



Summaries from the 2023 ERSWG Data Exchange

Introduction

This paper presents summaries from the data provided for the [ERSWG Data Exchange](#) (EDE). ERSWG 10 tasked the Secretariat with providing summaries of the exchanged data to ERSWG meetings, noting that the data would be aggregated over Members. The summaries would include at least observed and actual effort, observer coverage rate, observed mortalities and estimated total mortalities. Summaries would be provided separately for CCSBT statistical areas and species/species groups. The tables and figures presented in this paper are mainly an update of those presented in paper [CCSBT-ERS/2203/04](#) at ERSWG 14 and the addition of 5x5 maps for 2019-2022.

The EDE commenced in 2013 with data provided for 2010 to 2012. Data have been submitted yearly since then and now includes information up to and including 2022. 2023 data are due to be submitted by 31 July 2024. The summaries in this paper are for all data held by the Secretariat as of April 2024 and include an additional two years data to the summary presented at ERSWG 14, plus some revisions to previously included data. Table 2 summarises the data provided by Members. Korea had no observer coverage for 2020 or 2021, so it has no observed catch data for those years. Japan had no observer coverage for 2021 or 2022, so it has no observed catch data for those years. Australia provided revised historical data for 2016-2018 in December 2022.

The absence of Korean observer data for 2020-2021 and Japanese observer data for 2021-2022 mean that observed catch numbers and catch rates for those years cannot meaningfully be compared with previous years.

At ERSWG 13, Members agreed to a new EDE template with data provided at higher spatial and temporal resolution and agreed to provide data from at least 2019 in the new format. Table 1 below shows the years for which Members have provided EDE data in the new format. Maps using the 5x5 data from 2019 have been included in this paper, noting the absence of observer data for 2020 to 2022.

Table 1 - Years for which CCSBT Members have provided ERSWG Data Exchange (EDE) data in the new format with a 5x5 resolution¹.

Year	AU	ID	JP	KR	NZ	TW	ZA
2010		✓		✓			
2011		✓					
2012		✓		✓			
2013		✓		✓			
2014		✓		✓			
2015		✓		✓			

¹ The European Union is not included in this table, since it does not target SBT and has reported no catch of SBT, therefore has no related ERS data to report.

2016	✓	✓		✓			
2017	✓	✓		✓			
2018	✓	✓		✓	✓	✓	
2019	✓	✓	✓	✓	✓	✓	✓
2020	✓	✓	✓	✓	✓	✓	✓
2021	✓	✓	✓	✓	✓	✓	✓
2022	✓	✓	✓	✓	✓	✓	✓

CCSBT Circular #2019/023 provided a letter from Japan dated 28 March 2019, which stated: “*In December, 2018, National Research Institute of Far Seas Fisheries (NRIFS) informed FAJ that they have found suspicious and/or inconsistent descriptions on seabird and other species data in certain observer reports recorded on Japanese large-scale longline vessels fishing for southern bluefin tuna in high-latitude areas of the southern hemisphere. Upon this, FAJ started its investigation into such observer reports.*”. Subsequently, in May 2019, Japan provided revised 2016 and 2017 observer data for the EDE. This reduced Japan’s reported 2017 observer coverage by over one million hooks, which is over 50%.

Table 2 – Summary of ERSWG Data Exchange data by Members. The European Union had no reported SBT catch from 2013-2022 and therefore had no data to submit for those years. Indonesia has provided data for all years but has not been able to provide estimates of total fishing effort for 2010-2015. Furthermore, Indonesia has provided data for its entire longline fleet, not just sets where SBT were caught or targeted, and has not provided information on its usage of mitigation measures with its data. Therefore, Indonesia’s data are not compatible with that provided by the other Members.

	Australia	EU	Indonesia	Japan	Korea	New Zealand	South Africa	Taiwan
2010	✓	✗	✓	✓	✓	✓	✗	✓
2011	✓	✗	✓	✓	E	✓	✗	✓
2012	✓	✗	✓	✓	✓	✓	✓	✓
2013	✓	n/a	✓	✓	✓	✓	✓	✓
2014	✓	n/a	✓	✓	✓	✓	✓	✓
2015	✓	n/a	✓	✓	✓	✓	✓	✓
2016	✓	n/a	✓	✓	✓	✓	✓	✓
2017	✓	n/a	✓	✓	✓	✓	✓	✓
2018	✓	n/a	✓	✓	✓	✓	✓	✓
2019	✓	n/a	✓	✓	✓	✓	✓	✓
2020	✓	n/a	✓	✓	E	✓	✓	✓
2021	✓	n/a	✓	E	E	✓	✓	✓
2022	✓	n/a	✓	E	✓	✓	✓	✓

E - Effort data provided only - observer coverage was 0%

The specifications of the EDE provide a template for the provision of data. The submissions received from Members followed the template but there were substantial differences in the level of species detail provided. Some Members² provided species specific data, while others³ used the “species/species groups” defined within the EDE as the ‘minimum taxonomic level at which information should be reported’. The summaries in this document are aggregated over Members, so these “species/species groups” are the finest common level of detail that can be presented (the groups are shown in Table 3).

² Australia, Indonesia, Korea, New Zealand, South Africa, Taiwan.

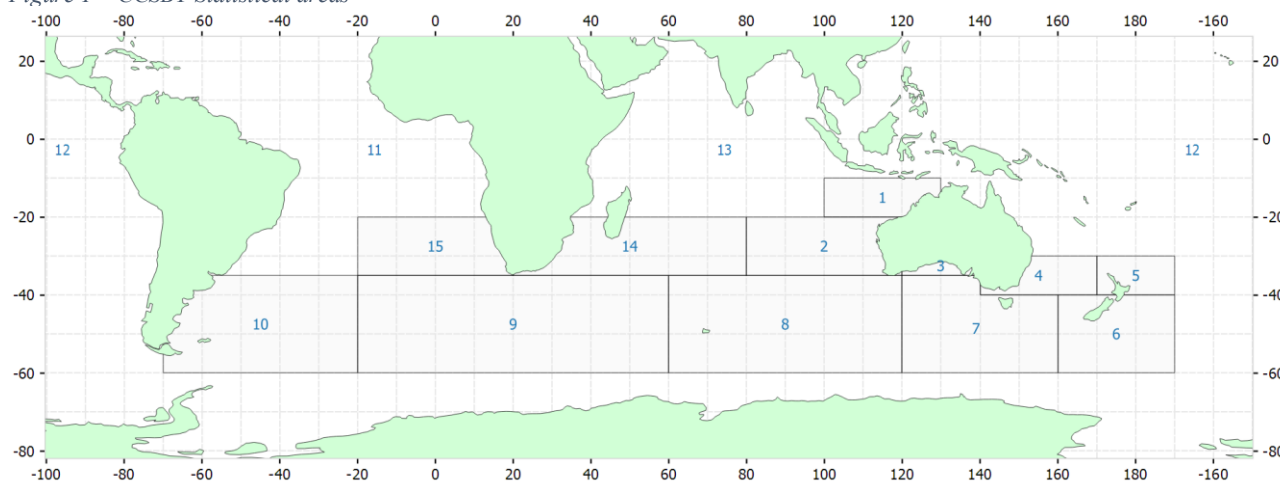
³ Japan

Table 3 - Minimum taxonomic level at which information should be reported for the ERS Data Exchange (providing that such taxonomic detail is available).

Species/Species Group	Comments
Sharks	
Blue Shark	
Shortfin Mako Shark	
Porbeagle	
Other sharks	
Turtles	For sea turtles, the number of species is small (approximately 7), so it is feasible to report data by stratum for each species.
Species specific	<i>Data should be provided separately for each species</i>
Seabirds	For seabirds, there are a large number of species and it is often difficult to separately identify species by pictures only. Reporting of seabird data by species would contain identification errors.
Large albatrosses	<i>Including: Wandering, Tristan, New Zealand, Antipodean, Southern Royal, and Northern Royal</i>
Dark coloured albatrosses	<i>Including: Sooty and Light-mantled</i>
Other albatrosses	<i>Including: Black-browed, Campbell, Grey-headed, Atlantic yellow-nosed, Indian yellow-nosed, Buller's, Shy, Salvin's, Chatham and White-capped</i>
Giant petrels	<i>Including: White-chinned petrel, Grey petrel, Flesh-footed shearwater etc.</i>
Other seabirds	<i>Including: Skua etc.</i>

For reference, the CCSBT Statistical Areas are shown in Figure 1 below.

Figure 1 – CCSBT Statistical areas



Effort Summaries

As per the rules of the EDE, the fishing effort provided by Members is defined as being effort by CCSBT authorised vessels for shots/sets where SBT was either targeted or caught.

Attachment A shows observer coverage by flag, gear, fleet, year and CCSBT statistical area. The final column, representativeness, is the proportion of statistical areas fished that reached the target of 10% observer coverage as per the SMMTG Recommendations. There are only two fleets that maintained a representativeness of 100% for all years fished, these being the charter fleets for New Zealand, that has not fished in New Zealand since 2015, and the South African charter fleet (which did not fish in 2020 and did not catch SBT in 2022).

Longline effort summaries are shown by CCSBT Statistical Area as a table in Attachment B and as maps in Attachment C, and by 5x5 degree squares in Attachment D. On the maps the circle area is proportional to the total number of hooks set in that area, with the yellow slice representing the proportion of hooks that were observed. The scale is the same across years. Note that for 2013, area 6 effort does not include the New Zealand (NZ) domestic fleet effort. NZ did not submit figures for total or observed effort for the domestic fleet in that area and year and advised that operational

issues resulted in very low observer coverage of the domestic fleet (<1%). The Indonesian domestic fleet is also not included in the tables and maps as Indonesia has not been able to provide estimates of total effort for 2010-2016, and where it has provided effort data it is for the entire longline fleet and not effort by CCSBT authorised vessels for shots/sets where SBT was either targeted or caught.

Over the 13-year period longline observer coverage was on average 12.1% of total effort, but coverage varied considerably by area and year. Japan’s observer coverage for 2017 and 2018 was less than 10% due to it removing a substantial amount of its observer data and its observer coverage was 0% for 2021 and 2022. Observer coverage for 2020 and 2021 was affected by the COVID-19 pandemic with most Members not achieving 10% coverage, and Korea having placed no observers for those years. The observer coverage for areas from 40°S to 60°S, where the most birds are caught, has been lower than 10% since 2020 with only area 9 having greater than 10% coverage in 2022.

Table 4 shows the percentage observer coverage of longline effort for areas that are considered to be important for seabirds. Statistical areas 2 and 8 have been combined, as have areas 5 and 6.

Table 4 – Longline observer coverage by year for areas that are important for seabirds.

Statistical Area(s)	Year												
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
2/8	13%	9%	15%	15%	13%	9%	12%	10%	15%	21%	12%	8%	11%
4	2%	5%	9%	7%	12%	14%	18%	7%	9%	13%	3%	5%	6%
5/6	24%	17%	17%	24%	35%	30%	14%	20%	9%	11%	11%	6%	3%
7	0%	7%	4%	7%	15%	16%	24%	11%	2%	24%	5%	0%	0%
9	6%	10%	14%	10%	7%	15%	20%	5%	12%	24%	9%	1%	12%
14	3%		38%	16%	20%	16%	20%	15%	15%	11%	10%	8%	17%

Purse seine effort summaries are shown as a Table in Attachment E and as maps in Attachment F. On the maps the circle area is proportional to the total number of sets in that area, with the yellow slice representing the proportion of sets that were observed. Observer coverage averages 16.4% over the 13-year period but was less than 10% in 2015 and 2022. Some statistical areas with a small number of sets for the year had no observer coverage.

Observed Mortality Summaries

The Table in Attachment G shows observed mortalities by year, statistical area, and species/species group for the SBT longline fishery, while attachments H and J map the distribution of observed mortalities by CCSBT Statistical Area for seabirds and sharks respectively. Attachments I and K map the distribution of observed mortalities by 5x5 degree squares. For the pie maps, the area of the pie is proportional to the total number of observed mortalities, with pie slices representing the proportion of each species/species group. The scale is the same across years. In Attachment I the orange heat map represents fishing effort and the overlaid blue heat map represents observed effort.

The number of observed bird mortalities by area varies considerably from year to year. The lower number of observed bird mortalities in 2017, 2020, 2021 and 2022 would at least be partly due to the lower amount of observer data available for those years and should be interpreted with great caution. Note that a large proportion of mortalities are in the ‘other albatross’ and ‘other seabirds’ categories, some of which are unidentified seabirds that may belong in a different category.

The number of observed shark mortalities by area also varies considerably from year to year. Note that a large proportion of shark catch was not given a life status, see the charts and discussion on catch rates (and Attachment P). Some Members have only been including discarded mortalities in their EDE figures, and have not included retained catch, while other Members have included both. This is mainly an issue for data provided in the older EDE format (data provided for calendar years prior to 2017) since the new format specifically includes retained catches, although some Members have not included retained catch when calculating mortality rates. Korea provided revised historical data in the new EDE format to address this issue. Australia provided revised historical data for 2016-2018 in December 2022.

Table 5 shows observed mortalities for all seabirds combined, by year and statistical area. 85% of all observed bird mortalities occurred in areas 7, 8, and 9.

Table 5 - Observed mortalities for the SBT longline fishery for all seabirds combined by year and statistical area⁴.

Year	Statistical Area									Total
	2	4	5	6	7	8	9	14	15	
2010	26	7	12	47		16	335			443
2011		60	14	12	76	151	109			422
2012	16	10	14	26	12		89	12		179
2013	19	7	1	3	30	20	322	12		414
2014	5	60	27	21	301	44	174	12		644
2015	5	86	10	14	396	91	352	13		967
2016	6	86	16	101	826	104	699	2		1840
2017	3	2	4	29	25	14	1	3		81
2018	2	16	1	72	17	41	301	7		457
2019	8	56	1	43	849	51	669	12		1689
2020	7		0	3	13	10	149	3	24	209
2021	3	0		25		7			4	39
2022	4			48		35	33	3		123
Total	104	390	100	444	2545	584	3233	79	28	7507
Average per year	8	30	8	34	196	45	249	6	2	577

Table 6 shows observed mortalities by year, statistical area, and species/species group for the SBT purse seine fishery. There were no observed mortalities reported.

⁴ Note that the low numbers for 2017, 2020, 2021, and 2022 are at least partly due to the lack of observer data from one or more Members (see Table 2 and preceding text).

Table 6 - Observed mortalities for the SBT purse seine fishery by year, statistical area and species/species group

Year	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2010	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Observed Catch Summary

The Table in Attachment L shows observed captures by year, statistical area, and species/species group for the SBT longline fishery.

Observed Catch Rate and Mortality Rate Summaries

The table in Attachment M shows observed catch rates by year, statistical area, and species/species group for the SBT longline fishery, while attachments N and O map the distribution of observed bird and shark capture rates by CCSBT Statistical Area. For the pie maps, the area of the pie is proportional to the total catch rate, with pie slices representing the proportion of each species/species group. The scale is the same across years.

Attachment P shows observed catch rates (numbers caught per thousand hooks) by year for each species group. The bars are divided by fate; red for observed mortalities, green for observed live releases, and grey for ‘unknown life status’ (for each species, Members provide total numbers caught, the number of individuals observed to be dead, and the number observed to be released alive. The ‘unknown life status’ number is the calculated discrepancy between ‘total caught’ – (‘observed dead’ + ‘observed released alive’)).

Attachment Q shows observed catch rates by species group, year, and statistical area.

Attachments R and T map mortality rates by CCSBT Statistical Area for seabirds and sharks respectively. The areas of the pies are proportional to the total mortality rate of all species combined, with pie slices representing the proportion of each species/species group. The scale is the same across years for each map series.

Note that in attachments T and O the data for statistical area 15 have been removed for 2014 and 2017. These points had extremely high capture and mortality rates for shortfin mako and blue shark but was for less than 10000 observed hooks.

Observed catch and mortality rates for seabirds are similar due to the low proportion of live releases. The overall bird rates appear to be the lowest in 2020 to 2022 but this is likely due to lower observer coverage in the areas where the most seabirds are caught.

Observed shark mortality rates appear to be relatively low from 2020 to 2022 but as with birds this is likely the result of lower observer coverage in certain areas.

Attachments S and U map mortality rates by 5x5 degree squares for seabirds and sharks respectively.

Summaries of the Estimated Total Number of Mortalities

The older ERSWG templates include a column for the estimated total number of mortalities per year/stratum. For data submitted using the older templates this particular column was provided for all years by four of the seven Members whose data are used in this report, not provided for any years by one Member, and partly provided for recent years by two Members. Where the estimated total number of mortalities was provided, Members mostly used a simple scaling of the observed number of mortalities according to the observer coverage of the stratum and rounded fractions down to the next integer (even for fractions greater than 0.5). For data provided in the older formats, the estimated total number of mortalities for the three Members that did not provide the column were calculated by scaling the number of observed mortalities by the observer coverage of the stratum and rounding down to the nearest whole number, to be consistent with the data provided by the other Members.

At ERSWG 13, when Members agreed on a new EDE template, Members also agreed that the Secretariat would calculate the estimated total number of mortalities for data provided in the new format, using the following method:

“raised mortalities would be estimated by applying a simple scaling ratio of observed mortalities and observed effort at the Statistical Area by fleet and year strata to the total effort. For finer scale estimates (e.g. 5x5 degree cell by quarter), the ratio calculated for the Statistical Area by fleet and year strata would be applied at the finer scale.”

The Secretariat has used this method for all data provided in the new EDE template (see Table 1). Due to the method of using a raising ratio by year and statistical area on finer scale data it does not seem appropriate to present estimated total mortalities at the finer scale because they could be biased.

Note that due to the simple, non-model based, approach used to estimate the total number of mortalities, and the low level of observer coverage in many strata which results in high scaling factors and a high risk of unrepresentative observations, the numbers should be treated with caution.

The table in Attachment V shows estimated total mortalities by year, statistical area, and species/species group for the SBT longline fishery, while attachments W and X map the distribution of estimated total mortalities for seabirds and sharks respectively. As with observed mortalities, the areas of the pies are proportional to the total number of estimated mortalities, with pie slices representing the proportion of each species/species group. The scale is the same across years.

The distribution of total estimated bird mortalities by area is similar to the distribution of observed mortalities, and also varies considerably from year to year. There are also relatively large numbers

of seabirds in the ‘other albatross’ and ‘other seabirds’ categories, some of which are unidentified seabirds that may belong in a different category.

The distribution of total estimated shark mortalities by area is also quite similar to the distribution of observed shark mortalities and also varies considerably from year to year, so the same comment applies that it is difficult to see clear visual patterns other than blue shark being caught in much larger numbers than any other shark species.

Table 7 shows the estimated total mortalities for all seabirds combined. As with Table 5 regarding observed mortalities, areas 7, 8, and 9 have the highest total mortalities, but area 4 also has appreciable mortalities. When comparing the mortalities between years, it is important to remember that no mortality data are available for Korea for 2020 and 2021, nor for Japan for 2021 and 2022.

Table 7 – Estimated total mortalities for the SBT longline fishery for all seabirds combined by year and statistical area⁴.

Year	Statistical Area								Total	
	2	4	5	6	7	8	9	14		15
2010	160	892	133	498		154	4,454			6,291
2011		1,508	252	15	1,029	716	799			4,319
2012	48	123	154	42	265		770	27		1,429
2013	69	137	15	3	424	220	2,959	85		3,912
2014	30	467	132	153	1,950	501	1,036	61		4,330
2015	50	575	96	142	2,524	1,045	1,697	96		6,224
2016	24	447	180	419	3,390	4,246	2,497	11		11,214
2017	22	34	24	126	371	281	4	18		881
2018	12	199	3	232	874	260	4,127	46		5,753
2019	26	357	9	225	3,190	424	3,040	22		7,293
2020	18		0	14	432	37	938	65	101	1,605
2021	18	0		117		53			81	269
2022	12			318		183	136	12		661
Total	490	4,739	998	2,304	14,449	8,120	22,457	443	182	54,181
Average	38	365	77	177	1,111	625	1,727	34	14	4,168

Table 8 shows estimated total mortalities by year, statistical area, and species/species group for the SBT purse seine fishery. There were no observed mortalities, so the total estimated mortalities are zero for this fishery.

Table 8 - Estimated total mortalities for the SBT purse seine fishery by year, statistical area and species/species group

Year	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2010	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0
2013	0	0	0	0	0	0	0	0	0	0
2014	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Summaries of Observed Effort with Specific Mitigation Measures

After ERSWG11, Members were required to provide the proportion of effort with specific mitigation measures. These have been aggregated over all fleets and statistical areas and are summarised in Table 9 below for 2014 to 2022 (these data are not available for most Members for earlier years). The column for ‘Mix of 2 measures includes effort where two measures were used at all times but switched from night setting/tori pole to tori pole/branch lines after dawn. The highest proportion of effort with a single or no mitigation measures being used occurred in 2016 and 2019, with over 30% of the effort in these years involving a single or no mitigation measures.

