0.15	0.03	-0.03	0.06

Fishing	Species									
year	DSK	MOO	EPL	RSQ	GSQ	TOP	MCA	WHR	WIT	MOD
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	40 (98)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	20 (57)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	10 (22)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	20 (25)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	10 (41)	- (-)	- (-)	- (-)	- (-)	40 (65)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	10 (39)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	- (-)	- (-)	- (-)	10 (49)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	10 (52)	- (-)	- (-)	10 (44)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	10 (55)	10 (68)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	10 (32)	- (-)	20 (50)	- (-)	- (-)	- (-)	20 (101)	- (-)	10 (64)
2001	- (-)	10 (24)	- (-)	- (-)	10 (52)	10 (28)	- (-)	- (-)	- (-)	- (-)
2002	- (-)	10 (20)	10 (77)	- (-)	- (-)	10 (28)	- (-)	- (-)	10 (30)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	10 (42)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	10 (40)	- (-)	- (-)	- (-)	10 (48)	10 (33)	- (-)	- (-)	10 (95)	20 (71)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (49)
2007	10 (40)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	10 (36)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (69)	10 (37)	10 (37)	10 (37)
2009	20 (29)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (40)	10 (49)	- (-)	10 (20)
2010	10 (42)	- (-)	10 (17)	10 (37)	- (-)	10 (62)	- (-)	- (-)	10 (32)	- (-)
2011	- (-)	- (-)	20 (37)	10 (41)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (79)	- (-)
2013	10 (46)	- (-)	10 (24)	- (-)	- (-)	10 (37)	- (-)	- (-)	- (-)	10 (35)
slope	0.18	-0.15	0.13	0.07	-0.07	0.08	-0.04	-0.02	0.12	0.13

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	DWE	RDO	EEL	HAG	EMA	CYO	APR	WHE	OCT	LAN
1991	- (-)	- (-)	- (-)	- (-)	10 (30)	10 (56)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	10 (22)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	10 (88)	- (-)	- (-)	- (-)	- (-)	20 (100)
1994	- (-)	- (-)	- (-)	- (-)	20 (82)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	10 (22)	- (-)	- (-)	10 (109)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	10 (62)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	- (-)	- (-)	- (-)	10 (199)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (169)	- (-)	- (-)	- (-)
1999	- (-)	10 (107)	10 (82)	- (-)	10 (95)	- (-)	- (-)	- (-)	10 (14)	- (-)
2000	- (-)	- (-)	20 (49)	- (-)	- (-)	- (-)	- (-)	- (-)	20 (26)	40 (75)
2001	- (-)	- (-)	20 (48)	- (-)	- (-)	- (-)	- (-)	80 (90)	10 (17)	10 (66)
2002	10 (99)	- (-)	30 (57)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (66)	- (-)
2003	30 (26)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	10 (69)	- (-)	- (-)	- (-)	10 (100)	10 (51)	- (-)	- (-)	- (-)
2005	10 (88)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	10 (45)	- (-)	- (-)	- (-)	10 (42)	- (-)	- (-)	- (-)	- (-)
2007	10 (36)	- (-)	10 (102)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	- (-)	- (-)	- (-)	- (-)	10 (30)	- (-)	- (-)	- (-)	- (-)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	10 (33)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	10 (122)	- (-)	- (-)	- (-)	- (-)	20 (56)	- (-)	- (-)	- (-)
2011	- (-)	10 (39)	- (-)	- (-)	- (-)	10 (20)	- (-)	- (-)	- (-)	- (-)
2012	10 (47)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (33)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	10 (122)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
slope	0.09	0.09	-0.08	0.05	-0.20	0.05	0.08	-0.01	-0.03	-0.06

Fishing	Species									
year	TSQ	HPB	TAM	RAG	PHO	BSQ	HEX	PSK	CDO	CYL
1991	- (-)	20 (36)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	10 (41)	10 (40)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	10 (55)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	10 (50)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	20 (24)	- (-)	10 (58)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	20 (37)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	10 (17)	- (-)	- (-)	130 (154)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	10 (14)	- (-)	20 (71)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2001	- (-)	- (-)	- (-)	- (-)	10 (85)	- (-)	- (-)	10 (37)	- (-)	- (-)
2002	- (-)	10 (32)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (108)	- (-)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (65)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (39)
2008	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (79)
2009	10 (37)	- (-)	10 (14)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (71)	- (-)	- (-)
2011	- (-)	- (-)	10 (24)	- (-)	- (-)	- (-)	10 (32)	10 (95)	- (-)	10 (61)
2012	10 (14)	- (-)	10 (14)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (89)
2013	10 (14)	- (-)	10 (30)	10 (58)	- (-)	- (-)	10 (44)	- (-)	- (-)	- (-)
slope	0.08	-0.29	0.17	0.00	-0.04	0.00	0.09	0.07	0.01	0.16

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	OAR	FMA	STU	OPE	CRB	CSH	DWO	BNE	STG	VSQ
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	40 (44)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	10 (84)	- (-)	- (-)	10 (138)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	- (-)	10 (47)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2001	10 (101)	- (-)	- (-)	10 (49)	10 (30)	- (-)	- (-)	30 (69)	- (-)	10 (81)
2002	- (-)	- (-)	- (-)	- (-)	10 (99)	10 (66)	- (-)	10 (114)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	10 (114)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (47)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	20 (58)	- (-)	20 (118)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	10 (33)	- (-)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	20 (61)	- (-)	- (-)	10 (56)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	10 (143)	- (-)	- (-)	- (-)	- (-)	10 (45)	- (-)	- (-)	- (-)	- (-)
slope	0.02	0.03	-0.01	0.00	0.00	0.09	0.05	-0.01	-0.06	0.05

Fishing	Species									
year	ACS	YBO	CAR	MAN	AGR	OEO	BAS	POR	TOR	SRI
1991	- (-)	- (-)	- (-)	10 (10)	10 (35)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	10 (14)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	- (-)	30 (84)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	- (-)	40 (147)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	- (-)	- (-)	- (-)	30 (131)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	- (-)	- (-)	10 (51)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (92)	- (-)	- (-)
2000	- (-)	- (-)	- (-)	10 (48)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2001	- (-)	- (-)	10 (39)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (30)	- (-)	- (-)	- (-)
2004	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (20)	- (-)	- (-)	- (-)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (44)	80 (32)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2009	10 (33)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	10 (36)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	10 (20)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
slope	0.07	0.05	0.00	-0.10	-0.10	-0.09	0.01	-0.01	0.01	0.02

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	BSL	SEE	SQA	OSK	MOK	MDO	EUC	ECH	PDS	GSC
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	20 (176)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (26)
1996	- (-)	- (-)	- (-)	- (-)	40 (155)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	- (-)	- (-)	- (-)	10 (114)	10 (17)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	- (-)	- (-)	10 (99)	10 (20)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	20 (70)	- (-)	- (-)
2001	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	10 (73)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (59)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (102)	- (-)
2004	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	20 (39)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2007	- (-)	- (-)	10 (36)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	- (-)	10 (41)	- (-)	- (-)	- (-)	10 (49)	- (-)	- (-)	- (-)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
slope	0.00	0.00	0.07	0.00	-0.12	-0.04	0.03	-0.01	0.00	-0.03

Fishing	Species									
year	SUN	SPI	ANT	BSP	CCX	BPI	HEP	PIG	BTS	BTH
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	10 (42)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	10 (77)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (81)	- (-)	- (-)
2001	- (-)	10 (33)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	- (-)	10 (51)	10 (59)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	- (-)	10 (72)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	20 (107)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (14)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	10 (147)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (59)	- (-)
slope	0.00	-0.03	0.00	0.00	0.05	0.03	0.00	-0.01	0.05	0.03

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	RAY	SLB	BWS	SNR	BER	LSK	FOR	GAS	EPR	SEV
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	- (-)	10 (40)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	10 (48)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2001	- (-)	- (-)	- (-)	10 (76)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	- (-)	- (-)	- (-)	10 (44)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2005	- (-)	20 (88)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (45)	- (-)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (20)	10 (24)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	10 (49)	- (-)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
slope	0.00	0.02	-0.04	0.00	0.00	0.04	0.00	0.05	0.03	0.00

Fishing	Species									
year	MOL	FLA	BCA	SNI	HYD	PSI	EMO	PKN	RSN	NEX
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	10 (69)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	10 (32)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	10 (36)	- (-)	- (-)	- (-)	- (-)	- (-)	20 (144)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2001	- (-)	10 (73)	- (-)	20 (42)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	20 (77)	- (-)	- (-)	- (-)	10 (40)	- (-)	- (-)	- (-)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (91)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (87)	- (-)	- (-)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
slope	-0.02	0.00	-0.06	0.00	0.00	0.00	0.00	0.03	-0.02	0.01

Table 3: Hoki, hake, and ling trawl fishery. — *continued*.

Fishing	Species									
year	SOP	TVI	CPA	CUB	OFH	BYD	CHG	ECN	SMI	ZOR
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2000	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2001	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (35)	- (-)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	20 (131)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	10 (59)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
slope	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Fishing	Species									
year	CCA	RCH	SBR	SHE	BTA	LHO	TOD	YFN	CHI	CPD
1991	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1992	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1993	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1994	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1995	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (22)	- (-)
1996	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1997	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1998	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
1999	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (66)
2000	- (-)	- (-)	- (-)	10 (105)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2001	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2002	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2003	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2004	- (-)	20 (91)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2005	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2006	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2007	- (-)	- (-)	- (-)	- (-)	- (-)	10 (60)	- (-)	- (-)	- (-)	- (-)
2008	- (-)	- (-)	- (-)	- (-)	- (-)	10 (52)	- (-)	- (-)	- (-)	- (-)
2009	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2010	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	10 (49)	- (-)	- (-)	- (-)
2011	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2012	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
2013	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
slope	0.00	0.01	0.00	-0.01	0.00	0.05	0.04	0.00	-0.03	-0.01

Table 3b: Hoki, hake, and ling trawl fishery. Total annual bycatch estimates (t) for individual species with at least 1 t of bycatch in at least one year for the 2013–14 fishing year, based on observer catch rates;-means less than 1 t. (see <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species																		
year	SWA	JAV	RAT	SPD	FRO	JMA	WWA	GSP	RIB	SPE	BAR	LDO	GSH	SHA	BOE	SQU	SND	GIZ	
2014	2 356	2	2	2	950	7	1 041	594	779	324	46	562	112	97	1	586	269	217	340
Fishing	Species																		
year	RBH	UFISH	RSO	BSH	RCO	SSK	SBW	BSK	WSQ	ONG	ORH	BNS	BYS	WAR	POS	SOR	BYX	LCH	
2014	152	3	358	80	68	246	321	-	71	4	29	24	104	2	41	61	24	113	
Fishing	Species																		
year	RBT	ETB	SSI	RUD	BBE	DEA	BEN	CON	SKA	FHD	CSQ	ETM	SSO	SCH	SDO	TOA	RSK	ASR	
2014	123	255	64	81	52	6	104	150	-	47	183	1	70	36	31	19	32	10	
Fishing	Species																		
year	RHY	ETL	CDL	SWO	SNA	SCO	CYP	HAP	THR	MIQ	SSH	RBY	NMP	SCI	HYA	NSD	MAK	GLS	
2014	16	53	23	19	-	158	38	4	8	4	21	7	1	9	49	21	5	-	
Fishing	Species																		
year	SLK	BEL	SPO	SRH	HJO	SBK	SCM	STN	PHO	CBO	HOR	WGX	ERA	PLS	MOO	COL	PDG	BEE	
2014	3	5	-	47	3	22	-	10	-	25	-	13	15	31	-	27	7	14	
Fishing	Species																		
year	EMA	RSQ	HCO	GSQ	SQX	WHR	HPB	EEL	RDO	OPI	DWE	WHE	DSK	EPL	AGR	OCT	MCA	WIT	
2014	-	2	8	4	1	1	1	-	-	-	16	-	-	4	15	-	2	-	2
Fishing	Species																		
year	TOP	BSQ	LAN	MOD	CYO	OEO	STU	APR	CDO	RAG	CRB	POR	BNE	STG	MOK	OPE	HAG	OAR	
2014	13	-	2	4	7	-	3	1	11	-	1	-	-	-	-	-	-	4	-
Fishing	Species																		
year	MDO	DWO	PSK	MAN	HEX	BAS	TSQ	VSQ	TAM	CAR	BWS	CYL	FMA	YBO	BSL	CSH	SPI	TOR	
2014	14	12	1	3	5	1	5	7	8	4	1	-	5	7	10	1	-	2	
Fishing	Species																		
year	SRI	SUN	ECH	ACS	SEE	PDS	ANT	GSC	FOR	SQA	BCA	SNR	BSP	RSN	SOP	MOL	OSK	FLA	
2014	-	5	-	5	-	-	2	7	-	-	1	-	2	-	-	-	6	-	
Fishing	Species																		
year	SNI	EUC	BPI	NEX	HEP	SLB	CUB	HYD	PIG	BTH	BER	OFH	SHE	SEV	CCA	GAS	EMO	BYD	
2014	-	1	-	-	3	-	1	-	-	-	1	1	-	3	-	-	-	8	
Fishing	Species																		
year	CCX	CHI	YFN	SUR	ECN	RCH	LSK	BCR	CPD	EPR	PAL	RAY	PSI	MRQ	BTS	COD	CAS	CHG	
2014	1	-	-	-	1	2	1	-	-	-	-	-	-	1	9	3	-	-	1
Fishing	Species																		
year	PKN	TVI	BDA	SSP	NTU	CTU	PSQ	LHO	PSP	JFI	CPA	ZOR	BCO	CJA	BTA	SMI	BFI	MRL	
2014	1	-	-	-	-	-	4	-	-	2	-	-	-	2	4	4	-	-	
Fishing	Species																		
year	KIC	HTH	SBO	CCO	LUC	SBR	GRM	GON	GUR	TOD	FLO	LMU	SMC	BOT	RIS	TRA	SNE	SCD	
2014	-	-	1	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	

Table 3b: Hoki, hake, and ling trawl fishery—continued.

Fishing	Species																			
year	SAW	HTR	CHP	LNV	PLT	PAH	BNT	DMG	TRU	BRA	BKM	HMT	BCD	SPZ	CRU	CHM	TAY	COU		
2014	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	
Fishing	Species																			
year	WRA	SBI	GOR	LSO	CDX	FRX	HAL	DSS	WPS	BRC	CST	ALB	LEG	CBE	CRA	FRS	JDO	SDE		
2014	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Fishing	Species																			
year	SPK	RMU	COF	SDM	EPD	CHQ	SYN	DEQ	TDQ	SCG	FAN	STO	BRS	STR	OSE	PRA	SOT	NOC		
2014	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Fishing	Species																			
year	MST	SSM	SNO	SSC	MOR	GSA	DCS	SDR	TLD	CBX	BES	SPR	ODO	OPA	SDF	VNI	GVO	PSY		
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
Fishing	Species																			
year	NCB	VOL	LLC	KWH	CBI	ETP	IBR	LHE	PIN	GMC	JGU	API	NEB	CRM	SPL	CMA	SAI	ROC		
2014	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1	-	-	-	-
Fishing	Species																			
year	NCB	VOL	LLC	KWH	CBI	ETP	IBR	LHE	PIN	GMC	JGU	API	NEB	CRM	SPL	CMA	SAI	ROC		
2014	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1	-	-	-	-
Fishing	Species																			
year	CUC	DHO	GRC	CFA	YBF	KIN	BOA	DPO	SRB	STM	SUH	SYD	HOL							
2014	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 4: Oreo trawl fishery. Total annual bycatch estimates (t) for individual species with at least 1 t of bycatch in at least one year, based on observer catch rates; -means less than 1 t. The slope of a regression through the data points is shown after fishing year (see <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species																		
year	ORH	SHA	HOK	COU	RAT	ETB	BSH	SLK	ETM	MCA	BEE	WSQ	MOD	JAV	UFISH	WOE	HJO	GSP	
1991	704	124	54	-	17	-	-	1	-	-	3	1	-	16	113	-	3	-	
1992	63	69	-	-	5	17	-	-	-	-	2	-	-	-	-	-	6	-	
1993	126	352	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	
1994	85	28	31	-	28	-	14	7	-	-	-	-	-	-	-	-	-	-	
1995	116	60	-	-	18	38	11	1	-	-	3	1	-	-	-	-	6	-	
1996	155	223	291	-	40	-	5	14	9	-	13	1	42	19	-	-	-	1	
1997	355	10	82	2	21	90	80	17	3	-	2	10	3	4	1	-	-	-	
1998	413	304	46	717	22	-	9	8	-	-	7	3	12	-	-	-	-	1	
1999	1 851	169	15	8	29	47	33	12	-	-	4	5	3	1	-	55	1	1	
2000	378	99	60	197	142	25	39	18	40	-	7	17	7	10	-	33	3	7	
2001	92	162	327	1	132	-	40	13	7	-	11	14	6	6	-	3	16	10	
2002	191	82	143	128	98	22	151	17	41	-	7	12	3	5	-	3	-	16	
2003	748	37	91	295	108	-	66	17	142	-	21	6	7	10	-	17	1	17	
2004	426	10	22	5	71	58	42	24	-	-	29	8	5	2	-	-	1	3	
2005	562	53	16	19	76	14	3	11	64	-	10	8	7	18	-	-	-	4	
2006	306	60	145	1	155	58	4	20	25	33	15	8	9	3	-	-	11	6	
2007	267	22	52	1	50	56	6	15	4	55	15	10	5	3	-	-	1	6	
2008	97	15	11	-	54	77	5	17	13	69	18	14	7	4	-	-	4	3	
2009	423	21	16	-	54	145	3	42	-	33	11	13	13	7	-	-	3	4	
2010	543	28	78	-	35	212	3	35	-	34	9	9	6	12	-	-	5	3	
2011	187	18	13	-	46	57	-	11	-	27	6	3	3	5	-	-	11	2	
2012	168	10	58	-	30	91	11	14	-	12	11	10	9	1	-	-	13	2	
2013	256	2	125	-	23	64	4	7	-	-	5	6	2	1	-	-	1	5	
2014	15	23	66	-	21	48	-	30	-	2	7	6	13	1	-	-	14	2	
slope	-0.01	-0.12	0.13	-0.05	0.08	0.26	-0.03	0.15	0.01	0.26	0.11	0.15	0.16	0.08	-0.08	-0.04	0.12	0.17	

Fishing	Species																		
year	SPD	HAK	CSQ	SVA	SSI	LCH	SQA	GSH	SND	HTH	GDU	ETP	GRC	VCO	RIB	ASR	SSK	CDL	
1991	-	2	-	-	-	6	-	26	1	-	-	-	-	-	3	-	-	-	
1992	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	71	1	-	-	1	1	-	6	-	-	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	
1996	-	2	50	-	-	2	-	1	-	-	-	-	-	-	10	-	-	-	
1997	-	2	-	-	-	8	-	4	1	-	-	-	-	-	1	-	-	5	
1998	-	1	-	-	-	2	-	2	1	-	-	-	-	-	-	-	-	-	
1999	-	2	-	-	-	2	-	1	1	21	-	-	-	-	-	20	-	-	
2000	-	19	5	-	49	2	-	5	3	2	-	30	-	2	-	1	-	-	
2001	-	6	-	-	7	2	-	1	6	-	-	-	-	-	-	-	-	-	
2002	-	5	-	-	-	4	-	-	4	-	-	-	-	-	1	-	-	-	
2003	-	3	-	-	-	2	-	-	1	1	-	-	1	-	1	-	1	-	
2004	-	7	-	-	-	3	-	-	1	-	-	-	7	-	1	-	-	1	
2005	-	1	-	-	-	2	4	-	2	-	-	-	16	-	1	-	-	12	
2006	-	3	1	-	-	3	48	1	1	-	-	-	-	2	-	-	-	-	
2007	-	3	-	-	-	2	-	-	1	-	5	-	-	-	-	-	-	-	
2008	4	1	-	20	-	3	-	-	-	17	-	-	3	-	-	-	-	-	
2009	-	1	-	37	-	3	-	-	2	4	-	-	12	1	-	-	-	-	
2010	-	1	1	2	-	2	-	-	5	-	3	-	3	3	1	-	2	-	
2011	-	-	1	-	-	-	-	-	-	5	-	-	-	1	-	-	-	-	
2012	-	-	-	-	-	1	-	-	2	2	-	-	-	-	-	-	16	-	
2013	-	-	1	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	
2014	-	1	1	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-	
slope	-0.03	-0.02	0.04	0.08	-0.04	0.03	0.03	-0.18	0.06	0.02	0.09	-0.01	0.04	0.09	-0.03	-0.02	0.06	0.00	

Table 4: Oreo trawl fishery. — *continued*.

