



26 September 2016

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Dear George,

Hake, hoki, ling and southern blue whiting trawl footprint analysis 1989/90 – 2013/14

1.0 INTRODUCTION

The Deepwater Group Ltd requested GNS Science to analyse trawl catch effort processing returns (TCEPR) data obtained from the Ministry for Primary Industries database to examine the extent of trawling for target species: hake, hoki, ling and southern blue whiting in selected respective fisheries within New Zealand's Exclusive Economic Zone (EEZ).

For the purposes of this report the Exclusive Economic Zone (EEZ) includes two enclaves of international water in the EEZ, one on the Chatham Rise and the other on the Campbell Plateau.

Trawls targeting hake were analysed in fisheries HAK 1, 4 and 7; trawls targeting hoki were analysed for fishery HOK 1; trawls targeting ling were analysed for fisheries LIN 2, 3, 4, 5, 6 and 7; trawls targeting southern blue whiting were analysed for fisheries SBW 6I, 6R and 6B. The trawls were analysed in relation to a series of depth ranges and with respect to the extent of closed areas within the fisheries. The depth ranges were specified at 50–200 m, 200–800 m and 800–1200 m for hake and hoki, 50–300 m, 300–600 m and 600–1000 m for ling and 200–400 m, 400–600 m and 600–800 m for Southern Blue Whiting. The closed areas are Benthic Protection Areas (BPAs), Seamount Closures and Large Marine Reserves. Analyses were carried out for the five-year period (fishing years 2009/10 to 2013/14), and for the twenty-five years for which TCEPR data are available (1989/90 to 2013/14).

2.0 METHOD

Bottom trawls (and mid-water trawls for which the ground rope depth equalled the water depth) targeting hake, hoki, ling or southern blue whiting were used for this analysis. Trawls in which

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these species were caught as bycatch and data from long line catch methods were not considered.

TCEPR data were sourced from the Ministry for Primary Industries, edited and corrected using methods approved by the Aquatic Environment Working Group (AEWG) in March 2012 and described in Black et al (2013) and Black & Tilney (2016).

Eight databases were created, one for each target species containing all bottom trawl data for each of the two specified time periods. Next the total closed area was calculated by taking the spatial union of the BPAs, Seamounts and Large Marine Reserves. Bathymetry contours (at 50, 200, 300, 400, 600, 800, 1000 and 1200 m) were then derived from the Global Bathymetric Chart of the Oceans 30 arc-second grid (GEBCO, 2010). Polygons representing the specified trawl depth ranges were created from these contour lines, the New Zealand coastline and the EEZ boundary. These spatial data were added to the Geographic Information System (GIS) where statistics were calculated: area (km²), number of tows, swept area (km² and %), total closed area (km² and %), and area closed and/or not trawled (km² and %). This workflow was carried out for trawls in the five-year period, and again (separately) for the full twenty-five-year period. Results from the analyses are presented in the appendix. Due to data confidentiality rules, metrics relating to tows are only shown where three or more vessels have towed in that depth band, fishery and time period. Maps have been generated for each fishery, for each time period detailing the fishery boundary, the swept area in that fishery, the closed areas, and the specified depth ranges for the target species. Due to data confidentiality rules, maps are plotted at a scale specifically designed to protect the localities of individual tows, and the swept area is only displayed where three or more vessels have towed in that depth band, fishery and time period. The maps are included in the appendix.

The sum of the number of tows within each depth zone of a fishery is often greater than the total number of tows in that fishery. This occurs when a tow crosses the boundary between two depth zones, thus contributing to the tow count in each zone. Whereas the total number of tows in each fishery are counted exactly once, regardless of crossing of depth zone boundaries.

3.0 CONCLUSIONS

For the 25-year period (1989/90 to 2013/14) each of the three hake fisheries analysed (HAK1, HAK4 and HAK7) have an area closed and/or not trawled greater than 98%. For the five-year period (2009/10 to 2013/14), the HAK1 and HAK4 fisheries have an area closed and/or not trawled greater than 99.9% of each fishery area, and HAK7 99.3%.

For each of the hake fisheries and in each of two time periods, trawling occurred predominantly within the 200–800 m depth range (determined by the number of tows, the swept area, and the percentage swept area). This is particularly pronounced in HAK4 where of the 5,547 recorded bottom trawls in this fishery between 1989/90 and 2013/14, 5,541 were within (or partly within) the 200–800 m depth range. These trawls generate a 7,677 km² swept area, 7.3% of the 200–800 m depth band in HAK4. During the five-year period (2009/10 to 2013/14) all 41 of the hake targeted trawls recorded in HAK4 occurred between depths of 200 and 800 m, generating a 162 km² swept area, 0.15% of the depth range.

Between 1989/90 and 2013/14, 98.4% of the HOK1 fishery was closed and/or not trawled, and during the five-year period 2009/10 to 2013/14 the area closed and/or not trawled was 98.6%. In HOK1, the majority of effort is reported in the 200–800 m depth range (determined by the number of tows, swept area and percentage swept area). During the five-year period (2009/10 to 2013/14) 40,362 of the 40,692 tows in HOK1 were within or partly within the 200–800 m depth range, generating a 46,036 km² swept area, 7.71% of the depth range.

For the 25-year period (1989/90 to 2013/14) five of the six ling fisheries analysed have an area closed and/or not trawled greater than 99%. LIN5 is the only exception, with an area closed and/or not trawled of 98.9%. Over the five-year period all six ling fisheries have an area closed and/or not trawled of over 99%, the lowest is again LIN5 (99.8%); it is greater than 99.9% for the remaining five.

As previously mentioned this report only considers bottom trawls, thus data from longline catch methods were not used when calculating the trawl footprint for the ling fisheries. Ling longline data is thought to have limited utility when assessing benthic effects. For example, bottom-set longline gear is static and unlikely to have an effect on benthic communities of the same magnitude as bottom trawling (Rob Tilney, pers. comm. September 2013). It is noted that any interaction with the habitat is likely to occur only in the water column.

For the 25-year period (1989/90 to 2013/14) each of the ling fisheries record the greatest number of tows and the largest swept area in the 300–600 m depth range. The five-year period (2009/10 to 2013/14) also recorded the greatest number of tows and largest swept area within the 300–600 m depth range, with the exception of LIN6, where the greatest number of tows were in the 50–300m depth range. For the 25-year period (1989/90 to 2013/14) the swept area in the 300–600 m depth range was always less than 5%, except for LIN5 where it was 15.8%. For the five-year period (2009/10 to 2013/14) the swept area recorded in the 300–600 m depth zone was always less than 1.6%, except for LIN5 where it was 3.5%.

For the 25-year period (1989/90 to 2013/14) two of the three southern blue whiting fisheries analysed (SBW6B and SBW6R) have an area closed and/or not trawled of 98.5% or more. The third southern blue whiting fishery analysed (SBW6I) has an area closed and/or not trawled of 94.4%. For the five-year period (2009/10 to 2013/14) the area closed and/or not trawled was also greatest for SBW6B and SBW6R (99.8% and 99.7% respectively); it was 98.7% for SBW6I. Within SBW6I the majority of effort is recorded in the 400–600m depth range, determined by the number of tows and the swept area for both the 2009/10 to 2013/14 and 1989/90 to 2013/14 periods. For SBW6B and SBW6R the majority of effort is recorded within the 200 to 400 m depth range. For SBW6B, the swept area between 1989/90 and 2013/14 is 34.2% of the 200–400 m depth range.

4.0 REFERENCES

- Black, J., Tilney, R. Submitted 2016. Monitoring New Zealand's trawl footprint for deepwater fisheries: 1989/90 to 2011/12 and 1989/90 to 2012/13, New Zealand Aquatic Environment and Biodiversity Report No. XXX. 62p.
- Black, J., Wood, R., Berthelsen, T., Tilney, R. 2013. Monitoring New Zealand's trawl footprint for deepwater fisheries: 198–90 to 2009–10, New Zealand Aquatic Environment and Biodiversity Report No. 110. 57p.

Black, J., Wood, R., 2012. DAE2010/04 Monitoring the trawl footprint for deepwater fisheries. Presented to the Aquatic Environment Working Group, Wellington, 5th March 2012.

GEBCO, 2010. General Bathymetric Chart of the Oceans: The GEBCO_08 global 30 arc-second grid. Available online at http://www.gebco.net/data_and_products/gridded_bathymetry_data/