Table 9 - Proportions of observed effort with specific mitigation measures by year.

	Tori pole + Night setting	Tori pole + weighted branchline	Night setting + weighted branchline	Tori pole + night setting + weighted	Tori pole	Night setting	Weighted branchline	None	Single measure (unspecified)	Mix of 2 measures	Other
2014	22.8%	57.0%	0.0%	6.5%	0.0%	0.0%	0.0%	0.0%	13.7%	0.0%	0.0%
2015	35.3%	27.2%	2.5%	10.8%	0.0%	0.0%	0.0%	0.0%	0.7%	23.5%	0.0%
2016	37.1%	14.8%	0.3%	17.1%	24.9%	1.4%	0.1%	3.2%	1.1%	0.0%	0.0%
2017	50.3%	23.1%	0.0%	20.0%	5.9%	0.0%	0.0%	0.2%	0.4%	0.0%	0.0%
2018	54.3%	13.4%	0.1%	13.5%	18.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	33.0%	22.4%	2.5%	8.3%	30.9%	0.4%	0.4%	0.0%	0.0%	0.0%	1.2%
2020	59.9%	11.6%	2.1%	12.4%	12.0%	0.6%	1.5%	0.0%	0.0%	0.0%	0.0%
2021	71.6%	3.2%	2.2%	22.4%	0.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
2022	43.7%	47.5%	0.5%	1.4%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

The table in Attachment Y summarises the proportion of observed effort with specific mitigation measures by year and statistical area.

Observer coverage (observed hooks / total hooks or observed sets / total sets expressed as a percent) by flag, gear, fleet, year and CCSBT statistical area. Representativeness is the proportion of statistical areas fished that reached the target of 10% observer coverage as per the SMMTG Recommendations. Cells shaded in grey are strata with low effort (<25,000 hooks for longline and <5 sets for purse seine).

Member code	Gear code	Fleet code	Year	Statistical area											Total	Representativeness	
				1	2	3	4	5	6	7	8	9	14	15			
AU	LL	AUD	2010				18%									18%	100%
			2011				24%									24%	100%
			2012		8%		37%									33%	50%
			2013		0%		23%									22%	50%
			2014		0%		6%									6%	0%
			2015		22%		8%									8%	50%
			2016		0%			14%				17%				14%	67%
			2017			0%		11%				12%				12%	67%
			2018			0%		12%				35%				11%	67%
			2019					12%				0%				12%	50%
			2020			0%		8%				7%				8%	0%
			2021			0%		12%				0%				11%	33%
	2022			0%		11%				11%	0%			10%	50%		
	PS	AUD	2010			26%										26%	100%
			2011			17%					0%					16%	50%
			2012			14%					9%					11%	50%
			2013			0%					13%					12%	50%
			2014								23%					23%	100%
			2015								9%					9%	0%
			2016								19%					19%	100%
			2017								25%					25%	100%
			2018				0%					21%				21%	50%
2019						0%					13%				13%	50%	
2020											11%				11%	100%	
2021							0%				28%				28%	50%	
2022					0%				8%				8%	0%			
JP	LL	JPD	2010				1%	0%			0%	9%	7%		5%	0%	
			2011				4%	5%			7%	21%	14%		11%	40%	
			2012				8%	1%			4%	11%	9%		8%	20%	
			2013				5%	3%			7%	7%	11%		8%	20%	
			2014				13%	26%			15%	5%	17%		12%	80%	
			2015				15%	20%			16%	9%	21%		14%	80%	
			2016				19%	8%			24%	2%	29%		17%	60%	
			2017				6%				11%	4%	0%		5%	25%	
			2018				8%	0%			2%	14%	6%		6%	20%	
			2019				14%	16%			24%	13%	26%		22%	100%	
			2020				0%	18%			5%	5%	3%	11%		7%	33%
			2021				0%	0%			0%	0%	0%	0%		0%	0%
2022					0%			0%	0%	0%	0%		0%	0%			
KR	LL	KRD	2010		0%						0%	25%			11%	33%	
			2011		0%						0%	0%			0%	0%	
			2012		0%						0%	16%			8%	33%	
			2013		34%						13%	26%			19%	100%	
			2014		0%						18%	0%			7%	33%	
			2015		0%						12%	17%			14%	67%	
			2016								0%	20%			19%	50%	
			2017										18%		18%	100%	
			2018										21%		21%	100%	
			2019										22%		22%	100%	
			2020									0%	0%		0%	0%	
			2021									0%	0%		0%	0%	
2022									0%	24%			22%	50%			
NZ	LL	NZC	2010						81%						81%	100%	
			2011						74%						74%	100%	
			2012					67%	84%						84%	100%	
			2013					88%	78%						78%	100%	
			2014						83%						83%	100%	
			2015						81%						81%	100%	
	NZD	2010						9%	8%						9%	0%	
		2011						10%	0%					8%	0%		
		2012						9%	7%					8%	0%		
		2013						7%						7%	0%		
		2014						11%	9%					10%	50%		
		2015						9%	4%					7%	0%		
		2016						16%	24%					19%	100%		
		2017						18%	23%					20%	100%		
		2018				0%	14%	17%						15%	67%		
		2019					8%	10%						9%	50%		
		2020					9%	10%						9%	50%		
		2021				0%	6%	14%						10%	50%		
2022				0%	0%	8%						5%	0%				
TW	LL	TWD	2010		16%							12%	2%	3%	9%	50%	
			2011										3%		3%	0%	
			2012		32%									20%	41%	28%	100%
			2013		26%								9%	7%	14%	13%	50%
			2014		16%								25%	1%	19%	14%	75%
			2015		10%								9%	5%	15%	10%	50%
			2016		25%								15%	10%	19%	17%	75%
			2017		13%								12%	0%	12%	10%	75%
			2018		15%								18%	20%	14%	28%	100%
			2019		26%								18%	5%	10%	17%	50%
			2020		22%								10%	10%	10%	13%	75%
			2021		18%								15%	2%	8%	12%	50%
2022		21%								16%	18%	18%	18%	100%			

Member code	Gear code	Fleet code	Year	Statistical area											Total	Representativeness			
				1	2	3	4	5	6	7	8	9	14	15					
ZA	LL	ZAC	2012										88%	43%		68%	100%		
			2013										100%	84%		85%	100%		
			2014											94%			94%	100%	
			2015											100%	97%		97%	100%	
			2016											40%	63%		62%	100%	
			2017											100%	100%		100%	100%	
			2018											100%	100%		100%	100%	
			2019											100%	98%		100%	100%	
			2020																
			2021											100%	100%		100%	100%	
			ZAD			2012										0%	0%	0%	0%
	2013													0%	0%	0%	0%	0%	
	2014														16%	0%	3%	7%	33%
	2015														0%	0%	0%	0%	0%
	2016														2%	0%	0%	1%	0%
	2017														7%	0%	3%	5%	0%
	2018														11%	16%	16%	15%	100%
	2019														10%	10%	14%	13%	33%
	2020														11%	25%	31%	24%	100%
	2021														16%	20%	11%	14%	100%
	2022														3%	0%	8%	4%	0%

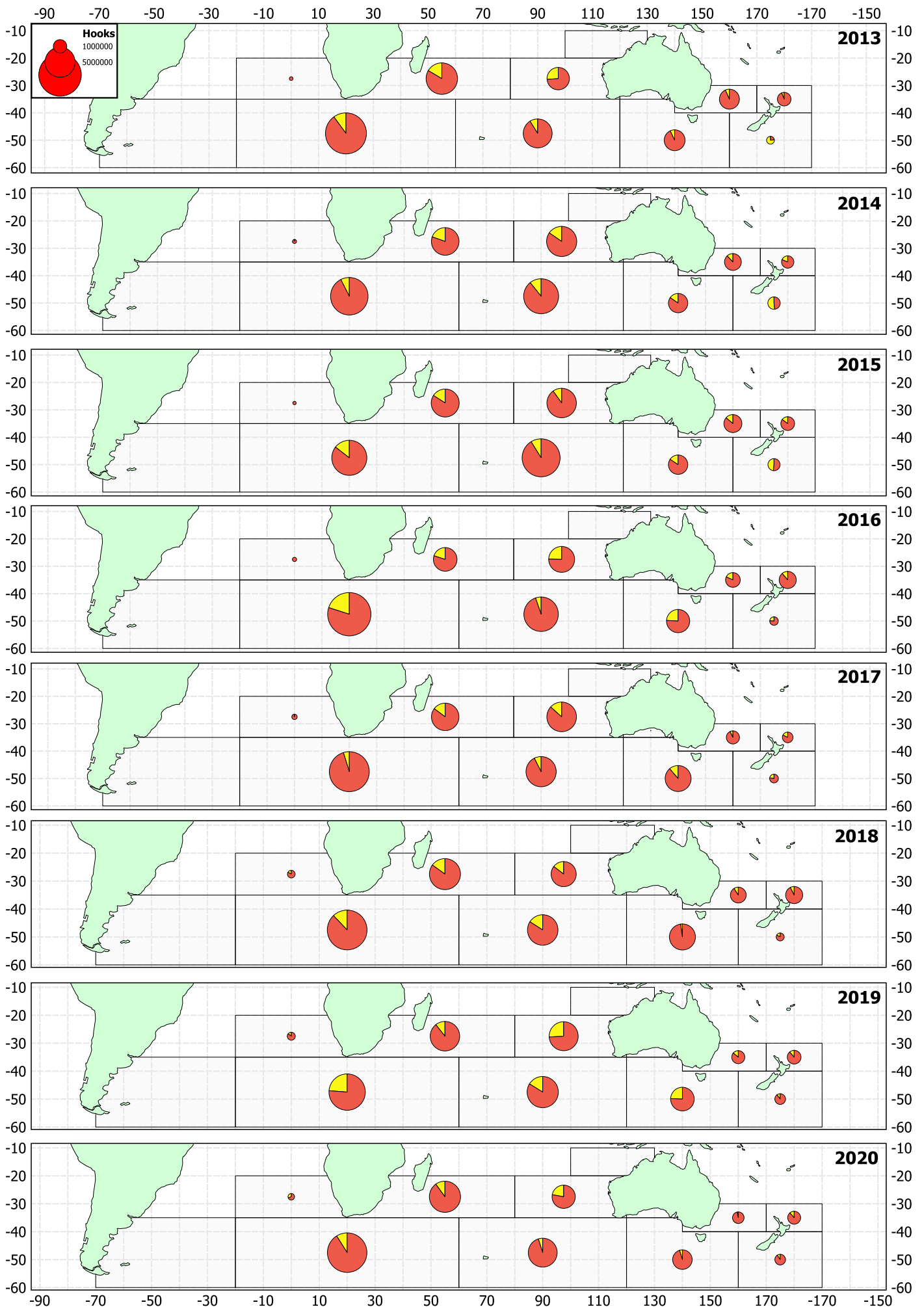
Longline effort by year and statistical area, with observer coverage

Year	Statistical area	Total effort (1000s of hooks)	Observed effort (1000s of hooks)	Observer coverage	
2010	2	12,456	1,960	15.7%	
	4	4,007	66	1.6%	
	5	1,345	88	6.5%	
	6	739	408	55.2%	
	7	1,304	0	0.0%	
	8	7,396	615	8.3%	
	9	19,659	1,152	5.9%	
	14	3,978	102	2.6%	
	2010 Total		50,884	4,391	8.6%
2011	2	103	0	0.0%	
	4	4,208	191	4.5%	
	5	2,539	170	6.7%	
	6	683	365	53.5%	
	7	1,986	147	7.4%	
	8	6,118	589	9.6%	
	9	10,515	1,066	10.1%	
	2011 Total		26,151	2,528	9.7%
	2012	2	1,944	623	32.0%
4		3,452	306	8.9%	
5		2,269	93	4.1%	
6		1,112	498	44.8%	
7		2,451	110	4.5%	
8		4,225	280	6.6%	
9		11,319	1,609	14.2%	
14		1,254	479	38.2%	
15		40	0	0.0%	
2012 Total			28,067	3,997	14.2%
2013	2	3,704	968	26.1%	
	4	2,952	200	6.8%	
	5	1,364	83	6.1%	
	6	450	349	77.6%	
	7	3,216	227	7.1%	
	8	6,184	551	8.9%	
	9	12,441	1,249	10.0%	
	14	7,330	1,209	16.5%	
	15	100	0	0.0%	
	2013 Total		37,741	4,836	12.8%
2014	2	6,722	1,032	15.4%	
	4	2,087	251	12.0%	
	5	1,123	213	18.9%	
	6	1,137	589	51.8%	
	7	2,759	426	15.4%	
	8	9,043	976	10.8%	
	9	10,394	777	7.5%	
	14	5,628	1,104	19.6%	
	15	122	4	3.0%	
	2014 Total		39,015	5,372	13.8%
2015	2	6,411	633	9.9%	
	4	2,387	330	13.8%	
	5	1,394	209	15.0%	
	6	1,086	523	48.2%	
	7	2,770	434	15.7%	
	8	10,655	942	8.8%	
	9	9,091	1,319	14.5%	
	14	5,774	917	15.9%	
	15	82	0	0.0%	
	2015 Total		39,651	5,307	13.4%

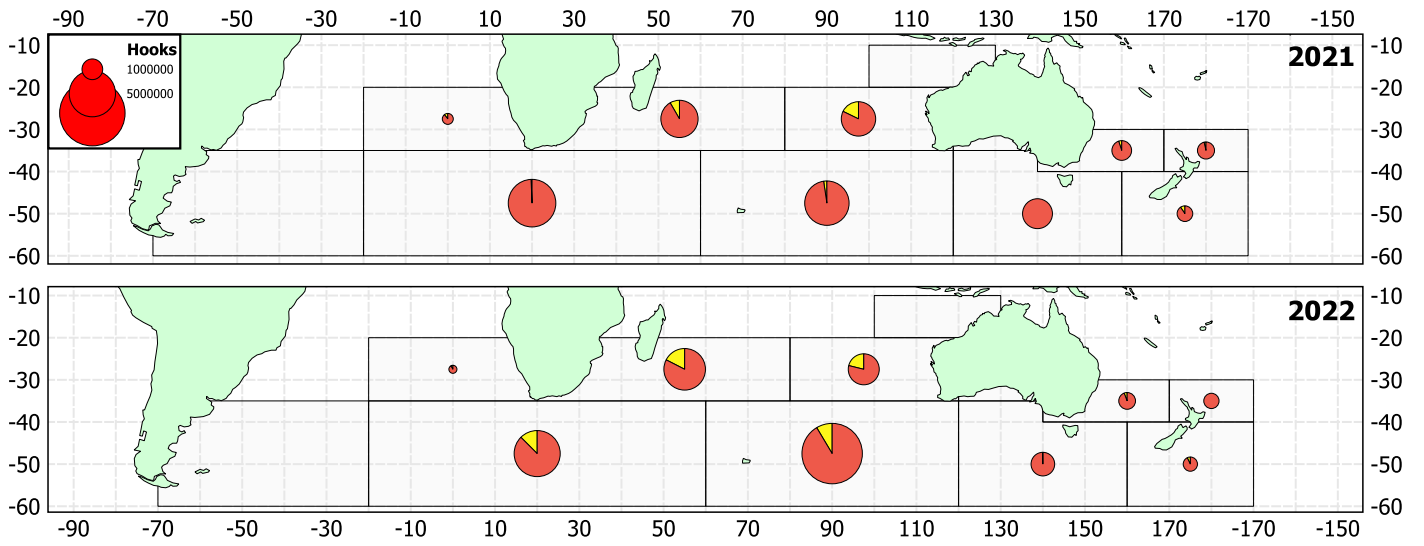
Year	Statistical area	Total effort (1000s of hooks)	Observed effort (1000s of hooks)	Observer coverage
2016	2	4,971	1,224	24.6%
	4	1,601	290	18.1%
	5	2,153	242	11.2%
	6	539	130	24.1%
	7	3,976	962	24.2%
	8	8,778	463	5.3%
	9	13,857	2,783	20.1%
	14	4,132	829	20.1%
	15	132	0	0.0%
		2016 Total	40,140	6,923
2017	2	6,478	866	13.4%
	3	1		0.0%
	4	1,273	93	7.3%
	5	838	149	17.8%
	6	565	128	22.7%
	7	4,979	565	11.4%
	8	6,747	504	7.5%
	9	11,809	563	4.8%
	12	2		0.0%
	14	5,568	823	14.8%
	15	213	7	3.4%
	2017 Total	38,473	3,698	9.6%
2018	2	4,480	655	14.6%
	4	1,773	163	9.2%
	5	2,082	158	7.6%
	6	446	77	17.2%
	7	4,822	104	2.2%
	8	6,608	1,052	15.9%
	9	11,235	1,360	12.1%
	12	7		0.0%
	14	6,845	1,030	15.1%
	15	417	70	16.8%
		2018 Total	38,715	4,670
2019	2	5,978	1,548	25.9%
	4	1,214	163	13.4%
	5	1,338	154	11.5%
	6	814	83	10.2%
	7	3,965	964	24.3%
	8	6,934	1,116	16.1%
	9	9,400	2,237	23.8%
	14	6,181	658	10.6%
	15	454	65	14.4%
		2019 Total	36,277	6,987
2020	2	3,838	851	22.2%
	4	955	30	3.1%
	5	1,191	139	11.7%
	6	811	75	9.3%
	7	2,714	129	4.8%
	8	5,933	295	5.0%
	9	11,093	993	9.0%
	12	12	2	18.3%
	14	6,917	691	10.0%
	15	302	94	31.0%
		2020 Total	33,767	3,300

Year	Statistical area	Total effort (1000s of hooks)	Observed effort (1000s of hooks)	Observer coverage
2021	2	3,697	657	17.8%
	4	1,215	62	5.1%
	5	912	33	3.6%
	6	766	73	9.5%
	7	2,798	0	0.0%
	8	6,163	145	2.4%
	9	7,079	47	0.7%
	12	2	0	0.0%
	14	4,339	362	8.3%
	15	376	40	10.6%
	2021 Total	27,348	1,420	5.2%
2022	2	3,003	635	21.1%
	4	877	52	5.9%
	5	729	0	0.0%
	6	633	46	7.2%
	7	1,742	3	0.2%
	8	11,413	977	8.6%
	9	6,637	829	12.5%
	12	12	1	5.6%
	14	5,403	944	17.5%
	15	203	17	8.4%
		2022 Total	30,652	3,503

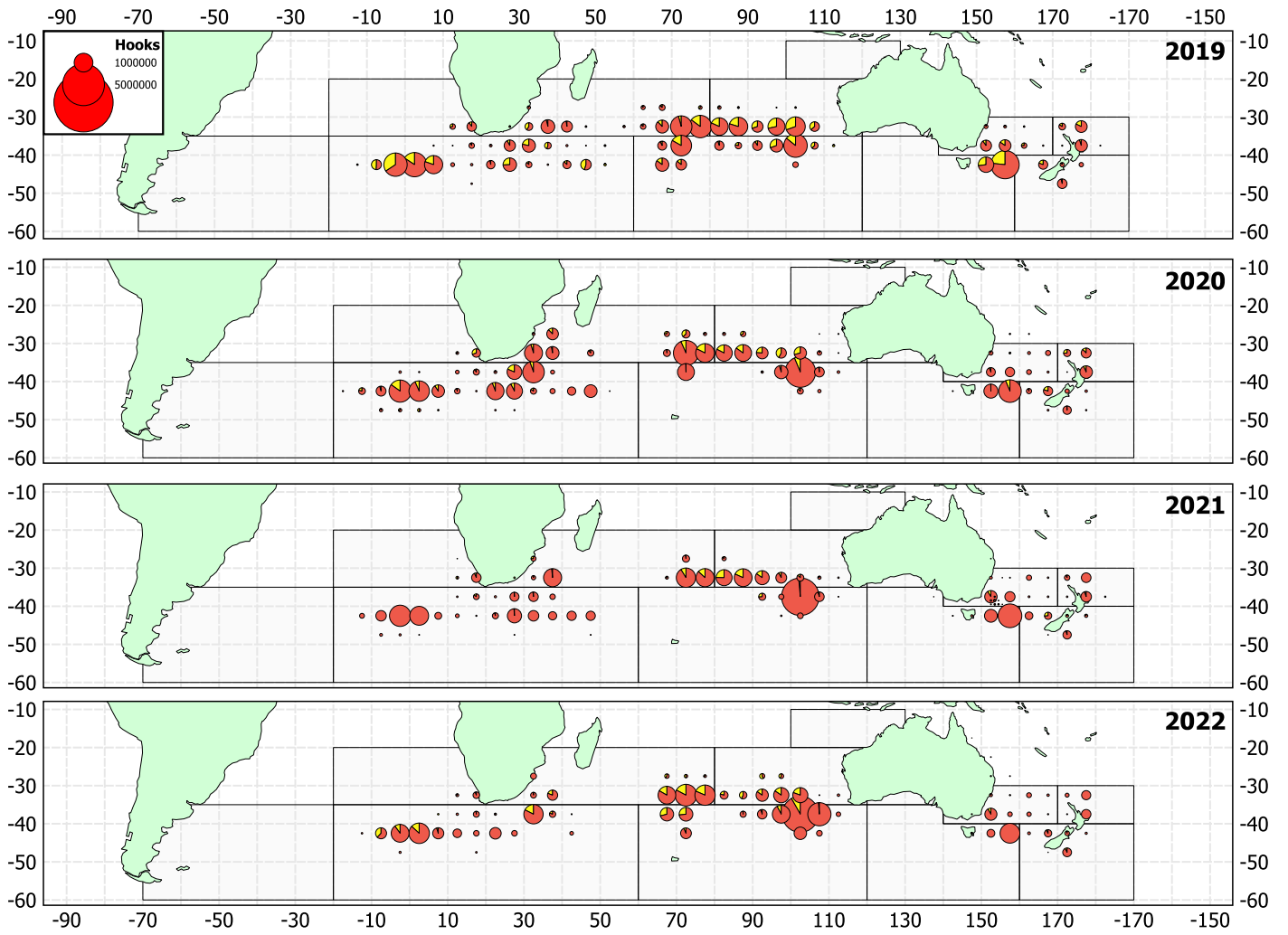
Longline SBT effort showing observer coverage (yellow)