Fishing	Species																		
year	LIN	ETL	CYP	CHI	SMC	ECN	MIQ	SSM	BSL	PAB	SKA	CHG	PSE	TAM	PLS	MOC	CHP	DWE	
1991	7	-	-	1	-	-	6	-	-	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	6	-	-	3	-	-	-	-	4	-	-	-	-	-	-	-	-	3	
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	2	-	-	-	-	3	-	-	-	-	-	-	
2000	-	-	2	1	-	8	-	-	-	-	2	1	8	-	6	-	1	-	
2001	-	-	-	1	1	-	-	-	-	-	2	-	-	-	-	-	-	1	
2002	1	-	-	1	2	1	-	-	1	-	1	1	-	-	-	-	-	-	
2003	2	11	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	
2004	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
2005	-	-	-	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	
2006	-	-	1	1	-	-	-	-	-	2	-	-	-	1	-	-	1	1	
2007	1	-	1	1	-	-	-	-	2	-	-	-	1	-	-	-	-	-	
2008	-	1	3	-	-	-	1	-	1	1	-	-	-	2	-	7	1	1	
2009	-	4	2	-	-	-	1	-	-	1	-	1	-	1	-	-	1	-	
2010	-	-	2	-	-	-	1	-	-	2	-	1	-	2	1	-	1	-	
2011	-	-	-	1	-	-	2	-	1	-	-	-	1	-	-	-	-	-	
2012	-	-	1	-	1	-	-	1	4	-	-	1	-	-	-	-	-	-	
2013	-	-	2	-	11	-	-	12	-	-	-	1	-	-	-	-	-	-	
2014	-	-	1	3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
slope	-0.06	0.04	0.13	0.00	0.06	-0.02	-0.01	0.06	0.03	0.07	-0.04	0.09	-0.01	0.08	0.01	0.02	0.04	-0.01	

Fishing	Species																		
year	ANT	CMU	WWA	BBE	CBD	EPL	SQU	NOR	RUD	ONG	APR	CBI	SIA	TOA	COD	ROC	VIT	CHR	
1991	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	6	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	3	-	
2001	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
2002	-	-	-	-	-	-	1	-	-	-	-	3	-	-	-	-	-	-	
2003	-	-	1	-	-	-	1	-	-	3	-	-	-	-	-	-	-	-	
2004	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	6	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	
2006	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	
2007	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	2	-	-	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	-	-	-	1	-	-	-	-	1	-	1	-	-	-	-	1	
2011	-	-	4	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2013	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
2014	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
slope	-0.01	0.01	0.03	0.03	0.02	-0.03	-0.03	0.01	-0.03	-0.01	0.02	0.00	0.06	0.00	-0.01	0.02	-0.01	0.03	

Table 4: Oreo trawl fishery. — *continued*.

Fishing	Species																		
year	OCT	LEG	SNR	PSY	SBI	SCM	SBW	LAE	HYD	DSK	SPI	LAN	RAG	CON	SQX	EEL	BJA	KIC	
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	1	
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
1997	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	1	-	-	1	-	-	-	-	-	2	-	-	-	-	1	-	-	-	
2001	2	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
2002	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	1	-	-	
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
2006	-	-	-	-	-	-	1	1	-	-	2	-	-	-	-	-	-	-	
2007	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
2008	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	
2013	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
slope	-0.01	0.04	0.03	0.00	-0.02	0.01	0.02	-0.01	0.01	-0.04	-0.01	0.01	0.01	0.01	0.00	-0.03	-0.01	0.02	-0.02

Fishing	Species																		
year	PSK	CAY	COR	PSL	IBR	BTH	JFI	CSH	LPS	PTO	GOB	OSP	GRM	SDE	MOR	SBR	CUB	BAT	
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	1	-	
1998	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
2001	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
2011	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
slope	0.00	0.01	0.00	0.01	0.02	0.01	0.01	-0.01	-0.01	0.00	-0.01	0.00	0.02	0.02	0.00	0.01	0.00	-0.01	

Table 4: Oreo trawl fishery. — *continued*.

Fishing year	Species							
	BNS	ISI	ECH	RAY	DDI	LDO	CRB	LPI
1991	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-	-
1994	-	-	-	1	-	-	-	-
1995	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-
2001	-	-	1	-	-	-	1	-
2002	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	1	-	-
2004	-	-	-	-	-	-	-	-
2005	1	-	-	-	-	-	-	-
2006	-	1	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-
2008	-	-	-	-	1	-	-	-
2009	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	1
slope	0.00	0.01	0.00	-0.02	0.01	0.00	0.00	0.02

Table 5: Orange roughy trawl fishery. Total annual bycatch estimates (t) for individual species with at least 1 t of bycatch in at least one year, based on observer catch rates; -means less than 1 t. The slope of a regression through the data points is shown after fishing year (see <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species																		
year	SSO	BOE	CDL	SHA	HOK	RAT	SOR	BSH	SLK	COU	RIB	SND	ETB	BYX	BYS	MOD	BEE	ETM	
1991	12 293	2 476	103	531	407	91	78	16	10	-	164	73	233	-	-	-	106	-	
1992	10 918	8 736	208	233	345	23	142	163	2	-	129	31	83	235	-	-	25	3	
1993	2 887	2 135	806	294	15	34	297	86	7	-	484	32	-	134	2	-	11	-	
1994	9 812	4 959	3 095	231	399	68	408	102	111	-	77	27	23	409	287	16	51	82	
1995	11 757	2 056	322	381	150	107	168	193	48	2	60	34	56	24	101	15	130	99	
1996	7 489	1 630	2 069	305	134	45	32	48	29	-	60	4	-	7	-	1	19	27	
1997	7 958	3 880	2 400	353	71	173	42	94	152	11	49	22	123	22	19	45	29	55	
1998	10 166	3 364	846	256	159	211	218	107	75	431	73	26	32	269	3	8	25	-	
1999	3 040	380	340	422	90	298	747	282	90	339	115	82	9	27	91	10	29	-	
2000	2 133	615	1 034	176	481	181	69	210	151	265	40	63	1	2	118	15	18	24	
2001	4 587	948	190	118	324	131	49	432	397	501	43	89	-	-	97	40	30	26	
2002	1 813	439	84	115	91	198	42	155	411	58	62	106	56	-	4	116	44	80	
2003	2 187	621	177	82	90	100	49	174	50	52	33	111	-	2	164	15	37	133	
2004	3 631	708	54	71	127	122	41	98	64	334	22	79	196	4	35	63	47	14	
2005	3 477	855	86	211	87	85	33	32	78	107	42	80	43	-	22	110	62	164	
2006	1 485	474	91	104	111	387	12	37	106	24	95	234	57	3	5	42	34	11	
2007	892	86	31	72	178	164	12	39	54	1	53	175	76	-	6	146	35	16	
2008	1 928	231	24	98	133	132	16	50	92	2	26	145	82	2	7	20	25	2	
2009	2 005	368	94	138	160	96	33	50	79	-	38	66	112	-	16	60	26	1	
2010	1 136	395	26	140	187	197	36	16	155	-	54	127	73	-	35	154	27	-	
2011	172	66	55	31	26	39	45	20	15	-	78	32	31	-	10	8	3	1	
2012	138	40	10	14	15	28	34	9	24	1	28	32	32	1	70	5	4	-	
2013	35	60	7	5	7	8	49	8	10	-	34	10	20	6	4	2	2	-	
2014	137	43	10	5	15	21	33	5	5	-	46	44	21	-	3	6	5	-	
slope	-0.19	-0.20	-0.20	-0.15	-0.09	-0.02	-0.09	-0.10	0.01	-0.04	-0.06	0.03	0.08	-0.24	0.08	0.15	-0.09	-0.10	

Fishing	Species																			
year	HJO	WSQ	JAV	LCH	HAK	UFISH	OEO	CYP	BNS	CBB	SPD	WHX	ETL	PLS	GSP	CSQ	ASR	BSL		
1991	51	2	8	21	113	178	82	-	-	-	-	-	14	-	10	-	-	-	-	
1992	6	1	-	2	2	35	12	-	144	-	13	-	1	6	-	-	-	3		
1993	9	1	1	6	-	117	4	1	26	-	20	1	-	21	1	4	-	1		
1994	10	8	10	7	19	22	208	13	10	-	140	1	68	44	2	4	-	27		
1995	33	11	3	6	2	7	-	5	2	-	-	-	-	8	1	25	-	-		
1996	10	7	61	8	18	-	5	-	1	-	2	18	-	4	-	6	-	-		
1997	1	31	4	13	22	13	1	5	34	-	1	-	-	11	-	5	-	1		
1998	14	24	49	32	44	2	8	-	6	-	-	4	65	-	-	-	2	8		
1999	-	16	54	9	19	12	-	2	1	-	-	-	3	2	1	-	25	43		
2000	14	14	16	36	27	-	-	2	10	-	21	6	1	-	9	-	65	13		
2001	8	42	23	62	143	-	-	-	3	-	1	-	-	-	17	-	3	-		
2002	46	15	96	108	25	1	-	6	4	-	-	101	-	-	18	-	5	2		
2003	17	20	39	17	15	-	-	-	2	100	-	7	14	-	7	-	5	5		
2004	20	24	5	25	25	-	-	4	9	34	1	-	4	7	4	-	-	-		
2005	22	168	56	14	7	-	-	16	5	-	-	5	-	2	10	2	-	-		
2006	158	79	23	56	10	-	1	85	-	-	-	1	-	5	6	8	-	-		
2007	6	50	33	14	9	-	-	53	-	42	-	25	-	1	6	13	1	2		
2008	106	22	31	32	8	-	-	57	1	26	-	-	-	8	7	1	-	-		
2009	52	42	9	25	9	-	8	30	1	-	-	2	-	17	5	6	-	-		
2010	71	15	8	39	8	-	36	12	1	-	-	-	1	7	12	7	2	-		
2011	14	2	2	7	4	-	-	4	-	-	-	1	-	2	3	6	-	-		
2012	11	2	13	4	2	-	-	4	-	-	-	2	-	8	2	6	-	-		
2013	6	2	-	1	2	-	12	2	-	-	-	2	-	3	1	8	-	1		
2014	10	2	2	1	4	-	-	4	-	1	-	4	-	7	1	9	1	-		
slope	0.04	0.02	0.00	-0.02	-0.03	-0.30	-0.13	0.16	-0.19	0.08	-0.18	0.07	-0.14	0.04	0.08	0.11	0.00	-0.12		

Table 5: Orange roughy trawl fishery. — continued.

Fishing	Species																	
year	WHR	GSH	WOE	SBI	VCO	EPL	GDU	CYO	CHI	SNR	SIA	DWE	SOP	SPE	COR	SCM	LIN	SMC
1991	8	8	-	54	-	4	-	1	-	-	-	-	-	2	-	-	4	-
1992	-	5	5	-	-	2	-	3	-	-	-	-	-	-	-	-	2	-
1993	-	6	1	8	4	-	-	2	-	-	-	-	-	1	-	-	-	1
1994	1	8	14	1	-	4	-	-	-	-	-	19	1	4	-	-	5	1
1995	-	7	10	-	2	33	-	-	-	2	-	1	11	1	-	1	-	6
1996	4	5	-	3	2	4	-	-	1	-	-	-	-	-	-	-	-	-
1997	-	4	7	-	4	1	-	1	22	-	-	8	7	4	-	-	-	-
1998	-	31	-	-	5	-	-	-	-	-	-	-	3	1	1	-	2	-
1999	-	6	7	2	-	-	-	-	21	5	-	1	-	12	-	-	2	-
2000	-	5	11	3	-	-	-	-	2	2	-	1	-	3	-	12	2	1
2001	61	1	4	1	-	-	-	-	1	-	-	-	-	2	-	7	11	25
2002	10	1	10	1	-	-	-	2	1	15	-	8	-	6	25	1	2	-
2003	-	2	2	1	-	2	-	3	2	24	-	-	6	-	-	-	2	-
2004	12	-	1	3	-	19	-	1	1	4	-	4	-	-	-	4	1	-
2005	-	3	-	-	-	-	-	-	2	2	-	-	-	1	14	7	1	-
2006	-	-	1	-	2	-	1	12	2	-	-	-	8	1	-	1	1	-
2007	-	1	4	-	1	-	28	6	1	-	-	2	-	-	-	-	1	-
2008	-	1	2	-	30	-	16	5	1	-	9	1	2	-	-	-	-	-
2009	1	2	2	-	20	1	11	5	1	-	24	-	3	-	-	-	-	-
2010	4	1	3	-	3	1	-	9	1	-	14	-	4	2	-	2	-	-
2011	-	-	1	-	2	-	5	5	1	-	1	-	-	2	-	3	-	-
2012	-	1	-	1	-	1	-	4	1	-	-	-	-	-	-	-	1	1
2013	-	-	1	-	1	-	3	3	-	-	1	-	-	-	-	-	-	1
2014	-	-	-	1	-	-	1	3	-	-	-	1	-	-	-	-	-	-
slope	-0.05	-0.18	-0.05	-0.11	0.04	-0.11	0.16	0.14	0.04	-0.03	0.12	-0.04	-0.01	-0.09	0.00	0.03	-0.08	-0.04

Fishing	Species																	
year	EPR	BSK	SKA	MCA	MIQ	SQX	RCH	LEG	SQU	APR	RUD	CYL	OPH	RHY	SSK	SHE	TOA	ONG
1991	-	-	1	-	10	-	-	1	-	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
1993	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	4	1	2	4	3	1	1	-	-	-	-	-	-	-
1995	-	-	-	-	7	-	-	1	3	3	-	-	-	-	3	-	-	-
1996	-	-	-	-	-	2	2	-	1	-	1	-	-	-	1	-	-	-
1997	-	-	4	-	-	4	-	-	2	1	4	-	-	-	2	-	-	-
1998	-	1	3	-	-	2	1	1	5	-	4	-	-	-	3	-	-	-
1999	-	21	10	-	-	-	-	3	-	1	5	-	20	1	-	-	4	-
2000	-	-	1	-	-	1	6	1	2	-	3	1	-	2	-	6	1	5
2001	-	-	1	-	-	4	-	2	1	-	1	-	-	-	12	-	-	-
2002	-	-	8	-	-	2	-	3	2	-	-	5	-	-	3	-	1	1
2003	22	-	2	-	-	-	-	1	1	-	-	-	-	-	1	1	1	1
2004	1	8	-	-	-	2	-	2	1	-	1	1	-	-	2	-	1	1
2005	3	-	-	1	-	2	1	1	-	-	-	-	-	-	1	-	-	1
2006	-	-	-	13	-	3	-	1	-	7	1	-	-	-	2	-	3	1
2007	-	-	-	4	-	-	5	-	1	3	-	-	-	-	1	-	1	-
2008	-	-	-	3	3	-	1	-	-	2	-	1	-	-	-	-	1	-
2009	-	-	-	1	-	-	1	-	-	1	-	1	-	-	-	-	1	3
2010	1	-	-	4	-	1	2	1	-	3	1	5	-	4	-	-	4	-
2011	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	1
2013	-	-	-	-	-	1	1	1	-	-	-	3	-	13	-	-	-	1
2014	3	-	-	-	-	-	1	-	-	-	-	2	-	-	1	-	-	-
slope	0.06	-0.02	-0.08	0.10	-0.09	0.00	0.05	-0.06	-0.11	0.02	-0.06	0.14	-0.02	0.06	-0.01	-0.01	0.05	0.07

Table 5: Orange roughy trawl fishery. — *continued*.