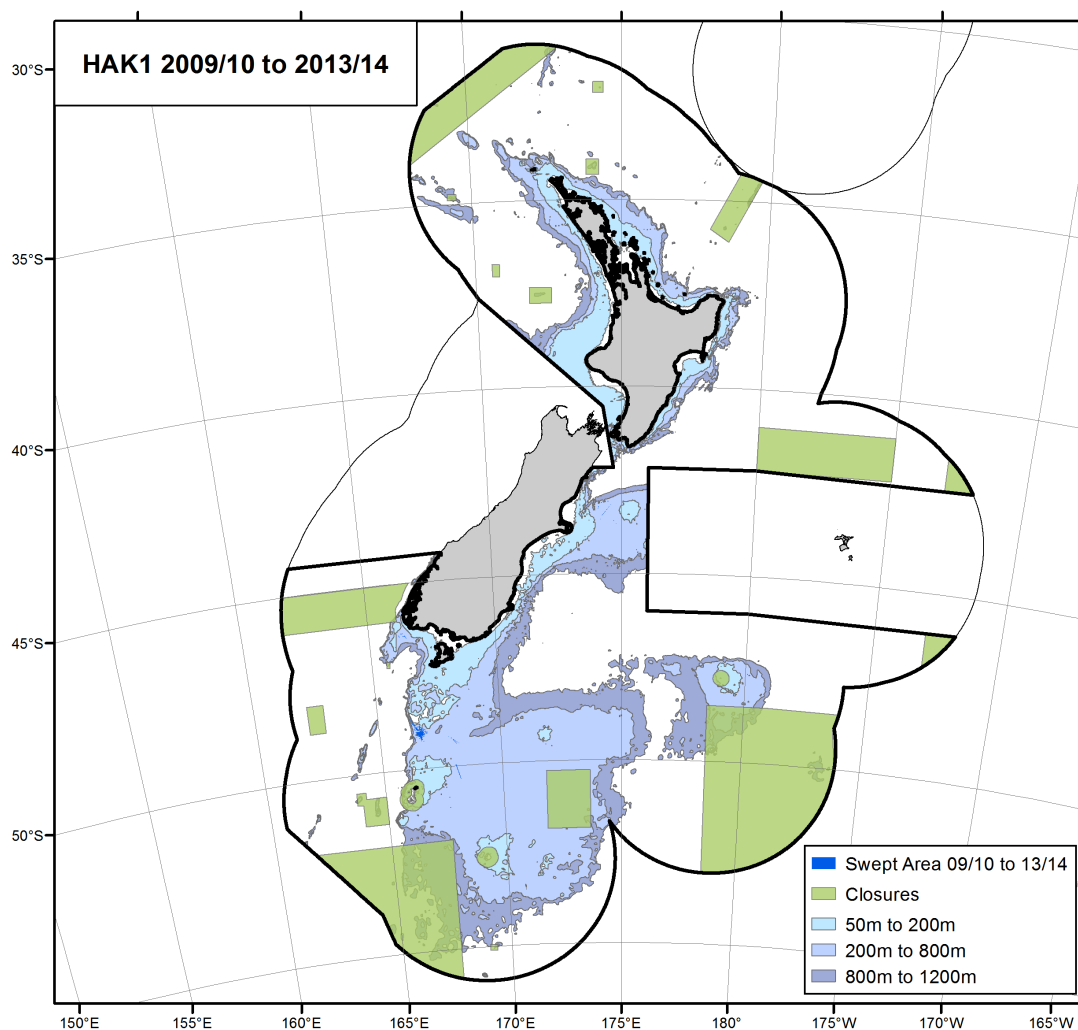
Yours sincerely



Jenny Black
Data Technician
Marine Geoscience

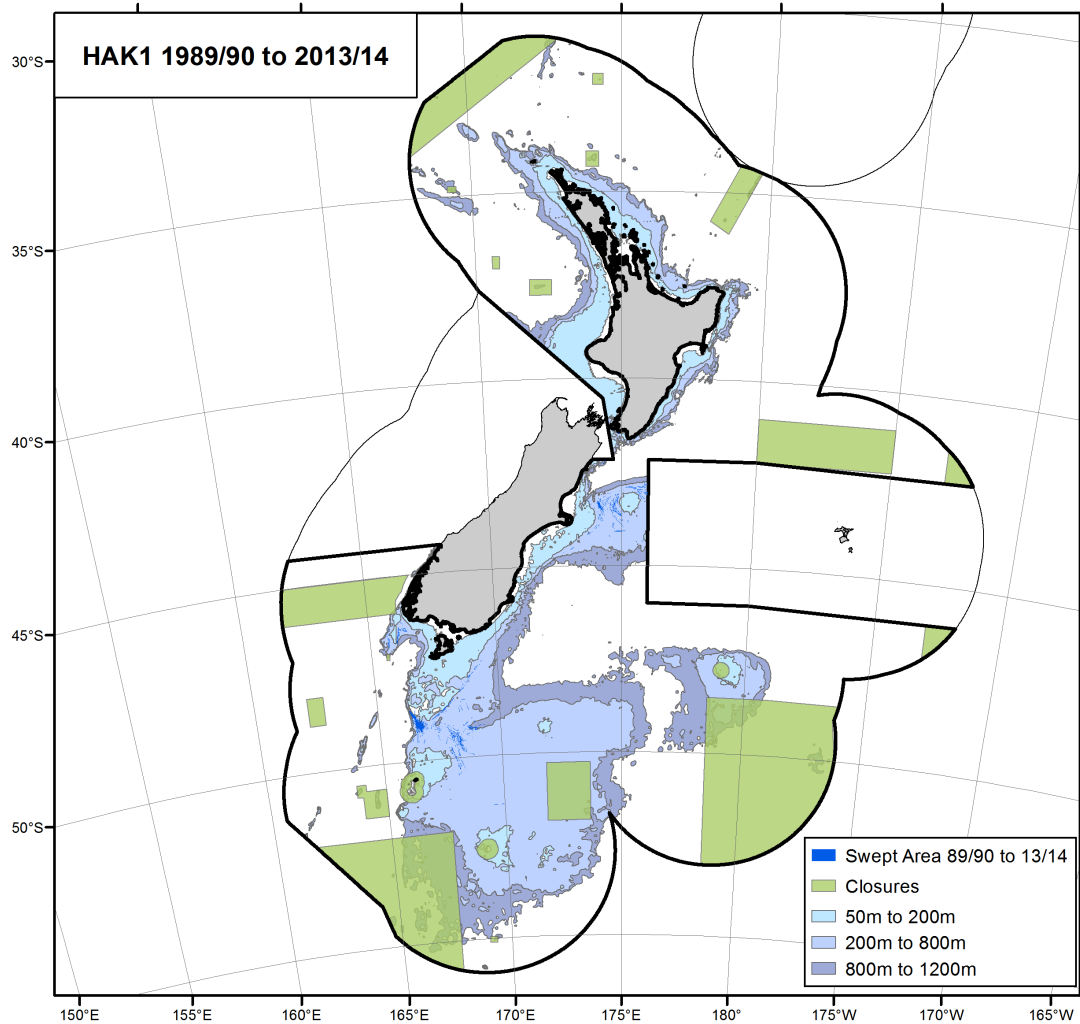
APPENDIX 1

HAK1 2009/10 to 2013/14



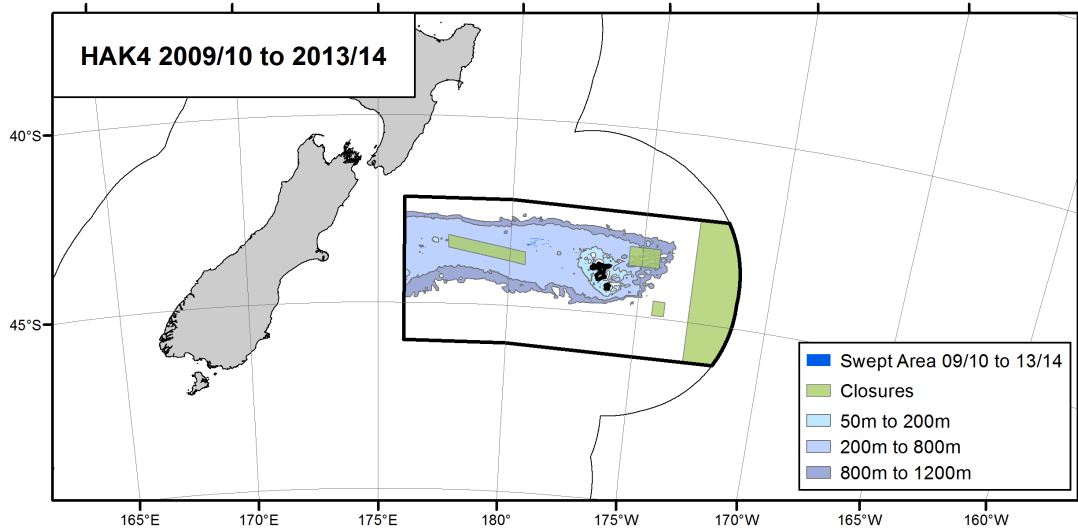
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
HAK1	2,735,835	720	773	0.03%	479,405	17.52%	2,735,062	99.97%
50–200 m	158,200	158	60	0.04%	7,110	4.49%	158,140	99.96%
200–800 m	412,118	712	701	0.17%	33,363	8.10%	411,417	99.83%
800–1200 m	248,803	10	12	<0.01%	44,420	17.85%	248,791	>99.99%

HAK1 1989/90 to 2013/14



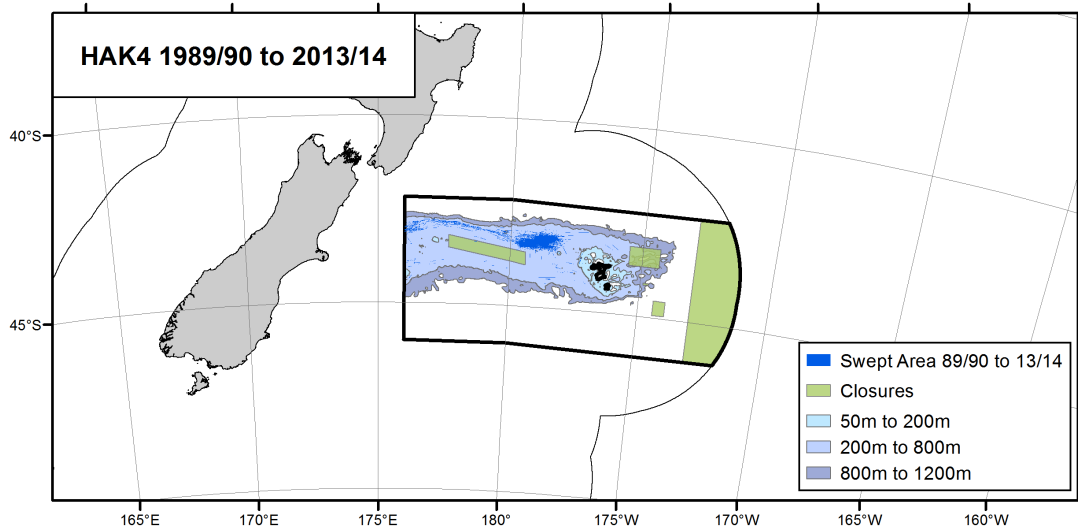
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HAK1	2,735,83	3,226	4,654	0.17%	479,405	17.52%	2,731,18	99.83%
50–200 m	158,200	643	190	0.12%	7,110	4.49%	158,010	99.88%
200–800 m	412,118	3,180	4,316	1.05%	33,363	8.10%	407,802	98.95%
800–1200 m	248,803	74	148	0.06%	44,420	17.85%	248,656	99.94%