Longline SBT effort showing observer coverage (yellow)



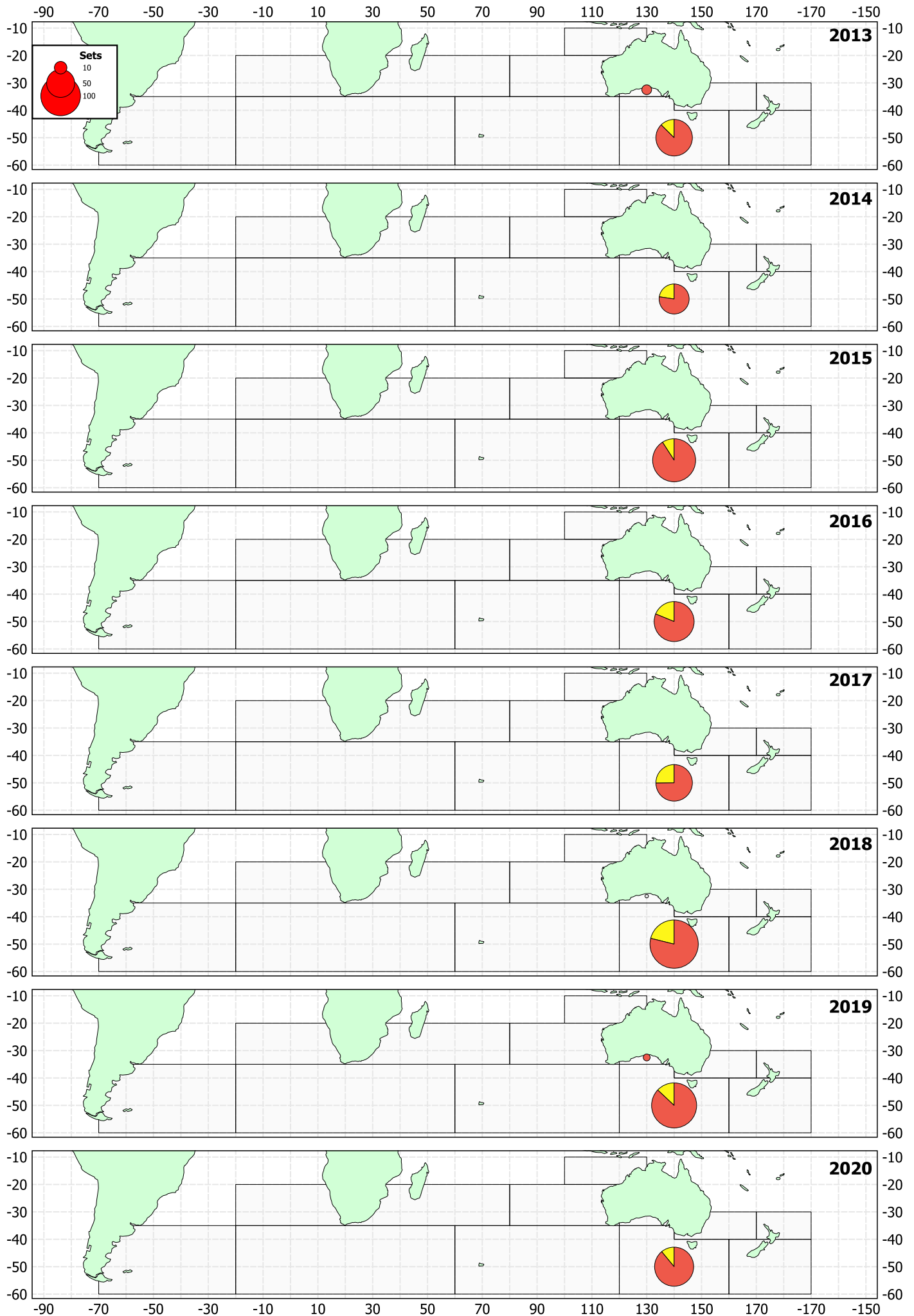
Longline SBT effort showing observer coverage (yellow)



Purse seine effort by year and statistical area, with observer coverage

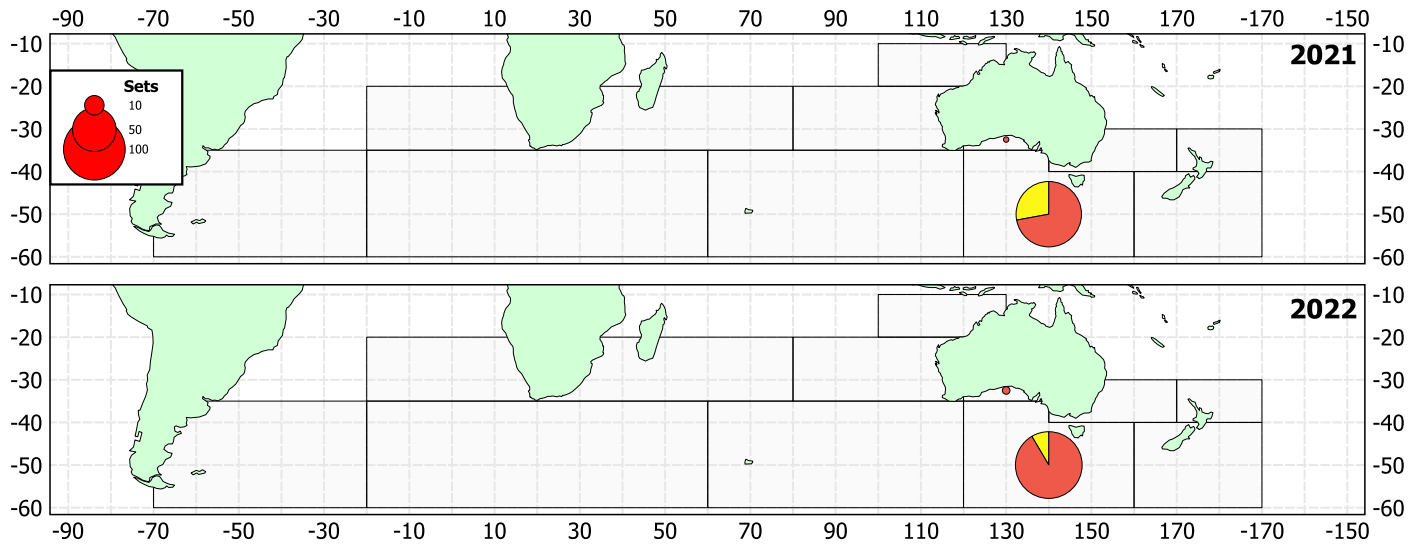
Year	Statistical area	Total effort (sets)	Observed effort (sets)	Observer coverage
2010	3	82	21	25.6%
	2010 Total	82	21	25.6%
2011	3	98	17	17.3%
	7	10	0	0.0%
	2011 Total	108	17	17.3%
2012	3	71	10	14.1%
	7	81	7	8.6%
	2012 Total	152	17	22.7%
2013	3	8	0	0.0%
	7	111	14	12.6%
	2013 Total	119	14	12.6%
2014	7	75	17	22.7%
	2014 Total	75	17	22.7%
2015	7	154	14	9.1%
	2015 Total	154	14	9.1%
2016	7	133	25	18.8%
	2016 Total	133	25	18.8%
2017	7	111	28	25.2%
	2017 Total	111	28	25.2%
2018	3	1	0	0.0%
	7	194	41	21.1%
	Unknown	4	0	0.0%
	2018 Total	199	41	21.1%
2019	3	4	0	0.0%
	7	169	22	13.0%
	2019 Total	173	22	13.0%
2020	7	127	14	11.0%
	2020 Total	127	14	11.0%
2021	3	1	0	0.0%
	7	147	41	27.9%
	2021 Total	148	41	27.9%
2022	3	2	0	0.0%
	7	153	13	8.5%
	2022 Total	155	13	8.5%
Total		1,736	284	16.4%

Purse seine SBT effort, showing observer coverage (yellow)



Purse seine SBT effort, showing observer coverage (yellow)

Attachment F



Observed mortalities for the SBT longline fishery by year, statistical area and species/species group. Note that the low numbers for 2017, 2020, 2021, and 2022 are at least partly due to the lack of observer data from one or more Members (see Table 2 and preceding text).

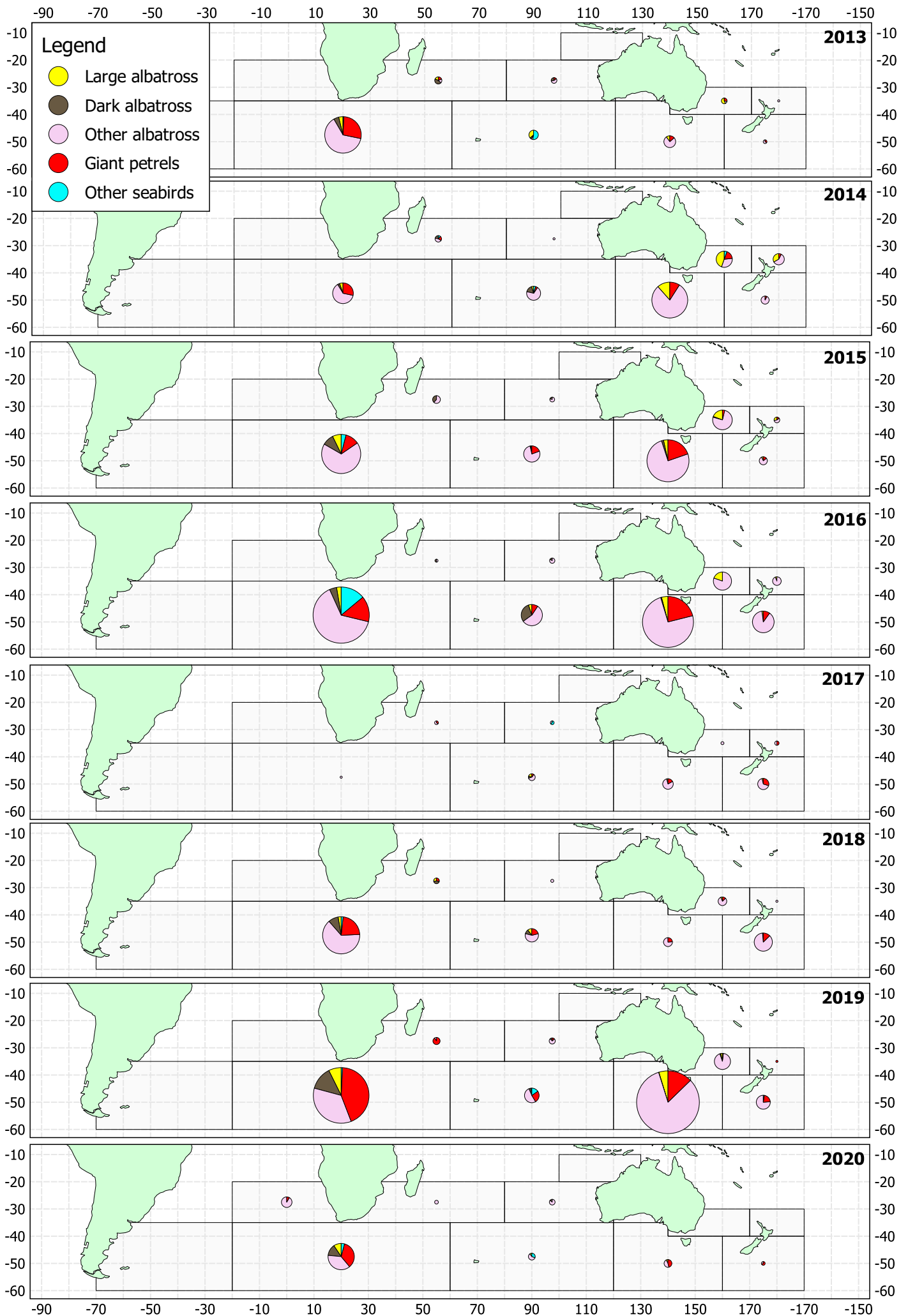
Year	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2010	2	404	28	0	69	0	0	1	23	1	1
	4	251	10	0	2	0	2	0	5	0	0
	5	1,272	65	148	2	0	0	0	9	2	1
	6	2,547	18	76	28	0	0	0	47	0	0
	7	0	0	0	0	0	0	0	0	0	0
	8	429	16	42	20	0	1	3	8	3	1
	9	4,862	132	628	123	0	16	5	74	20	220
	14	51	33	0	0	0	0	0	0	0	0
	2010 Total	9,816	302	894	244	0	19	9	166	26	223
2011	2	0	0	0	0	0	0	0	0	0	0
	4	247	59	0	22	0	13	0	8	6	33
	5	1,152	172	243	16	0	9	0	4	0	1
	6	2,357	18	60	60	0	0	0	11	1	0
	7	334	23	22	6	0	1	0	44	11	20
	8	1,321	14	177	0	0	4	1	101	12	33
	9	1,927	131	115	77	0	11	3	76	7	12
		2011 Total	7,338	417	617	181	0	38	4	244	37
2012	2	1,435	10	0	0	0	0	0	16	0	0
	4	29	90	0	7	0	3	0	3	1	3
	5	1,880	96	125	2	0	3	0	8	3	0
	6	6,254	33	141	90	0	0	0	26	0	0
	7	40	5	2	0	0	1	0	5	3	3
	8	928	3	10	2	0	0	0	0	0	0
	9	2,772	289	426	15	0	9	7	45	21	7
	14	930	73	0	0	0	0	0	10	1	1
	15	0	0	0	0	0	0	0	0	0	0
	2012 Total	14,268	599	704	116	0	16	7	113	29	14
2013	2	749	21	1	60	0	0	2	16	1	0
	4	210	30	1	4	0	4	0	1	2	0
	5	818	38	50	4	0	0	0	1	0	0
	6	3,948	45	71	92	0	0	0	2	1	0
	7	16	18	5	2	0	3	0	23	4	0
	8	721	36	54	26	0	7	1	2	0	10
	9	1,797	95	686	16	0	11	13	196	79	23
	14	558	151	0	51	0	2	5	3	2	0
	15	0	0	0	0	0	0	0	0	0	0
	2013 Total	8,817	434	868	255	0	27	21	244	89	33
2014	2	1,023	27	3	17	0	0	0	5	0	0
	4	537	141	1	51	0	25	0	18	10	7
	5	333	109	68	39	0	9	0	16	2	0
	6	2,425	51	280	142	0	0	0	20	1	0
	7	501	16	85	10	0	32	0	223	25	21
	8	1,612	57	302	96	0	2	7	31	2	2
	9	1,331	392	105	30	0	5	3	107	26	33
	14	656	96	0	185	0	0	2	7	2	1
	15	68	462	0	0	0	0	0	0	0	0
	2014 Total	8,486	1,351	844	570	0	73	12	427	68	64
2015	2	57	20	0	4	0	0	1	4	0	0
	4	302	47	26	39	0	16	1	66	3	0
	5	700	37	99	9	0	2	0	7	1	0
	6	567	27	75	73	0	1	0	11	2	0
	7	279	46	102	9	0	13	6	295	75	7
	8	1,735	34	136	20	0	1	1	76	11	2
	9	953	81	171	14	0	24	31	245	38	14
	14	280	102	0	9	0	0	5	8	0	0
	15	0	0	0	0	0	0	0	0	0	0
	2015 Total	4,873	394	609	177	0	57	45	712	130	23

	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2016	2	262	27	0	1	0	0	1	5	0	0
	4	117	30	3	21	0	14	0	72	0	0
	5	918	92	233	60	0	1	0	15	0	0
	6	326	18	119	6	0	2	0	89	10	0
	7	425	37	120	13	0	23	3	681	118	1
	8	407	25	13	18	0	5	29	61	9	0
	9	2,993	79	170	76	0	18	28	456	101	96
	14	641	126	0	8	0	0	1	1	0	0
	15	0	0	0	0	0	0	0	0	0	0
	2016 Total	6,089	434	658	203	0	63	62	1,380	238	97
2017	2	509	38	0	44	0	0	0	1	0	2
	3	0	0	0	0	0	0	0	0	0	0
	4	50	6	0	8	0	0	0	2	0	0
	5	713	47	254	14	0	0	0	2	2	0
	6	305	16	127	16	0	1	0	20	8	0
	7	671	25	24	12	0	1	0	20	4	0
	8	906	13	270	42	0	2	1	10	1	0
	9	990	278	137	107	0	0	0	1	0	0
	12	0	0	0	0	0	0	0	0	0	0
	14	242	162	0	11	0	0	0	2	1	0
15	285	144	0	0	0	0	0	0	0	0	
	2017 Total	4,671	729	812	254	0	4	1	58	16	2
2018	2	166	24	0	4	0	0	0	2	0	0
	4	236	5	5	2	0	1	0	13	2	0
	5	817	64	76	22	0	0	0	1	0	0
	6	209	9	94	9	0	1	0	62	9	0
	7	242	1	10	2	0	0	0	13	4	0
	8	2,026	34	145	20	0	4	4	24	8	1
	9	2,173	202	398	164	0	8	26	195	67	5
	12	0	0	0	0	0	0	0	0	0	0
	14	471	155	0	23	0	2	3	0	2	0
	15	827	405	0	0	0	0	0	0	0	0
	2018 Total	7,167	899	728	246	0	16	33	310	92	6
2019	2	217	38	46	1	0	0	1	6	1	0
	4	48	17	1	3	0	2	1	52	1	0
	5	411	23	38	4	0	0	0	0	1	0
	6	565	14	134	1	0	0	0	33	9	1
	7	307	53	80	8	0	40	1	700	108	0
	8	1,192	50	132	40	0	1	2	29	12	7
	9	4,256	215	445	101	0	49	90	235	290	5
	14	216	31	0	25	0	0	0	2	10	0
	15	529	107	6	155	0	0	0	0	0	0
	2019 Total	7,741	548	882	338	0	92	95	1,057	432	13
2020	2	253	41	11	76	0	0	1	6	0	0
	4	1	2	0	1	0	0	0	0	0	0
	5	383	13	27	8	1	0	0	0	0	0
	6	212	3	40	6	0	0	0	1	2	0
	7	178	15	27	1	0	1	0	6	6	0
	8	258	3	3	65	0	1	0	6	0	3
	9	2,540	76	550	65	0	14	21	56	52	6
	12	0	0	0	0	0	0	0	0	0	0
	14	166	32	2	7	0	0	0	3	0	0
	15	237	86	0	118	0	0	0	22	2	0
	2020 Total	4,228	271	660	347	1	16	22	100	62	9

