CCSBT-CC/2510/05 Rev2

Annual Report on Members' implementation of ERS measures and performance with respect to ERS

Introduction

Paragraph 8 of the Resolution to Align CCSBT's Ecologically Related Species (ERS) measures with those of other tuna RFMOs requires that:

> "*The Secretariat shall annually present a report to the CCSBT Compliance Committee on the implementation of the ERS Measures, for the sole purpose of the provision of information for Members and Cooperating Non-Members*".

In addition, the Report of CCSBT 25 specifies:

> *"That ERS is to remain a standing item on the Annual Meeting agenda, and the Secretariat is to provide annual reports on Members' performance with respect to ERS";*

and clarifies that:

> *"the report provided by the Secretariat would be a simple report of numbers and species by Member for the past 3 years, derived from Members annual reports and submitted ERS data, and did not require additional submission from Members."*

The two required reports are interrelated, so the Secretariat compiles the contents for both reports into this single paper. The paper is organised as follows:

(1) Implementation of ERS Measures
   a) Observer Coverage
   b) Usage of seabird mitigation measures
   c) Data submission
   d) Participation and reporting to ERSWG meetings
   e) Annual reports to the Compliance Committee and the Extended Commission

(2) Performance
   a) ERS mortality rate
   b) Total ERS mortality

Most of the information provided in this paper originates from data provided in the CCSBT's ERSWG Data Exchange (EDE). The EDE is defined to include all fishing effort by authorised vessels[1] for shots or sets where southern bluefin tuna (SBT) was either targeted or caught.

[1] Authorised vessels are vessels on the CCSBT authorised list of vessels during the relevant calendar year.

(1) Implementation of ERS Measures

a) Observer Coverage

The CCSBT Scientific Observer Program Standards specifies that the CCSBT Scientific Observer Program will cover the fishing activity of CCSBT Members and Cooperating Non-Members wherever southern bluefin tuna are targeted or are a significant bycatch. The Standards also specify that the Program will have a target observer coverage of 10% for catch and effort monitoring for each fishery and that the observer coverage should therefore be representative of different vessel-types in distinct areas and times.

The scientific observer coverage (observed hooks / total hooks expressed as a percent) by Member, gear, fleet and CCSBT Statistical Area for each of the last three calendar years is shown at **Attachment 1**. With the exception of Indonesia and New Zealand, all Members achieved the 10% target across all areas in 2024. New Zealand transitioned to electronic monitoring in 2024 but did not provide information to allow the Secretariat to determine the percentage of effort and catch that was observed. There are no figures for the European Union (EU) because the EU reported that it had no vessels targeting or capturing SBT during the three years in question.

Indonesia has never reached the target observer coverage. Furthermore, Indonesia's data is for its entire longline fleet, not just shots that targeted or caught SBT. Therefore, Indonesia's data is not directly comparable with data from the other Members.

The CCSBT's Effectiveness of Seabird Mitigation Measures Technical Group (SMMTG) recommended that spatial-temporal representativeness is an important metric of observer program data and agreed on the method for calculating a measure of "representativeness". A column showing the representativeness of the observer coverage for each Member, fleet and year is also included in **Attachment 1**. A representativeness of 100% means that the target of 10% observer coverage was achieved for all Statistical Areas that were fished, while a representativeness of 50% means that the target observer coverage was only achieved for half of the areas that were fished. Members should note that this indicator does not factor in the varying levels of effort in each area and therefore does not provide an accurate reflection of overall representativeness.

b) Usage of seabird mitigation measures

Attachment 2 shows the proportion of observed effort in Members' longline fleets that used specific mitigation measures for fishing from 2022-2024. This information is subdivided by groupings of Statistical Areas. Within this attachment, "n/a" means that the information is not available for one of the reasons listed below:

- Indonesia has not provided information on its usage of mitigation measures with its EDE data in any year, and even if it had provided such information, its observer coverage is too low to provide robust information;
- Japan had no observer coverage in 2022; and
- New Zealand only provided fisher reported mitigation use for 2024 and is therefore not included in the data.

The data gaps continue to make it challenging to make an overall assessment of trends in mitigation use, however, the Secretariat notes the following:

- Australian reporting includes effort in the Indian Ocean;
- There was a large increase in the use of night setting and weighted branch lines for South Africa; and
- The use of a single mitigation method (primarily tori line) persists in a significant portion of the Taiwanese fleet along with an increase in trips where no mitigation was used.

c) Data submission

The main ERS data that Members are required to provide to the CCSBT are the data specified in the annual ERSWG Data Exchange (EDE), which must be provided by 31 July each year. Table 1 shows Members' compliance with the EDE for the last six years.