HAK4 2009/10 to 2013/14



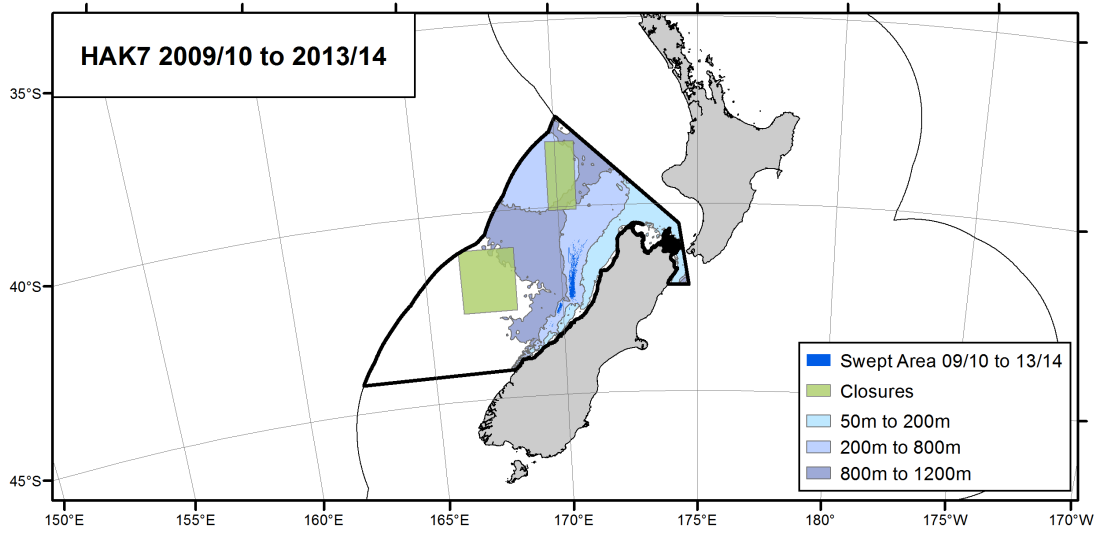
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
HAK4	427,910	41	162	0.04%	69,987	16.36%	427,748	99.96%
50–200 m	10,438	0	0	0.00%	0	0.00%	10,438	100.00%
200–800 m	105,574	41	162	0.15%	11,036	10.45%	105,412	99.85%
800–1200 m	41,512	0	0	0.00%	2,600	6.26%	41,512	100.00%

HAK4 1989/90 to 2013/14



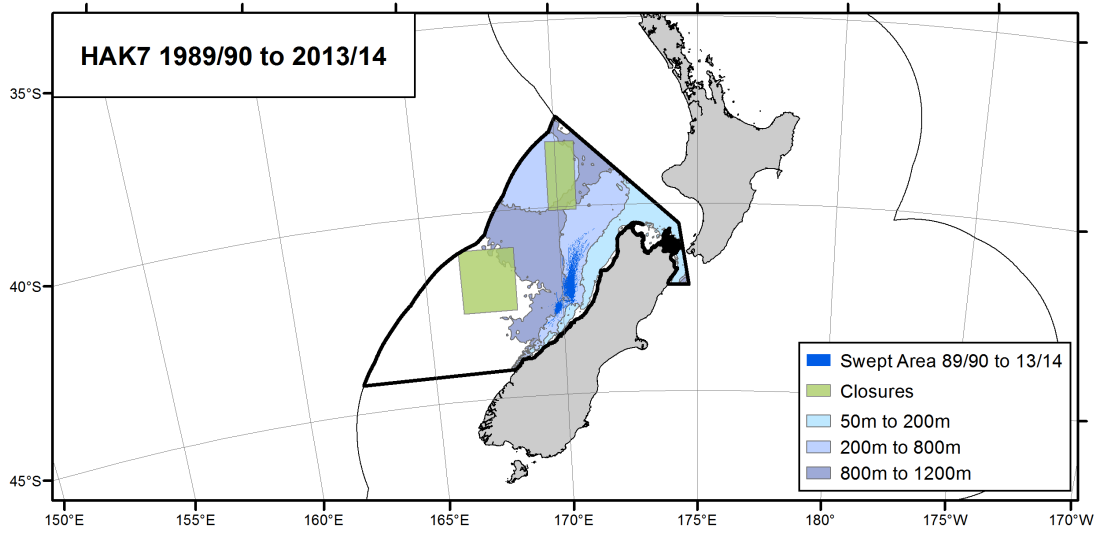
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
HAK4	427,910	5,547	7,728	1.81%	69,987	16.36%	420,195	98.20%
50–200 m	10,438	13	28	0.26%	0	0.00%	10,410	99.74%
200–800 m	105,574	5,541	7,677	7.27%	11,036	10.45%	97,911	92.74%
800–1200 m	41,512	24	24	0.06%	2,600	6.26%	41,489	99.94%

HAK7 2009/10 to 2013/14



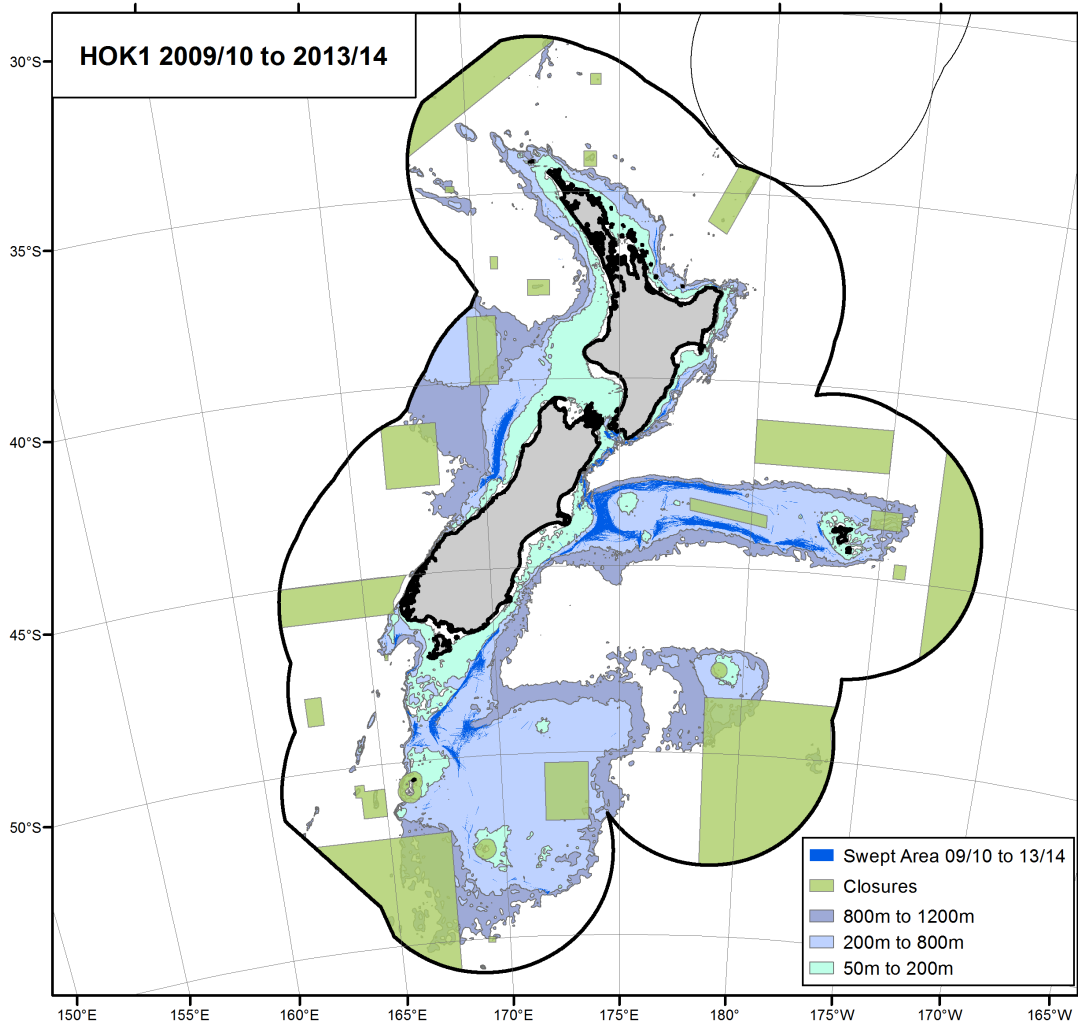
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
HAK7	335,550	1,159	2,263	0.67%	48,326	14.40%	333,287	99.33%
50–200 m	34,239	4	15	0.04%	0	0.00%	34,225	99.96%
200–800 m	79,722	1,156	2,243	2.81%	14,295	17.93%	77,479	97.19%
800–1200 m	76,425	4	6	0.01%	5,828	7.63%	76,420	99.99%