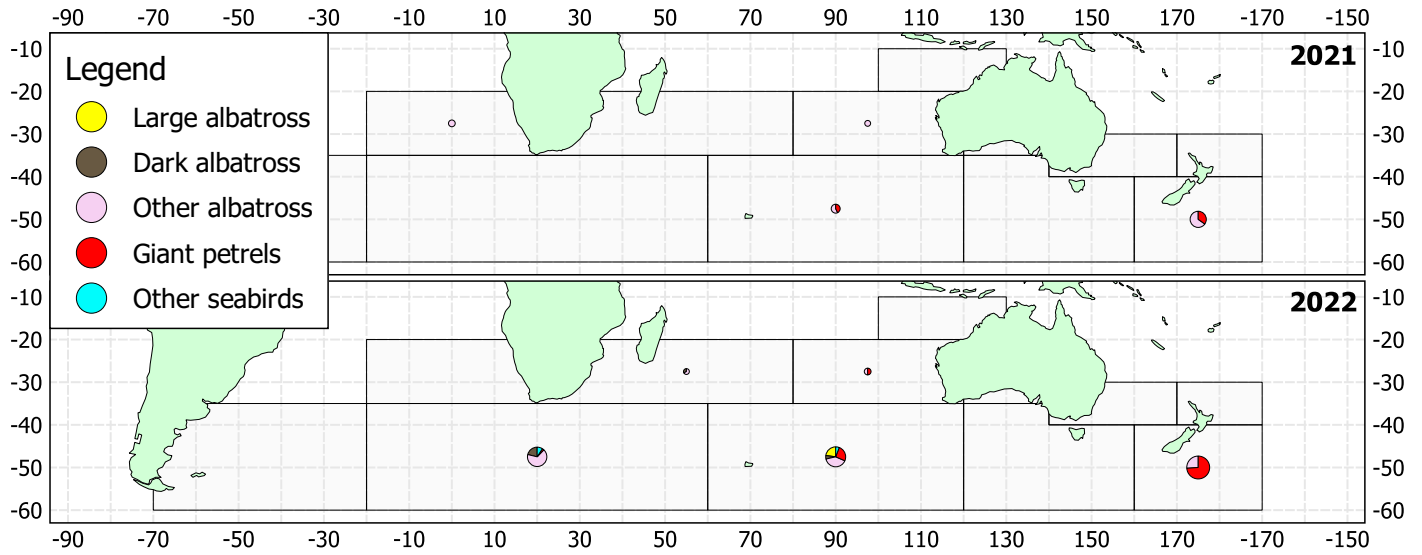
	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2021	2	87	27	0	5	0	0	0	3	0	0
	4	1	9	0	3	0	0	0	0	0	0
	5	154	22	6	4	0	0	0	0	0	0
	6	195	2	159	3	0	0	0	17	8	0
	7	0	0	0	0	0	0	0	0	0	0
	8	34	3	0	1	0	0	0	4	3	0
	9	17	8	0	0	0	0	0	0	0	0
	12	0	0	0	0	0	0	0	0	0	0
	14	113	18	0	96	0	0	0	0	0	0
	15	502	112	0	60	0	0	0	4	0	0
	2021 Total	1,103	201	165	172	0	0	0	28	11	0
2022	2	259	15	15	1	0	0	0	2	2	0
	4	10	3	0	3	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0
	6	176	3	75	1	0	0	0	14	34	0
	7	1	0	0	0	0	0	0	0	0	0
	8	459	33	104	3	0	8	2	14	9	2
	9	360	27	23	44	0	0	7	22	1	3
	12	0	0	0	0	0	0	0	0	0	0
	14	204	25	13	2	0	0	1	2	0	0
	15	67	35	0	1	0	0	0	0	0	0
	2022 Total	1,536	141	230	55	0	8	10	54	46	5

Observed bird mortalities for the SBT longline fishery

Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)

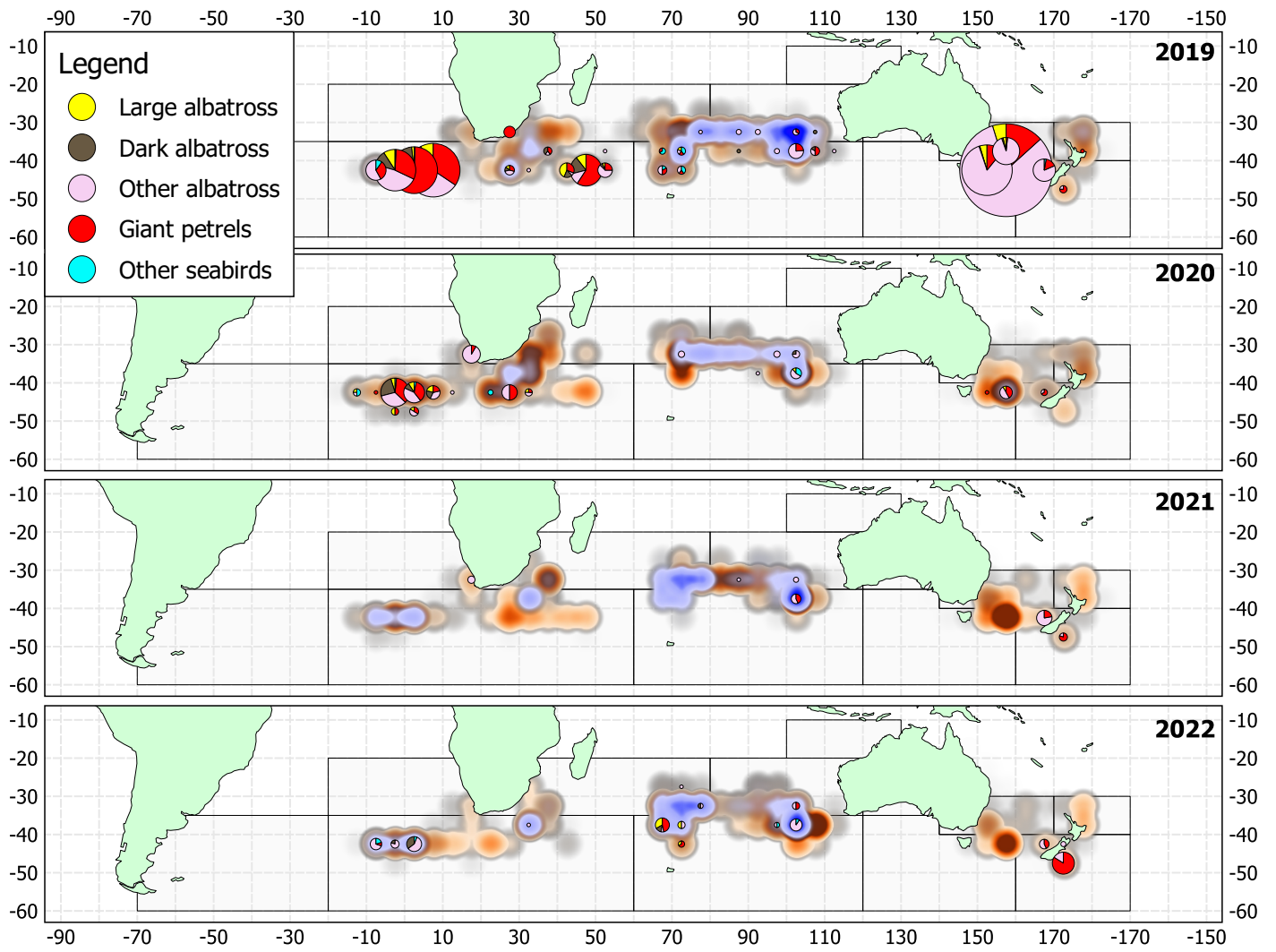


Observed bird mortalities for the SBT longline fishery



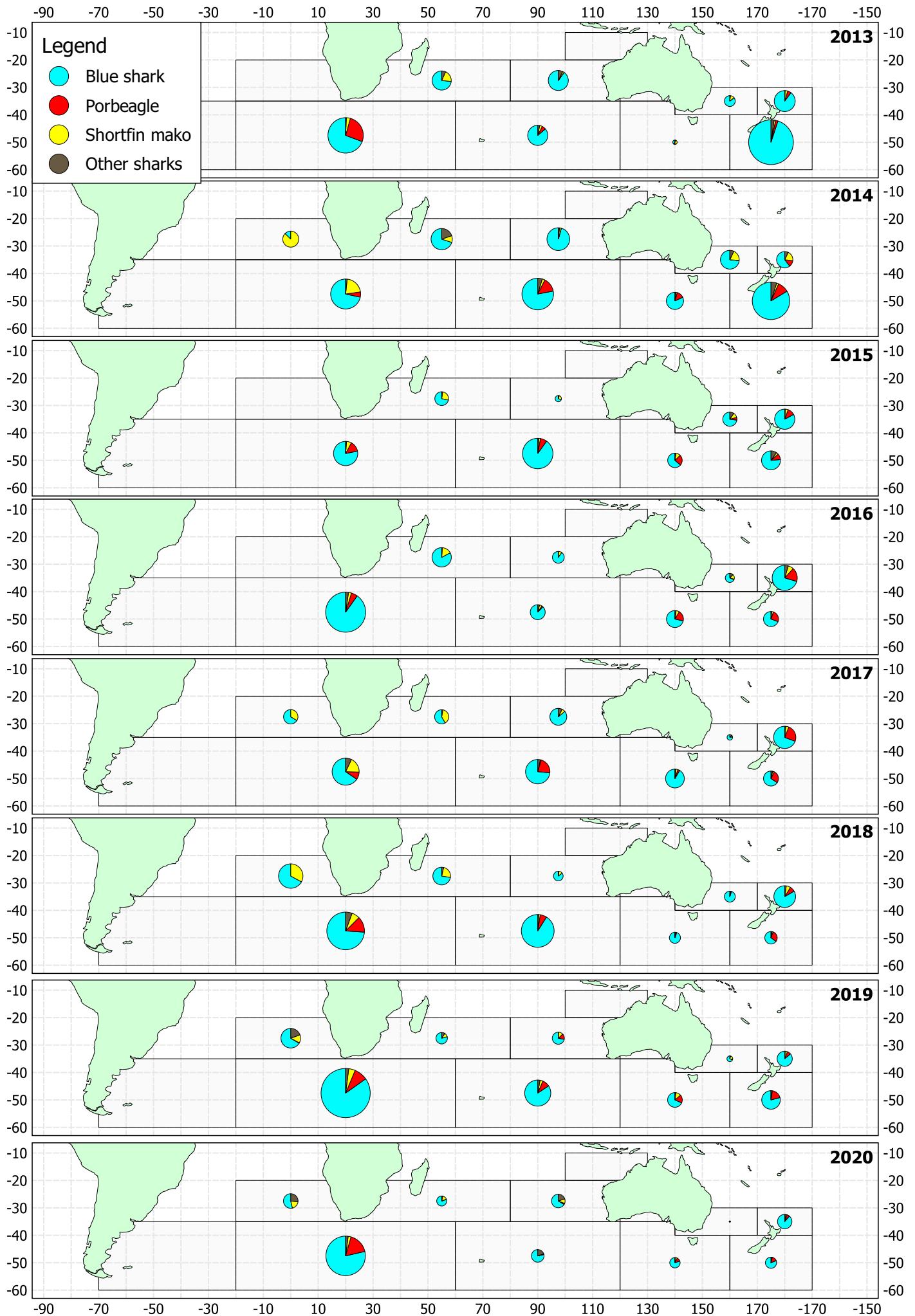
Observed bird mortalities for the SBT longline fishery (5x5)

The orange heat map represents fishing effort, the blue heat map is observed effort. Note that observer coverage was 0 for some Members for 2020-2022 (see table 2 of main document)

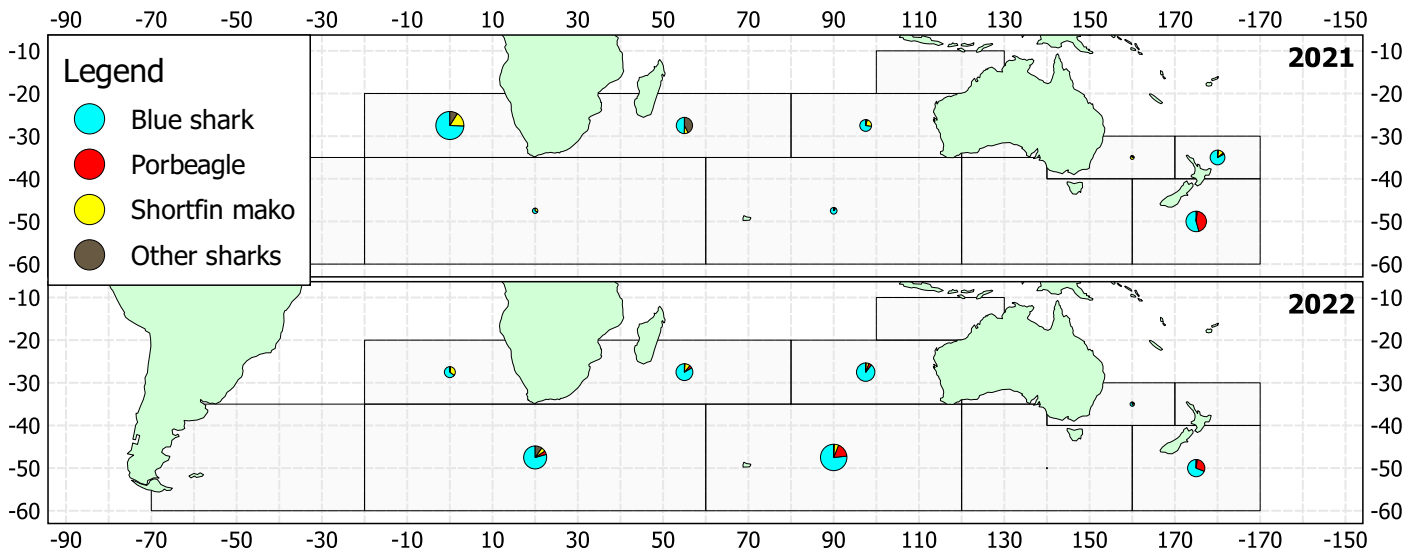


Observed shark mortalities for the SBT longline fishery

Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)

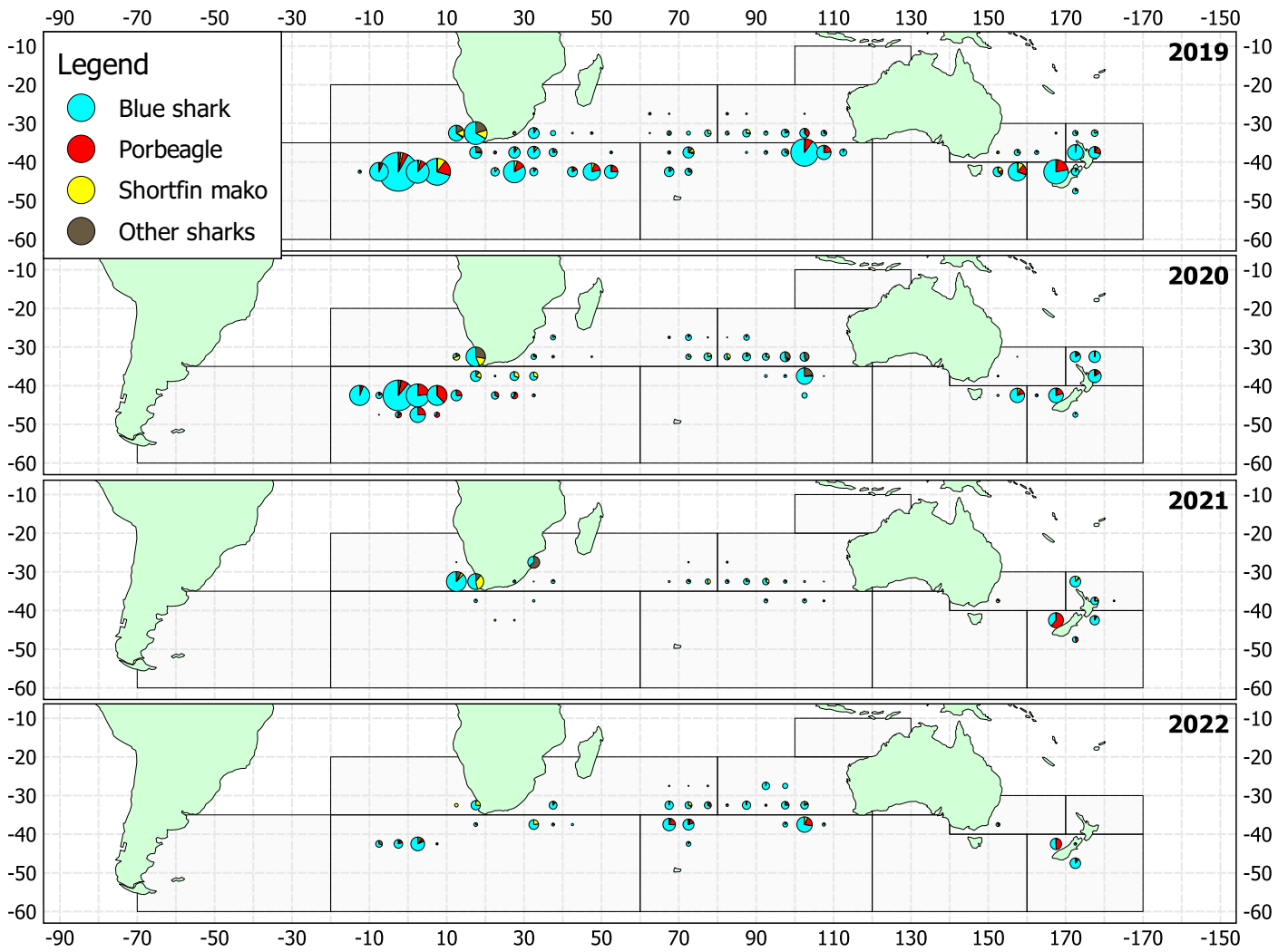


Observed shark mortalities for the SBT longline fishery



Observed shark mortalities for the SBT longline fishery (5x5)

Note that observer coverage was 0 for some Members for 2020-2022 (see table 2 of main document)



Observed captures for the SBT longline fishery by year, statistical area and species/species group. Note that the low numbers for 2017, 2020, 2021, and 2022 are at least partly due to the lack of observer data from one or more Members (see Table 2 and preceding text).