Fishing	Species																	
year	HTH	SSM	MAK	PSK	ETP	ECN	RSQ	CRB	MOK	SRH	OFH	JFI	NEB	BRG	ROC	MDO	SSI	CHG
1991	-	5	13	-	-	-	9	-	-	-	-	1	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
1993	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	6	-	1	1	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	1
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-	-
1999	1	-	-	-	-	4	-	2	-	10	1	1	-	-	1	-	-	2
2000	-	-	-	-	5	1	-	1	-	-	4	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
2002	-	-	-	1	1	2	-	6	-	-	1	-	-	-	-	-	9	1
2003	-	-	-	-	-	4	-	1	-	1	-	1	-	-	-	-	-	-
2004	-	4	-	-	-	-	-	1	-	-	1	-	-	2	-	-	-	-
2005	-	-	-	1	-	1	-	-	-	-	-	1	-	-	-	-	-	2
2006	4	-	-	-	-	-	-	-	-	-	-	1	-	5	6	-	1	-
2007	2	-	-	1	-	-	-	-	-	-	-	-	4	1	1	-	-	2
2008	3	-	-	3	-	-	-	-	-	-	-	3	2	1	-	-	-	-
2009	1	-	-	1	-	-	-	-	-	-	-	1	2	1	-	-	-	-
2010	3	-	-	5	-	-	1	-	-	-	-	2	1	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-
2013	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
2014	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
slope	0.07	0.00	-0.05	0.07	-0.04	-0.01	-0.07	-0.03	-0.02	-0.01	0.01	0.01	0.06	0.08	0.02	-0.03	0.00	0.02

Fishing	Species																	
year	BBE	PDG	SRI	CHP	IBR	CSH	MOC	SQA	CON	GRC	DSK	CSU	ANT	SLC	DDI	EEL	PAB	KIC
1991	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
1992	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	-	2	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	
1995	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	
1996	-	1	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	
1998	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	
2000	-	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	
2001	7	-	-	-	-	-	-	-	2	-	1	1	-	-	-	-	-	
2002	-	-	8	2	-	-	-	-	-	1	-	-	-	-	4	-	-	
2003	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	
2005	-	-	-	1	-	-	1	-	8	1	-	1	-	-	3	1	-	
2006	-	-	1	-	2	-	7	1	-	-	4	-	-	-	-	-	2	
2007	-	-	-	-	2	-	-	-	-	1	-	-	-	-	2	1	-	
2008	-	-	-	-	-	1	-	-	-	-	-	-	-	7	-	-	-	
2009	-	-	-	-	-	5	-	-	-	-	6	-	-	-	-	1	-	
2010	-	-	-	1	-	2	-	-	2	-	1	-	-	1	-	2	-	
2011	-	-	-	1	4	-	1	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
slope	-0.04	-0.06	0.00	0.01	0.05	-0.04	0.06	0.02	-0.04	0.01	0.01	0.02	0.03	-0.02	0.02	0.00	0.03	0.04

Table 5: Orange roughy trawl fishery. — *continued*.

Fishing	Species																		
year	GSQ	ACS	SYN	ERO	BTH	LUC	SVA	SPI	DSS	WPS	BEL	MUR	CEN	TAM	SWO	COD	SWR	HYD	
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
1993	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	-	-
1995	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	1	-	1	-	-	3	-	-	-	-	-	2	-	-
2000	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1	3	3
2001	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	1
2002	1	-	-	-	-	-	-	1	6	-	-	-	1	-	-	-	-	-	-
2003	-	-	3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
2005	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	2	-	-	4	-	-	-	-	-	-	-	-	2	-	-	-	-	1
2007	-	1	-	-	1	-	-	-	-	-	-	-	-	1	-	2	-	-	-
2008	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
2009	-	1	-	5	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-
2010	1	1	-	1	1	-	1	-	-	-	-	-	-	1	-	1	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
slope	0.01	0.06	-0.03	0.04	0.04	-0.02	0.05	-0.03	0.00	0.00	-0.01	-0.02	-0.04	0.04	-0.04	0.00	-0.02	0.00	

Fishing	Species																			
year	OCT	RSC	JMA	WIT	COB	SBO	SAF	SBR	LDO	RAG	LAN	CBO	GLS	OSK	SOM	BWH	GIZ	FRO		
1991	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	
1992	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2001	1	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
2002	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	
2003	-	-	2	-	3	-	-	-	-	-	-	-	-	-	1	3	-	-	-	
2004	-	-	-	-	-	3	4	-	-	1	-	-	-	-	-	-	-	-	-	
2005	1	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	
2006	-	1	-	1	-	-	-	-	-	1	2	-	-	1	-	-	-	-	-	
2007	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
2008	-	-	-	1	-	-	-	-	-	1	-	3	1	-	2	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	
2010	-	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
slope	0.02	0.00	-0.03	0.04	0.01	0.00	0.00	-0.03	-0.05	0.03	0.00	0.00	0.03	0.04	0.02	0.00	-0.03	-0.03		

Table 5: Orange roughy trawl fishery. — *continued*.

Fishing	Species																	
year	SNA	CBD	MST	FRS	SWA	CAR	OPE	SBK	TSQ	PSY	SCH	HYP	ZAS	BSQ	BAC	PSL	LAE	SUR
1991	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	1	-
1993	2	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-
1994	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
1997	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2	-	-
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
2010	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
slope	-0.04	0.01	0.03	-0.04	-0.03	-0.02	-0.01	-0.03	0.03	0.02	0.02	0.00	0.02	-0.03	-0.03	-0.01	-0.03	0.00

Fishing	Species																	
year	VSQ	TOP	CHX	HYA	HCO	GOU	MOR	NSD	WAR	RBM	WWA	SLR	COL	SMI	PSQ	LSK	GSC	SDL
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
1995	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
1998	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	-	1	1	-	-	-	-	-	2	1	-	-	-	-	-	-	1	-
2002	-	-	1	-	-	-	-	2	-	-	-	-	2	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
2006	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
2007	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-
2011	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
slope	0.03	0.00	0.00	0.02	-0.01	0.03	0.00	0.00	0.00	-0.01	0.00	0.00	-0.01	0.00	0.02	-0.02	0.00	0.01

Table 5: Orange roughy trawl fishery. — *continued*.

Fishing	Species																	
year	EUC	DEQ	PIN	EMO	CRS	TRS	LPS	HGB	SCO	DIS	LMU	PHO	SUN	BAT	SNO	SAR	SLG	BOODHO
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
1994	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
1995	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	--	
1996	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	--	
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
1998	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	--	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2000	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	--	
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2002	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	--	
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2004	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	--	
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2006	-	-	-	-	-	-	-	-	1	1	-	1	-	1	-	-	--	
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	--	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1-	
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	--	
2014	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	
slope	-0.02	-0.02	0.00	0.00	-0.01	-0.02	0.02	0.01	0.01	0.00	0.01	-0.01	0.01	0.00	0.01	0.00	0.010.02	

Fishing	Species										
year	SDR	MAN	GAO	BFE	DCS	RSK	BJA	ECH	BRG	NOT	BFI
1991	-	-	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	1	-	-	-	-
1993	-	-	-	-	-	-	-	-	1	-	-
1994	-	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	1	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	1	-	-	-
1998	-	-	-	-	-	-	-	-	-	-	-
1999	1	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-	-
2001	-	-	1	-	-	-	-	-	-	-	-
2002	-	-	-	1	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	1	1	-
2004	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	1	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-
2010	-	1	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-
2014	-	-	-	-	-	-	-	-	-	-	-
slope	-0.01	0.02	0.00	0.00	-0.02	0.01	-0.02	-0.01	-0.02	0.00	0.00

Table 6: Jack mackerel trawl fishery. Total annual bycatch estimates (t) (with estimated 95% CIs in parenthesis) for individual species (based on the top 25 QMS, top 25 Non-QMS, and top 5 INV species observed, with at least 1 t of bycatch in at least one year). Species are ordered by decreasing total catch. The slope of a regression through the data points is shown in parentheses alongside each species code (see <http://marlin.niwa.co.nz> for species code definitions).

	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14
BAR(0)	8330 (7060–9860)	8327 (3577–11777)	3005 (2525–3575)	9010 (7260–11280)	9247 (7827–10637)	4802 (3822–5832)	4522 (3922–5252)	6991 (5191–10541)	3398 (2938–3948)	4788 (4658–4928)	4561 (4471–4651)	5504 (5394–5634)
EMA(0)	757 (567–1007)	3824 (2454–5594)	1743 (1083–2623)	1321 (711–2681)	2213 (1553–3293)	1781 (1301–2311)	1681 (1321–2151)	2839 (1839–4369)	1261 (791–2001)	958 (878–1038)	1118 (1078–1168)	1029 (979–1139)
FRO(0)	900 (750–1090)	1409 (1009–1999)	1847 (1547–2167)	1707 (1417–1997)	1470 (1110–1770)	1781 (1511–2111)	1248 (1108–1438)	1514 (1334–1694)	971 (801–1141)	1499 (1449–1559)	1532 (1492–1562)	1118 (1088–1158)
RBT(0)	1463 (743–2493)	301 (111–601)	1173 (613–2353)	2372 (1452–3562)	1348 (998–1708)	2582 (1562–3912)	1313 (843–1863)	383 (263–793)	359 (179–539)	881 (741–1051)	929 (929–939)	760 (740–800)
SWA(0.1)	137 (37–317)	20 (0–50)	30 (0–90)	811 (131–2491)	138 (28–398)	29 (9–69)	92 (2–392)	120 (60–290)	99 (29–199)	196 (106–366)	125 (125–125)	121 (111–131)
SQU(–0.1)	245 (105–385)	53 (23–93)	94 (44–144)	255 (195–345)	302 (162–482)	119 (79–179)	66 (46–146)	114 (74–164)	44 (34–64)	83 (73–93)	91 (81–91)	61 (51–61)
SPD(0)	172 (122–252)	22 (12–42)	65 (35–115)	331 (111–711)	201 (111–341)	76 (46–116)	69 (49–169)	103 (63–153)	102 (52–262)	124 (104–154)	109 (109–109)	93 (93–93)
RBM(0.1)	34 (14–64)	10 (10–20)	40 (20–60)	58 (28–118)	33 (23–53)	34 (14–64)	67 (37–137)	13 (3–13)	14 (14–24)	3 (3–3)	242 (242–242)	338 (328–348)
WAR(–0.1)	350 (180–570)	51 (21–91)	90 (40–160)	72 (32–162)	12 (2–12)	15 (5–25)	51 (31–71)	16 (6–36)	16 (6–36)	26 (16–26)	23 (23–23)	75 (65–75)
SDO(–0.2)	114 (84–144)	33 (13–73)	117 (67–197)	105 (85–145)	127 (87–167)	89 (59–149)	96 (76–116)	33 (33–43)	13 (3–13)	19 (19–29)	21 (21–21)	17 (17–17)
SNA(0.1)	11 (11–21)	86 (6–236)	92 (32–212)	30 (10–80)	28 (18–48)	77 (37–167)	48 (28–78)	75 (45–115)	57 (27–137)	99 (89–109)	58 (48–58)	48 (38–48)
STU(0.5)	24 (4–74)	0.1 (0–0)	0.1 (0–0)	12 (2–52)	1 (1–11)	1 (1–1)	1 (1–1)	14 (4–24)	40 (30–60)	24 (14–44)	148 (148–148)	381 (361–401)
KIN(0.1)	11 (1–21)	21 (11–51)	56 (26–116)	24 (14–44)	46 (26–126)	47 (27–97)	29 (19–29)	61 (41–91)	29 (19–39)	61 (61–71)	53 (43–53)	95 (95–105)
PIL(0)	34 (14–84)	32 (2–102)	13 (3–43)	28 (8–58)	13 (3–13)	46 (16–106)	14 (4–14)	16 (6–36)	0.1 (0–0)	51 (41–71)	64 (54–74)	102 (92–112)
JDO(0)	44 (34–64)	11 (11–21)	27 (17–47)	28 (18–38)	55 (35–75)	29 (19–39)	30 (20–30)	44 (24–64)	27 (7–37)	37 (27–37)	31 (31–41)	19 (19–19)
POP(0)	45 (35–55)	11 (11–11)	12 (2–12)	28 (18–38)	29 (29–39)	30 (20–40)	16 (16–16)	47 (37–87)	16 (16–26)	38 (38–38)	27 (27–37)	23 (23–23)
GUR(–0.1)	100 (80–150)	10 (0–10)	13 (13–23)	27 (17–37)	28 (18–38)	17 (17–27)	13 (3–13)	29 (19–39)	14 (14–14)	13 (13–23)	13 (13–13)	18 (18–18)
NMP(0.2)	34 (24–44)	0.1 (0–10)	1 (1–11)	14 (14–24)	42 (32–52)	29 (19–39)	16 (16–16)	28 (18–38)	14 (14–24)	14 (14–14)	13 (13–13)	23 (23–33)
HOK(–0.2)	68 (8–248)	13 (3–43)	0.1 (0–10)	35 (5–125)	11 (1–21)	44 (14–124)	2 (2–12)	1 (1–11)	0.1 (0–0)	4 (4–14)	1 (1–1)	13 (13–13)
THR(0)	22 (12–32)	21 (11–31)	27 (17–57)	1 (1–11)	13 (13–13)	15 (15–25)	14 (4–14)	14 (4–14)	27 (17–37)	7 (7–7)	10 (10–10)	13 (13–13)
SUN(0.2)	0.1 (0–10)	10 (0–20)	13 (3–23)	14 (14–24)	14 (4–24)	30 (20–50)	3 (3–13)	13 (3–13)	14 (4–24)	11 (11–11)	8 (8–8)	32 (32–42)
SCH(0.1)	24 (14–34)	0.1 (0–10)	13 (13–23)	14 (4–24)	14 (14–14)	15 (15–25)	14 (4–14)	14 (4–14)	2 (2–12)	9 (9–9)	11 (11–11)	9 (9–9)
MAK(0.4)	0.1 (0–0)	0.1 (0–10)	12 (2–12)	12 (2–12)	1 (1–1)	13 (3–23)	14 (4–24)	1 (1–11)	1 (1–11)	7 (7–7)	33 (33–53)	44 (44–64)
TRE(0.1)	0.1 (0–0)	107 (7–277)	1 (1–11)	2 (2–22)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	1 (1–11)	0.1 (0–0)	6 (6–6)	8 (8–8)	2 (2–2)
RCO(0.4)	1 (1–11)	0.1 (0–0)	1 (1–11)	11 (1–21)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	0.1 (0–10)	2 (2–12)	14 (4–24)	24 (24–24)	67 (57–67)
ATT(0.5)	0.1 (0–20)	0.1 (0–0)	0.1 (0–0)	1 (1–11)	14 (4–44)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	29 (9–59)	11 (11–11)	18 (18–28)	12 (12–12)
JFI(0)	0.1 (0–0)	75 (5–165)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	3 (3–3)	4 (4–4)	
CDO(–0.4)	11 (1–31)	21 (11–41)	0.1 (0–0)	0.1 (0–0)	27 (7–67)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)
RDO(0.1)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	53 (33–113)	0.1 (0–0)	1 (1–1)	0.1 (0–0)	1 (1–1)	0.1 (0–0)
LEA(–0.2)	22 (12–32)	0.1 (0–0)	0.1 (0–0)	2 (2–12)	13 (3–23)	1 (1–1)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	1 (1–1)	0.1 (0–0)
ALB(0.5)	0.1 (0–0)	0.1 (0–10)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	2 (2–12)	1 (1–1)	8 (8–8)	22 (22–32)
JAV(0.2)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	32 (32–62)	0.1 (0–0)	
SCG(0.2)	0.1 (0–10)	0.1 (0–0)	12 (2–22)	1 (1–11)	1 (1–11)	1 (1–1)	1 (1–1)	1 (1–11)	1 (1–1)	4 (4–4)	2 (2–2)	3 (3–3)
OPE(0.2)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	11 (1–21)	0.1 (0–0)	0.1 (0–0)	0.1 (0–10)	1 (1–11)	1 (1–1)	0.1 (0–0)	1 (1–1)	4 (4–4)
RAT(0.3)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	5 (5–5)	1 (1–1)	5 (5–5)
ERA(0.2)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	0.1 (0–0)	1 (1–1)	1 (1–1)	0.1 (0–0)	2 (2–2)	2 (2–2)	2 (2–2)	
EGR(0.2)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	0.1 (0–0)	2 (2–12)	1 (1–1)	1 (1–1)	1 (1–1)	1 (1–1)	1 (1–1)	1 (1–1)
GSH(0.3)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	3 (3–3)	1 (1–1)	
RSO(0.1)	1 (1–11)	0.1 (0–10)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	1 (1–1)	0.1 (0–0)	1 (1–1)	1 (1–1)	
SPE(0.2)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	3 (3–3)	
SSI(0.2)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	1 (1–1)	2 (2–2)	
SKJ(0.1)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	
GIZ(0.2)	0.1 (0–10)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	1 (1–1)	1 (1–1)	
RHY(0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	1 (1–1)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	
SKA(0)	0.1 (0–10)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	0.1 (0–0)	

Table 7: Scampi trawl fishery. Total annual bycatch estimates (t) for individual species with at least 1 t of bycatch in at least one year, based on observer catch rates; -means less than 1 t. The slope of a regression through the data points is shown after fishing year (see <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species																		
year	JAV	RAT	SPE	LIN	HOK	GSH	FHD	UFISH	GIZ	RCO	SSK	SPD	SWA	CRB	SKA	ASR	SRH	CDO	
1991	547	158	274	639	443	11	90	835	73	33	117	-	51	4	41	-	123	122	
1992	1 526	547	424	808	577	189	14	941	200	255	32	25	57	106	33	-	55	96	
1993	1 636	887	708	947	1 013	341	94	510	263	141	120	38	150	66	13	7	6	2	
1994	670	1 590	458	696	403	100	110	51	263	247	28	39	82	41	66	53	15	10	
1995	1 040	1 579	965	756	555	74	119	105	213	153	89	25	195	102	78	1	96	61	
1996	1 332	1 514	750	420	310	104	416	13	113	85	49	53	77	166	184	228	157	21	
1997	431	586	105	452	420	184	2	166	88	50	41	310	15	60	62	160	-	-	
1998	610	317	482	337	148	127	53	1	69	46	87	16	56	88	29	82	11	3	
1999	757	501	258	308	218	24	91	3	62	67	22	2	39	31	161	8	18	21	
2000	1 325	523	351	356	296	52	217	5	63	37	156	56	80	78	76	65	38	7	
2001	1 255	577	409	498	596	77	8	3	69	109	-	61	77	70	201	23	13	4	
2002	1 464	1 435	941	640	582	127	253	-	191	197	12	84	288	130	256	173	19	27	
2003	766	754	982	503	285	140	114	-	226	170	55	131	256	95	83	77	8	-	
2004	701	785	496	247	139	111	127	-	127	220	125	97	39	165	6	19	1	2	
2005	1 255	724	917	300	250	197	82	-	27	24	150	44	4	33	-	41	66	-	
2006	388	195	230	49	122	126	133	1	35	16	77	48	3	12	-	19	14	56	
2007	879	418	385	154	180	189	73	1	41	52	123	139	13	11	-	28	154	163	
2008	832	369	356	97	221	118	102	1	51	23	90	82	2	17	-	33	50	80	
2009	687	367	211	98	202	83	94	-	62	17	78	130	8	11	-	30	29	48	
2010	977	646	265	81	167	50	85	-	9	17	44	67	12	1	-	42	35	65	
2011	555	413	300	51	112	51	99	-	22	52	63	12	2	23	-	9	50	49	
2012	515	298	223	59	134	109	69	-	62	45	64	25	2	13	-	9	36	19	
2013	939	458	469	93	155	155	90	-	41	29	127	41	3	1	-	2	6	13	
2014	857	643	545	142	300	479	126	-	70	63	115	116	2	8	-	33	118	101	
slope	-0.01	-0.02	-0.01	-0.12	-0.06	0.03	0.03	-0.40	-0.08	-0.06	0.03	0.09	-0.18	-0.12	-0.38	0.08	0.02	0.05	