HAK7 1989/90 to 2013/14



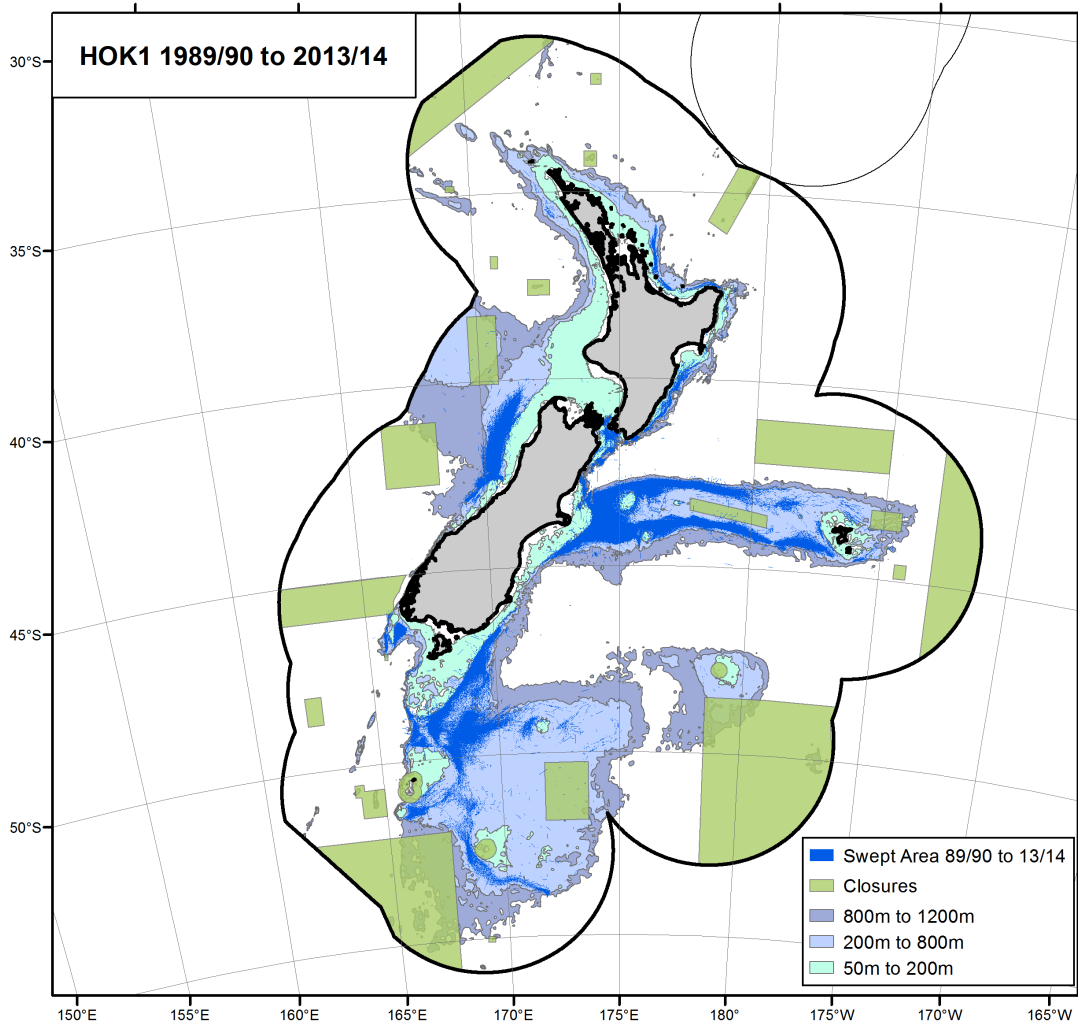
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
HAK7	335,550	6,459	5,517	1.64%	48,326	14.40%	330,033	98.36%
50–200 m	34,239	21	49	0.14%	0	0.00%	34,191	99.86%
200–800 m	79,722	6,269	4,751	5.96%	14,295	17.93%	74,972	94.04%
800–1200 m	76,425	586	718	0.94%	5,828	7.63%	75,707	99.06%

HOK1 2009/10 to 2013/14



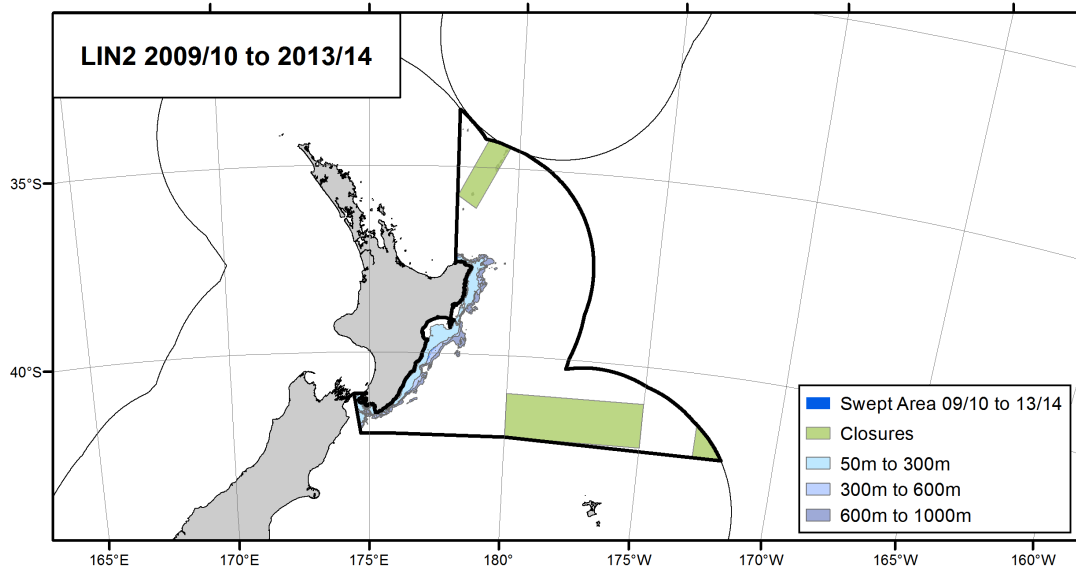
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
HOK1	3,499,296	40,692	48,232	1.38%	118,653	3.39%	3,451,076	98.62%
50–200 m	202,878	2,814	808	0.40%	7,110	3.50%	202,070	99.60%
200–800 m	597,415	40,362	46,036	7.71%	58,695	9.82%	551,390	92.30%
800–1200 m	366,741	1,767	1,263	0.34%	52,849	14.41%	365,478	99.66%

HOK1 1989/90 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
HOK1	3,499,296	354,453	162,005	4.63%	118,653	3.39%	3,337,627	95.38%
50–200 m	202,878	29,024	9,887	4.87%	7,110	3.50%	192,995	95.13%
200–800 m	597,415	348,065	140,564	23.53%	58,695	9.82%	457,125	76.52%
800–1200 m	366,741	22,693	9,950	2.71%	52,849	14.41%	356,837	97.30%

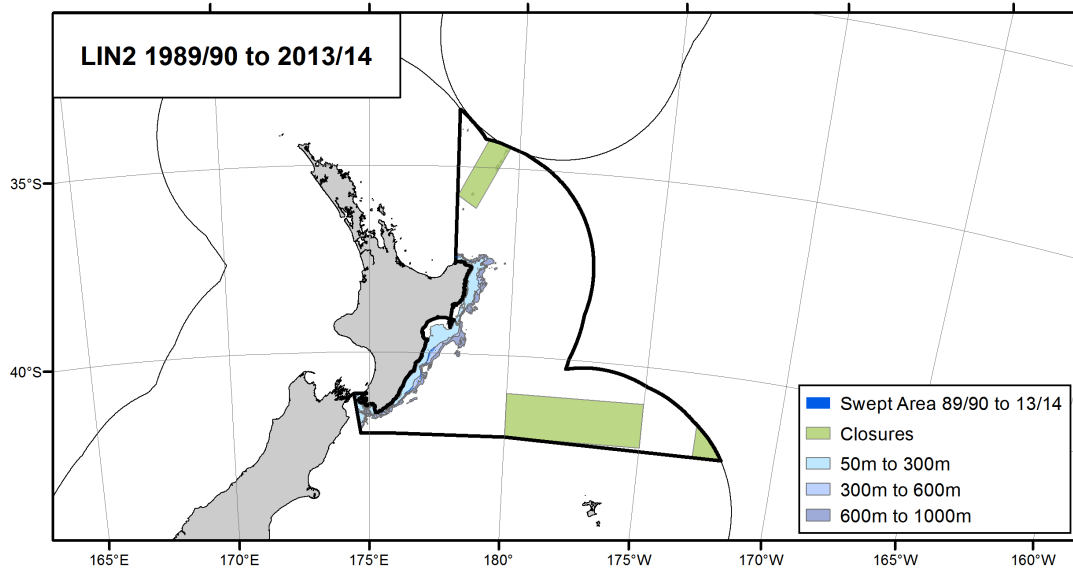
LIN2 2009/10 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN2	456,108	70	89	0.02%	72,591	15.92%	456,019	99.98%
50–300 m	14,106	-*	-*	-*	0	0.00%	-*	-*
300–600 m	5,023	70	77	1.54%	15	0.29%	4,946	98.46%
600–1000 m	7,125	-*	-*	-*	211	2.96%	-*	-*