Year	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2010	2	415	33	0	73	0	0	2	37	2	3
	4	629	16	0	4	0	2	0	5	0	0
	5	4,162	202	258	9	0	0	0	11	2	1
	6	2,906	18	92	312	0	0	0	82	0	0
	7	0	0	0	0	0	0	0	0	0	0
	8	579	23	57	132	0	1	3	9	3	1
	9	5,152	136	673	208	1	17	5	77	23	247
	14	53	34	0	0	0	0	0	0	0	0
	2010 Total	13,896	462	1,080	738	1	20	10	221	30	252
2011	2	0	0	0	0	0	0	0	0	0	0
	4	500	78	0	289	0	13	0	8	6	36
	5	3,001	436	499	318	4	9	0	4	0	2
	6	2,729	18	83	407	0	0	0	27	1	1
	7	566	26	58	28	0	1	0	44	11	21
	8	1,540	14	280	25	0	4	1	104	12	33
	9	2,635	147	158	127	0	12	4	76	7	13
		2011 Total	10,971	719	1,078	1,194	4	39	5	263	37
2012	2	1,475	11	0	0	0	0	0	16	0	0
	4	233	97	1	109	0	3	0	4	1	3
	5	4,857	190	365	23	0	3	0	8	3	0
	6	7,797	37	210	546	0	0	0	34	0	0
	7	46	5	10	2	0	1	0	6	3	3
	8	944	6	58	12	0	0	0	0	0	0
	9	3,789	384	428	82	0	10	8	56	21	11
	14	1,121	127	0	31	0	0	0	10	1	1
	15	0	0	0	0	0	0	0	0	0	0
	2012 Total	20,262	857	1,072	805	0	17	8	134	29	18
2013	2	809	21	3	76	0	0	2	21	1	0
	4	769	49	1	26	0	4	0	1	2	0
	5	4,772	118	154	19	0	0	0	2	0	0
	6	5,149	54	112	600	0	0	0	4	1	0
	7	220	30	77	15	0	4	0	30	4	0
	8	1,155	38	92	64	0	7	1	3	0	14
	9	1,959	103	774	51	0	13	13	198	81	25
	14	751	172	0	109	0	2	5	3	2	0
	15	0	0	0	0	0	0	0	0	0	0
	2013 Total	15,584	585	1,213	960	0	30	21	262	91	39
2014	2	1,129	27	3	24	0	0	0	8	0	1
	4	742	160	19	173	0	29	0	21	10	7
	5	4,497	270	254	197	0	9	0	16	2	1
	6	9,903	60	517	561	0	1	0	28	1	0
	7	1,866	42	190	38	0	32	0	241	26	23
	8	2,600	64	426	408	0	2	8	36	3	2
	9	2,207	417	167	198	2	7	3	107	28	47
	14	860	135	0	263	2	0	2	13	2	1
	15	335	462	0	15	0	0	0	0	0	0
	2014 Total	24,139	1,637	1,576	1,877	4	80	13	470	72	82
2015	2	241	24	0	30	0	0	1	4	0	0
	4	2,509	178	160	153	1	17	1	73	3	0
	5	3,082	156	180	17	0	2	0	7	1	0
	6	8,678	49	292	478	0	2	0	26	2	0
	7	2,738	138	1,268	60	0	14	6	308	76	9
	8	5,252	38	647	67	0	1	1	76	12	2
	9	4,819	165	480	379	0	30	31	248	40	16
	14	422	163	0	14	0	0	5	11	0	0
	15	0	0	0	0	0	0	0	0	0	0
	2015 Total	27,741	911	3,027	1,198	1	66	45	753	134	27

	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2016	2	363	40	0	125	0	0	1	5	0	0
	4	340	72	8	124	0	14	0	72	0	0
	5	5,098	252	539	232	1	2	0	16	0	0
	6	4,163	58	320	14	0	3	0	95	12	0
	7	2,124	85	676	102	1	27	3	688	118	1
	8	943	36	154	114	0	5	29	64	9	0
	9	3,745	107	340	544	0	22	28	472	106	118
	14	948	186	0	53	2	0	1	2	0	0
	15	0	0	0	0	0	0	0	0	0	0
	2016 Total	17,724	836	2,037	1,308	4	73	62	1,414	245	119
2017	2	569	38	0	65	0	0	0	2	0	3
	3	0	0	0	0	0	0	0	0	0	0
	4	114	14	0	18	0	0	0	2	0	0
	5	4,695	148	362	40	1	0	0	3	2	0
	6	3,760	36	272	40	0	2	0	29	8	0
	7	1,193	38	79	87	0	1	0	21	4	0
	8	1,175	18	432	68	0	3	1	10	1	0
	9	1,574	292	153	291	0	0	0	1	0	0
	12	0	0	0	0	0	0	0	0	0	0
	14	587	218	0	130	0	0	0	2	1	0
	15	652	147	0	9	0	0	0	0	0	0
	2017 Total	14,319	949	1,298	748	1	6	1	70	16	3
2018	2	246	26	0	19	0	0	0	2	0	0
	4	581	15	11	36	0	1	0	14	2	0
	5	4,648	196	153	49	1	0	0	1	1	1
	6	3,946	32	261	31	0	3	0	68	9	0
	7	563	3	27	27	0	2	0	14	4	0
	8	3,494	59	229	43	0	4	4	24	8	1
	9	2,880	213	631	689	0	9	26	197	69	5
	12	0	0	0	0	0	0	0	0	0	0
	14	577	185	0	41	0	2	3	0	2	0
	15	1,450	411	0	24	2	0	0	0	0	0
	2018 Total	18,385	1,140	1,312	959	3	21	33	320	95	7
2019	2	540	78	55	6	0	0	1	6	1	0
	4	568	32	10	82	0	2	1	53	1	0
	5	2,156	48	59	48	0	0	0	0	1	0
	6	4,820	34	220	46	0	0	0	39	13	1
	7	1,855	143	479	216	1	42	1	886	146	8
	8	2,424	79	619	132	1	2	2	58	20	7
	9	6,987	336	1,241	1,553	0	53	91	374	293	7
	14	270	33	7	67	0	0	0	2	10	0
	15	1,201	123	8	187	2	0	0	0	0	0
	2019 Total	20,821	906	2,698	2,337	4	99	96	1,418	485	23
2020	2	498	167	17	83	0	0	1	6	0	0
	4	48	2	0	23	0	0	0	0	0	0
	5	1,930	47	63	59	1	0	0	1	0	0
	6	1,708	5	72	6	0	0	0	1	3	0
	7	317	18	150	2	0	1	0	6	6	0
	8	343	49	42	82	0	1	0	6	0	4
	9	3,148	93	1,087	252	0	21	21	61	56	10
	12	0	0	0	0	0	0	0	0	0	0
	14	190	37	2	42	1	0	0	3	0	0
	15	848	104	0	180	32	0	0	24	2	0
	2020 Total	9,030	522	1,433	729	34	23	22	108	67	14

	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2021	2	192	30	0	30	0	0	0	3	0	0
	4	150	16	0	90	2	0	0	0	0	1
	5	856	35	14	20	1	0	0	0	0	0
	6	2,908	9	275	8	0	0	0	20	11	1
	7	0	0	0	0	0	0	0	0	0	0
	8	47	3	0	13	0	0	0	4	3	0
	9	61	22	0	3	0	0	0	0	0	0
	12	0	0	0	0	0	0	0	0	0	0
	14	141	23	0	116	8	0	0	0	0	0
	15	1,055	113	0	88	2	0	0	4	0	0
	2021 Total	5,410	251	289	368	13	0	0	31	14	2
2022	2	640	33	16	8	0	0	0	2	2	0
	4	185	4	0	74	1	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0
	6	2,411	4	106	2	0	0	0	16	37	2
	7	57	0	0	12	0	0	0	0	0	0
	8	1,177	192	189	6	0	8	2	14	11	2
	9	2,430	49	200	250	0	0	7	24	1	4
	12	0	0	0	0	0	0	0	0	0	0
	14	345	29	37	6	0	0	1	3	0	0
	15	247	35	0	14	0	0	0	0	0	0
	2022 Total	7,492	346	548	372	1	8	10	59	51	8

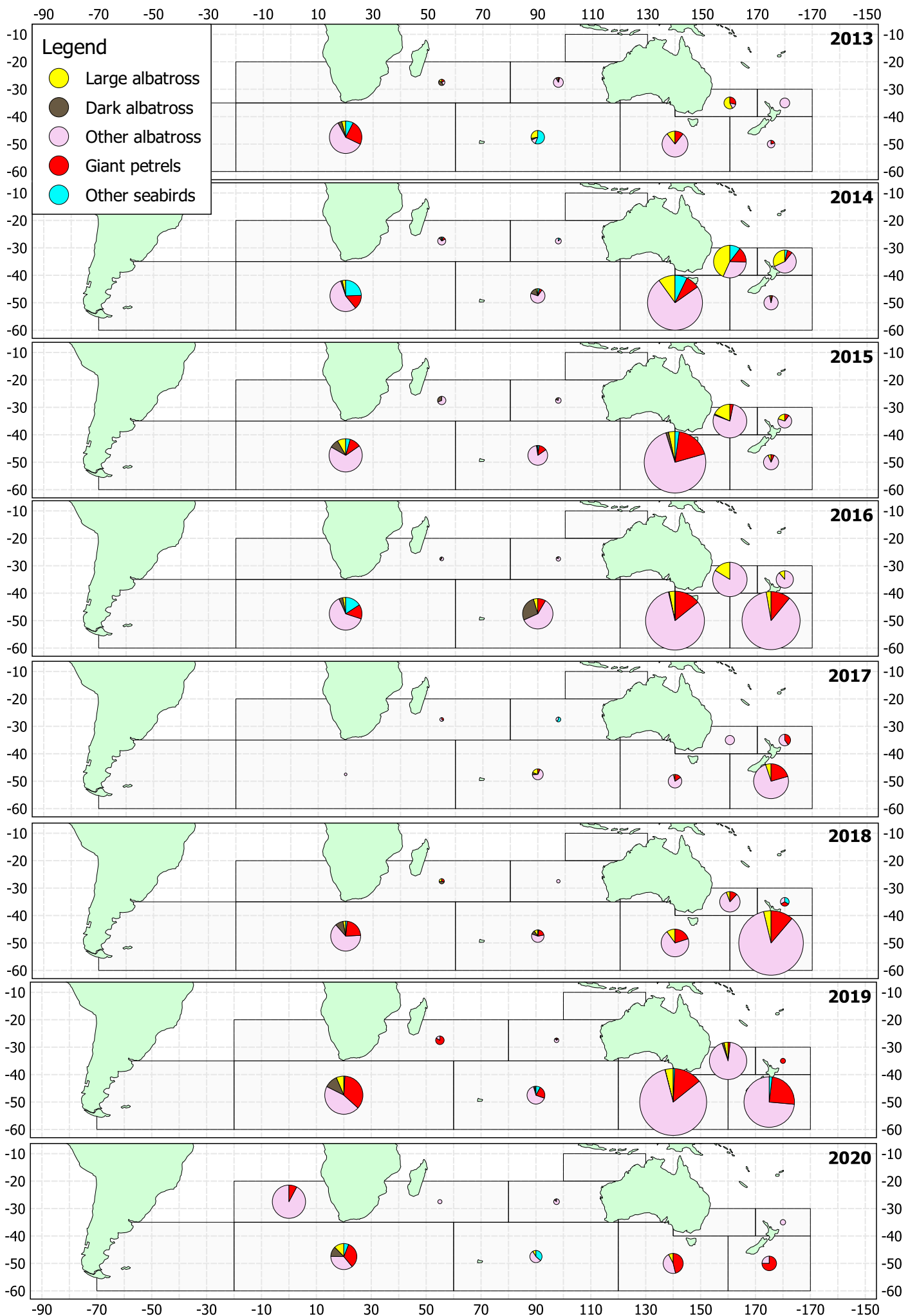
Observed catch rates for the SBT longline fishery by year, statistical area and species/species group. Note that the low numbers for 2017, 2020, 2021, and 2022 are at least partly due to the lack of observer data from one or more Members (see Table 2 and preceding text).

Year	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2010	2	0.212	0.017	0.000	0.037	0.000	0.000	0.001	0.019	0.001	0.002
	4	9.569	0.243	0.000	0.061	0.000	0.030	0.000	0.076	0.000	0.000
	5	47.539	2.307	2.947	0.103	0.000	0.000	0.000	0.126	0.023	0.011
	6	7.130	0.044	0.226	0.766	0.000	0.000	0.000	0.201	0.000	0.000
	8	0.941	0.037	0.093	0.215	0.000	0.002	0.005	0.015	0.005	0.002
	9	4.471	0.118	0.584	0.181	0.001	0.015	0.004	0.067	0.020	0.214
	14	0.519	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2011	4	2.616	0.408	0.000	1.512	0.000	0.068	0.000	0.042	0.031	0.188
	5	17.694	2.571	2.942	1.875	0.024	0.053	0.000	0.024	0.000	0.012
	6	7.470	0.049	0.227	1.114	0.000	0.000	0.000	0.074	0.003	0.003
	7	3.862	0.177	0.396	0.191	0.000	0.007	0.000	0.300	0.075	0.143
	8	2.614	0.024	0.475	0.042	0.000	0.007	0.002	0.177	0.020	0.056
	9	2.472	0.138	0.148	0.119	0.000	0.011	0.004	0.071	0.007	0.012
2012	2	2.368	0.018	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000
	4	0.761	0.317	0.003	0.356	0.000	0.010	0.000	0.013	0.003	0.010
	5	52.489	2.053	3.944	0.249	0.000	0.032	0.000	0.086	0.032	0.000
	6	15.650	0.074	0.422	1.096	0.000	0.000	0.000	0.068	0.000	0.000
	7	0.418	0.045	0.091	0.018	0.000	0.009	0.000	0.054	0.027	0.027
	8	3.373	0.021	0.207	0.043	0.000	0.000	0.000	0.000	0.000	0.000
	9	2.355	0.239	0.266	0.051	0.000	0.006	0.005	0.035	0.013	0.007
	14	2.341	0.265	0.000	0.065	0.000	0.000	0.000	0.021	0.002	0.002
2013	2	0.836	0.022	0.003	0.078	0.000	0.000	0.002	0.022	0.001	0.000
	4	3.852	0.245	0.005	0.130	0.000	0.020	0.000	0.005	0.010	0.000
	5	57.765	1.428	1.864	0.230	0.000	0.000	0.000	0.024	0.000	0.000
	6	14.737	0.155	0.321	1.717	0.000	0.000	0.000	0.011	0.003	0.000
	7	0.970	0.132	0.339	0.066	0.000	0.018	0.000	0.132	0.018	0.000
	8	2.097	0.069	0.167	0.116	0.000	0.013	0.002	0.005	0.000	0.025
	9	1.568	0.082	0.620	0.041	0.000	0.010	0.010	0.158	0.065	0.020
	14	0.621	0.142	0.000	0.090	0.000	0.002	0.004	0.002	0.002	0.000
2014	2	1.094	0.026	0.003	0.023	0.000	0.000	0.000	0.008	0.000	0.001
	4	2.955	0.637	0.076	0.689	0.000	0.115	0.000	0.084	0.040	0.028
	5	21.157	1.270	1.195	0.927	0.000	0.042	0.000	0.075	0.009	0.005
	6	16.816	0.102	0.878	0.953	0.000	0.002	0.000	0.048	0.002	0.000
	7	4.384	0.099	0.446	0.089	0.000	0.075	0.000	0.566	0.061	0.054
	8	2.664	0.066	0.437	0.418	0.000	0.002	0.008	0.037	0.003	0.002
	9	2.840	0.537	0.215	0.255	0.003	0.009	0.004	0.138	0.036	0.060
	14	0.779	0.122	0.000	0.238	0.002	0.000	0.002	0.012	0.002	0.001
2015	2	0.381	0.038	0.000	0.047	0.000	0.000	0.002	0.006	0.000	0.000
	4	7.610	0.540	0.485	0.464	0.003	0.052	0.003	0.221	0.009	0.000
	5	14.744	0.746	0.861	0.081	0.000	0.010	0.000	0.033	0.005	0.000
	6	16.580	0.094	0.558	0.913	0.000	0.004	0.000	0.050	0.004	0.000
	7	6.309	0.318	2.922	0.138	0.000	0.032	0.014	0.710	0.175	0.021
	8	5.576	0.040	0.687	0.071	0.000	0.001	0.001	0.081	0.013	0.002
	9	3.654	0.125	0.364	0.287	0.000	0.023	0.024	0.188	0.030	0.012
	14	0.460	0.178	0.000	0.015	0.000	0.000	0.005	0.012	0.000	0.000

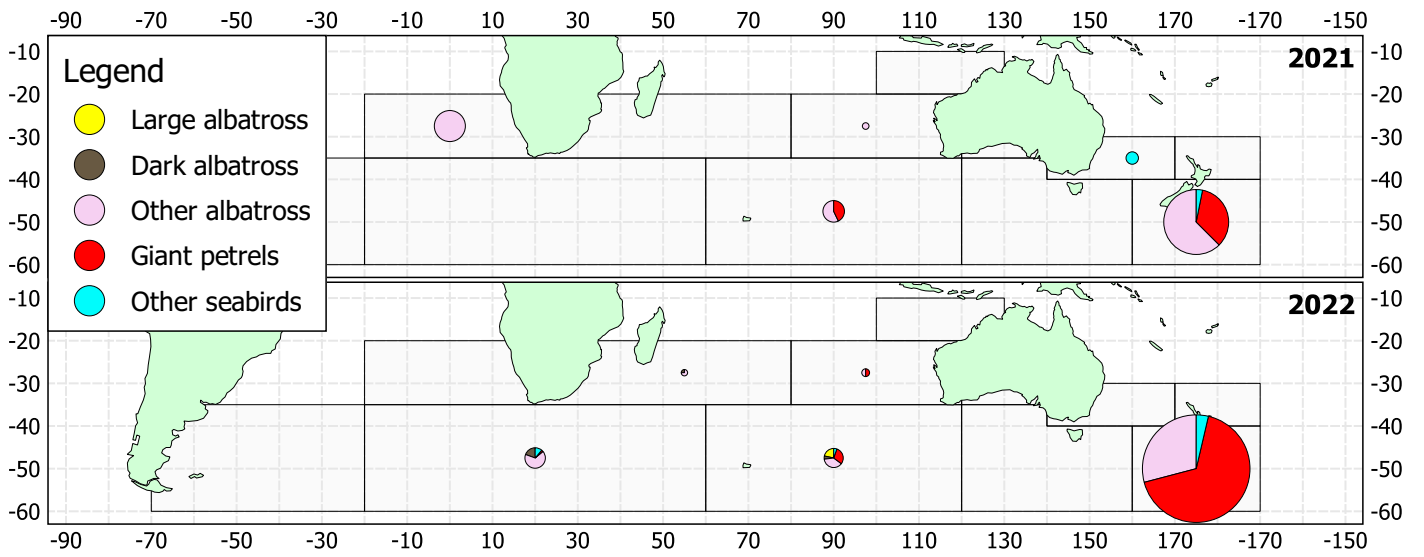
	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2016	2	0.297	0.033	0.000	0.102	0.000	0.000	0.001	0.004	0.000	0.000
	4	1.173	0.248	0.028	0.428	0.000	0.048	0.000	0.248	0.000	0.000
	5	21.051	1.041	2.226	0.958	0.004	0.008	0.000	0.066	0.000	0.000
	6	32.040	0.446	2.463	0.108	0.000	0.023	0.000	0.731	0.092	0.000
	7	2.208	0.088	0.703	0.106	0.001	0.028	0.003	0.715	0.123	0.001
	8	2.036	0.078	0.333	0.246	0.000	0.011	0.063	0.138	0.019	0.000
	9	1.346	0.038	0.122	0.195	0.000	0.008	0.010	0.170	0.038	0.042
	14	1.144	0.224	0.000	0.064	0.002	0.000	0.001	0.002	0.000	0.000
2017	2	0.657	0.044	0.000	0.075	0.000	0.000	0.000	0.002	0.000	0.003
	4	1.223	0.150	0.000	0.193	0.000	0.000	0.000	0.021	0.000	0.000
	5	31.473	0.992	2.427	0.268	0.007	0.000	0.000	0.020	0.013	0.000
	6	29.376	0.281	2.125	0.313	0.000	0.016	0.000	0.227	0.063	0.000
	7	2.111	0.067	0.140	0.154	0.000	0.002	0.000	0.037	0.007	0.000
	8	2.332	0.036	0.857	0.135	0.000	0.006	0.002	0.020	0.002	0.000
	9	2.798	0.519	0.272	0.517	0.000	0.000	0.000	0.002	0.000	0.000
	14	0.713	0.265	0.000	0.158	0.000	0.000	0.000	0.002	0.001	0.000
2018	2	0.376	0.040	0.000	0.029	0.000	0.000	0.000	0.003	0.000	0.000
	4	3.555	0.092	0.067	0.220	0.000	0.006	0.000	0.086	0.012	0.000
	5	29.498	1.244	0.971	0.311	0.006	0.000	0.000	0.006	0.006	0.006
	6	51.528	0.418	3.408	0.405	0.000	0.039	0.000	0.888	0.118	0.000
	7	5.406	0.029	0.259	0.259	0.000	0.019	0.000	0.134	0.038	0.000
	8	3.321	0.056	0.218	0.041	0.000	0.004	0.004	0.023	0.008	0.001
	9	2.117	0.157	0.464	0.507	0.000	0.007	0.019	0.145	0.051	0.004
	14	0.560	0.180	0.000	0.040	0.000	0.002	0.003	0.000	0.002	0.000
	15	20.759	5.884	0.000	0.344	0.029	0.000	0.000	0.000	0.000	0.000
2019	2	0.349	0.050	0.036	0.004	0.000	0.000	0.001	0.004	0.001	0.000
	4	3.483	0.196	0.061	0.503	0.000	0.012	0.006	0.325	0.006	0.000
	5	14.039	0.313	0.384	0.313	0.000	0.000	0.000	0.000	0.007	0.000
	6	58.123	0.410	2.653	0.555	0.000	0.000	0.000	0.470	0.157	0.012
	7	1.925	0.148	0.497	0.224	0.001	0.044	0.001	0.919	0.151	0.008
	8	2.172	0.071	0.555	0.118	0.001	0.002	0.002	0.052	0.018	0.006
	9	3.123	0.150	0.555	0.694	0.000	0.024	0.041	0.167	0.131	0.003
	14	0.411	0.050	0.011	0.102	0.000	0.000	0.000	0.003	0.015	0.000
	15	18.437	1.888	0.123	2.871	0.031	0.000	0.000	0.000	0.000	0.000
2020	2	0.585	0.196	0.020	0.098	0.000	0.000	0.001	0.007	0.000	0.000
	4	1.621	0.068	0.000	0.777	0.000	0.000	0.000	0.000	0.000	0.000
	5	13.866	0.338	0.453	0.424	0.007	0.000	0.000	0.007	0.000	0.000
	6	22.643	0.066	0.954	0.080	0.000	0.000	0.000	0.013	0.040	0.000
	7	2.448	0.139	1.158	0.015	0.000	0.008	0.000	0.046	0.046	0.000
	8	1.162	0.166	0.142	0.278	0.000	0.003	0.000	0.020	0.000	0.014
	9	3.170	0.094	1.095	0.254	0.000	0.021	0.021	0.061	0.056	0.010
	14	0.275	0.054	0.003	0.061	0.001	0.000	0.000	0.004	0.000	0.000
	15	9.044	1.109	0.000	1.920	0.341	0.000	0.000	0.256	0.021	0.000