Fishing	Species																		
year	HAK	BBE	SSI	RSO	RHY	SQU	TOA	LDO	WWA	RSK	PRK	ANT	BEL	HTH	BNS	MDO	HAG	RIB	
1991	-	42	2	103	46	11	3	11	-	-	-	-	-	2	40	32	27	1	
1992	47	2	17	35	4	51	8	18	31	63	-	58	-	-	13	9	16	1	
1993	60	13	93	38	-	21	63	38	19	17	-	23	6	10	50	1	4	6	
1994	52	23	35	10	1	41	22	24	14	5	-	21	3	8	7	-	15	18	
1995	100	17	21	25	3	32	5	69	41	1	1	-	31	-	18	3	5	158	
1996	26	52	17	61	2	19	15	53	21	-	78	-	28	-	23	28	11	13	
1997	70	1	70	43	-	8	117	41	79	95	-	97	1	132	5	2	9	-	
1998	50	30	40	5	4	22	48	17	15	11	35	55	1	95	3	11	2	-	
1999	22	121	2	44	19	9	33	9	15	1	1	1	71	1	16	20	18	5	
2000	34	127	2	34	41	12	76	36	8	-	-	58	77	-	19	9	22	13	
2001	43	144	18	74	22	45	24	61	28	9	-	2	34	1	41	2	25	10	
2002	129	41	29	48	12	71	54	37	19	8	-	11	30	38	58	19	17	3	
2003	66	45	27	7	6	29	23	23	127	21	-	28	14	20	2	1	10	5	
2004	66	39	40	1	6	14	53	28	11	17	1	1	1	-	1	13	3	7	
2005	24	4	1	15	1	10	2	29	64	56	-	-	53	-	12	14	9	2	
2006	4	7	37	23	114	35	13	15	2	39	2	1	-	16	-	19	5	-	
2007	18	3	37	43	60	35	21	23	27	26	198	40	4	17	1	15	8	-	
2008	5	22	25	36	175	26	14	24	6	26	23	11	18	12	-	29	8	1	
2009	5	6	39	7	55	17	11	18	8	12	5	12	1	15	-	8	5	-	
2010	7	11	45	23	58	33	4	7	3	16	3	-	1	5	-	9	6	-	
2011	3	12	34	30	42	34	12	4	1	27	27	-	3	2	-	14	9	-	
2012	5	11	32	19	24	38	14	13	2	28	5	-	32	3	1	8	8	-	
2013	19	54	45	-	9	52	11	17	4	33	1	3	1	-	-	-	-	-	
2014	6	5	34	17	12	40	8	12	5	35	55	1	-	10	-	16	2	-	
slope	-0.06	-0.02	0.04	-0.08	0.15	0.02	-0.03	-0.04	-0.05	0.14	0.19	-0.09	-0.01	0.04	-0.28	0.02	-0.08	-0.20	

Table 7: Scampi trawl fishery. — *continued*.

Fishing	Species																		
year	CSH	DSK	ERA	SDO	SMK	BER	CAR	HSI	YBO	SCH	CON	DCS	SBW	GSC	CRU	ECN	FLA	SPI	
1991	2	2	15	-	-	-	-	10	14	13	1	1	-	-	-	-	-	-	-
1992	-	6	6	1	-	5	13	1	-	10	-	7	-	13	18	8	13	-	-
1993	6	49	6	15	-	22	1	-	-	5	6	85	5	-	-	-	-	-	3
1994	2	13	5	6	-	11	-	-	-	5	21	2	7	6	-	-	-	-	17
1995	3	41	9	4	-	69	1	-	-	8	16	3	-	-	-	-	-	-	-
1996	-	-	13	80	-	2	17	-	-	30	5	-	3	-	-	-	-	7	35
1997	55	65	-	-	-	1	1	-	-	4	-	-	108	10	-	-	-	-	46
1998	33	28	2	-	-	8	-	1	1	4	4	26	3	-	-	1	10	25	-
1999	2	9	6	1	-	10	5	-	1	4	12	-	-	-	1	1	-	3	-
2000	-	7	7	-	-	27	25	2	4	18	23	-	-	-	-	-	7	3	-
2001	1	-	18	-	-	-	15	-	-	18	20	-	-	-	72	17	59	-	-
2002	-	-	77	22	-	10	22	-	18	8	5	14	12	-	62	83	22	8	-
2003	5	-	4	10	-	18	7	-	-	9	14	-	2	3	-	3	-	-	-
2004	6	-	7	2	-	5	6	8	-	1	17	-	8	-	-	3	-	-	-
2005	-	-	7	74	-	5	6	35	6	8	-	-	-	-	-	12	-	-	-
2006	14	5	13	4	106	-	8	14	16	3	1	4	4	30	-	-	20	-	-
2007	52	-	8	5	48	-	10	11	14	8	6	1	1	47	-	-	1	-	-
2008	15	2	5	-	24	1	10	39	2	5	5	1	-	5	-	13	-	-	-
2009	6	1	1	-	11	3	10	30	-	3	1	2	7	2	-	1	-	1	-
2010	-	4	7	2	7	4	10	4	19	6	6	-	-	-	-	1	-	1	-
2011	16	2	9	4	8	1	10	29	-	3	4	2	2	10	-	-	3	-	-
2012	20	2	6	2	4	1	7	7	2	4	5	-	2	1	-	1	-	-	-
2013	-	2	2	-	9	3	2	-	2	1	1	12	1	17	-	-	-	-	-
2014	-	-	4	2	-	5	10	-	92	9	3	11	-	9	-	-	1	-	-
slope	0.00	-0.13	-0.01	-0.02	0.23	-0.06	0.12	0.13	0.14	-0.05	0.00	-0.02	-0.01	0.13	-0.07	0.01	-0.03	-0.13	

Fishing	Species																			
year	COU	WSQ	CDX	OCT	BYX	EEL	HAP	SHA	GAS	PSK	BWH	ETL	PRA	BRZ	TOP	HPB	PSI	TFA		
1991	-	-	-	1	6	3	-	-	-	-	-	2	-	8	-	19	-	-	-	
1992	-	1	-	1	3	17	15	3	-	-	1	1	-	5	1	4	-	-	-	
1993	-	1	-	3	4	15	6	1	-	-	-	-	-	-	-	6	-	-	-	
1994	-	7	-	4	6	-	1	6	-	-	-	-	1	-	-	-	2	-	-	
1995	-	5	-	6	31	-	1	3	-	4	-	3	-	1	16	5	-	-	-	
1996	-	-	-	7	5	-	1	14	-	-	-	3	1	5	1	2	-	-	-	
1997	-	29	-	1	3	-	2	15	-	-	-	1	2	1	-	1	-	-	-	
1998	-	3	-	4	4	-	1	4	-	-	-	5	3	3	-	-	-	-	-	
1999	82	1	-	2	19	11	11	3	-	22	-	3	-	1	10	5	-	-	-	
2000	43	1	-	4	6	11	8	6	-	29	-	3	7	7	8	-	-	-	-	
2001	1	-	-	2	15	30	11	13	7	6	-	-	-	-	7	1	-	-	-	
2002	-	10	-	11	1	18	34	2	25	-	-	1	-	-	2	14	-	-	-	
2003	-	17	-	1	3	5	3	22	-	-	-	2	1	-	-	5	-	-	-	
2004	-	21	-	49	-	-	2	2	3	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	5	-	-	-	-	-	-	2	-	-	-	13	-	-	-	
2006	-	5	-	3	-	-	-	-	-	3	27	2	-	4	-	-	2	-	-	
2007	2	4	-	2	-	-	5	-	-	6	28	15	1	11	-	-	21	-	-	
2008	3	3	28	2	-	-	1	1	8	-	-	13	-	12	1	-	8	19	-	
2009	-	4	-	2	-	-	-	5	20	-	-	1	2	1	-	-	15	-	-	
2010	-	3	76	2	-	-	-	3	4	1	-	11	31	4	3	-	3	5	-	
2011	-	2	17	3	-	-	1	1	5	13	30	7	-	12	-	-	3	7	-	
2012	-	4	-	5	-	-	2	-	18	17	-	2	-	3	-	-	17	11	-	
2013	-	-	1	1	-	-	1	-	-	-	-	1	-	-	17	-	17	11	-	
2014	-	1	-	-	2	-	3	-	13	-	6	13	42	6	16	-	3	-	-	
slope	-0.01	0.02	0.13	-0.04	-0.22	-0.16	-0.05	-0.12	0.19	0.06	0.10	0.08	0.08	0.04	0.03	-0.20	0.22	0.19		

Table 7: Scampi trawl fishery. — *continued*.

Fishing	Species																		
year	BSH	SCO	SND	OSK	OPI	GSP	ECH	NSD	WIT	GMC	VOL	ACS	BYS	FMA	YSG	MIQ	MOL	NMP	
1991	1	-	2	-	-	-	-	13	-	-	-	-	-	-	-	-	-	-	1
1992	1	-	2	-	-	-	-	14	3	4	-	-	-	-	-	-	1	2	4
1993	6	-	1	-	-	-	-	1	1	-	-	-	3	-	-	39	-	-	-
1994	2	-	2	-	-	-	-	-	2	-	-	-	-	-	-	3	18	1	1
1995	2	-	2	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	1
1996	7	18	3	-	-	-	-	-	-	-	-	-	2	-	-	-	-	8	-
1997	-	20	-	-	-	-	-	-	1	-	37	-	-	-	-	-	6	-	-
1998	-	1	1	-	-	6	3	12	-	-	12	-	1	-	42	1	-	6	-
1999	2	2	1	-	-	-	1	5	-	-	-	-	1	-	-	-	-	-	-
2000	1	-	1	-	33	4	-	-	-	-	-	-	4	-	-	-	4	-	-
2001	11	1	2	-	-	1	-	-	-	-	-	-	17	-	-	-	-	-	-
2002	29	-	30	-	-	12	39	-	-	-	-	-	3	-	-	-	-	17	-
2003	2	6	1	-	-	2	4	-	2	-	-	-	2	-	-	-	-	-	-
2004	-	-	9	-	-	5	-	2	2	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	3	1	-	-	-	1	-	-	-	1	-	-
2006	-	-	4	1	-	4	-	-	1	9	3	10	-	16	5	-	2	2	-
2007	-	-	1	12	4	3	-	10	3	1	-	2	-	-	-	-	8	-	-
2008	1	1	1	-	-	5	-	1	1	8	4	5	2	4	-	-	5	-	-
2009	-	-	-	-	-	1	-	1	3	2	-	-	-	-	-	-	1	-	-
2010	1	-	2	2	2	-	-	-	1	3	1	9	-	2	-	-	1	-	-
2011	-	-	-	4	1	5	1	1	1	2	-	8	1	2	1	-	-	-	-
2012	-	-	-	12	2	-	-	1	2	13	-	7	2	5	-	-	-	1	-
2013	-	9	-	26	20	9	-	-	8	5	-	10	1	24	-	4	-	-	-
2014	-	7	-	6	-	5	-	8	19	15	-	5	15	1	-	-	-	7	-
slope	-0.14	0.02	-0.11	0.20	0.11	0.14	-0.05	0.00	0.10	0.23	0.00	0.22	0.06	0.18	0.00	-0.07	-0.02	-0.06	

Fishing	Species																		
year	PDG	SPT	HMT	BAS	ZOR	SCG	PIG	SUR	CUC	SHL	ONG	STR	JMA	HCO	BTH	LSK	TAY	SNI	
1991	-	-	-	11	-	-	-	39	1	-	-	-	20	-	-	-	-	-	-
1992	1	-	-	3	-	-	-	-	1	-	-	-	3	2	-	1	-	-	-
1993	4	-	-	3	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-
1994	6	-	-	4	-	2	1	-	1	-	-	-	-	1	1	-	-	-	-
1995	5	-	-	4	-	29	-	-	3	10	-	10	2	-	-	1	-	2	-
1996	1	-	-	2	-	-	-	-	3	3	-	2	2	-	-	-	-	-	-
1997	-	-	-	1	-	-	1	-	6	2	7	1	-	6	5	-	-	15	-
1998	2	-	-	2	-	8	2	-	2	-	-	2	-	-	4	-	-	-	-
1999	2	-	-	1	-	-	-	-	1	6	-	1	2	-	-	-	-	-	-
2000	4	-	-	3	-	-	1	-	2	-	-	-	-	-	-	-	-	6	-
2001	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	2	-	-	4	-	-	-	-	1	-	1	2	1	7	-	-	-	-	-
2003	3	-	-	-	-	-	-	-	1	1	-	-	-	-	-	8	-	-	-
2004	6	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-
2005	2	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
2006	1	-	10	-	10	-	1	-	2	11	-	13	-	-	3	2	4	-	-
2007	1	14	1	-	-	7	-	-	-	1	3	-	9	1	2	8	1	-	-
2008	1	6	1	-	1	-	10	-	-	2	-	1	1	14	-	10	-	-	-
2009	1	14	-	-	-	3	-	-	-	-	-	-	-	-	8	1	2	-	-
2010	1	1	4	1	-	-	1	-	-	-	-	-	-	3	-	3	-	-	-
2011	1	2	8	-	11	1	1	-	-	3	-	-	1	-	3	1	1	1	-
2012	1	4	5	-	12	-	1	-	1	-	-	-	1	1	1	-	-	-	-
2013	1	1	7	-	6	-	-	-	-	20	-	-	-	-	2	-	-	-	-
2014	1	3	8	-	-	-	-	10	-	1	-	-	-	-	-	-	-	-	-
slope	0.00	0.19	0.20	-0.20	0.14	-0.06	0.03	-0.06	-0.07	-0.06	0.10	-0.05	-0.14	0.01	0.05	0.08	0.10	-0.01	

Table 7: Scampi trawl fishery. — *continued*.

Fishing	Species																		
year	SBR	SDM	HYM	DMG	JFI	OFH	DWE	HEX	BTA	CAS	FRO	API	JGU	BOA	PNE	DAP	SLG	BRC	
1991	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
1992	-	-	-	-	-	1	-	-	-	-	-	2	2	-	-	-	-	1	
1993	1	-	-	-	-	-	20	3	-	-	3	-	2	-	-	-	-	-	
1994	-	-	-	-	-	-	-	1	-	-	2	1	-	-	-	-	-	2	
1995	2	-	-	-	-	22	-	4	-	-	3	-	6	1	-	-	-	3	
1996	-	-	-	-	-	-	1	1	-	-	1	1	-	1	-	-	-	8	
1997	-	-	-	-	12	-	-	-	-	-	-	-	-	-	-	-	14	-	
1998	1	-	-	-	10	-	-	-	-	-	4	-	1	-	-	-	3	-	
1999	1	-	-	-	-	1	-	2	-	-	-	-	-	2	-	-	-	-	
2000	-	-	-	-	-	1	-	1	-	-	-	-	2	-	-	-	-	1	
2001	-	-	-	-	-	-	-	3	-	-	6	1	-	-	-	-	-	2	
2002	22	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	
2003	-	-	-	-	2	-	1	2	-	-	-	1	-	-	-	-	1	-	
2004	-	-	-	-	-	-	-	-	1	-	-	2	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	-	-	-	8	-	-	-	-	-	-	1	-	-	1	-	5	-	-	
2007	-	-	-	6	-	-	-	5	-	-	-	1	-	-	-	1	-	-	
2008	-	1	-	-	-	-	-	-	-	-	1	1	-	-	-	1	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	16	-	-	-	-	-	-	-	1	1	1	-	2	2	-	-	
2011	-	1	10	1	-	-	1	-	-	-	1	1	-	6	4	1	-	1	
2012	-	6	-	1	-	-	-	-	-	-	1	-	-	6	12	4	-	-	
2013	-	15	-	10	-	-	-	-	12	23	-	2	-	-	-	1	-	-	
2014	-	3	-	-	-	-	-	1	10	-	-	2	6	-	-	3	-	-	
slope	-0.06	0.14	0.07	0.11	-0.06	-0.05	-0.04	-0.06	0.09	0.05	-0.05	0.04	-0.03	0.02	0.09	0.15	-0.04	-0.08	

Fishing	Species																		
year	WHE	SPK	OPE	LHO	SEE	SPO	ODO	PMU	CPA	NUD	RAY	LAN	GVO	MSL	HYA	BTS	LCH	SSC	
1991	-	-	-	-	4	6	-	-	-	-	-	-	-	-	-	-	-	-	
1992	-	-	11	-	-	-	-	-	-	-	-	-	-	-	-	4	-	12	
1993	5	-	-	-	2	1	-	-	-	-	-	-	-	-	-	5	-	-	
1994	-	-	1	-	-	-	-	-	-	-	4	-	-	-	-	-	1	-	
1995	-	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	1	-	
1996	-	-	2	-	-	2	-	-	-	-	9	-	-	-	-	-	3	-	
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
2000	-	16	-	-	1	-	-	-	-	-	1	-	-	3	-	-	1	-	
2001	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	7	-	-	-	1	-	-	-	-	-	14	-	-	-	-	-	-	-	
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-	-	-	
2006	-	-	-	-	2	-	-	-	5	10	-	-	7	-	-	-	-	-	
2007	-	-	1	-	1	-	-	6	-	3	-	-	-	2	-	-	1	-	
2008	-	-	-	-	-	-	-	-	-	-	-	-	2	4	5	-	1	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
2010	-	-	-	13	2	-	-	1	-	1	-	-	1	1	-	-	-	-	
2011	-	-	-	1	-	-	-	1	2	-	-	-	-	7	-	-	-	-	
2012	-	-	-	-	1	-	-	7	3	-	-	-	1	1	1	-	-	-	
2013	-	-	1	-	-	-	-	-	5	-	-	-	2	-	-	1	1	-	
2014	5	-	1	2	-	1	-	-	-	-	-	-	-	-	-	2	1	-	
slope	0.00	-0.01	-0.02	0.08	-0.03	-0.08	0.01	0.08	0.10	0.04	-0.06	0.00	0.09	0.05	0.07	-0.02	0.01	-0.04	

Table 7: Scampi trawl fishery. — *continued*.