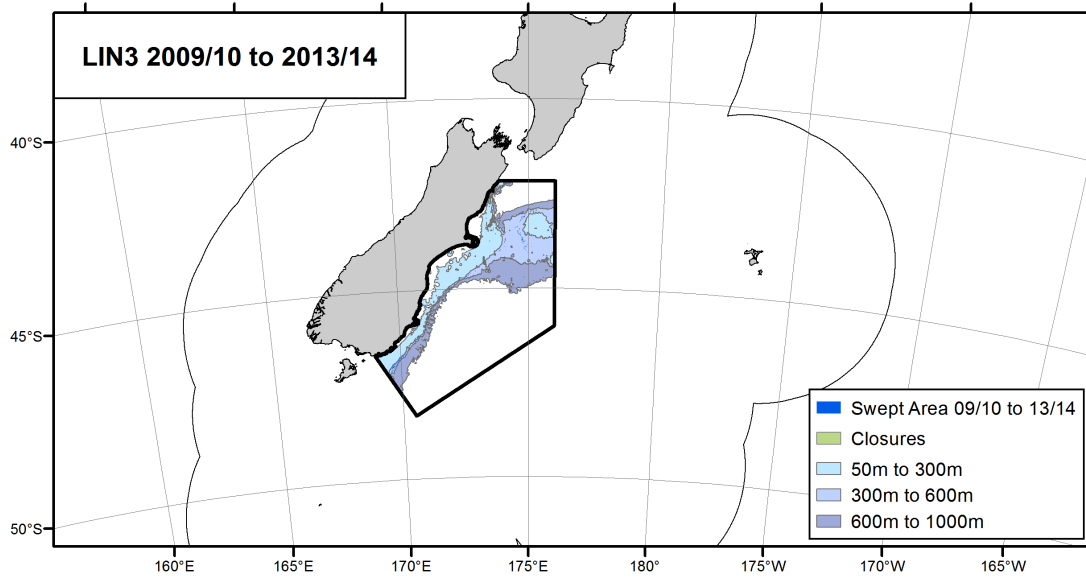
* Data withheld from map and table because fewer than three vessels have towed in these depth bands in this fishery and time period.

LIN2 1989/90 to 2013/14



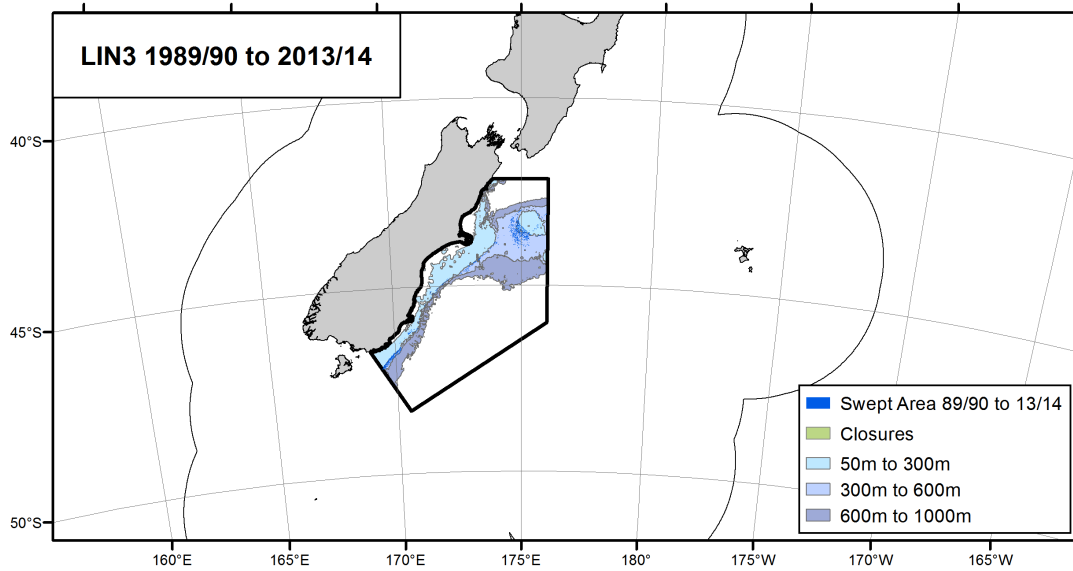
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN2	456,108	291	278	0.06%	72,591	15.92%	455,831	99.94%
50–300 m	14,106	147	59	0.42%	0	0.00%	14,048	99.58%
300–600 m	5,023	278	213	4.24%	15	0.29%	4,810	95.76%
600–1000 m	7,125	16	4	0.06%	211	2.96%	7,121	99.94%

LIN3 2009/10 to 2013/14



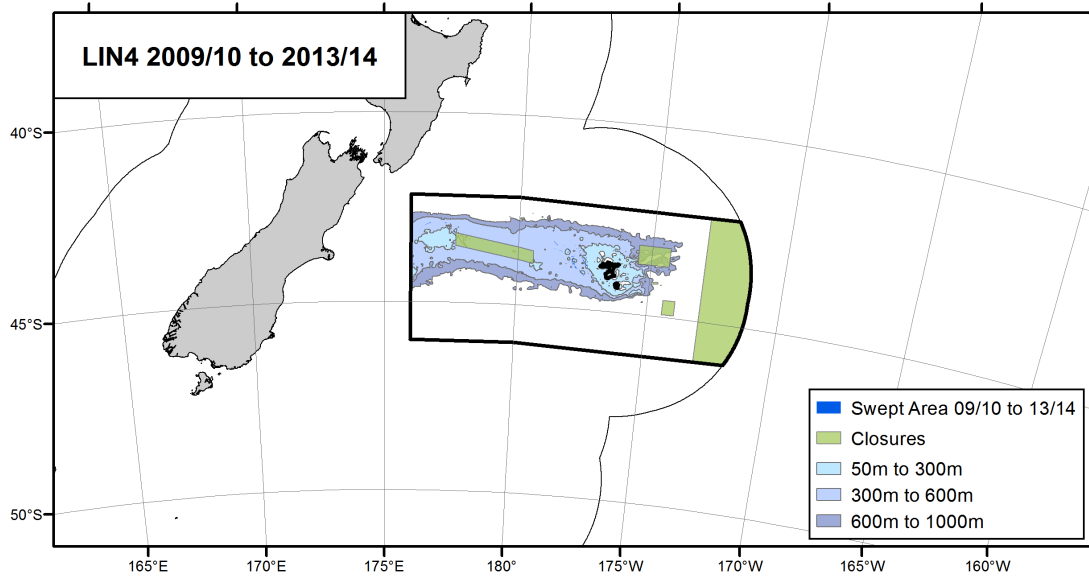
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN3	204,723	146	259	0.13%	19	0.01%	204,464	99.87%
50–300 m	28,887	39	22	0.08%	0	0.00%	28,865	99.92%
300–600 m	23,473	140	235	1.00%	0	0.00%	23,238	99.00%
600–1000 m	26,915	4	2	0.01%	19	0.07%	26,913	99.99%

LIN3 1989/90 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN3	204,723	1,102	1,621	0.79%	19	0.01%	203,102	99.21%
50–300 m	28,887	554	519	1.80%	0	0.00%	28,368	98.20%
300–600 m	23,473	953	1,085	4.62%	0	0.00%	22,389	95.38%
600–1000 m	26,915	36	13	0.05%	19	0.07%	26,902	99.95%

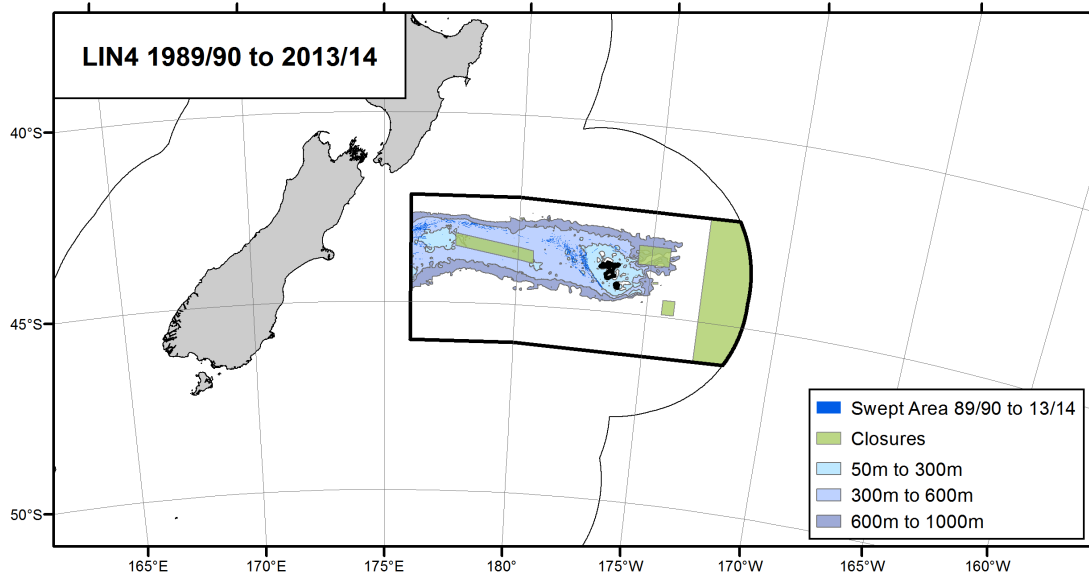
LIN4 2009/10 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN4	427,910	138	209	0.05%	69,987	16.36%	427,701	99.95%
50–300 m	21,437	82	43	0.20%	371	1.73%	21,393	99.80%
300–600 m	74,235	136	165	0.22%	8,920	12.02%	74,070	99.78%
600–1000 m	40,453	-*	-*	<0.01%	3,278	8.10%	-*	-*