Observed bird capture rates for the SBT longline fishery

Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)

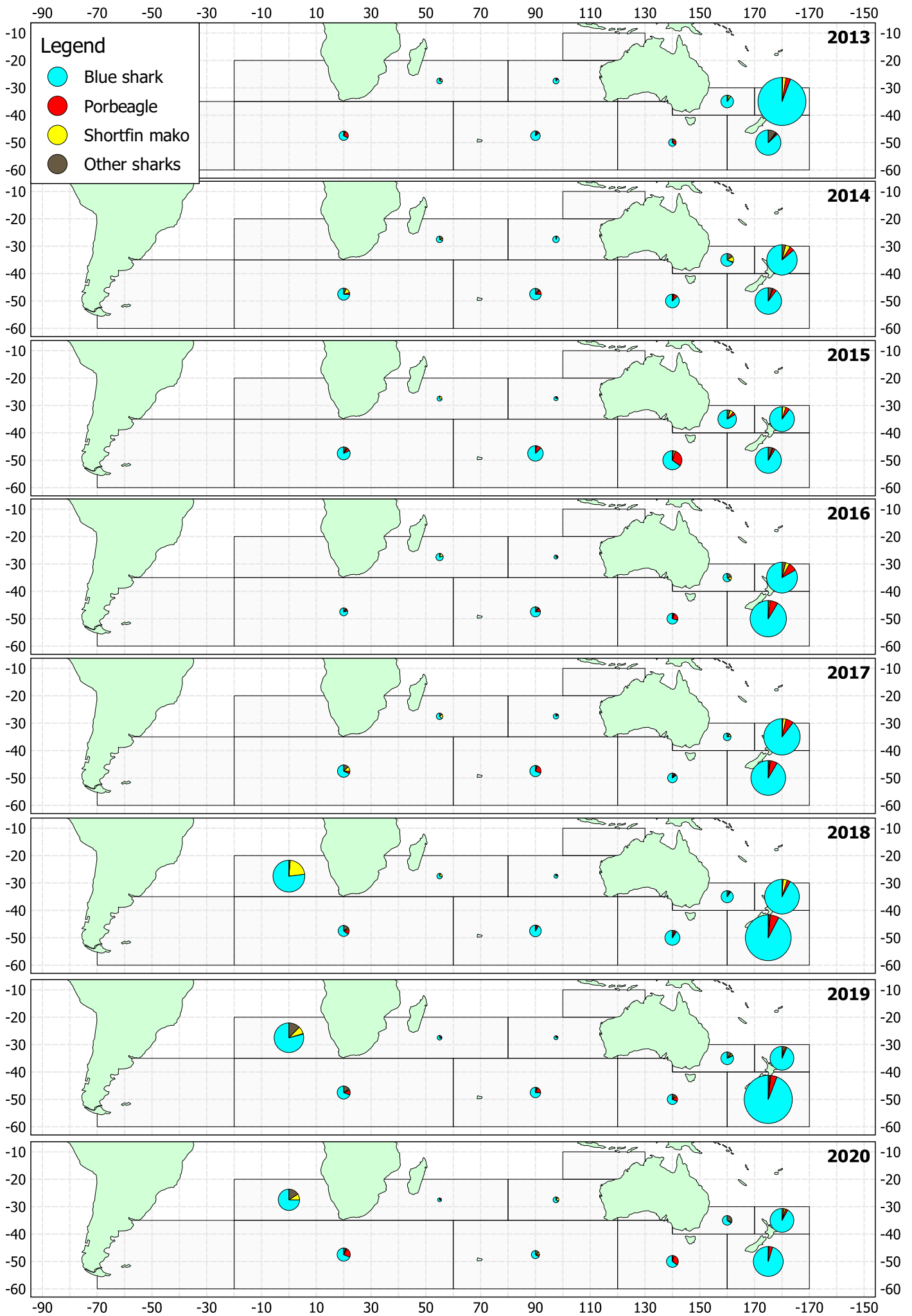


Observed bird capture rates for the SBT longline fishery

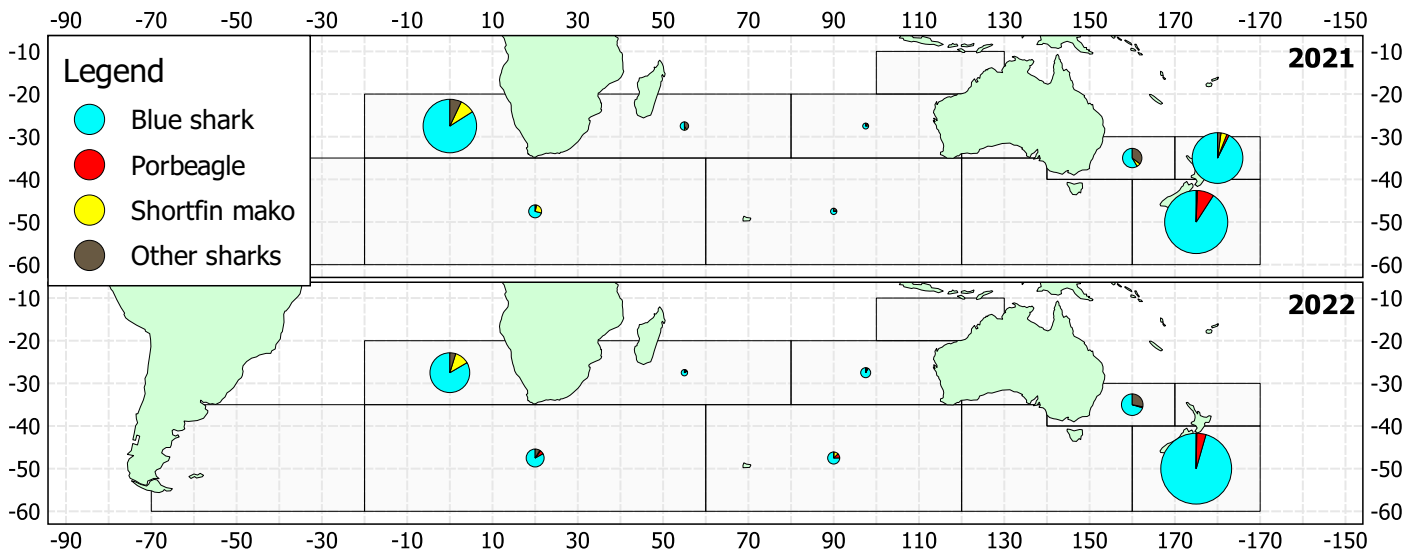


Observed shark capture rates for the SBT longline fishery

Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)



Observed shark capture rates for the SBT longline fishery

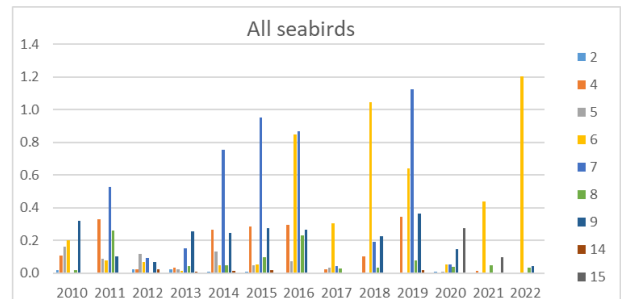
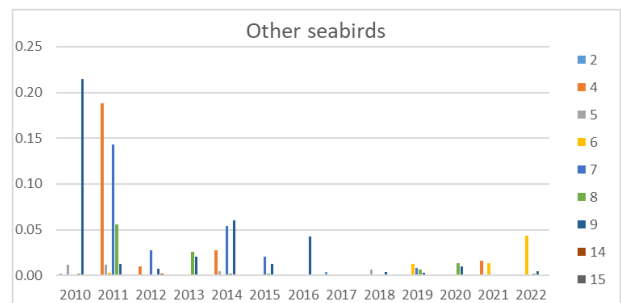
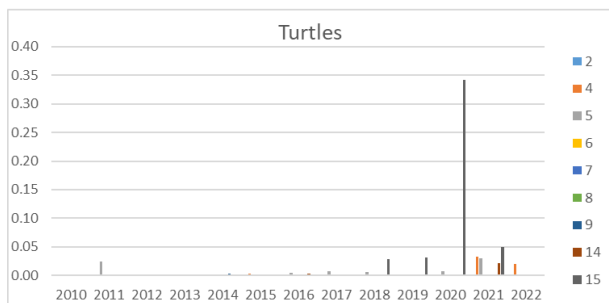
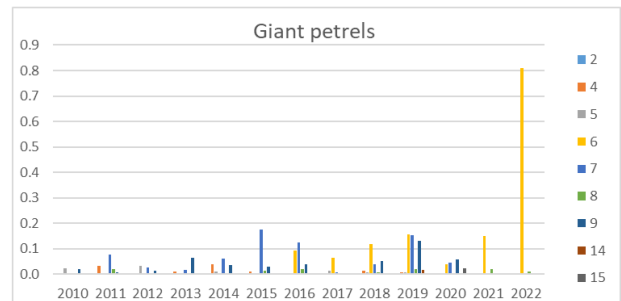
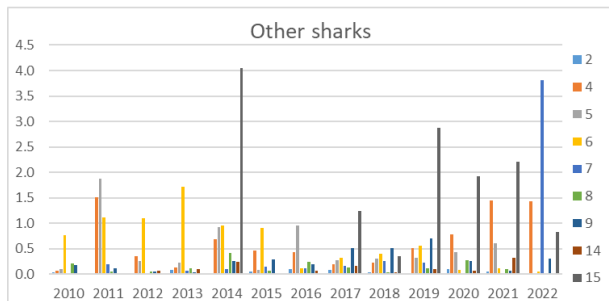
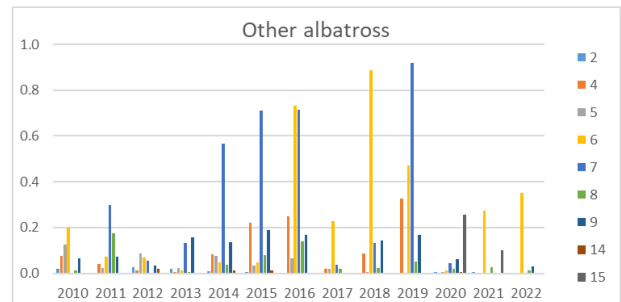
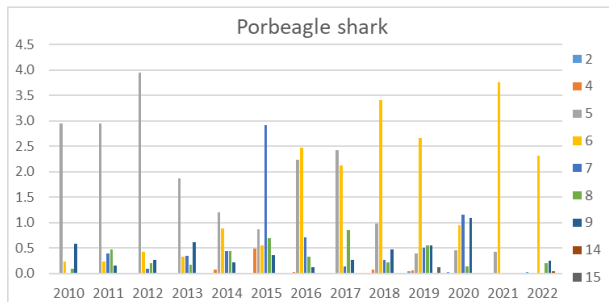
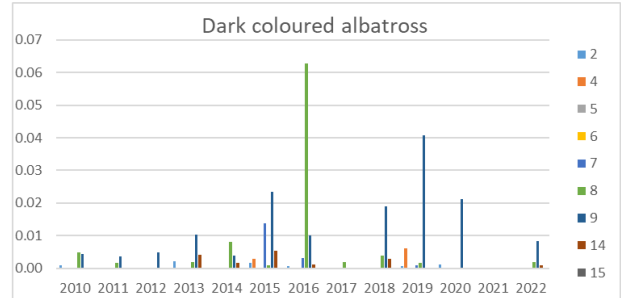
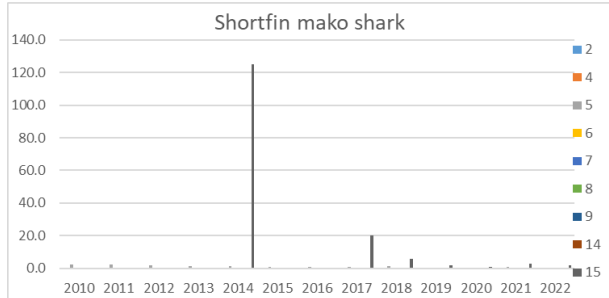
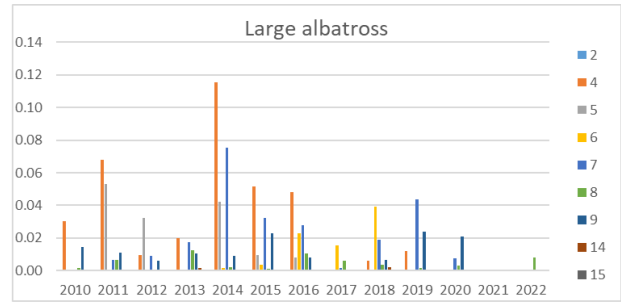
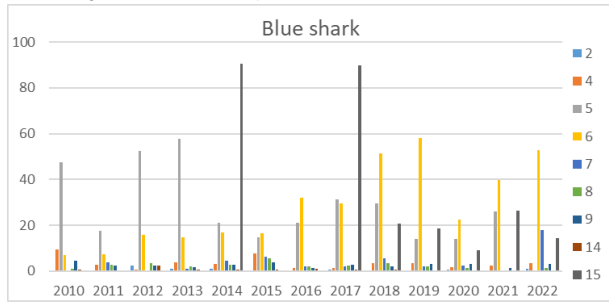


Observed capture rates (numbers per 1000 hooks) with proportions of observed mortalities (red), observed live releases (green) and unspecified life status (grey) for the SBT longline fishery by year and species/species group. Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)



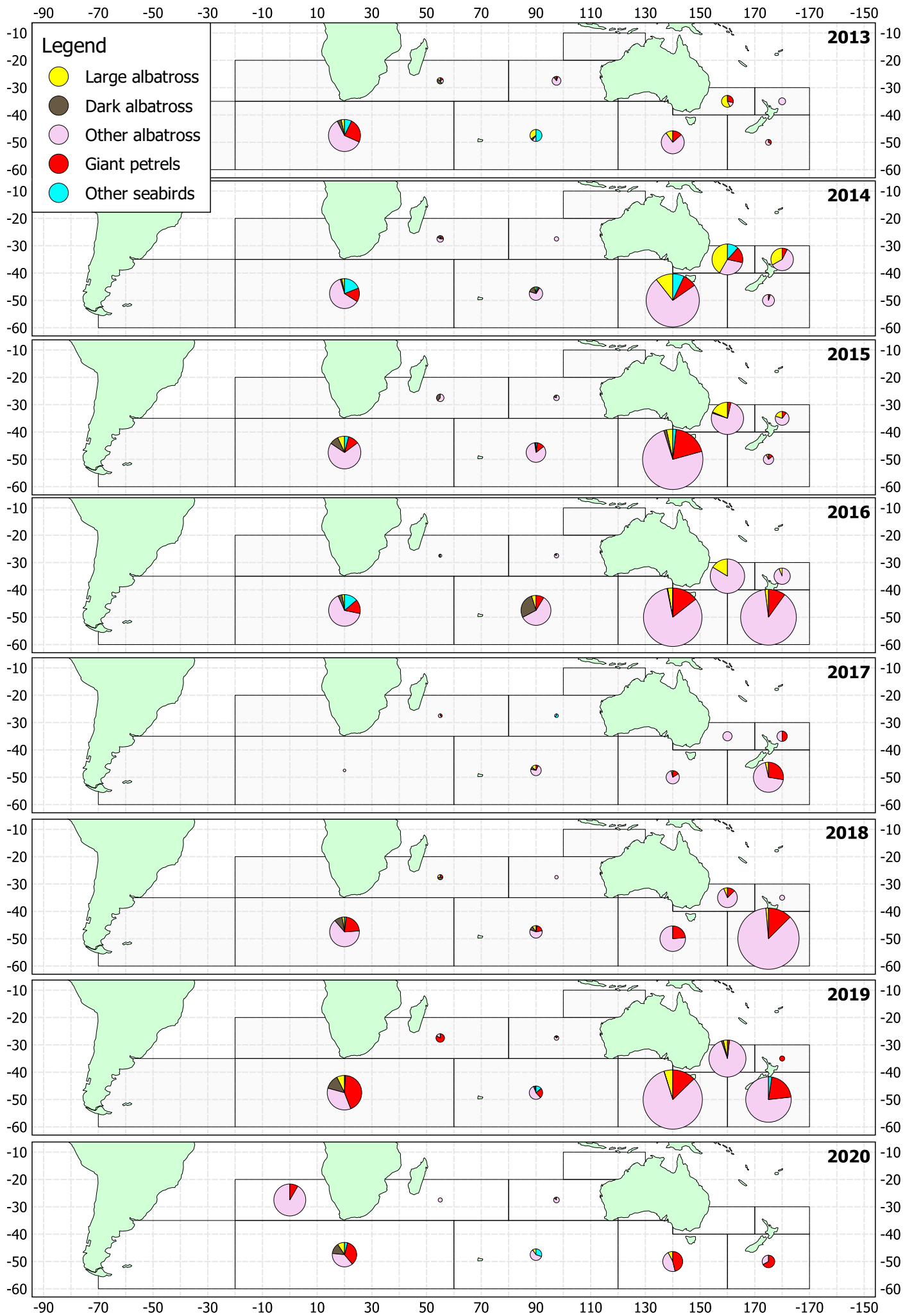
Attachment Q

Observed catch rates for the SBT longline fishery by year, statistical area and species/species group. Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)

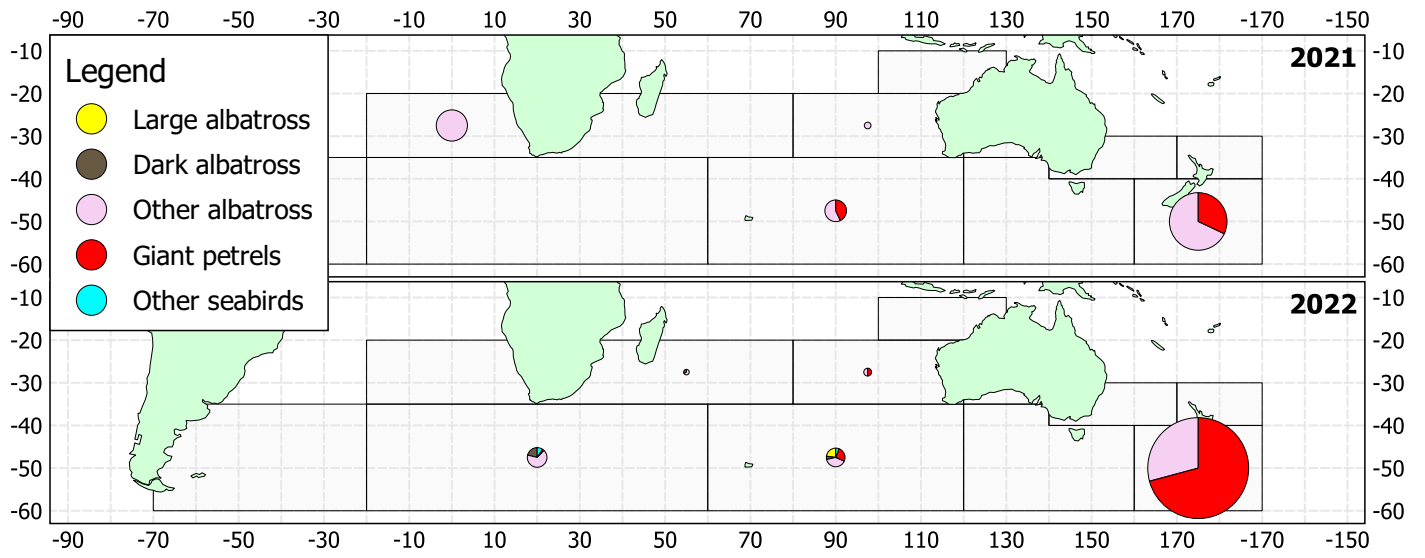


Observed bird mortality rates for the SBT longline fishery

Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)