Table 1: Members' compliance with the EDE for the last six years. "P" indicates partial compliance and "X" indicates non-compliance or no provision of the information. The last line of the table is not a mandatory requirement.

	AU	EU	ID	JP	KR	NZ	TW	ZA
Data provided as required by the EDE in 2017?	✓	n/a[2]	X	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2018?	✓	n/a[2]	P[3]	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2019?	✓	n/a[2]	P[4]	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2020?	✓	n/a[2]	P[4]	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2021?	✓	n/a[2]	P[4]	✓	✓[5]	✓	✓	✓
Data provided as required by the EDE in 2022?	✓	n/a[2]	P[4]	✓[6]	✓[5]	✓	✓	✓
Data provided as required by the EDE in 2023?	✓	n/a[2]	P[4]	✓[6]	✓	✓	✓	✓
Data provided as required by the EDE in 2024?	✓	n/a[2]	P[4]	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2025?	✓	n/a[2]	X	✓	✓	✓[7]	✓	✓
Data for 2024 provided at species level where this is not a minimum requirement of the EDE[8]?	*P*	*n/a[2]*	✓	-	✓	✓	✓	✓

All Members have complied with the EDE requirements, and some have gone beyond the minimum requirements and have provided ERS data at a species level of resolution in cases where this was not a minimum requirement of the EDE.

Members are also required to submit data similar to the above in national reports to meetings of the ERSWG and to annual meetings of the Compliance Committee and the Extended Commission. However, these data are essentially the same as the EDE requirements or a subset of this information, so are not examined separately in this paper.

d) Participation and reporting to ERSWG meetings

The last three ERSWG meetings were in 2019, 2022, and 2024. Members are encouraged to attend meetings and are required to provide annual reports to these meetings. Table 2 provides information on participation and reporting to these meetings by Members.

Table 2: Participation and reporting to recent ERSWG meetings by Members. "P" indicates partial compliance with the annual report template, and "X" indicates either no participation at the meeting or no annual report submitted.

	AU	EU	ID	JP	KR	NZ	TW	ZA
2019 ERSWG meeting								
Participated at meeting	✓	X	X	✓	✓	✓	✓	X
Submitted annual report to meeting	✓	X	✓	✓	✓	✓	✓	✓
Completeness of annual report	✓	n/a	P	P	P	✓	P	P
2022 ERSWG meeting								
Participated at meeting	✓	X	✓	✓	✓	✓	✓	X
Submitted annual report to meeting	✓	X	✓	✓	✓	✓	✓	X
Completeness of annual report	✓	n/a	P	P	P	✓	P	n/a

[2] The European Union has reported no targeting or catch of SBT in the last three years, so there is no relevant data for it to submit to the EDE.
[3] Indonesia was not able to provide the proportions of observed effort with specific mitigation measures.
[4] Indonesia was not able to provide the proportions of observed effort with specific mitigation measures. Furthermore, Indonesia's total and observed effort were calculated from its entire longline fishery operating in the Indian Ocean instead of just for shots that targeted or caught SBT.
[5] However, Korea did not submit any observer data because it had zero observer coverage in 2020 and 2021.
[6] However, Japan did not submit any observer data because it had zero observer coverage in 2021 and 2022
[7] However, New Zealand did not submit any observer data because it had zero observer coverage in 2024.
[8] The EDE specifies the minimum taxonomic level at which information should be reported. The EDE also states that information should be provided to species level where this is practical.

2024 ERSWG Meeting								
Participated at meeting	✓	X	X	✓	✓	✓	✓	✓
Submitted annual report to meeting	✓	X	✓	✓	✓	✓	✓	✓
Completeness of annual report	✓	n/a	P	✓	P	✓	✓	✓

There was a notable improvement on the completeness of annual reports submitted to the most recent meeting of the ERSWG.

e) Annual reports to the Compliance Committee and the Extended Commission

Members' annual reports to the Compliance Committee and the Extended Commission (Annual CC/EC Report) are required to include information on:

- Whether the IPOA-seabirds[9], IPOA-sharks[10] and the FAO Guidelines to reduce sea turtle mortality have been implemented;
- Whether all current binding and recommendatory measures of ICCAT, IOTC and WCPFC aimed at the protection of ERS from fishing are being complied with;
- Whether data is being collected and reported on ecologically related species in accordance with the requirements of ICCAT, IOTC and WCPFC; and
- A description of the methods used to monitor compliance with bycatch mitigation measures, including the level of coverage and the type of information collected[11].