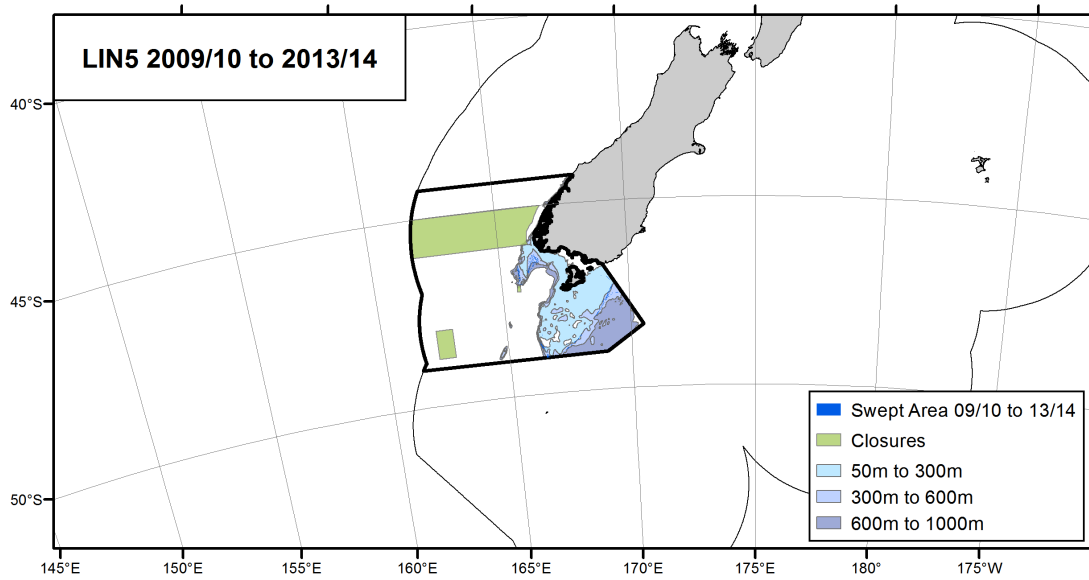
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LIN4 1989/90 to 2013/14



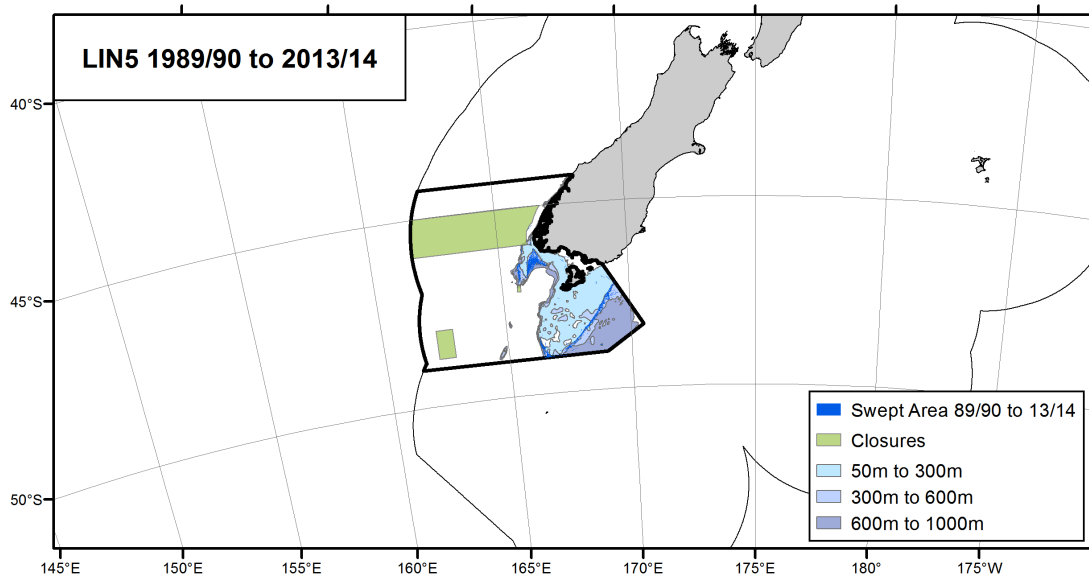
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN4	427,910	1,449	2,443	0.57%	69,987	16.36%	425,468	99.43%
50–300 m	21,437	558	421	1.97%	371	1.73%	21,016	98.03%
300–600 m	74,235	1,401	2,008	2.70%	8,920	12.02%	72,229	97.30%
600–1000 m	40,453	21	14	0.04%	3,278	8.10%	40,439	99.96%

LIN5 2009/10 to 2013/14



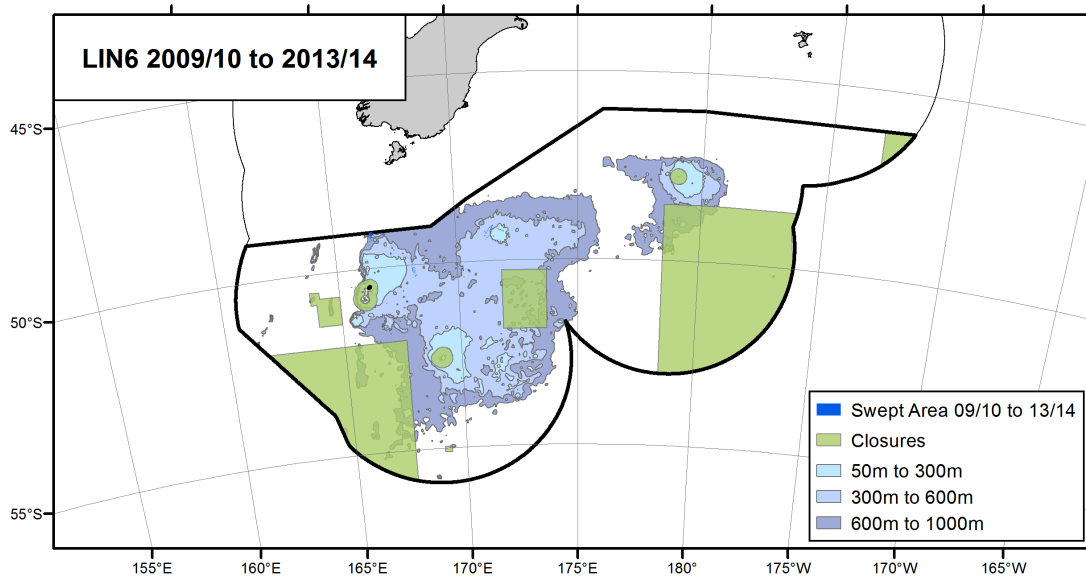
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN5	272,256	1,630	658	0.24%	44,520	16.35%	271,599	99.76%
50–300 m	34,520	864	97	0.28%	5	0.01%	34,423	99.72%
300–600 m	11,954	1,489	421	3.52%	35	0.29%	11,533	96.48%
600–1000 m	21,273	216	129	0.61%	111	0.52%	21,144	99.39%

LIN5 1989/90 to 2013/14



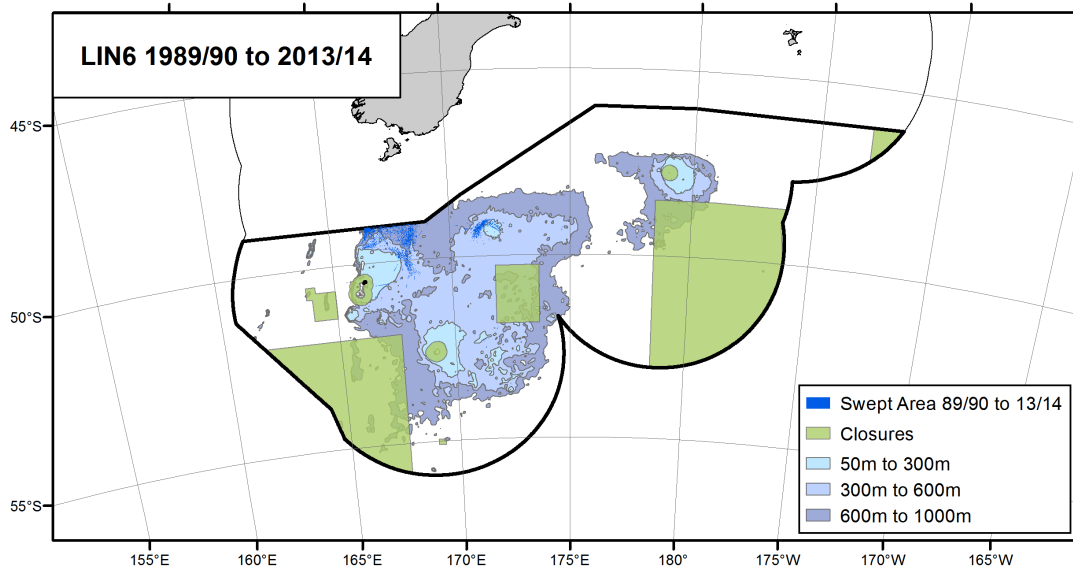
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN5	272,256	6,944	2,966	1.09%	44,520	16.35%	269,292	98.91%
50–300 m	34,520	3,405	517	1.50%	5	0.01%	34,003	98.50%
300–600 m	11,954	6,164	1,892	15.82%	35	0.29%	10,063	84.18%
600–1000 m	21,273	1,368	503	2.36%	111	0.52%	20,771	97.64%