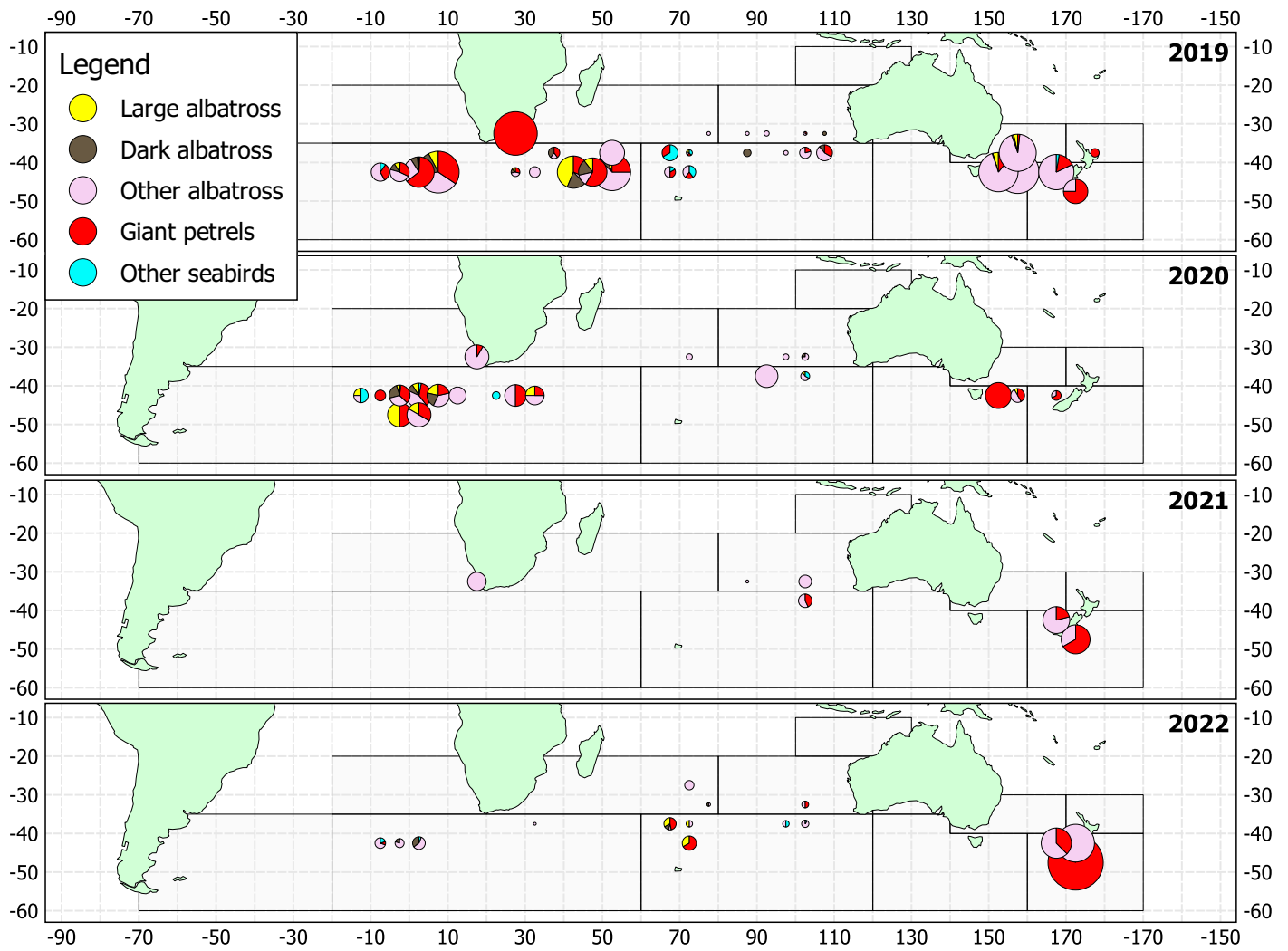


Observed bird mortality rates for the SBT longline fishery



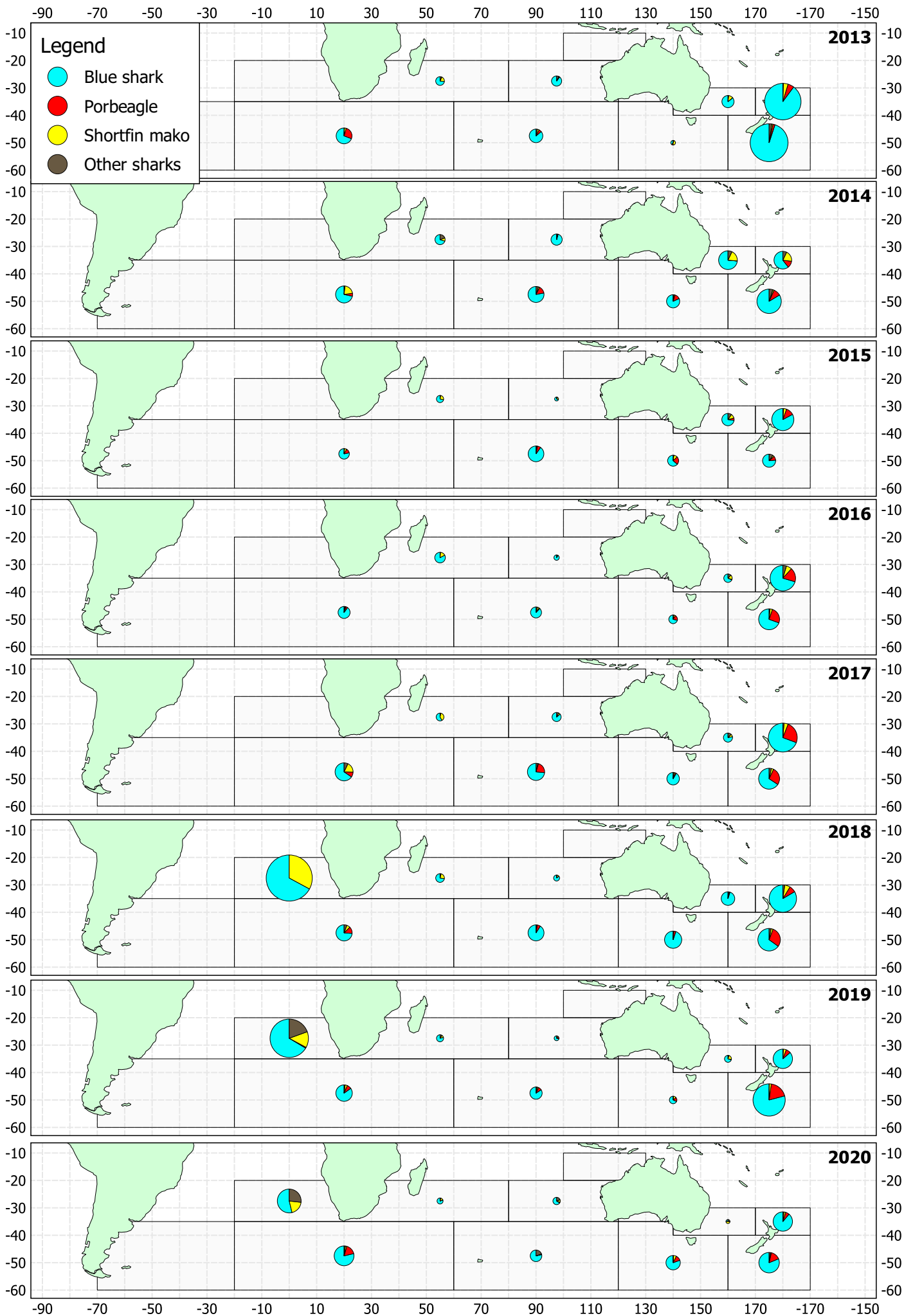
Observed bird mortality rates for the SBT longline fishery (5x5)

Note that observer coverage was 0 for some Members for 2020-2022 (see table 2 of main document)

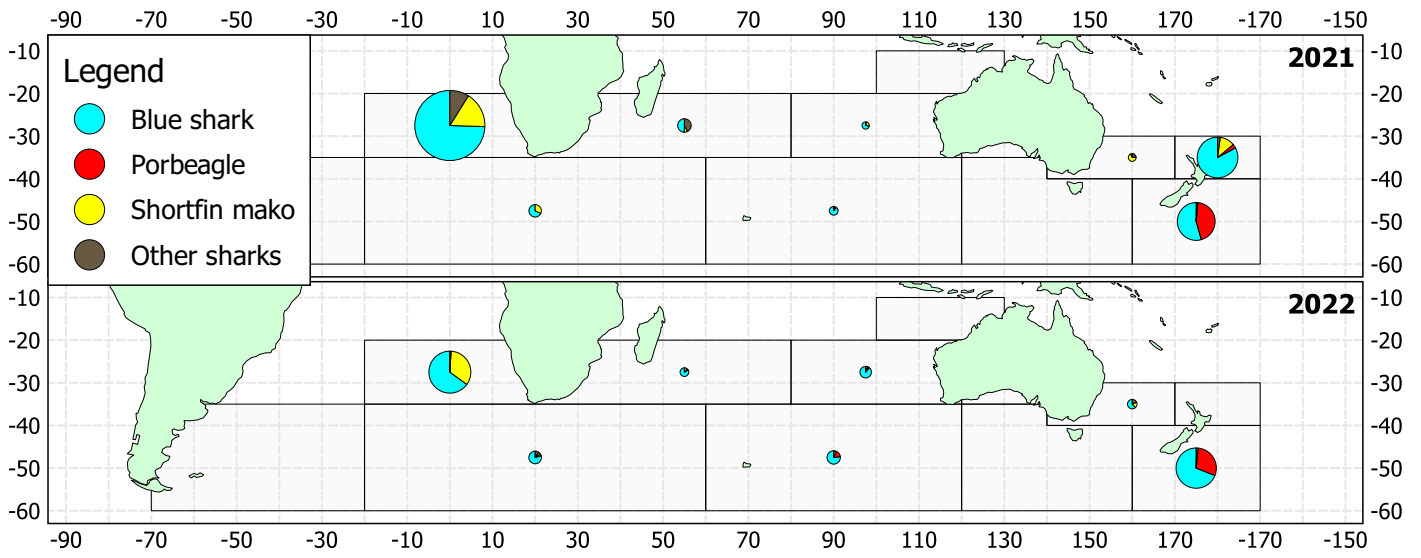


Observed shark mortality rates for the SBT longline fishery

Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)

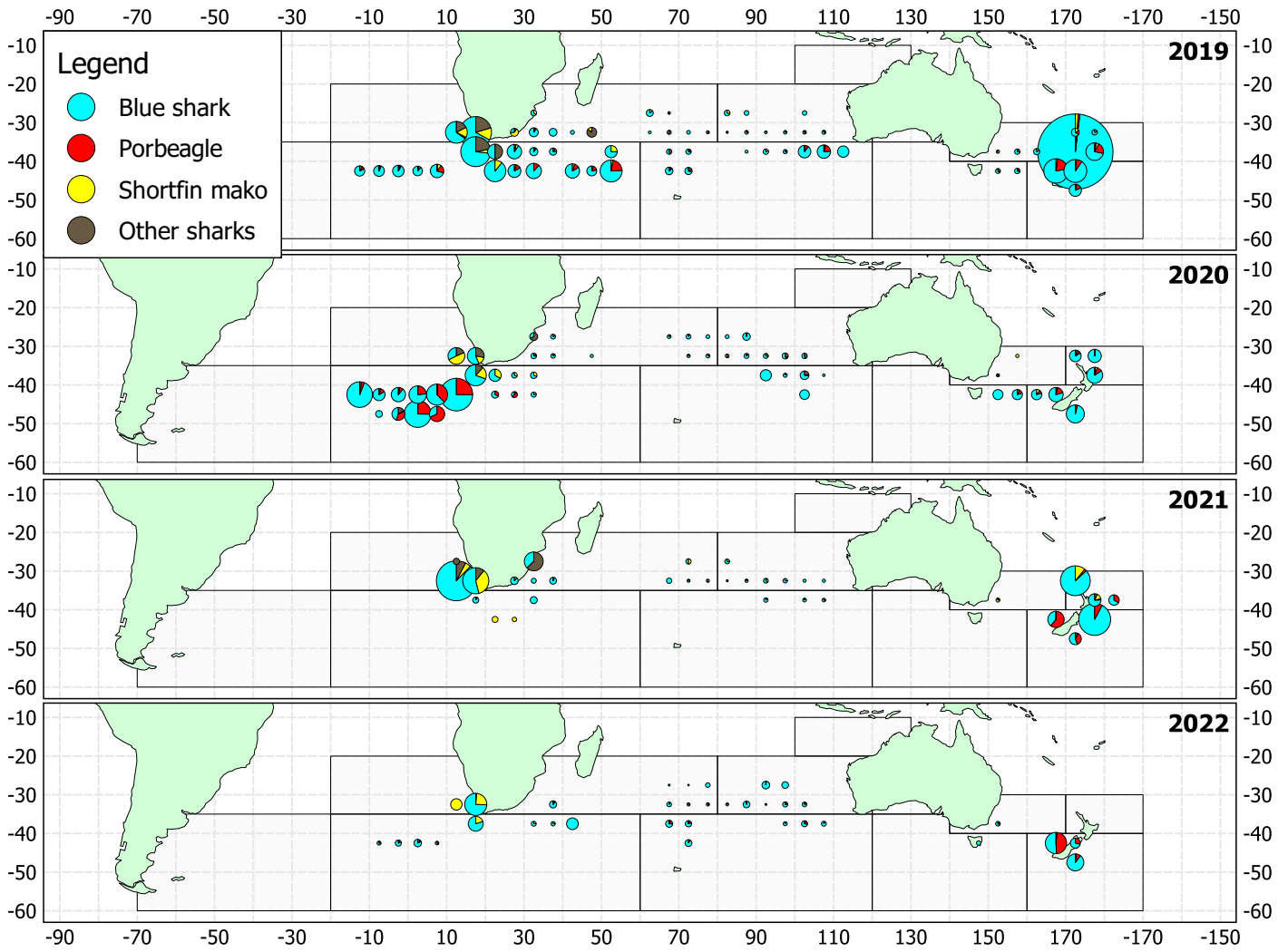


Observed shark mortality rates for the SBT longline fishery



Observed shark mortality rates for the SBT longline fishery (5x5)

Note that observer coverage was 0 for some Members for 2020-2022 (see table 2 of main document)



Estimated total mortalities for the SBT longline fishery by year, statistical area and species/species group. Note that the low numbers for 2017, 2020, 2021, and 2022 are at least partly due to the lack of observer data from one or more Members (see Table 2 and preceding text).

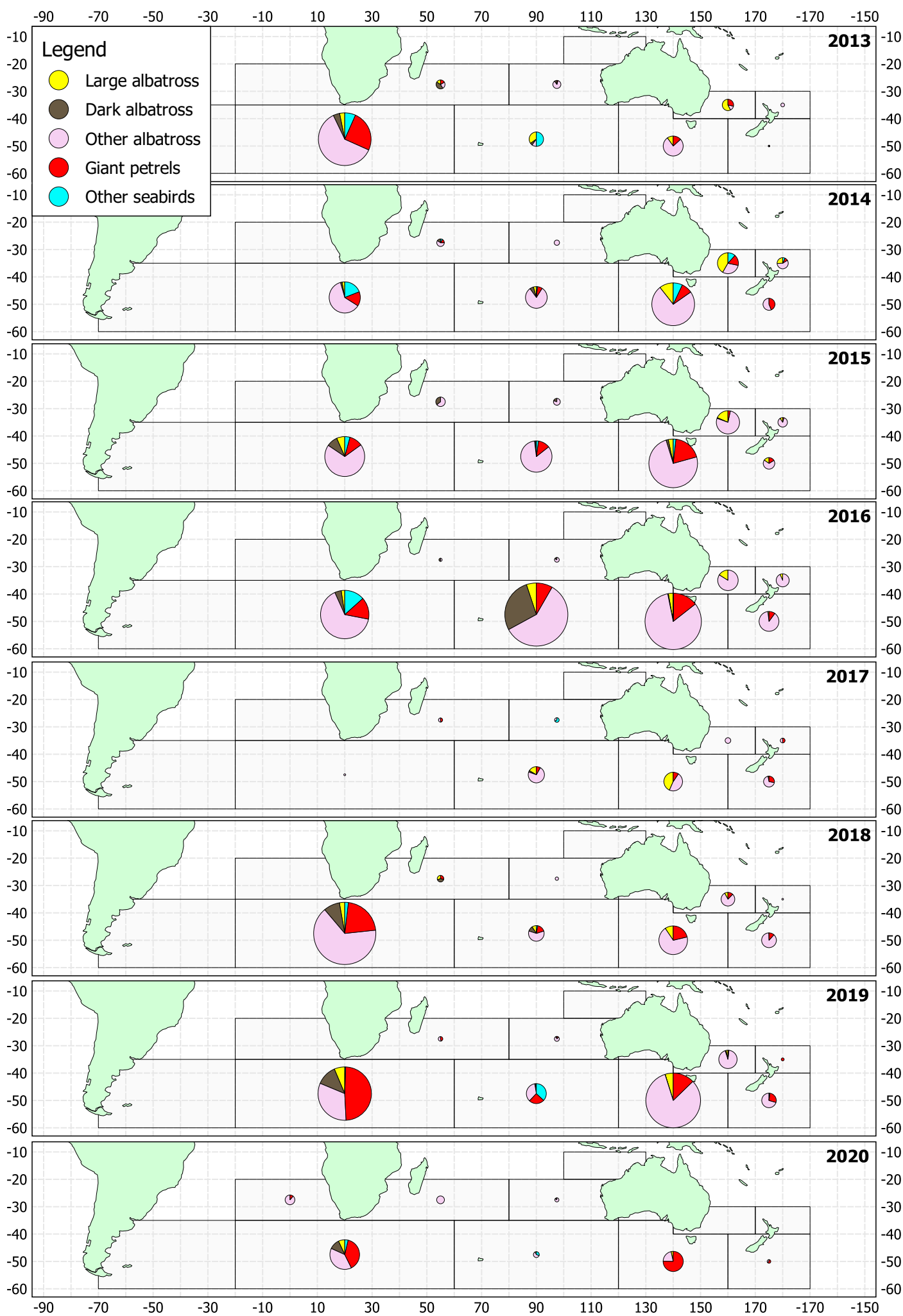
Year	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other Sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2010	2	2,533	175	0	432	0	0	6	142	6	6
	4	3,448	664	0	132	0	255	0	637	0	0
	5	14,326	732	1,666	22	0	0	0	100	22	11
	6	11,157	102	313	34	0	0	0	498	0	0
	8	4,584	131	449	185	0	10	24	80	32	8
	9	24,074	965	3,703	1,793	0	167	145	682	568	2,892
	14	1,987	1,286	0	0	0	0	0	0	0	0
	2010 Total	62,109	4,055	6,131	2,598	0	432	175	2,139	628	2,917
2011	4	5,681	1,248	0	539	0	331	0	204	153	820
	5	12,361	2,108	2,461	273	0	172	0	60	0	20
	6	3,204	24	81	81	0	0	0	14	1	0
	7	4,526	311	298	81	0	13	0	596	149	271
	8	6,281	66	841	0	0	19	4	480	57	156
	9	20,966	1,702	846	566	0	80	22	559	51	87
	2011 Total	53,019	5,459	4,527	1,540	0	615	26	1,913	411	1,354
2012	2	4,423	30	0	0	0	0	0	48	0	0
	4	363	892	0	77	0	37	0	37	12	37
	5	20,936	1,109	1,393	22	0	33	0	88	33	0
	6	28,514	183	1,311	106	0	0	0	42	0	0
	7	890	111	44	0	0	22	0	111	66	66
	8	8,351	26	89	17	0	0	0	0	0	0
	9	16,418	1,180	4,010	133	0	62	73	393	177	65
	14	2,241	168	0	0	0	0	0	23	2	2
2012 Total	82,136	3,699	6,847	355	0	154	73	742	290	170	
2013	2	2,838	79	2	210	0	0	7	59	3	0
	4	931	501	4	17	0	79	0	19	39	0
	5	10,652	435	703	60	0	0	0	15	0	0
	6	5,090	58	92	119	0	0	0	2	1	0
	7	226	255	70	28	0	42	0	326	56	0
	8	7,081	255	403	235	0	77	11	22	0	110
	9	15,598	686	3,004	136	0	93	118	1,810	742	196
	14	3,231	274	0	356	0	14	36	21	14	0
2013 Total	45,647	2,543	4,278	1,161	0	305	172	2,274	855	306	
2014	2	6,279	165	18	103	0	0	0	30	0	0
	4	4,253	1,117	7	366	0	195	0	140	78	54
	5	2,913	812	635	169	0	34	0	77	12	9
	6	4,232	388	2,097	270	0	0	0	86	67	0
	7	3,248	103	551	64	0	207	0	1,445	162	136
	8	15,147	664	3,091	847	0	22	28	406	37	8
	9	10,139	2,502	627	1,018	0	29	17	638	155	197
	14	3,164	115	0	981	0	0	10	36	10	5
	15	2,246	15,262	0	0	0	0	0	0	0	0
2014 Total	51,621	21,128	7,026	3,818	0	487	55	2,858	521	409	
2015	2	552	193	0	38	0	0	10	40	0	0
	4	2,049	345	173	265	0	106	6	444	19	0
	5	8,232	407	1,164	107	0	9	0	83	4	0
	6	2,359	267	879	174	0	22	0	97	23	0
	7	1,780	293	651	57	0	82	38	1,882	478	44
	8	15,574	359	1,452	217	0	8	12	875	127	23
	9	8,470	401	870	110	0	112	152	1,178	184	71
	14	1,476	244	0	61	0	0	34	62	0	0
2015 Total	40,492	2,509	5,189	1,029	0	339	252	4,660	835	138	