Fishing	Species																		
year	LAG	APR	SYN	MNI	COL	ALL	SBO	PLZ	RCK	SPZ	AST	HTR	RPE	RBY	SQX	TTA	PCO	SMC	
1991	-	-	-	-	-	-	-	-	10	-	-	-	-	-	1	-	-	8	-
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
1993	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	2	-	-	-
1996	-	-	7	-	-	-	-	-	-	2	-	-	-	3	5	-	-	-	-
1997	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-	10	-	-	-	1	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	-	2	-	-	-	2	-	-	-	7	-	-	-	1	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-
2008	2	1	-	-	11	1	-	-	-	1	-	-	-	-	-	-	-	-	-
2009	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	1	3	-	2	-	-	2	-	-	-	-	-	-	-	-	8	-	-	-
2011	3	-	-	1	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-
2012	5	5	-	3	-	7	3	-	-	-	-	2	-	1	-	-	-	-	-
2013	-	-	-	1	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-
2014	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
slope	0.09	0.06	0.00	0.13	0.02	0.07	0.03	-0.05	0.00	-0.01	-0.02	0.07	-0.03	-0.08	-0.06	0.03	-0.04	0.02	

Fishing	Species																	
year	BOC	SLR	GPA	CBB	SBK	LMI	EMO	ROC	CJA	CAM	DIR	HEP	CAL	PSY	EZE	SOL	BEE	ETM
1991	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
1992	-	3	-	-	1	-	-	-	-	-	-	-	-	5	-	-	-	1
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	3	-	1	-	-	-	-	1	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
1998	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-
2000	-	5	-	-	1	-	6	1	-	-	-	-	-	-	-	-	-	1
2001	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	6	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	1	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
2007	-	-	-	7	2	-	-	-	-	-	1	-	-	-	-	-	-	1
2008	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
2010	1	-	-	-	-	-	-	-	1	1	2	-	1	-	1	-	-	-
2011	1	-	-	-	-	7	-	-	1	-	1	-	3	-	-	-	-	-
2012	1	-	-	-	-	-	-	-	2	1	-	-	3	-	3	1	-	-
2013	1	-	5	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-
2014	3	-	2	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-
slope	0.11	-0.04	0.07	0.02	-0.04	0.03	-0.02	-0.02	0.09	0.10	0.07	-0.04	0.07	-0.04	0.07	0.02	0.00	-0.04

Table 7: Scampi trawl fishery. — *continued*.

Fishing	Species																		
year	ETB	EUC	CHI	PCH	MOD	AFO	OCP	PNO	OPA	CSQ	GDU	COR	TAM	RUD	LUC	BPE	PRU	CHX	
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
1992	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
1994	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-	2
1995	-	-	5	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	2
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
2007	-	-	-	-	-	-	1	-	-	-	-	3	-	-	-	-	-	-	-
2008	1	1	-	1	-	1	-	-	-	-	-	1	-	1	-	-	3	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-
2011	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	1	-	-	-	-	-	-	5	1	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
2014	-	4	-	4	2	-	-	-	2	-	-	-	-	-	1	-	-	-	-
slope	0.06	0.05	-0.03	0.05	0.00	0.04	0.00	0.03	0.06	0.02	0.02	0.02	-0.01	0.06	-0.07	-0.04	-0.02	0.04	-0.04

Fishing	Species																		
year	RDO	PAM	HJO	PAG	EPR	SMT	AWI	SEV	CBE	AIR	SCM	PMO	CFA	BAM	DDI	CTU	DCO	SDF	
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	3	1	-	-
2001	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-
2002	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	1	-	-	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	2	-	1	-	1	-	1	-	-	-	-	-	1	1	-	-	1	-
2012	-	1	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
2013	-	-	-	-	-	-	-	-	-	-	-	3	3	2	1	-	1	-	-
2014	-	-	-	-	-	-	2	-	-	-	-	-	-	-	1	-	-	1	-
slope	-0.01	0.05	0.00	0.04	0.02	0.04	0.05	0.03	-0.02	-0.01	0.00	0.03	0.03	0.04	0.06	-0.01	0.02	0.04	0.04

Table 7: Scampi trawl fishery. — *continued*.

Fishing	Species																		
year	ORH	PSE	DAS	CYP	GAT	TOD	PED	LSO	CCO	SNA	PLS	STG	RBT	CVI	CBO	NOT	PLY	AER	
1991	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
1994	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
1995	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2000	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
2003	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	1	1	-	-	-	1	1	1	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1
2013	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
2014	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
slope	-0.02	0.00	0.01	0.01	0.03	0.03	-0.03	0.04	0.01	-0.02	0.00	0.03	0.01	0.02	-0.02	-0.02	0.02	0.02	0.02

Fishing	Species																			
year	LLC	EPL	URP	POS	CDY	OCO	YSP	KWH	BAR	KIC	PDO	SHR	GUR	ADT	BCO	PLT	OLY	LAE		
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	
2001	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
2002	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2011	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
2014	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
slope	0.02	0.01	0.02	0.02	0.01	0.02	0.02	0.01	0.00	-0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.01	0.02	0.00	

Table 7: Scampi trawl fishery. — *continued*.

Fishing	Species													
year	STN	PAO	SOT	GOU	HIS	SUN	PFL	BCD	ARE	BCR	MAK	HEC	BES	SER
1991	-	-	-	-	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	-	-	-	-	-	-	
1993	-	-	-	-	-	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	-	-	-	-	-	-	
1995	1	-	-	-	-	-	-	-	-	-	-	-	-	
1996	-	-	-	-	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	1	-	1	-	-	-	
1998	-	-	-	-	-	-	-	-	-	-	-	-	-	
1999	-	-	-	-	-	-	-	-	-	-	-	-	-	
2000	-	-	-	-	-	-	-	-	-	-	1	-	-	
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	-	-	-	-	-	1	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	-	-	1	-	-	-	-	-	-	-	-	
2011	-	-	-	-	-	-	-	-	-	-	-	1	-	
2012	-	-	1	-	-	-	-	-	1	-	-	-	1	
2013	-	1	-	1	-	-	1	-	-	-	-	-	1	
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	
slope	-0.02	0.02	0.02	0.02	0.02	0.01	0.02	-0.01	0.02	-0.01	0.00	0.02	0.02	

Fishing	Species									
year	WHX	PNN	DHO	RSN	EGA	EPO	MOK	TLO	KIN	
1991	-	-	-	-	-	-	-	-	-	
1992	-	-	-	-	-	-	-	-	1	
1993	-	-	-	-	-	-	-	-	-	
1994	-	-	-	-	-	-	-	-	-	
1995	-	-	-	-	-	1	-	-	-	
1996	-	-	-	-	-	-	-	-	-	
1997	-	-	-	-	-	-	-	-	-	
1998	-	-	-	-	-	-	-	-	-	
1999	-	-	-	1	-	-	-	-	-	
2000	-	-	-	-	-	-	1	-	-	
2001	-	-	-	-	-	-	-	-	-	
2002	-	-	-	-	-	-	-	-	-	
2003	-	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	
2006	-	-	-	-	-	-	-	1	-	
2007	1	-	-	-	-	-	-	-	-	
2008	-	-	-	-	-	-	-	-	-	
2009	-	-	1	-	-	-	-	-	-	
2010	-	1	-	-	1	-	-	-	-	
2011	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	-	-	-	-	
2013	-	-	-	-	-	-	-	-	-	
2014	-	-	-	-	-	-	-	-	-	
slope	0.01	0.02	0.01	-0.01	0.02	-0.02	0.00	0.01	-0.02	

Table 8: Ling longline fishery. Total annual bycatch estimates (t) (with estimated CVs in parentheses) for individual species with at least 0.1 t of bycatch in at least one year, based on observer catch rates. Species are ordered by decreasing total catch. The slope of a regression through the data points is shown in parentheses alongside each species code. See <http://marlin.niwa.co.nz> for species code definitions). Data from Anderson (2014).

	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12
SPD ⁽⁰⁾	480(11)	723(9)	1285(7)	938(16)	1030(20)	1808(12)	855(25)	978(26)	1446(14)	1783(15)	1178(14)	923(12)	1117(9)	1125(8)	714(12)	1204(7)	983(6)	947(18)	526(11)	436(14)
RIB ⁽⁰⁾	466(9)	409(7)	383(8)	520(8)	935(7)	205(10)	416(9)	578(10)	397(13)	373(13)	181(11)	354(10)	216(11)	313(8)	90(13)	247(10)	222(12)	422(16)	636(7)	589(6)
SND ⁽⁰⁾	97(14)	142(14)	152(14)	132(17)	148(16)	201(14)	156(15)	183(16)	350(13)	306(12)	190(13)	317(13)	267(13)	307(11)	106(23)	122(21)	97(23)	134(24)	270(12)	224(11)
SSK ⁽⁰⁾	54(6)	173(30)	171(6)	530(8)	272(16)	132(6)	240(29)	227(6)	355(6)	113(10)	70(16)	130(23)	92(11)	73(7)	72(11)	133(9)	132(13)	126(16)	108(18)	89(16)
SPE ⁽⁰⁾	76(7)	144(5)	202(5)	117(7)	137(10)	124(10)	132(11)	159(12)	156(7)	180(7)	76(18)	111(7)	161(9)	149(6)	104(11)	80(7)	81(7)	98(11)	119(7)	90(6)
BNS ^(-0.1)	755(17)	328(17)	66(26)	64(23)	105(25)	99(23)	63(24)	64(30)	64(33)	41(33)	39(29)	36(32)	53(22)	49(22)	55(20)	60(20)	60(24)	60(22)	66(20)	51(20)
RCO ⁽⁰⁾	20(15)	38(18)	30(13)	106(33)	74(7)	137(8)	113(9)	108(8)	182(11)	299(7)	95(18)	91(22)	66(18)	96(13)	57(20)	104(20)	65(11)	37(15)	17(13)	20(11)
SCH ⁽⁰⁾	44(18)	112(16)	151(17)	94(14)	133(16)	155(11)	68(14)	61(22)	111(13)	93(12)	72(12)	79(12)	70(12)	67(12)	41(15)	115(11)	89(10)	79(14)	48(12)	47(11)
RSK ^(0.2)	0.7(0)	0.8(0)	1.2(0)	1.7(61)	61(51)	130(18)	45(53)	45(71)	2.8(36)	98(5)	145(4)	314(9)	41(24)	52(10)	118(6)	149(6)	55(10)	8.7(50)	23(26)	12(29)
CON ^(-0.1)	299(6)	161(7)	85(10)	118(10)	70(11)	8.5(17)	30(14)	25(17)	68(12)	97(11)	36(17)	20(18)	15(23)	9.2(11)	45(15)	43(10)	22(8)	16(47)	4.8(72)	3.7(47)
HAK ^(0.2)	3.4(30)	3.7(27)	4.4(32)	5.9(38)	7(35)	6(37)	5.8(35)	4.1(34)	5.2(27)	5(28)	3.7(27)	3.9(36)	4(36)	3.8(38)	6.7(26)	112(34)	199(25)	246(25)	283(24)	251(23)
SKA ^(-0.4)	196(13)	187(45)	131(14)	82(16)	51(34)	202(10)	38(49)	49(52)	34(20)	65(10)	32(14)	21(31)	5.7(93)	0.4(0)	0.3(0)	0.5(0)	0.3(0)	0.4(0)	0.6(0)	0.4(0)
BCD ^(0.1)	0(–)	32(75)	12(20)	120(9)	78(10)	49(7)	42(7)	74(7)	44(11)	60(5)	82(5)	103(6)	8.2(17)	5.1(20)	35(9)	69(10)	189(12)	4.1(0)	40(12)	4.7(0)
BSH ⁽⁰⁾	25(20)	41(16)	51(16)	65(20)	54(26)	53(21)	48(20)	45(18)	76(16)	73(13)	96(12)	51(16)	58(15)	76(12)	50(18)	36(23)	27(18)	48(13)	36(17)	32(15)
NOT ^(-0.5)	518(13)	446(32)	53(7)	3(101)	2.5(143)	0(–)	0(–)	0(–)	2.9(34)	7.6(32)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
GSH ^(-0.1)	47(12)	87(11)	124(14)	125(13)	47(10)	64(8)	16(17)	23(19)	39(9)	55(10)	31(30)	14(10)	80(9)	36(15)	62(18)	30(11)	33(13)	29(19)	9.5(21)	5.5(18)
HCO ^(0.2)	3.9(0)	5.5(18)	5.6(18)	6.2(16)	5.2(19)	7.2(14)	5.3(19)	6.1(16)	25(19)	16(11)	7(14)	28(20)	19(26)	42(9)	44(21)	74(14)	36(25)	75(30)	179(9)	160(8)
BAS ⁽⁰⁾	41(20)	58(21)	51(20)	43(20)	78(20)	75(19)	38(17)	29(17)	34(17)	15(16)	18(18)	17(16)	26(18)	19(14)	18(19)	26(17)	21(24)	30(26)	46(30)	32(27)
DWD ^(-0.3)	20(52)	24(54)	28(56)	37(77)	58(49)	65(44)	66(37)	52(34)	112(32)	48(31)	34(42)	20(78)	68(25)	33(48)	23(67)	16(90)	0.2(0)	0.4(0)	0(–)	0.4(0)
ETM ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	373(53)	155(18)	59(15)	34(27)	5.7(49)	0.4(0)	6.3(71)	17(50)	22(54)	0(0)	0(0)	0(–)	0(–)	0(–)	0(–)
GSP ^(0.2)	13(49)	7.8(97)	0.4(0)	0.3(0)	0.3(0)	0.5(0)	28(76)	30(9)	48(14)	63(9)	46(13)	26(9)	32(11)	19(5)	55(8)	124(6)	83(16)	18(14)	39(9)	34(6)
NSD ^(0.1)	12(23)	16(23)	14(23)	11(22)	28(21)	17(23)	5.6(25)	3.9(25)	14(37)	12(62)	8(33)	27(50)	52(15)	24(26)	26(37)	63(30)	64(23)	69(25)	83(24)	73(25)
OSD ^(0.1)	31(10)	33(9)	35(11)	50(11)	2.3(0)	0(–)	1.1(89)	0.2(0)	2.6(39)	23(23)	5.7(18)	24(30)	6.8(64)	23(22)	26(25)	53(15)	69(14)	38(21)	60(23)	55(17)
DWE ^(-0.1)	9.7(51)	13(53)	16(49)	27(49)	37(41)	107(14)	30(42)	27(39)	17(49)	13(51)	14(48)	15(49)	16(50)	16(48)	29(35)	21(52)	8.3(75)	7.1(76)	8.1(76)	5(80)
CSQ ^(0.4)	0(–)	0(–)	0(–)	0.1(0)	6.2(23)	13(26)	11(25)	9.7(25)	0(–)	0(–)	0(–)	7(53)	0(–)	0(–)	58(18)	21(31)	16(42)	40(43)	100(20)	89(18)
CAR ⁽⁰⁾	6.2(49)	8.7(46)	9.9(50)	16(51)	18(49)	19(43)	15(49)	10(44)	21(27)	19(23)	17(26)	16(29)	29(21)	35(26)	42(27)	15(17)	7(32)	15(41)	25(26)	15(25)
HAP ⁽⁰⁾	40(24)	25(19)	13(20)	14(36)	27(24)	30(13)	12(16)	11(20)	18(16)	14(12)	14(27)	11(19)	12(19)	16(16)	16(18)	13(15)	11(20)	12(21)	10(20)	
HAG ^(0.1)	7.4(14)	10(14)	8.2(12)	4.4(0)	12(20)	7(20)	4.7(30)	5.7(30)	21(13)	21(9)	17(28)	14(12)	30(12)	7.9(13)	26(12)	20(11)	15(13)	20(24)	27(12)	17(12)
SCO ^(0.2)	0(–)	27(15)	47(14)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	8.9(91)	0(–)	0(0)	0(0)	0(–)	11(40)	23(24)	23(26)	20(30)	21(29)
RAT ⁽⁰⁾	4.8(59)	7.5(35)	3.1(45)	5.6(47)	4.6(54)	6.1(40)	9.8(23)	8.9(16)	16(12)	16(13)	13(17)	12(11)	6.2(28)	7.9(22)	11(19)	7.2(20)	16(12)	2.7(0)	5(0)	2.9(0)
PLS ^(0.4)	0(–)	0(–)	0(–)	0(–)	4.6(22)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	9.9(44)	2.3(88)	5.9(61)	8.1(63)	0.4(0)	0.8(0)	18(73)	53(37)	26(38)
ETL ⁽⁰⁾	0(0)	6.5(15)	12(12)	52(43)	6.1(16)	8.7(11)	2.9(0)	2.3(0)	2.1(0)	3.5(29)	3.3(31)	1.1(0)	4.2(0)	1.4(0)	1.8(0)	1.8(0)	1.9(0)	2.5(0)	5.6(0)	3.7(0)
SFI ^(0.1)	0.1(0)	0.1(0)	0.2(0)	0.1(0)	0.3(0)	0.7(0)	5.5(26)	3.5(29)	14(52)	22(44)	25(29)	18(21)	0.2(0)	2.5(0)	1.8(56)	0.1(0)	1(0)	0.7(0)	1.6(0)	1.6(0)
RBM ^(-0.2)	35(16)	14(18)	1.6(0)	2.5(40)	8.7(16)	1.6(0)	7.4(19)	6.7(15)	2.9(0)	3.2(0)	1.5(0)	1.4(0)	1(0)	2.1(0)	0.4(0)	0.2(0)	0.5(0)	0.6(0)	0.6(0)	0.4(0)