LIN6 2009/10 to 2013/14



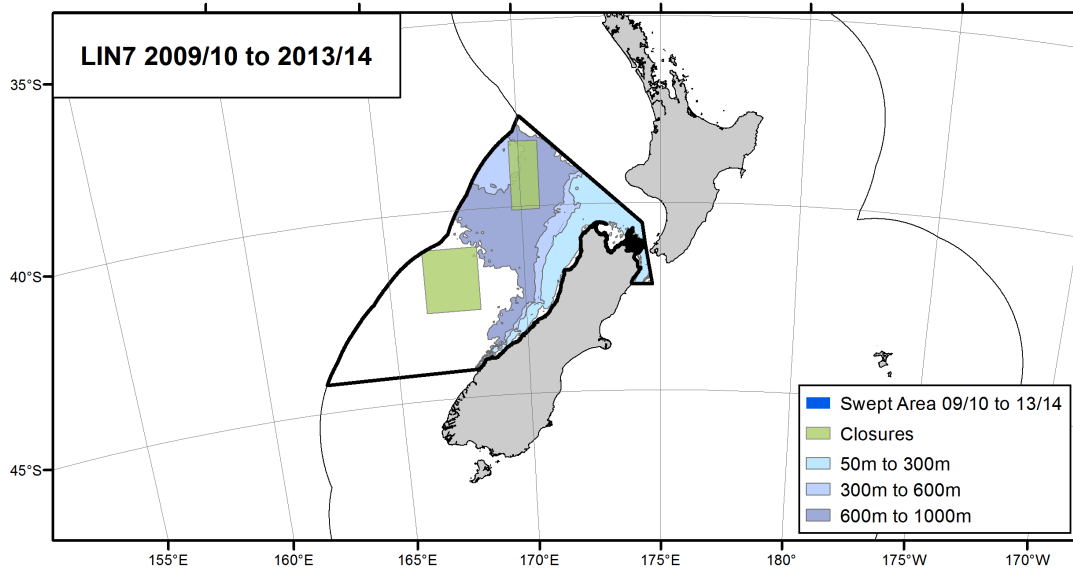
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN6	1,178,615	719	356	0.03%	308,976	26.22%	1,178,259	99.97%
50–300 m	46,605	609	90	0.19%	8,232	17.66%	46,516	99.81%
300–600 m	173,122	384	209	0.12%	18,798	10.86%	172,913	99.88%
600–1000 m	181,599	117	56	0.03%	30,245	16.65%	181,543	99.97%

LIN6 1989/90 to 2013/14



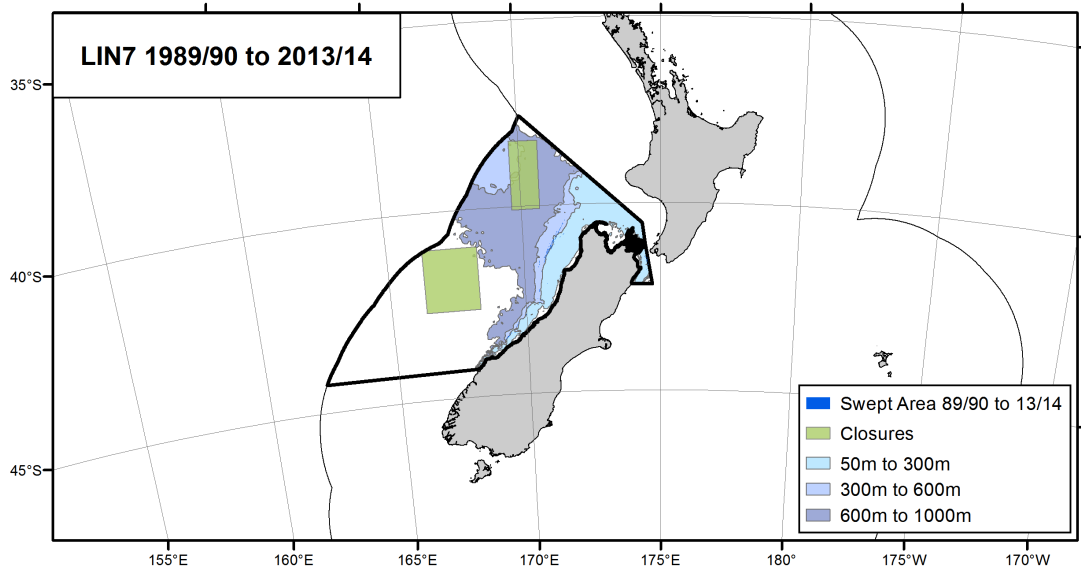
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN6	1,178,615	5,559	5,277	0.45%	308,976	26.22%	1,173,338	99.55%
50–300 m	46,605	2,683	453	0.97%	8,232	17.66%	46,153	99.03%
300–600 m	173,122	3,649	2,659	1.54%	18,798	10.86%	170,463	98.46%
600–1000 m	181,599	2,120	2,157	1.19%	30,245	16.65%	179,442	98.81%

LIN7 2009/10 to 2013/14



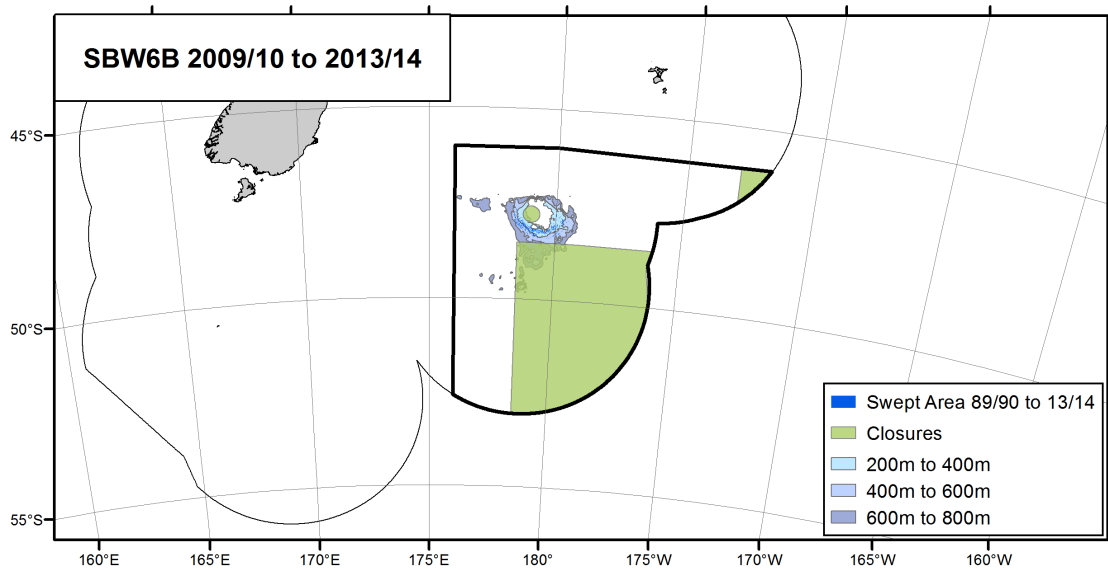
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN7	335,417	16	28	0.01%	48,326	14.41%	335,388	99.99%
50–300 m	44,600	6	5	0.01%	26	0.06%	44,595	99.99%
300–600 m	31,297	15	23	0.07%	3,625	11.58%	31,274	99.93%
600–1000 m	91,197	0	0	0.00%	13,979	15.33%	91,197	100.00%

LIN7 1989/90 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
LIN7	335,417	188	312	0.09%	48,326	14.41%	335,105	99.91%
50–300 m	44,600	129	112	0.25%	26	0.06%	44,489	99.75%
300–600 m	31,297	147	193	0.62%	3,625	11.58%	31,104	99.38%
600–1000 m	91,197	6	7	0.01%	13,979	15.33%	91,191	99.99%

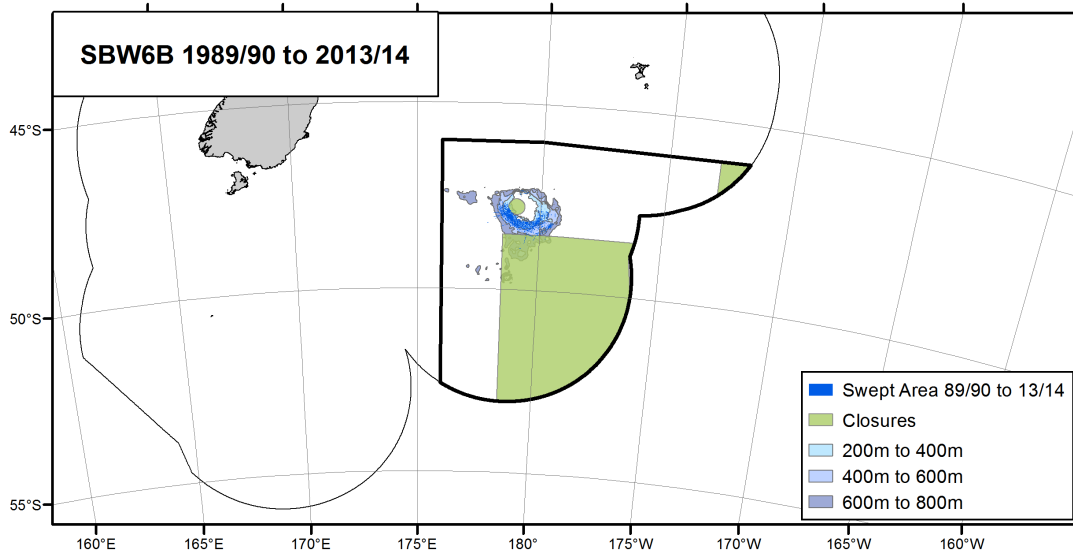
SBW6B 2009/10 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
SBW6B	459,799	704	1,058	0.23%	172,526	37.52%	458,741	99.77%
600–800 m	13,156	-*	-*	0.04%	-*	-*	-*	-*
400–600 m	7,497	301	349	4.66%	1,054	14.06%	7,148	95.34%
200–400 m	6,249	526	703	11.25%	470	7.51%	5,546	88.75%