Year	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other Sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2016	2	1,061	109	0	4	0	0	4	20	0	0
	4	609	156	15	109	0	72	0	375	0	0
	5	6,012	643	1,435	695	0	12	0	168	0	0
	6	1,353	75	494	25	0	8	0	369	42	0
	7	1,745	151	492	53	0	94	12	2,796	484	4
	8	10,209	788	563	154	0	216	1,182	2,495	353	0
	9	15,015	962	666	281	0	59	109	1,629	366	334
	14	2,792	291	0	42	0	0	5	5	0	0
	2016 Total	38,796	3,175	3,665	1,363	0	461	1,313	7,858	1,245	338
2017	2	3,809	284	0	329	0	0	0	7	0	15
	4	872	105	0	140	0	0	0	34	0	0
	5	3,988	247	1,427	78	0	0	0	12	12	0
	6	1,279	26	560	69	0	4	0	87	35	0
	7	5,923	221	212	106	0	161	0	175	35	0
	8	18,424	199	6,310	416	0	47	9	203	23	0
	9	6,818	3,438	1,304	463	0	0	0	4	0	0
	14	1,084	225	0	79	0	0	0	10	9	0
	15	8,384	4,236	0	0	0	0	0	0	0	0
2017 Total	50,581	8,981	9,813	1,680	0	212	9	532	114	15	
2018	2	1,661	233	0	100	0	0	0	12	0	0
	4	2,894	61	61	25	0	16	0	159	24	0
	5	6,055	311	540	209	0	0	0	3	0	0
	6	690	33	374	27	0	1	0	204	27	0
	7	11,298	47	467	93	0	82	0	606	186	0
	8	13,839	176	1,050	124	0	24	28	156	45	7
	9	19,244	1,380	3,551	1,206	0	114	347	2,704	886	76
	14	2,672	393	0	87	0	14	19	0	13	0
	15	5,204	2,548	0	0	0	0	0	0	0	0
2018 Total	63,556	5,181	6,043	1,870	0	251	394	3,844	1,181	83	
2019	2	795	161	151	3	0	0	2	21	3	0
	4	255	85	6	19	0	12	6	333	6	0
	5	1,679	141	315	37	0	0	0	0	9	0
	6	3,576	69	716	11	0	0	0	159	62	4
	7	1,280	223	323	33	0	152	3	2,629	406	0
	8	8,239	260	512	253	0	5	6	150	107	156
	9	16,450	1,094	1,831	394	0	194	375	975	1,480	16
	14	2,132	139	0	67	0	0	0	12	10	0
	15	3,170	772	15	871	0	0	0	0	0	0
2019 Total	37,576	2,944	3,869	1,688	0	363	392	4,279	2,083	176	
2020	2	1,017	202	35	237	0	0	3	15	0	0
	4	16	13	0	16	0	0	0	0	0	0
	5	2,983	94	257	59	7	0	0	0	0	0
	6	1,791	29	241	26	0	0	0	5	9	0
	7	3,911	230	415	15	0	15	0	92	325	0
	8	4,812	10	8	242	0	3	0	23	0	11
	9	13,116	675	2,844	423	0	65	106	367	366	34
	14	1,508	296	14	45	0	0	0	65	0	0
	15	926	238	0	573	0	0	0	90	11	0
2020 Total	30,080	1,787	3,814	1,636	7	83	109	657	711	45	

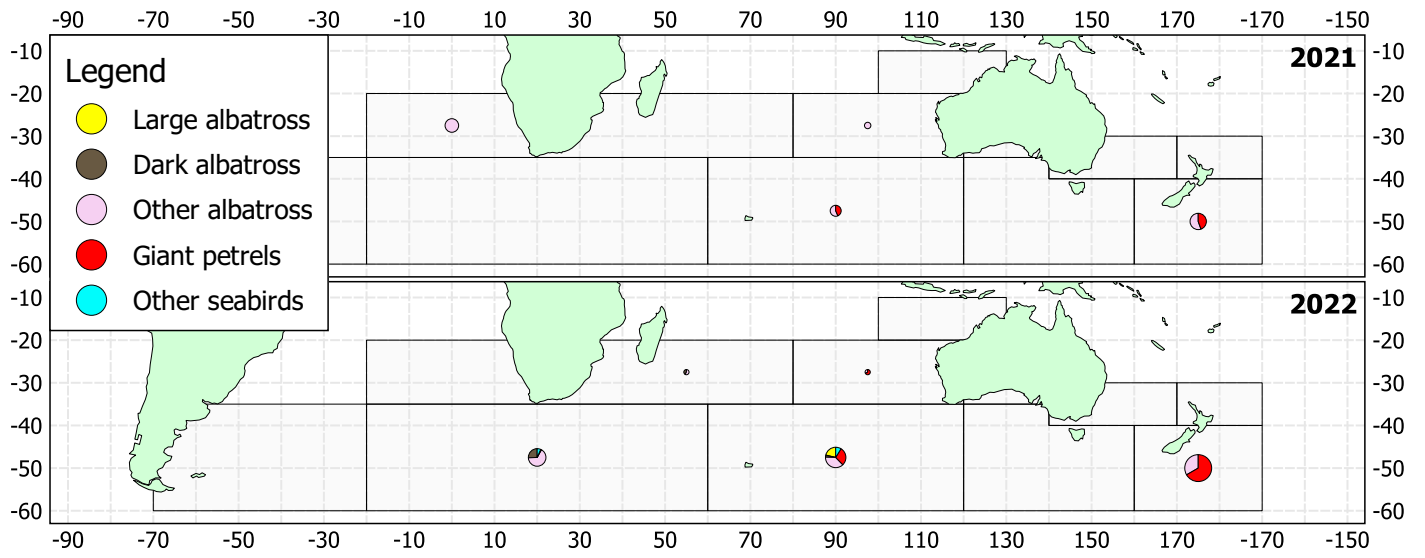
Year	Statistical area	Blue shark	Shortfin mako shark	Porbeagle	Other Sharks	Turtles	Large albatross	Dark coloured albatross	Other albatross	Giant petrels	Other seabirds
2021	2	562	146	0	36	0	0	0	18	0	0
	4	6	58	0	3	0	0	0	0	0	0
	5	1,709	274	53	74	0	0	0	0	0	0
	6	1,075	13	597	23	0	0	0	65	52	0
	8	211	14	0	7	0	0	0	30	23	0
	9	254	12	0	0	0	0	0	0	0	0
	14	1,386	220	0	225	0	0	0	0	0	0
	15	2,744	1,022	0	484	0	0	0	81	0	0
	<i>2021 Total</i>	<i>7,947</i>	<i>1,759</i>	<i>650</i>	<i>852</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>194</i>	<i>75</i>	<i>0</i>
2022	2	798	71	89	1	0	0	0	4	8	0
	4	100	30	0	30	0	0	0	0	0	0
	6	1,176	19	525	6	0	0	0	106	212	0
	7	4	0	0	0	0	0	0	0	0	0
	8	2,463	189	443	9	0	39	6	69	53	16
	9	2,836	329	115	186	0	0	35	90	2	9
	14	1,158	140	69	10	0	0	5	7	0	0
	15	760	270	0	11	0	0	0	0	0	0
	<i>2022 Total</i>	<i>9,295</i>	<i>1,048</i>	<i>1,241</i>	<i>253</i>	<i>0</i>	<i>39</i>	<i>46</i>	<i>276</i>	<i>275</i>	<i>25</i>

Estimated total bird mortalities for the SBT longline fishery

Note that observer coverage was 0 for some Members for 2011 and 2020-2022 and South Africa has not provided data for 2010-2011 (see table 2 of main document)

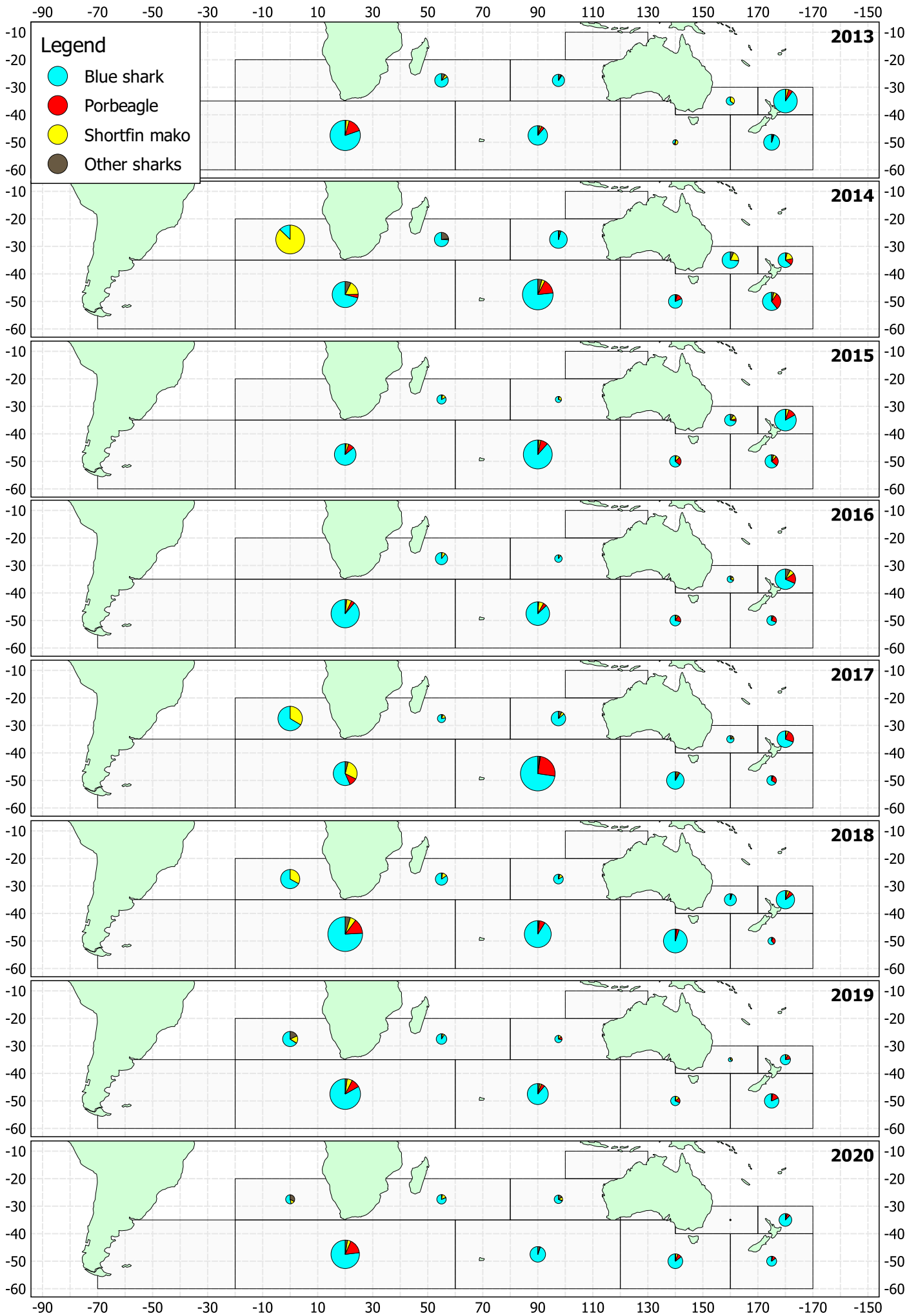


Estimated total bird mortalities for the SBT longline fishery

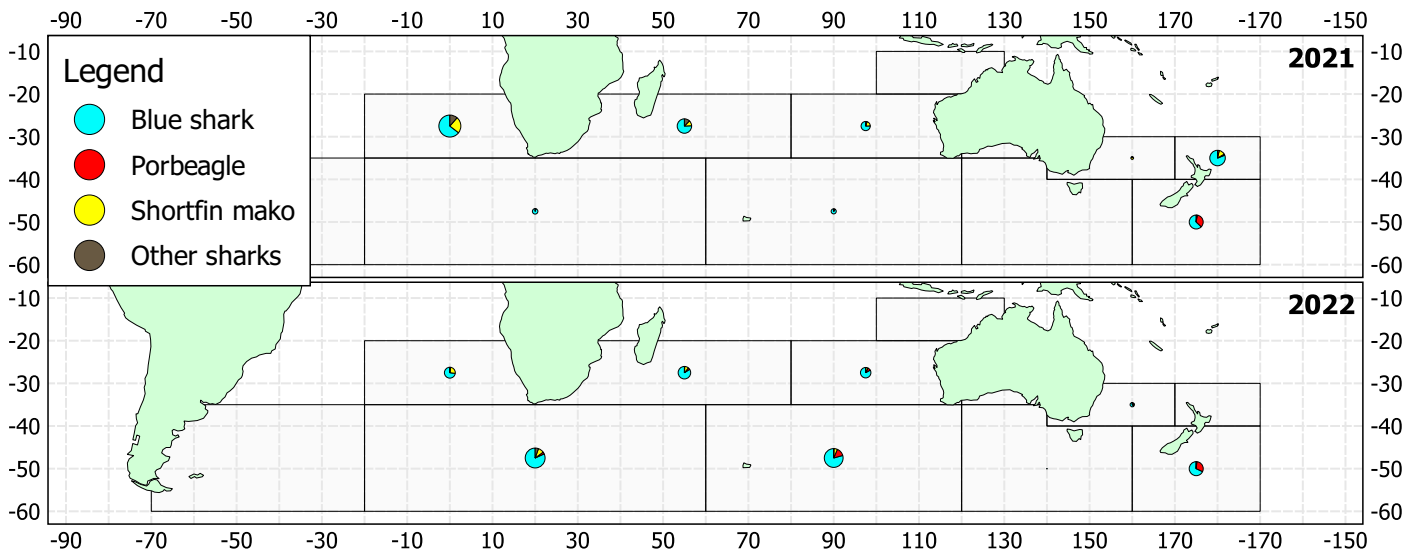


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Estimated total shark mortalities for the SBT longline fishery



Proportions of observed effort with specific mitigation measures by year and CCSBT statistical area.

Year	Statistical Area	Tori pole + Night setting	Tori pole + weighted branchline	Night setting + weighted branchline	Tori pole + night setting + weighted branchline	Tori pole	Night setting	Weighted branchline	None	Single measure (unspecified)	Mix of 2 measures	Other
2014	2	21.2%	78.8%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%
2014	4	6.2%	5.2%	0.0%	0.4%				0.0%	88.3%	0.0%	0.0%
2014	5	5.8%	60.6%	0.0%	0.0%				0.0%	33.6%	0.0%	0.0%
2014	6	99.7%	0.0%	0.0%	0.0%				0.0%	0.3%	0.0%	0.0%
2014	7	17.3%	0.0%	0.0%	0.0%				0.0%	82.7%	0.0%	0.0%
2014	8	29.7%	70.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%
2014	9	3.6%	51.2%	0.0%	33.8%				0.0%	11.4%	0.0%	0.0%
2014	14	0.0%	92.8%	0.0%	7.2%				0.0%	0.0%	0.0%	0.0%
2014	15	0.0%	0.0%	0.0%	100.0%				0.0%	0.0%	0.0%	0.0%
2015	2	59.0%	25.6%	7.5%	7.8%				0.0%	0.0%	0.0%	0.0%
2015	4	1.6%	68.1%	0.0%	3.5%				0.0%	0.0%	26.8%	0.0%
2015	5	8.6%	74.2%	0.0%	0.0%				0.0%	17.2%	0.0%	0.0%
2015	6	99.5%	0.0%	0.0%	0.0%				0.0%	0.5%	0.0%	0.0%
2015	7	0.3%	31.5%	0.0%	0.0%				0.0%	0.0%	68.2%	0.0%
2015	8	42.7%	15.2%	0.0%	10.3%	0.0%	0.0%	0.0%	0.0%	0.0%	31.8%	0.0%
2015	9	11.6%	39.8%	0.0%	5.8%	0.0%	0.0%	0.0%	0.0%	0.0%	42.8%	0.0%
2015	14	43.6%	10.6%	9.0%	36.8%				0.0%	0.0%	0.0%	0.0%
2016	2	48.5%	7.6%	0.0%	43.9%				0.0%	0.0%	0.0%	0.0%
2016	4	18.0%	7.4%	0.0%	9.1%	62.0%	1.7%	0.0%	1.7%	0.0%	0.0%	0.0%
2016	5	39.4%	0.0%	0.0%	0.0%	26.5%	1.5%	0.0%	8.9%	23.7%	0.0%	0.0%
2016	6	83.6%	0.0%	0.0%	0.0%				0.0%	16.4%	0.0%	0.0%
2016	7	15.9%	13.8%	0.0%	4.8%	65.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2016	8	37.2%	3.8%	0.0%	28.0%	31.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2016	9	28.3%	25.6%	0.7%	9.9%	25.3%	3.2%	0.2%	7.0%	0.0%	0.0%	0.0%
2016	14	73.3%	5.9%	0.0%	20.8%				0.0%	0.0%	0.0%	0.0%
2017	2	87.6%	2.2%	0.0%	10.2%				0.0%	0.0%	0.0%	0.0%
2017	4	0.0%	57.3%	0.0%	42.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2017	5	89.5%	0.0%	0.0%	0.0%				0.0%	10.5%	0.0%	0.0%
2017	6	99.3%	0.0%	0.0%	0.0%				0.0%	0.8%	0.0%	0.0%
2017	7	11.1%	45.0%	0.0%	29.7%	14.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2017	8	65.9%	3.2%	0.0%	2.2%	27.4%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%
2017	9	3.0%	90.1%	0.0%	6.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2017	14	52.4%	0.5%	0.0%	47.1%				0.0%	0.0%	0.0%	0.0%
2017	15	0.0%	0.0%	0.0%	100.0%				0.0%	0.0%	0.0%	0.0%
2018	2	91.4%	3.3%	0.6%	4.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	4	19.1%	11.0%	0.0%	29.0%	40.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	5	66.7%	1.2%	0.0%	25.8%	1.8%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	6	68.9%	0.0%	0.0%	31.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	7	31.2%	0.9%	0.0%	0.0%	68.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	8	59.8%	0.0%	0.0%	0.0%	40.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	9	22.7%	42.3%	0.0%	13.8%	21.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2018	14	74.7%	0.8%	0.0%	23.6%	0.0%	0.8%	0.0%	0.2%	0.0%	0.0%	0.0%
2018	15	12.0%	0.0%	0.0%	88.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	2	71.3%	18.1%	0.0%	5.0%	5.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	4	18.1%	22.3%	0.0%	21.2%	38.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	5	28.4%	1.3%	5.2%	5.2%	0.4%	10.8%	16.2%	0.0%	0.0%	0.0%	32.4%
2019	6	0.0%	1.0%	1.1%	98.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	7	18.9%	14.2%	0.0%	4.0%	63.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	8	46.8%	22.1%	6.0%	0.3%	24.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	9	6.6%	29.4%	0.3%	10.5%	48.0%	0.6%	0.0%	0.0%	0.0%	0.0%	1.5%
2019	14	40.8%	30.9%	9.6%	11.2%	7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2019	15	17.3%	0.0%	43.1%	39.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	2	92.5%	4.7%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	4	0.0%	37.9%	0.0%	62.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	5	19.8%	6.7%	16.6%	21.5%	0.6%	0.0%	34.8%	0.0%	0.0%	0.0%	0.0%
2020	6	0.0%	0.7%	9.4%	89.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	7	0.0%	31.1%	0.0%	68.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	8	71.7%	3.6%	0.0%	0.8%	23.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	9	57.6%	13.0%	0.6%	5.4%	23.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	12	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	14	53.7%	20.0%	0.0%	11.1%	13.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
2020	15	7.0%	0.0%	34.6%	51.5%	0.0%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%