Table 8—continued

	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12
ETB ^(0.3)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	48(19)	1.2(115)	15(42)	0(0)	0(–)	0(–)	4.4(68)	0.7(0)	0.8(0)	1.7(0)	4.3(33)
POS ^(-0.1)	3(68)	4.3(70)	3.6(67)	4(56)	6.3(58)	6(53)	3.4(42)	5.5(41)	4.6(38)	2.9(35)	3.6(28)	1.7(0)	1.5(66)	0.4(0)	1.3(0)	1.1(0)	2(51)	1.3(76)	1.5(0)	0.7(0)
CHI ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	19(60)	0(–)	0.6(0)	9.6(39)	12(39)	1.5(66)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	2.3(99)	0(–)
SKI ⁽⁰⁾	2.1(0)	2.9(34)	2.9(34)	3.2(31)	4.6(31)	4(36)	2.3(43)	1.6(0)	2.3(44)	1.4(0)	1.5(0)	1.5(0)	2(0)	1.7(0)	1.7(0)	1.6(0)	1.6(0)	1.7(0)	2(0)	1.8(0)
BWS ^(-0.1)	2.4(60)	1.5(66)	1(140)	2.7(91)	4.2(63)	3.2(76)	5.1(44)	4.2(41)	3.4(42)	2.2(46)	1.6(90)	1.3(76)	2.2(64)	1.7(85)	1.8(80)	2(71)	0.9(0)	0.9(0)	1.1(0)	0.8(0)
HPB ^(-0.1)	1.8(0)	5.7(25)	6.3(22)	4.9(54)	4.1(24)	3(34)	0.1(0)	0.2(0)	0.2(0)	0.6(0)	0(0)	0.2(0)	0.9(108)	2.5(69)	5.7(43)	4.8(36)	0.4(0)	0.2(0)	0.3(0)	0.2(0)
SSH ^(0.2)	0.2(0)	0.2(0)	0.2(0)	0.2(0)	0.2(0)	0.3(0)	0.2(0)	0.2(0)	0.4(0)	0.3(0)	0.6(0)	0.2(0)	0.3(0)	0.2(0)	0.3(0)	3.2(55)	5.4(56)	5.7(56)	5.7(58)	5.7(58)
HEX ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(0)	0.1(0)	0(–)	0(–)	1.7(0)	2.5(40)	0.7(0)	0.5(0)	15(16)	0.2(0)	0(–)	1.5(0)	3.7(38)	2.7(52)	0.1(0)	0.1(0)
CHP ^(0.1)	6.7(74)	3(121)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(–)	0(–)	0(–)	0(–)	14(77)	0.3(0)	3.1(73)	0.3(0)
CSH ^(0.4)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.6(182)	0.7(0)	0.5(0)	0.6(0)	0.1(0)	0(–)	1.5(115)	3.4(66)	4.8(55)	4.8(55)	4.9(57)	4.8(72)
HOK ^(0.2)	0.5(0)	0.2(0)	0(0)	0(0)	0.1(0)	0.2(0)	0.2(0)	0.2(0)	0.2(0)	0.1(0)	0.8(0)	0.5(0)	0.5(0)	0.6(0)	1.2(0)	3.5(41)	5.3(54)	7.4(48)	4.6(44)	
SCM ^(-0.1)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(–)	0.5(0)	20(22)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
MAK ^(-0.1)	1.3(78)	1.1(92)	1.1(95)	1.7(118)	1.9(108)	1.7(118)	1.5(117)	1(101)	1.1(124)	1(105)	1.4(74)	1.2(87)	1.2(85)	1.1(92)	1(98)	0(–)	0(–)	0.2(0)	0.7(143)	0.4(0)
CYO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	16(77)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(0)	0(–)	0(–)	0(–)	0(–)	0(0)	0(0)	0.1(0)
SEV ^(-0.1)	0.4(0)	0.5(0)	0.7(0)	1.1(93)	1.3(108)	1.1(88)	1(99)	0.8(127)	1.5(66)	1.6(65)	1.1(92)	1.2(82)	0.9(118)	0.6(0)	0.7(152)	0.2(0)	0.2(0)	0.2(0)	0.2(0)	0.2(0)
BYS ^(0.2)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.2(0)	0.2(0)	0.1(0)	0.1(0)	0.1(0)	1.1(0)	1.5(0)	2.2(47)	1.5(0)	1.7(0)	2.4(42)	1.7(0)
ANT ^(-0.1)	0(–)	0(–)	0(–)	0(–)	0.3(0)	0.5(0)	0.5(0)	0.4(0)	0.5(0)	2.5(0)	3.8(0)	4(25)	0(0)	0.2(0)	0(0)	0(–)	0(0)	0(–)	0(0)	0(–)
UNI ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0.8(0)	1.5(0)	0.2(0)	1.4(74)	0.9(0)	1.6(0)	0(–)	3.5(41)	2(72)	0(–)	0(–)
CHG ^(0.2)	0(0)	0(0)	0(0)	0(0)	0(0)	0.1(0)	0.3(0)	0(0)	0.1(0)	0.9(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	1.2(0)	2.4(43)	4.7(70)	0.1(0)	1(0)	0.1(0)
DSK ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	3(0)	4.1(0)	3.7(27)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
TAR ⁽⁰⁾	0.6(0)	0.7(0)	0.6(0)	0.5(0)	0.9(0)	0.7(0)	0.3(0)	0.2(0)	0.4(0)	0.1(0)	0.2(0)	0.1(0)	0.2(0)	0.3(0)	0.5(0)	0.7(0)	0.5(0)	0.5(0)	0.8(0)	0.6(0)
CYP ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0.3(0)	0.6(0)	0.5(0)	0.4(0)	0.1(0)	0(–)	0(–)	0.3(0)	0(–)	0(–)	0(–)	5.9(61)	1.1(0)	0(–)	0(–)	0(–)
JAV ^(0.2)	0(0)	0(0)	0(0)	0(0)	0.2(0)	0.3(0)	0.3(0)	0.4(0)	0.7(0)	1(0)	0.3(0)	0.2(0)	0.8(0)	0.4(0)	0.4(0)	0.2(0)	0.3(0)	0.4(0)	0.8(0)	0.7(0)
ASR ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	1(144)	1.1(130)	1.6(86)	0(–)	0(–)	0.1(0)	0.4(0)	0.5(0)	0(–)	1.2(0)	0.8(0)	0(–)	0(0)
OFH ^(0.2)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.3(0)	0.3(0)	0.2(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.5(0)	0.5(0)	0.8(122)	0.6(0)	0.6(0)	0.9(108)	0.7(0)
SQA ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	5.4(19)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SPO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	4.2(106)	0(0)	0(0)	0(0)	0.2(0)	0.4(0)	0(–)	0.2(0)	0(0)	0.1(0)	0.1(0)	0(0)	0(–)	0(–)	0(–)	0(–)
BCO ⁽⁰⁾	0(–)	0(0)	0(0)	1.3(113)	0.8(122)	0.3(0)	0(–)	0.1(0)	0(–)	0(–)	0.5(204)	0(0)	0.1(0)	0.1(0)	0.4(0)	0.5(0)	0(0)	0(0)	0(0)	0(0)
STA ^(-0.1)	0(0)	0.1(0)	0(0)	0.1(0)	0.1(0)	0.2(0)	0.2(0)	0.1(0)	0.2(0)	1.2(0)	0.4(0)	0.6(0)	0.2(0)	0.5(0)	0(0)	0.1(0)	0(0)	0(0)	0(–)	0(–)
EEL ^(-0.2)	0.2(0)	0.3(0)	0.2(0)	0.2(0)	0.3(0)	0.3(0)	0.1(0)	0.1(0)	1.7(0)	0.1(0)	0.1(0)	0.3(0)	0.2(0)	0(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
CEN ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	1.4(69)	2.4(60)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
COU ^(-0.2)	0.2(0)	0.3(0)	0.3(0)	0.2(0)	0.2(0)	0.3(0)	0.2(0)	0.3(0)	0.5(0)	0.4(0)	0.3(0)	0.3(0)	0(0)	0(0)	0(0)	0(–)	0(–)	0(–)	0(–)	0(–)
BRC ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(0)	0.1(0)	0.1(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0.9(0)	0.7(0)	0.5(0)	0.3(0)	0.5(0)	0.3(0)
WWA ⁽⁰⁾	1.8(56)	0.7(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(–)	0.1(0)	0.2(0)	0.3(0)	0.3(0)
HEP ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(0)	0.2(0)	0(–)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.7(154)	1.3(107)	0.7(0)
TOA ^(0.1)	0(–)	0(–)	0(–)	0(0)	0(–)	0.6(0)	0.4(0)	0.5(0)	0.4(0)	0.2(0)	0.2(0)	0.1(0)	0.1(0)	0.1(0)	0(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)
PTO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(0)	0(0)	0.8(132)	0(–)	0(–)	0(–)	0(0)	0(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	2(101)	0(0)

Table 8—continued

	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12
DCS ^(0.1)	0(–)	0.1(0)	0.1(0)	0(–)	0(0)	0(–)	0(–)	0(–)	0(0)	0(0)	0(0)	0(–)	1(0)	0(0)	0(–)	0.3(0)	0.1(0)	0(0)	0.8(0)	0.2(0)
CRB ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(0)	0(0)	0(0)	0(0)	0.2(0)	0.4(0)	0.6(0)	1.2(0)	0(0)	0.1(0)	0(0)	0(–)	0(–)	0(–)	0(–)	0(0)
AST ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	1.1(0)	0.9(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	0.1(0)	0(0)	0(0)	0(0)	0(0)
THR ^(-0.1)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.1(0)	0.2(0)	0.2(0)	0.1(0)	0.2(0)	0.2(0)	0.2(0)	0.2(0)	0(–)	0.3(0)	0(–)	0(–)	0(–)	0(–)
SHA ^(0.2)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	0.2(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0.3(0)	0.3(0)	0.1(0)	0.8(0)
HYD ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0.5(0)	0.7(0)	0.2(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SOT ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	1.5(0)	0(–)	0(–)	0(–)	0(–)
SBR ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(–)	0(–)	0(–)	0(0)	0.3(0)	0.5(0)	0.5(0)	0(0)	0(0)	0(0)	0(–)	0(–)	0(–)	0(–)
APR ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.4(0)	0.6(0)	0.1(0)	0.1(0)	0(0)	0(–)	0(–)	0.1(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)
BYX ^(-0.1)	0.8(0)	0.3(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(0)	0(0)	0(–)
ONG ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(0)	0(–)	0.3(0)	0.4(0)	0.3(0)	0(–)	0(–)	0(–)	0(–)	0(0)	0(0)	0(0)
FHD ⁽⁰⁾	0(–)	0(0)	0(0)	0(–)	0(0)	0(0)	0(0)	0(0)	0.2(0)	0.2(0)	0.1(0)	0(0)	0.2(0)	0(0)	0.1(0)	0(–)	0(–)	0(–)	0(0)	0(0)
HYB ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.3(0)	0.4(0)	0(–)	0.2(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
ELT ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0.1(0)	0(0)	0(–)	0(–)	0(–)	0(–)	0.7(0)	0(–)	0(–)	0(–)	0(–)
OCT ⁽⁰⁾	0.1(0)	0(0)	0(–)	0(0)	0(0)	0(–)	0(–)	0(0)	0.1(0)	0.1(0)	0(0)	0.1(0)	0(0)	0.1(0)	0.2(0)	0(0)	0(–)	0(–)	0(–)	0(–)
PSK ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0.2(0)	0.1(0)	0.1(0)	0(0)	0(–)	0.1(0)	0(0)	0(0)	0.1(0)	0.1(0)
ETP ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.4(0)	0.3(0)	0(–)	0(–)
GSC ⁽⁰⁾	0(–)	0(–)	0(–)	0.2(0)	0.1(0)	0(0)	0(–)	0(–)	0(0)	0(0)	0(0)	0(–)	0(–)	0(–)	0(0)	0.1(0)	0.1(0)	0(–)	0(0)	0(–)
SPI ⁽⁰⁾	0(–)	0(0)	0(0)	0(–)	0(–)	0(0)	0(–)	0(0)	0(0)	0.6(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
TOP ⁽⁰⁾	0(–)	0(–)	0(–)	0(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0.4(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0.1(0)
BTH ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.3(0)	0.2(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
PNE ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.5(0)	0(0)	0(0)	0(–)	0(–)
PSI ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.5(0)	0(–)	0(–)	0(–)	0(–)
PKN ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.5(0)	0(–)	0(–)	0(–)	0(–)
BSP ^(-0.1)	0(–)	0(–)	0(–)	0.1(0)	0.2(0)	0(–)	0.1(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
SNR ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(0)	0.4(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
GAS ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(0)	0(0)	0.2(0)	0(–)	0.1(0)	0(–)	0(0)	0(0)	0(0)	0(0)
TRU ⁽⁰⁾	0.1(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(0)	0(–)	0.2(707)	0(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
MOL ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
ODO ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.3(0)	0(–)	0(–)	0(–)	0(–)
ECN ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)
HMT ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	0(–)	0.1(0)	0(0)
ACS ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0.1(0)
ECH ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.2(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
ROC ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(0)	0(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)
TOD ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
LCH ⁽⁰⁾	0(0)	0(0)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0.1(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(–)	0(–)	0(–)	0(–)	0(–)

Table 8—continued

	1992–93	1993–94	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	2011–12
MOD ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(–)	0.1(0)	0(–)
DMG ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(–)	0(–)	0(0)	0(0)
QSC ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0.1(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(–)	0(–)	0(–)
CPA ^(0.1)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0.1(0)
MSL ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(0)	0(0)	0(–)	0(–)
WHE ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0.1(0)	0(–)	0(–)	0(0)	0(0)	0(0)
WIT ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0(–)	0(–)	0(0)	0(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)
MOR ⁽⁰⁾	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)	0(0)	0.1(0)	0(–)	0(–)	0(–)	0(–)	0(–)	0(–)

Table 8b: Ling longline fishery. Total annual bycatch estimates (t) for individual species with at least 1 t of bycatch in at least one year, based on observer catch rates, for the 2012–13 and 2013–14 fishing years; - means less than 1 t. (see <http://marlin.niwa.co.nz> for species code definitions).

Fishing	Species																		
year	SPD	RIB	SSK	RSK	RCO	SPE	BCD	GSP	SHA	SND	SCH	BNS	ETM	NOT	GSH	HCO	CON	BSH	
2013	4 565	1	220	-	622	423	-	-	-	-	-	81	-	-	-	67	-	154	4
2014	3 700	836	182	265	106	241	2	194	156	208	54	25	-	-	-	205	51	16	188

Fishing	Species																	
year	CSQ	SKA	HAG	HAK	PLS	HAP	NSD	RAT	SCO	ETB	CAR	ETL	ASR	BAS	DWE	SSH	CHI	SEE
2013	-	-	91	2	-	3	6	-	-	-	3	2	-	-	-	-	-	-
2014	35	-	54	66	227	38	-	12	217	136	41	59	2	12	20	-	-	-

Fishing	Species																	
year	RBM	CHP	HPB	CHG	HEX	CYO	POS	HOK	UFISH	BWS	ANT	DSK	SCM	SQA	PTO	SPO	CYP	DCS
2013	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	4	-	4	4	-	-	-	-	22	-	5	-	-	-	-	-	2	1

Fishing	Species																	
year	DMG	BCO	JAV	SEV	GIZ	SBR	TOA	CRB	CSH	BTH	AST	BRC	PSI	CEN	EEL	BYS	MAK	HEP
2013	14	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	1	-	-	10	1	6	1	-	1	-	-	-	4	-	-	-	-	-

Fishing	Species																	
year	GSC	PSK	PKN	APR	RSO	TOP	TRU	HJO	WWA	HYB	GAS	PNE	THR	ETP	SNR	CPA	BYX	OFH
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	-	

Fishing	Species																	
year	ELT	COU	ROC	ZOR	ECN	BSP	NMP	MOD	HMT	SOT	SPI	OCT	ODO	ECH				
2013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 9: Regression slopes for each species/species group and fishery, from Tables 1–8. Slopes indicating a significant decline in bycatch over time (based on regression analysis) are highlighted in red, with significant increases highlighted in green. Species/species groups are ordered alphabetically; blank cells = not estimated; LLL = ling longline fishery; HHL = hoki/hake/ling trawl fishery.

Species	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	Fishery		Scientific name
ACS		0.01	0.22				0.06		0.19		Actinostolidae
ADT				0.02							<i>Aphrodita</i> spp.
AER				0.02							<i>Aeneator recens</i>
AFO				0.04							<i>Aristaeomorpha foliacea</i>
AGR								-0.18			<i>Agrostichthys parkeri</i>
AIR				-0.01							<i>Argyripnus iridescens</i>
ALB		0.01			0.45				0.00		<i>Thunnus alalunga</i>
ALL				0.07							<i>Alcithoe larochei</i>
ANC											<i>Engraulis australis</i>
ANT	0.00	-0.09	-0.02			0.03	-0.01	0.11			Anthozoa
ANZ	0.02										<i>Ecionemia novaezelandiae</i>
API	-0.03	0.04							0.00		<i>Alertichthys blacki</i>
APR	0.01	0.06	-0.02			0.02	0.02	0.09			<i>Apristurus</i> spp.
ARE			0.02								<i>Apatopygus recens</i>
ASR	0.01	0.11	0.08	-0.04		0.01	-0.02	0.16			Asteroid
AST			-0.02	-0.02							<i>Astronesthinae</i>
ATT				0.49							<i>Arripis trutta</i>
AWI			0.05								<i>Alcithoe wilsonae</i>
BAC						-0.03					<i>Bathygadus cottooides</i>
BAM			0.04								<i>Bathypletes</i> spp.
BAR	0.00	-0.01	-0.01		-0.04				-0.11		<i>Thrysites atun</i>
BAS		-0.01	-0.20	-0.10					0.06		<i>Polyprion americanus</i>
BAT		-0.01				0.00	-0.01				<i>Rouleina</i> spp.
BBE	-0.02	0.03	-0.03			-0.04	0.03	0.03			<i>Centriscops humerosus</i>
BCA		0.00							-0.09		<i>Magnisudis prionosa</i>
BCD		0.19	-0.01	-0.12					-0.01		<i>Paranotothenia magellanica</i>
BCO	-0.03	0.11	-0.01	-0.04					0.00		<i>Parapercis colias</i>
BCR			-0.01						-0.03		<i>Brotulotaenia crassa</i>
BDA									-0.01		<i>Sphyraena novaehollandiae</i>
BEE			0.00			-0.09	0.11				<i>Diastobranchus capensis</i>
BEL	0.06	-0.01				-0.01			0.13		<i>Centriscops</i> spp.
BEN									0.20		<i>Benthodesmus</i> spp.
BER			-0.06						0.00		<i>Typhlonarke</i> spp.
BES			0.02						0.03		<i>Benthopecten</i> spp.
BFE						0.00					<i>Bathysaurus ferox</i>
BFI						0.00					<i>Bathophilus filifer</i>
BFL	0.01										<i>Rhombosolea retiaria</i>
BGZ	0.11										<i>Kathetostoma binigrasella</i>
BIG	0.01								-0.02		<i>Thunnus obesus</i>
BJA						-0.02	0.03				<i>Mesobius antipodum</i>
BKM											-0.04 <i>Makaira indica</i>
BNE											-0.01 <i>Benthodesmus elongatus</i>
BNS		-0.07	-0.28	-0.31		-0.19	0.01	-0.10			<i>Hyperoglyphe antarctica</i>
BNT											-0.01 <i>Benthodesmus tenuis</i>
BOA	-0.03		0.02								-0.01 <i>Paristiopterus labiosus</i>