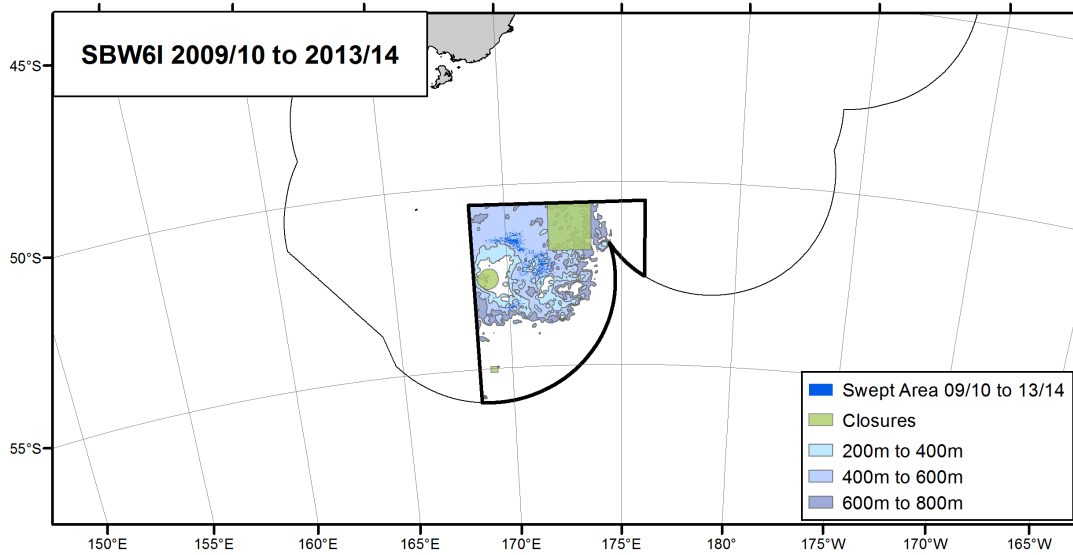
* Data withheld from map and table because fewer than three vessels have towed in this depth band, fishery and time period.

SBW6B 1989/90 to 2013/14



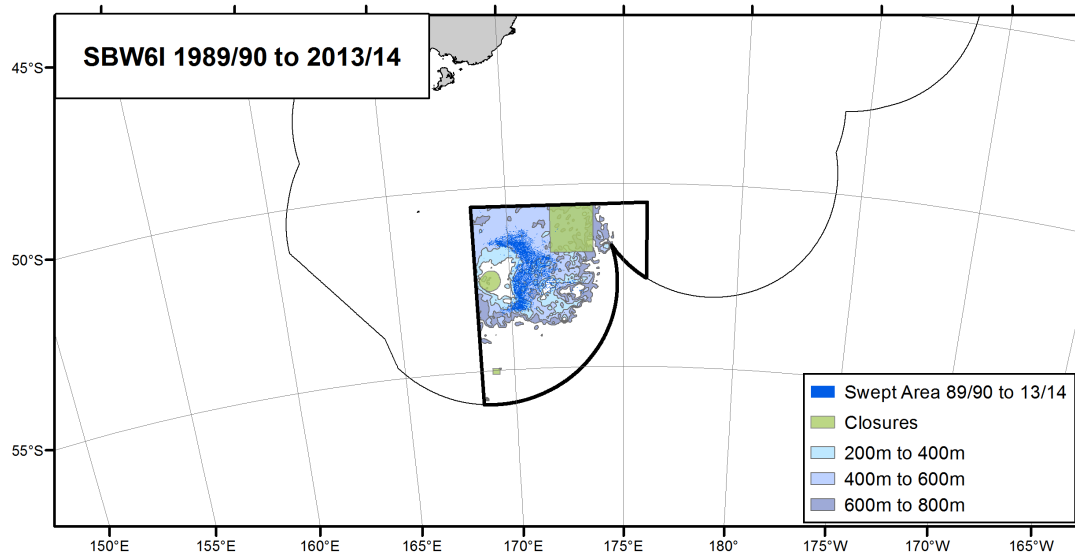
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
SBW6B	459,799	3,456	3,950	0.86%	172,526	37.52%	455,913	99.15%
600–800 m	13,156	165	155	1.18%	5,507	41.86%	13,021	98.97%
400–600 m	7,497	1,550	1,490	19.87%	1,054	14.06%	6,016	80.25%
200–400 m	6,249	2,528	2,139	34.23%	470	7.51%	4,142	66.29%

SBW6I 2009/10 to 2013/14



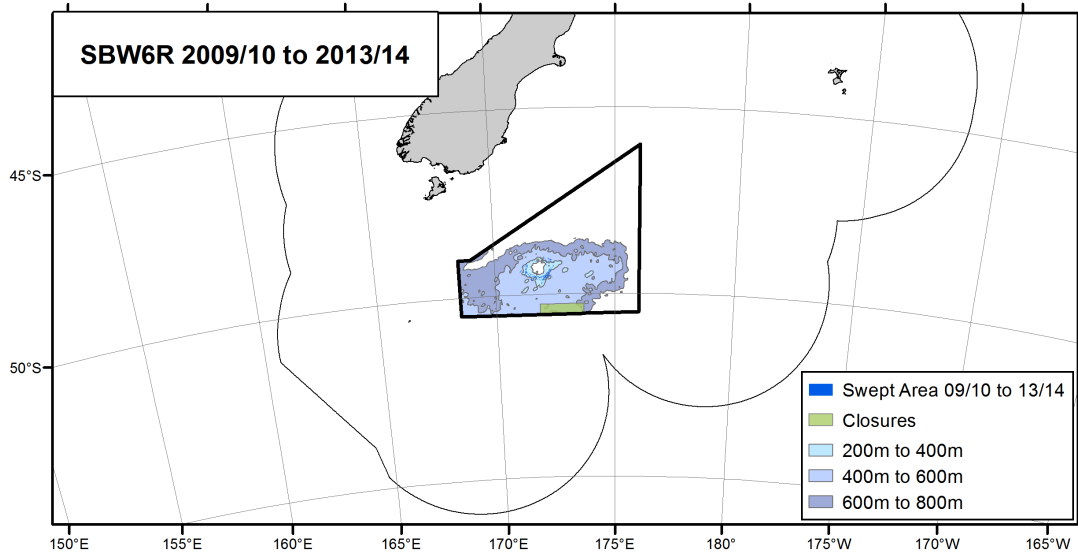
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
SBW6I	239,688	1,567	3,091	1.29%	21,880	9.13%	236,597	98.71%
600–800 m	24,059	60	46	0.19%	4,659	19.36%	24,013	99.81%
400–600 m	69,223	1,419	2,407	3.48%	12,856	18.57%	66,816	96.52%
200–400 m	21,902	567	638	2.91%	970	4.43%	21,263	97.09%

SBW6I 1989/90 to 2013/14



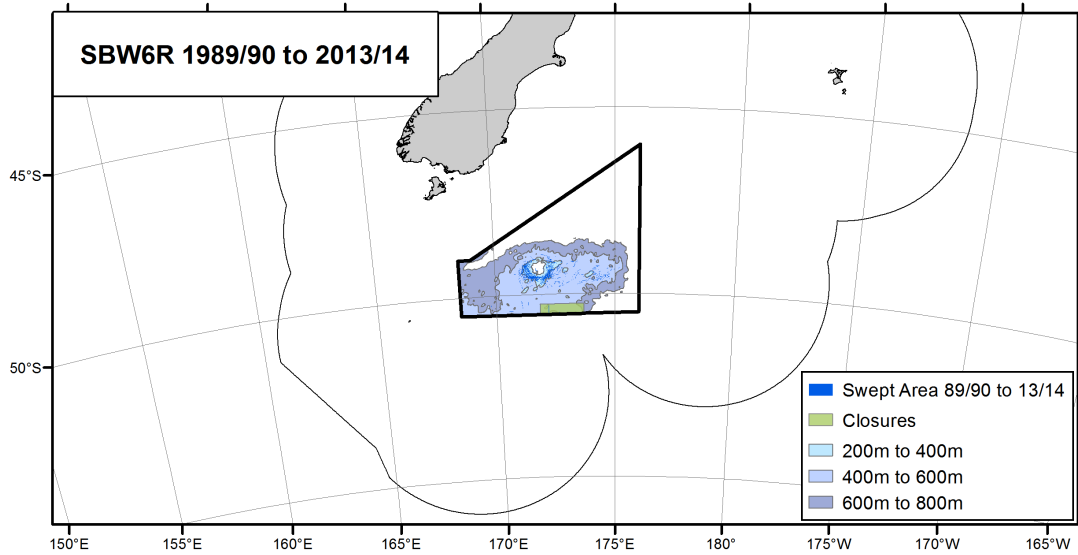
Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
SBW6I	239,688	9,723	13,348	5.57%	21,880	9.13%	226,354	94.44%
600–800 m	24,059	379	271	1.13%	4,659	19.36%	23,792	98.89%
400–600 m	69,223	8,692	9,304	13.44%	12,856	18.57%	59,929	86.57%
200–400 m	21,902	4,368	3,367	15.37%	970	4.43%	18,535	84.63%

SBW6R 2009/10 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
SBW6R	176,132	307	530	0.30%	4,083	2.32%	175,601	99.70%
600–800 m	36,855	0	0	0.00%	667	1.81%	36,855	100.00%
400–600 m	49,885	149	154	0.31%	3,320	6.65%	49,732	99.69%
200–400 m	5,108	279	376	7.37%	97	1.89%	4,731	92.63%

SBW6R 1989/90 to 2013/14



Depth Range (m)	Area (km ²)	No. of Tows	Swept Area (km ²)	Swept Area (%)	Total Closed Area (km ²)	Total Closed Area (%)	Area closed and/or not trawled (km ²)	Area closed and/or not trawled (%)
SBW6R	176,132	1,536	2,731	1.55%	4,083	2.32%	173,411	98.46%
600–800 m	36,855	31	40	0.11%	667	1.81%	36,816	99.89%
400–600 m	49,885	971	1,432	2.87%	3,320	6.65%	48,463	97.15%
200–400 m	5,108	1,205	1,235	24.19%	97	1.89%	3,872	75.81%