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
BOC		0.01	0.11						<i>Bolocera</i> spp.
BOE					-0.20				0.05 <i>Allocyttus niger</i>
BOO					0.01				<i>Keratoisis</i> spp.
BOT		0.00							-0.01 <i>Bothidae</i>
BPE			-0.02						-0.01 <i>Caezioperca lepidoptera</i>
BPI									0.02 <i>Benthopecten pikei</i>
BRA		-0.01							0.01 <i>Dasyatis brevicaudata</i>
BRB				-0.08	0.01		-0.02		0.01 <i>Pseudophycis breviuscula</i>
BRG						0.08			<i>Brisingida</i>
BRS	-0.01								-0.01 <i>Echinorhinus brucus</i>
BRZ			0.04						<i>Xenocephalus armatus</i>
BSH	-0.01	-0.06	-0.14	-0.11		-0.11	-0.03	-0.01	<i>Dalatias licha</i>
BSK		0.16				-0.02		-0.16	<i>Cetorhinus maximus</i>
BSL						-0.12	0.03	0.11	<i>Xenodermichthys</i> spp.
BSP				-0.02					0.02 <i>Taractichthys longipinnis</i>
BSQ	-0.02					-0.03		-0.08	<i>Sepioteuthis australis</i>
BTA			0.09						0.07 <i>Brochiraja asperula</i>
BTH	-0.03	0.01	0.05	0.01		0.04	0.01	0.04	<i>Notoraja</i> spp.
BTS			-0.02					0.10	<i>Brochiraja spinifera</i>
BWH			0.10			0.00			<i>Carcharhinus brachyurus</i>
BWS		0.03		-0.08					-0.06 <i>Prionace glauca</i>
BYD								0.13	<i>Beryx decadactylus</i>
BYS	0.00	0.06	0.01			0.08		0.19	<i>Beryx splendens</i>
BYX	0.01	-0.22	-0.04			-0.25			-0.10 <i>Beryx splendens & B. decadactylus</i>
CAL			0.07						<i>Caenopedina porphyrogigas</i>
CAM			0.10						<i>Camlyonotus rathbunae</i>
CAR	0.24	0.12	0.02			-0.02		0.14	<i>Cephaloscyllium isabellum</i>
CAS	0.06	0.05						-0.04	<i>Coelorinchus aspercephalus</i>
CAY							0.01		<i>Caryophyllia</i> spp.
CBB	0.02	0.02				0.08			Coral rubble
CBD	0.08					0.01	0.02		Coral rubble - dead
CBE	0.04	-0.03							0.03 <i>Notopogon lilliei</i>
CBI							0.00		-0.02 <i>Coelorinchus biclinozonalis</i>
CBO	-0.04	0.00	-0.02			0.00			-0.02 <i>Coelorinchus bollonsi</i>
CBX									-0.01 <i>Cubiceps baxteri</i>
CCA									0.00 <i>Cubiceps caeruleus</i>
CCO			0.01						0.02 <i>Coelorinchus cookianus</i>
CCR		0.00							<i>Cetonus crassiceps</i>
CCX									0.07 <i>Coelorinchus parvifasciatus</i>
CDL					-0.20		-0.01		0.02 Epigonidae
CDO	0.05	0.05		-0.41				0.18	<i>Capromimus abbreviatus</i>
CDX			0.13					-0.01	<i>Coelorinchus maurofasciatus</i>
CDY			0.01						<i>Cosmasterias dyscrita</i>
CEN				-0.01		-0.04			<i>Squalidae</i>
CFA			0.03						0.02 <i>Coelorinchus fasciatus</i>
CHA									0.01 <i>Chauliodus sloani</i>
CHC		0.02							<i>Chaceon bicolor</i>
CHG				0.01		0.02	0.09	0.05	<i>Chimaera lignaria</i>
CHI			-0.03	-0.05		0.04	0.00	-0.06	<i>Chimaera</i> spp.

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
CHM								-0.01	Chiasmodontidae
CHP				-0.04		0.01	0.04	-0.01	<i>Chimaera</i> sp.
CHQ		0.06						0.02	Cranchiidae
CHR							0.03		<i>Chrysogorgia</i> spp.
CHX		-0.04				0.00		0.01	<i>Chaunax pictus</i>
CJA		0.09						0.12	<i>Crossaster multispinus</i>
CMA								0.02	<i>Coelorinchus matamua</i>
CMT		0.02							Comatulida
CMU							0.01	-0.02	<i>Coryphaenoides murrayi</i>
COB						0.01			Antipatharia
COD						0.01	-0.01	-0.02	Cod
COF		0.01						0.01	<i>Flabellum</i> spp.
COL			0.02			-0.01		0.13	<i>Coelorinchus oliverianus</i>
CON	-0.02	0.07	0.00	-0.31		-0.04	0.00	0.11	<i>Conger</i> spp.
COR			-0.01			0.00	0.00		Stylerasteridae
COU		-0.01	-0.01			-0.04	-0.05	0.01	Alcyonacea, Scleractinia, Antipatharia, Stylerasteridae
CPA			0.10					0.06	<i>Ceramaster patagonicus</i>
CPD								-0.03	Centrolophidae
CRA		-0.02						-0.02	<i>Jasus edwardsii</i>
CRB		-0.16	-0.12	-0.01		-0.03	0.00	0.02	Crab
CRM		0.08						0.02	<i>Callioponga cf ramosa</i>
CRN		0.02							Sea lily, stalked crinoid
CRS						-0.01		0.13	<i>Callioponga ramosa</i>
CRU		-0.04	-0.07					-0.01	Crustacea
CSH		0.04	0.00	0.01		-0.04	-0.01	0.13	Catshark
CSP		-0.01							<i>Coelorinchus spathulatus</i>
CSQ		-0.01	0.02	0.08		0.11	0.04	0.10	<i>Centrophorus squamosus</i>
CST								-0.01	<i>Caristius</i> sp.
CSU					0.02				<i>Coryphaenoides subserrulatus</i>
CTU			-0.01					-0.01	<i>Cookia sulcata</i>
CUB						-0.01		-0.01	<i>Cubiceps</i> spp.
CUC		-0.02	-0.07					0.00	<i>Paraulopus nigripinnis</i>
CVI			0.02						<i>Pycnoplax victoriensis</i>
CYL					0.14			0.15	<i>Centroscymnus coelolepis</i>
CYO				-0.03		0.14		0.11	<i>Centroscymnus owstoni</i>
CYP		0.01	-0.02			0.16	0.13	0.13	<i>Centroscymnus crepidater</i>
DAP		0.15							<i>Dagnaudus petterdi</i>
DAS		0.01							<i>Pteroplatytrygon violacea</i>
DCO		0.02							<i>Notophycis marginata</i>
DCS		-0.03	0.00			-0.02		-0.04	<i>Bythaelurus dawsoni</i>
DDI		0.06				0.02	0.01		<i>Desmophyllum dianthus</i>
DEA	0.00							-0.12	<i>Trachipterus trachypterus</i>
DEQ						-0.02		-0.02	<i>Deania quadrispinosum</i>
DHO		0.01				0.02		0.01	<i>Dermechinus horridus</i>
DIR		0.07							<i>Diacanthurus rubricatus</i>
DIS					0.00				<i>Diretmus argenteus</i>
DMG		0.11					0.09		<i>Dipsacaster magnificus</i>
DPO								-0.02	<i>Desmodema polystictum</i>
DSK	0.01	-0.13	0.00			0.01	-0.04	0.10	<i>Amblyraja hyperborea</i>

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
DSP	-0.02	0.03							<i>Congiopodus coriaceus</i>
DSS						0.00		-0.01	<i>Bathylagus</i> spp.
DWE			-0.04	-0.04		-0.04	-0.01	0.14	Whelks
DWO								0.18	<i>Ganeledone</i> spp.
ECH			-0.05	-0.01		-0.01	0.00	-0.04	Echinodermata
ECN			0.01	-0.01		-0.01	-0.02	0.01	Echinoid
EEL			-0.16	-0.01		0.00	-0.01	-0.09	Eels
EEX		0.03							<i>Enypniastes eximia</i>
EGA			0.02						<i>Euciroa galathea</i>
EGR				0.20					<i>Myliobatis tenuicaudatus</i>
ELE									<i>Callorhinchus milii</i>
ELT									<i>Electrona</i> spp.
EMA	0.00	0.03			-0.04			-0.20	<i>Scomber australasicus</i>
EMO			-0.02			-0.01		0.01	<i>Etmopterus molleri</i>
EPD								0.02	<i>Epigonus denticulatus</i>
EPL		0.03	0.01			-0.11	-0.03	0.21	<i>Epigonus lenimen</i>
EPO			-0.02						<i>Melanostigma gelatinosum</i>
EPR			0.02			0.06		0.13	<i>Epigonus robustus</i>
ERA		0.02	-0.01		0.24			0.04	<i>Torpedo fairchildi</i>
ERO						0.04			<i>Enallopssammia rostrata</i>
ETB	-0.02	0.05	0.06	0.03		0.08	0.26	0.24	<i>Etmopterus baxteri</i>
ETL		0.03	0.08	-0.18		-0.14	0.04	0.06	<i>Etmopterus lucifer</i>
ETM		-0.03	-0.04	-0.09		-0.11	0.01	-0.24	<i>Etmopterus</i> sp.
ETP						-0.04	-0.01	-0.01	<i>Etmopterus pusillus</i>
EUC			0.05			-0.02		0.13	<i>Euclichthys polynemus</i>
EZE		0.07	0.07						<i>Enteroctopus zealandicus</i>
FAN								-0.01	<i>Pterycombus petersii</i>
FHD		0.03	0.03					0.08	<i>Hoplichthys haswelli</i>
FLA		0.13	-0.03					-0.03	Flatfish
FLO		0.01						-0.02	Flounder
FMA		0.01	0.18					0.19	<i>Fusitriton magellanicus</i>
FOR								-0.02	<i>Forsterygion</i> spp.
FRO	0.00	0.08	-0.05		-0.01	-0.03		-0.10	<i>Lepidopus caudatus</i>
FRS						-0.05		-0.02	<i>Chlamydoselachus anguineus</i>
FRX								-0.01	Trichiuridae
FTU		0.01							<i>Auxis thazard</i>
GAO					0.00				<i>Gadomus aoteanus</i>
GAS			0.19					0.05	Gastropoda
GAT			0.03						<i>Gastroptychus</i> spp.
GDU			0.02		0.16	0.09			<i>Goniocorella dumosa</i>
GFL		0.14							<i>Rhombosolea tapiri</i>
GIZ	0.00	0.07	-0.08	-0.01	0.16	-0.03		0.00	<i>Kathetostoma giganteum</i>
GLS	0.01					0.03		0.12	Hexactinellida
GMC		0.04	0.23					0.02	<i>Leptomithrax garricki</i>
GMU		-0.01							<i>Mugil cephalus</i>
GOB					-0.01				<i>Mitsukurina owstoni</i>
GON		0.25					0.08		<i>Gonorynchus forsteri</i> & <i>G. greyi</i>
GOR								0.05	<i>Gorgonocephalus</i> spp.

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
GOU			0.02			0.03			<i>Goniocidaris umbraculum</i>
GPA			0.07						<i>Goniocidaris parasol</i>
GRC						0.01	0.04	-0.01	<i>Tripterocephalus gilchristi</i>
GRM							0.02	0.04	<i>Gracilechinus multidentatus</i>
GSA								-0.01	<i>Hoplostethus gigas</i>
GSC	0.38		0.13	-0.03		0.00			<i>Jacquinotia edwardsii</i>
GSH	-0.09	0.10	0.03	-0.28	0.25	-0.18	-0.18	-0.09	<i>Hydrolagus novaezealandiae</i>
GSP	0.13	0.14	0.14	0.07		0.09	0.17	0.16	<i>Hydrolagus bemisi</i>
GSQ	0.00	0.00				0.01			<i>Architeuthis</i> spp.
GUR		-0.01	0.00		-0.07			0.03	<i>Chelidonichthys kumu</i>
GVO			0.09					0.01	<i>Provocator mirabilis</i>
HAG			-0.08	-0.03			0.18		<i>Eptatretus cirrhatus</i>
HAK	-0.05	0.06	-0.06	-0.06		-0.03	-0.02		<i>Merluccius australis</i>
HAL								0.01	<i>Halosauropsis macrochir</i>
HAP		0.04	-0.05	-0.18				-0.03	<i>Polyprion oxygeneios</i>
HAT									<i>Sternopychidae</i>
HCO	0.02	0.01	0.09			-0.01		-0.01	<i>Bassanago hirsutus</i>
HEC			0.02						<i>Henricia compacta</i>
HEP			-0.04					0.06	<i>Heptranchias perlo</i>
HEX	0.05	-0.06	0.01				0.15		<i>Hexanchus griseus</i>
HGB						0.01		0.00	<i>Hydrolagus</i> sp. D
HIS		0.02							<i>Histocidaris</i> spp.
HJO		0.00				0.05	0.12	0.01	<i>Halargyreus johnsonii</i>
HMT		0.21						0.07	<i>Hormathiidae</i>
HOK	-0.12	0.04	-0.06	0.01	-0.19	-0.09	0.13		<i>Macruronus novaezealandiae</i>
HOL								0.01	<i>Holtbyrnia</i> sp.
HOR								-0.01	<i>Atrina zelandica</i>
HPB		-0.08	-0.20	-0.18				-0.16	<i>Polyprion oxygeneios & P americanus</i>
HSI			0.13						<i>Haliporoides sibogae</i>
HTH	-0.02	0.04				0.07	0.02	0.05	Holothurian unidentified
HTR			0.07				0.08		<i>Hippasteria phrygiana</i>
HYA	0.03	0.03	0.07			0.02		0.31	<i>Hyalascus</i> sp.
HYB				0.00					<i>Hydrolagus homonycterus</i>
HYD						0.00	0.01	-0.01	<i>Hydrolagus</i> sp.
HYM			0.07						<i>Hymenocephalus</i> spp.
HYP						0.00			<i>Hydrolagus trolli</i>
IBR						0.05	0.02	0.00	<i>Isistius brasiliensis</i>
ISI							0.01		<i>Isididae</i>
JAV	0.06	0.20	-0.01	-0.03	0.18	0.00	0.08	0.04	<i>Lepidorhynchus denticulatus</i>
JDO						0.01		-0.02	<i>Zeus faber</i>
JFI		0.00	-0.06		0.04	0.01	0.01	0.05	Jellyfish
JGU		-0.01	-0.03					0.00	<i>Pterygotrigla picta</i>
JMA	0.00	-0.16	-0.14			-0.03		-0.25	<i>Trachurus declivis, T. murphyi, T. novaezealandiae</i>
KIC			-0.02			0.04	-0.02	0.04	<i>Lithodes murrayi, Neolithodes brodiei</i>
KIN		-0.02		0.12				0.01	<i>Seriola lalandi</i>
KWH		0.01						0.01	<i>Astrofucus glans</i>
LAE		0.00				-0.03	-0.01		<i>Laemonema</i> spp.
LAG		0.09							<i>Laetmogone</i> spp.
LAN	0.14	0.00				0.00	0.01	0.07	Myctophidae

Species	Fishery									Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL		
LCH	0.02		0.01			-0.02	0.03	0.03	<i>Harriotta raleighana</i>	
LDO	-0.01	0.06	-0.04			-0.05	0.00	0.00	<i>Cyttus traversi</i>	
LEA		-0.01			-0.19				<i>Meuschenia scaber</i>	
LEG						-0.06	0.04	0.00	<i>Lepidion schmidti & Lepidion inosimae</i>	
LHE								-0.02	<i>Lampanyctodes hectoris</i>	
LHO			0.08					0.02	<i>Lipkius holthuisi</i>	
LIN	-0.04	0.05	-0.12			-0.08	-0.06		<i>Genypterus blacodes</i>	
LLC		0.07	0.02					0.02	<i>Leptomithrax longipes</i>	
LMI			0.03						<i>Leptomithrax spp.</i>	
LMU						0.01		0.03	<i>Lithodes murrayi</i>	
LNV								0.05	<i>Lithosoma novaezelandiae</i>	
LPI						0.02			<i>Lepidion inosimae</i>	
LPS						0.02	-0.01		<i>Lepidion schmidti</i>	
LSK		0.01	0.08			-0.02		0.10	<i>Arhynchobatis asperrimus</i>	
LSO		-0.02	0.04					0.00	<i>Pelotretis flavidatus</i>	
LUC			-0.04			-0.02		-0.02	<i>Luciosudus sp.</i>	
MAK	0.03	0.03	-0.01	0.00	0.36	-0.05		-0.06	<i>Isurus oxyrinchus</i>	
MAN	-0.04	-0.02				0.02		-0.07	<i>Neoachiropsetta milfordi</i>	
MCA						0.11	0.26	0.00	<i>Macrourus carinatus</i>	
MDO		0.02	0.02			-0.03		0.03	<i>Zenopsis nebulosa</i>	
MIC	-0.02								<i>Microstoma microstoma</i>	
MIQ	-0.05		-0.07			-0.09	-0.01	0.07	<i>Onykia ingens</i>	
MNI			0.13						<i>Munida spp.</i>	
MOC						0.06	0.02		<i>Madrepora oculata</i>	
MOD			0.00			0.15	0.16	0.16	<i>Moridae</i>	
MOK		-0.02	-0.01			-0.02		-0.09	<i>Latridopsis ciliaris</i>	
MOL			-0.02					-0.02	<i>Molluscs</i>	
MOO	-0.14	0.01						-0.18	<i>Lampris guttatus</i>	
MOR						0.00	0.00	-0.01	<i>Muraenidae</i>	
MRL								0.00	<i>Muraenolepididae</i>	
MRQ								0.04	<i>Onykia robsoni</i>	
MSL			0.05						<i>Mediaster sladeni</i>	
MST						0.03		0.02	<i>Melanostomiidae</i>	
MUR						-0.02			<i>Muraenolepis marmoratus</i>	
MUU		0.00							<i>Mullet</i>	
NCA		0.03							<i>Nectocarcinus antarcticus</i>	
NCB		0.47						0.01	<i>Nectocarcinus bennetti</i>	
NEB						0.07		0.01	<i>Neolithodes brodiei</i>	
NEX								0.00	<i>Nemichthyidae</i>	
NMP		0.12	-0.06		0.20			-0.08	<i>Nemadactylus macropterus</i>	
NOC								0.01	<i>Notacanthus chemnitzii</i>	
NOR						0.01			<i>Normichthys yahganorum</i>	
NOT		-0.06	-0.03	-0.26		0.00			<i>Nototheniidae</i>	
NSD		0.01	0.00	-0.02		0.00	0.21		<i>Squalus griffini</i>	
NTO		0.01							<i>Notomithrax spp.</i>	
NTU								-0.02	<i>Thunnus thynnus</i>	
NUD			0.04						<i>Nudibranchia</i>	
OAR								-0.08	<i>Regalecus glesne</i>	
OCO		0.02							<i>Octopus spp.</i>	

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
OCP			0.01					-0.02	Octopod
OCT	0.00	0.05	-0.04			0.02	-0.01	-0.05	<i>Pinnoctopus cordiformis</i>
ODO			0.01					-0.01	<i>Odontaspis ferox</i>
OEO						-0.13		-0.09	<i>P. maculatus, A. niger, & N. rhomboidalis</i>
OFH			-0.05			0.01		0.00	<i>Ruvettus pretiosus</i>
OLY			0.02						<i>Ophiomusium lymani</i>
ONG	-0.03	0.15	0.10	0.00		0.07	-0.01	0.06	Porifera
OPA	-0.02	0.15	0.06					0.02	<i>Hemerocoetes spp.</i>
OPE		0.17	-0.02		0.20	-0.01		-0.04	<i>Lepidoperca aurantia</i>
OPH						-0.02			Ophiuroid
OPI			0.11				0.26		<i>Opisthoteuthis spp.</i>
OPL			0.01						Opheliidae
ORH			-0.02				-0.01	-0.08	<i>Hoplostethus atlanticus</i>
OSE								0.00	<i>Ophisurus serpens</i>
OSK			0.20			0.04		0.18	Rajidae
OSP						0.01	0.00	0.00	<i>Crassostrea gigas</i>
PAB					0.03	0.07			<i>Paragorgia arborea</i>
PAD			-0.30						<i>Ovalipes catharus</i>
PAG			0.04						Paguroidea
PAH		0.23						0.00	<i>Lampris immaculatus</i>
PAL							-0.01		<i>Paralepididae</i>
PAM			0.05						<i>Pannychia moseleyi</i>
PAO			0.02				0.01		<i>Pillsburyaster aoteanus</i>
PCH			0.05						<i>Penion chathamensis</i>
PCO			-0.04						<i>Auchenoceros punctatus</i>
PDG		0.06	0.00			-0.06		0.05	<i>Oxynotus bruniensis</i>
PDO			0.00						<i>Paphies donacina</i>
PDS							0.02		<i>Paradiplospinus gracilis</i>
PED			-0.03						<i>Aristaeopsis edwardsiana</i>
PFL			0.02						<i>Pseudechinus flemingi</i>
PHO		0.03				-0.01		0.02	<i>Phosichthys argenteus</i>
PHW		0.02							<i>Psammocinia cf hawere</i>
PIG	-0.08	0.20	0.03					0.05	<i>Congiopodus leucopaecilus</i>
PIL				0.00					<i>Sardinops sagax</i>
PIN						-0.01		0.01	<i>Idiophorhynchus andriashevi</i>
PKN								0.08	<i>Plutonaster knoxi</i>
PLS		0.02	0.00	0.05		0.04	0.01	0.04	<i>Proscymnodon plunketi</i>
PLT			0.01					0.02	<i>Plutonaster spp.</i>
PLY			0.02						<i>Polycheles spp.</i>
PLZ			-0.05						<i>Pleuroscopus pseudodorsalis</i>
PMO			0.03				0.02		<i>Pseudostichopus mollis</i>
PMU			0.08						<i>Paramaretia peloria</i>
PNE			0.09						<i>Proserpister neozelanicus</i>
PNN			0.02						<i>Pennatula spp.</i>
PNO			0.03						<i>Pteropeltarion novaezelandiae</i>
POM		0.01							Bramidae
POP				0.02					<i>Allomycterus jaculiferus</i>
POR	-0.02	-0.04					-0.23		<i>Nemadactylus douglasii</i>
POS	0.02	0.01	0.02	-0.11			-0.08		<i>Lamna nasus</i>

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
PRA			0.08					0.00	Prawn
PRK			0.19						<i>Ibacus alticrenatus</i>
PRU			0.04					0.01	<i>Pseudechinaster rubens</i>
PSE			0.00				-0.01		<i>Pseudechinus</i> spp.
PSI			0.22					0.14	<i>Psilaster acuminatus</i>
PSK		0.01	0.06	0.00		0.07	-0.01	0.15	<i>Bathyraja shuntovi</i>
PSL						-0.01	0.01		<i>Paralomis dosleini</i>
PSO								-0.02	<i>Psolus</i> spp.
PSP								0.01	<i>Psenes pellucidus</i>
PSQ						0.02		0.09	<i>Pholidoteuthis massyae</i>
PSY			-0.04			0.02	0.00	-0.02	<i>Psychrolutes microporos</i>
PTO				-0.02			0.00		<i>Dissostichus eleginoides</i>
PZE								0.01	<i>Paralomis zealandica</i>
QSC			0.15						<i>Psychrochlamys delicatula subantactica</i>
RAG						0.03	0.01	-0.09	<i>Pseudoicichthys australis</i>
RAT	-0.07	0.07	-0.02	-0.12	0.32	-0.03	0.08	0.02	Macrouridae
RAY			-0.06				-0.02	0.02	Torpedinidae, Dasyatidae, Myliobatidae, Mobulidae
RBM	0.08	-0.11		-0.24		0.09	-0.01		<i>Brama brama</i>
RBT	0.00	0.01	0.01			-0.05		0.05	<i>Emmelichthys nitidus</i>
RBY		0.01	-0.08					-0.18	<i>Plagiogeneion rubiginosum</i>
RCH						0.05		0.05	<i>Rhinochimaera pacifica</i>
RCK			0.00						Acanthoclinidae
RCO	0.04	0.05	-0.07	-0.24		0.38		-0.07	<i>Pseudophycis bachus</i>
RDO		0.11	-0.01			0.07		0.06	<i>Cytopsis roseus</i>
RHY			0.15			0.02	0.06	0.18	<i>Paratrachichthys trailli</i>
RIB		0.04	-0.20	0.27		-0.06	-0.03	0.00	<i>Mora moro</i>
RIS								0.05	<i>Bathyraja richardsoni</i>
RMU								-0.02	<i>Upeneichthys lineatus</i>
ROC		0.01	-0.02			0.02	0.02	0.00	<i>Lotella rhacina</i>
RPE			-0.03						Red perch
RPI									<i>Bodianus vulpinus</i>
RSC						0.00			<i>Scorpaena papillosa</i>
RSK	0.02	0.23	0.14	0.11		0.01		0.11	<i>Zearaja nasuta</i>
RSN			-0.01					-0.02	<i>Centroberyx affinis</i>
RSO		-0.11	-0.09	-0.01	0.11			-0.01	<i>Rexea solandri</i>
RSQ		0.02				-0.07		0.00	<i>Ommastrephes bartrami</i>
RUD			-0.07			-0.06	-0.03	-0.02	<i>Centrolophus niger</i>
SNA		-0.05	-0.02		0.07	-0.04		-0.09	<i>Pagrus auratus</i>
SAF						0.01			<i>Synaphobranchus affinis</i>
SAI								0.01	<i>Istiophorus platypterus</i>
SAR						0.00			<i>Squilla armata</i>
SAW								-0.02	<i>Serrivomer</i> spp.
SBI	0.02					-0.11	-0.02	-0.03	<i>Alepocephalus australis</i>
SBK			-0.04			-0.03		0.05	<i>Notacanthus sexspinis</i>
SBO	-0.04	-0.01	0.03			0.00		0.06	<i>Pseudopentaceros richardsoni</i>
SBR		0.02	-0.06			-0.03	0.01	0.08	<i>Pseudophycis barbata</i>
SBW		0.13	-0.01				0.02	0.20	<i>Micromesistius australis</i>
SCA		0.02							<i>Pecten novaezelandiae</i>
SCD			0.11						0.01 <i>Notothenia microlepidota</i>

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
SCG			-0.06		0.20				0.01 <i>Lepidotrigla brachyoptera</i>
SCH		0.11	-0.05	-0.23	0.07	0.03			0.04 <i>Galeorhinus galeus</i>
SCI							0.10		<i>Metanephrops challenger</i>
SCM	0.00	0.00	-0.04			0.03	0.01	0.08	<i>Centroscymnus macracanthus</i>
SCO		0.02	-0.02			0.01			0.13 <i>Bassanago bulbiceps</i>
SDE							0.02	-0.02	<i>Cryptopsaras couesii</i>
SDF		0.04							0.02 <i>Azygopus pinnifasciatus</i>
SDL					0.01				<i>Scorpaena cardilis</i>
SDM		0.14							0.01 <i>Sympagurus dimorphus</i>
SDO	0.38	-0.02		-0.18				0.12	<i>Cyttus novaezealandiae</i>
SDR					-0.01				0.01 <i>Solegnathus spinosissimus</i>
SEE		-0.03	0.04				0.07		<i>Gnathophis habetus</i>
SER		0.02							<i>Sergestes</i> spp.
SEV	0.04	0.03	-0.02				0.11		<i>Notorynchus cepedianus</i>
SFL	0.05								<i>Rhombosolea plebeia</i>
SHA	0.00	0.06	-0.12	-0.11		-0.15	-0.12	-0.04	Shark
SHE						-0.01			-0.04 <i>Scymnodalatias sherwoodi</i>
SHL		-0.06							<i>Scyllarus</i> sp.
SHR		0.00							<i>Aplysiomorpha</i>
SIA					0.12	0.06			Scleractinia
SKA	-0.05	-0.08	-0.38	-0.37	0.00	-0.08	-0.04	-0.33	Rajidae & Arhynchobatidae
SKJ		0.01			0.12				<i>Katsuwonus pelamis</i>
SLB									0.03 <i>Scymnodalatias albicauda</i>
SLC						-0.02			<i>Slosarczykvia circumantarctica</i>
SLG		-0.04				0.00			<i>Scutus breviculus</i>
SLK					0.01	0.15	0.14		Alepocephalidae
SLR		-0.04				0.00			<i>Optivus elongatus</i>
SLS	0.00								<i>Peltorhamphus tenuis</i>
SMA	0.01								<i>Stigmatophora macropterygia</i>
SMC		0.02				-0.04	0.06	-0.04	<i>Lepidion microcephalus</i>
SMI	0.02					0.00			<i>Somniosus microcephalus</i>
SMK	0.02	0.23							<i>Teratomaia richardsoni</i>
SMO	0.05								<i>Sclerasterias mollis</i>
SMT		0.04							<i>Spatangus mathesoni</i>
SND	0.03	-0.11	-0.01			0.03	0.06	-0.01	<i>Deania calcea</i>
SNE									0.02 <i>Simenchenelys parasitica</i>
SNI	-0.03	-0.01					0.01		<i>Macroramphosus scolopax</i>
SNO						0.01			0.02 <i>Sio nordenskjoldii</i>
SNR			0.01			-0.03	0.03	0.00	<i>Deania histricosa</i>
SOL		0.02							Sole
SOM					0.02				<i>Somniosus rostratus</i>
SOP	0.02					-0.01			-0.03 <i>Somniosus pacificus</i>
SOR					-0.09				-0.01 <i>Neocytthus rhomboidalis</i>
SOT		0.02							0.03 <i>Solaster torulatus</i>
SPD	0.02	0.03	0.09	-0.18	0.02	-0.18	-0.03	-0.01	<i>Squalus acanthias</i>
SPE	0.06	-0.01	-0.25	0.20		-0.09			0.00 <i>Helicolenus</i> spp.
SPF									-0.01 <i>Pseudolabrus miles</i>
SPI	0.01	-0.06	-0.13	0.00		-0.03	-0.01	-0.08	Spider crab
SPK			-0.01						-0.01 <i>Macrorhamphosodes uradoi</i>

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
SPL									0.00 <i>Scopelosaurus</i> sp.
SPO		0.03	-0.09	-0.04					-0.08 <i>Mustelus lenticulatus</i>
SPP									0.00 <i>Callanthias</i> spp.
SPR									0.00 <i>Sprattus antipodum, S. muelleri</i>
SPT			0.19						0.01 <i>Spatangus multispinus</i>
SPZ			-0.01						-0.05 <i>Genyagnus monopterygius</i>
SQA				0.01		0.02	0.03	0.03	<i>Squalus</i> spp.
SQI		-0.03							<i>Pristilepis oligolepis</i>
SQU	-0.01		0.03		-0.08	-0.11	-0.03	0.01	<i>Nototodarus sloanii & N. gouldi</i>
SQX	0.02		-0.06			0.00	-0.03	0.11	Squid
SRB	0.02								0.02 <i>Brama australis</i>
SRH			0.02			-0.01		0.13	<i>Hoplostethus mediterraneus</i>
SRI						0.01			0.03 <i>Scymnodon ringens</i>
SSC		-0.13	-0.04						0.01 <i>Leptomithrax australis</i>
SSH		0.03		-0.03				0.17	<i>Gollum attenuatus</i>
SSI	0.00	0.19	0.04		0.24	0.01	-0.04	0.04	<i>Argentina elongata</i>
SSK	0.00	-0.01	0.03	-0.15		-0.01	0.06	0.04	<i>Dipturus innominatus</i>
SSM						0.00	0.06	-0.01	<i>Alepocephalus antipodianus</i>
SSO						-0.19			0.00 <i>Pseudocytthus maculatus</i>
SSP									-0.02 <i>Pecten novaezelandiae</i>
STG		-0.01	0.03						-0.11 Stargazer
STM									0.02 <i>Tetrapurus audax</i>
STN		0.03	-0.02						0.06 <i>Thunnus maccoyii</i>
STO									0.01 <i>Stomias</i> spp.
STR		0.01	-0.05						-0.01 Stingray
STU	-0.02	-0.06			0.52				-0.10 <i>Allothunnus fallai</i>
SUH									-0.01 <i>Schedophilus huttoni</i>
SUN		-0.01	0.01		0.20	0.01			0.01 <i>Mola mola</i>
SUR			-0.06			0.00			-0.03 <i>Evechinus chloroticus</i>
SVA						0.05	0.08		<i>Solenosmilia variabilis</i>
SWA	0.06	0.05	-0.18			0.07	-0.03		-0.05 <i>Seriolella punctata</i>
SWO							-0.04		0.00 <i>Xiphias gladius</i>
SWR							-0.02		0.00 <i>Coris sandageri</i>
SYD									0.01 <i>Systellaspis debilis</i>
SYN			0.00			-0.03			0.01 Synaphobranchidae
TAM			0.06			0.04	0.08	0.23	<i>Echinothuriidae & Phormosomatidae</i>
TAY			0.10						0.04 <i>Typhlorke aysoni</i>
TDQ									0.04 <i>Taningia danae</i>
TFA			0.19						<i>Trichopeltarion fantasticum</i>
THR		-0.09			-0.02				-0.12 <i>Alopias vulpinus</i>
TLD									0.03 <i>Tetilla leptoderma</i>
TLO			0.01						<i>Telesto</i> spp.
TOA		0.10	-0.03	-0.03		0.05	0.00	0.08	<i>Neophrynicthys</i> sp.
TOD		0.05	0.03						0.06 <i>Neophrynicthys latus</i>
TOP	-0.02		0.03			0.00			0.13 <i>Ambophthalmos angustus</i>
TOR		0.06						0.14	<i>Thunnus orientalis</i>
TRA									-0.01 Trachichthyidae
TRE				0.06					<i>Pseudocaranx georgianus</i>
TRS					-0.02				<i>Trachyscorpia eschmeyeri</i>

Species	Fishery								Scientific name
	SBW	SQU	SCI	LLL	JMA	ORH	OEO	HHL	
TRU		0.00		0.00				-0.02	<i>Latis lineata</i>
TSQ						0.03		0.13	<i>Todarodes filippovae</i>
TTA			0.03						<i>Typhlonarke tarakea</i>
TUR		0.02							<i>Colistium nudipinnis</i>
TVI							0.02		<i>Trachonurus villosus</i>
UFISH	-0.07	-0.22	-0.40	0.02		-0.31	-0.08	-0.37	Unidentified fish
URP		0.02	0.02						<i>Uroptychus</i> spp.
VCO					0.04	0.09	0.00		<i>Antimora rostrata</i>
VIT						-0.01			<i>Vitiazmaia latidactyla</i>
VNI							0.02		<i>Lucigadus nigromaculatus</i>
VOL		0.00						0.01	Volutidae
VSQ					0.03		0.19		<i>Histioteuthis</i> spp.
WAR	-0.01				-0.13	0.00		-0.18	<i>Seriolella brama</i>
WHE		0.01							Witch
WHR					-0.05		-0.05		<i>Trachyrincus longirostris</i>
WHX		0.01				0.07		0.18	<i>Trachyrincus aphyodes</i>
WIT	-0.01	0.11	0.10			0.04		0.12	<i>Arnoglossus scapha</i>
WOE					-0.05	-0.04			<i>Allocyttus verrucosus</i>
WPS		0.05				0.01		0.01	<i>Carcharodon carcharias</i>
WRA								0.03	<i>Dasyatis thetidis</i>
WSE									Labridae
WSQ	-0.02	0.09	0.02			0.03	0.15	-0.03	<i>Onykia</i> spp.
WWA	-0.04	0.05	-0.05	-0.04		0.00	0.03	0.06	<i>Seriolella caerulea</i>
YBF								0.02	<i>Rhombosolea leporina</i>
YBO		0.14					0.12		<i>Pentaceros decacanthus</i>
YCO		0.08							<i>Parapercis gilliesi</i>
YEM		-0.02							<i>Aldrichetta forsteri</i>
YFN		0.00					0.00		<i>Thunnus albacares</i>
YSG		0.01							<i>Pterygotrigla pauli</i>
YSP		0.02							<i>Yaldwynopsis spinima</i>
ZAS					0.03				<i>Zameus squamulosus</i>
ZOR		0.14					0.09		<i>Zoroaster</i> spp.