A summary of the above information reported by Members is provided in Table 3. The table was compiled from the 2024 Annual CC/EC Report because the reports for the 2024 meeting were not available at the time of preparing this paper. The information provided by some Members in the 2024 Annual CC/EC Report was ambiguous, and this has been reflected in the footnotes to items in Table 3.

Table 3: Summary of required information reported by Members in their 2023 Annual CC/EC Reports. "P" indicates partial compliance with the measure and/or report template, "X" indicates non-compliance with the measure and/or report template and "?" indicates that insufficient information was provided to determine compliance.

	AU	EU	ID	JP	KR	NZ	TW	ZA
Implemented IPOA-Seabirds	✓	✓	?[12]	✓	✓	✓	✓	✓
Implemented IPOA-Sharks	✓	✓	✓	✓	✓	✓	✓	✓
Implemented FAO-Sea Turtles	✓	✓	✓	✓	✓	✓	✓	✓
Complied with ICCAT ERS Measures	n/a	✓	✓	✓	✓	n/a	✓	✓
Complied with IOTC ERS Measures	✓	✓	✓	✓	✓	n/a	✓	✓
Complied with WCPFC ERS Measures	✓	✓	✓	✓	✓	✓	✓	n/a
ERS Data collected and reported as required by ICCAT	n/a	✓	?[13]	✓	✓	n/a	✓	✓
ERS Data collected and reported as required by IOTC	✓	✓	✓	✓	✓	n/a	✓	✓
ERS Data collected and reported as required by WCPFC	✓	✓	✓	✓	✓	✓	✓	n/a

The Secretariat paper relies on the information provided by Members on their compliance status amongst the various RFMOs given the varying approaches to assessing compliance with ERS across RFMOs. Some RFMO assessments of compliance are primarily focused on whether Members have completed the legislative implementation process (i.e. domestic regulations are in place) but do not seek to determine whether the measures have been implemented from an operational perspective. CCSBT's reliance on other RFMOs for "monitoring, compliance, and surveillance for ERS" was identified as a potential risk in the most recent Performance Review (Recommendation PR2021-30) and Members may wish to consider alternatives.

[9] International Plan of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries.
[10] International Plan of Action for the Conservation and Management of Sharks.
[11] Other ERS information is also required in the Annual CC/EC Report, but this information is also provided elsewhere and is not shown here as it is covered in other parts of this paper.
[12] Indonesia simply notes that it has conducted a workshop related to bycatch mitigation especially in longline fisheries and that based on observer reports, vessels are already implementing mitigation measures.
[13] The response given in the Annual CC/EC Report was "None" and therefore there was no indication as whether the required measures were being complied with or whether the required data was provided.

(2) Performance

The mortality rates and raised total mortality estimates of ERS for each of the species groups defined in the EDE for each Member are provided in **Attachment 3**. It should be noted that some of the shark mortalities are retained as commercial catch and are not all unwanted mortalities.

The 15th meeting of the ERSWG (ERSWG 15) met in June 2024. The meeting concluded that it had no specific or additional concerns about shark bycatch that warranted action by ERSWG 15, noting that significant gaps in observer coverage may be impacting ERSWG's ability to assess the impact of SBT Fisheries on sharks. In addition, ERSWG 15 did update its advice on Seabirds to the following:

- The level of interaction between seabirds and SBT fisheries remains a significant concern.
- The ERSWG noted that the most recent version of the Spatially Explicit Fisheries Risk Assessment, SEFRA, indicates that Wandering and Royal Albatross species groups are at high risk. Species in these groups are of high conservation concern and ACAP indicated that some populations are in sharp decline.
- The SEFRA indicates areas with higher risk in some parts of the Tasman Sea (especially), Southern Atlantic, and Southern Indian Ocean. These areas account for a large proportion of the modelled risk to seabirds from SBT surface longline fisheries, but contain a very small proportion of SBT surface longline fishing effort.
- Based on the best scientific information available, the ERSWG recommends that CCSBT Members consider taking further actions that would ensure robust seabird mitigation measures and effective monitoring of the implementation of the mitigation measures, whilst minimising impacts on SBT surface longline fisheries effort.

This revised advice will now be presented to CCSBT 31 for endorsement.

Please note that this section excludes seabird mortality figures for Indonesia because these figures are not meaningful due to Indonesia's low observer coverage (1% or less) and because Indonesia's observer data were not restricted to the SBT fishery. In addition, no information is provided for the EU because the EU reported that it did not target or catch SBT during the years presented.

a) ERS mortality rate

Table 4 provides the observed mortality rate of seabirds for each Member from 2017 to 2024.

Table 4: Observed mortality rate of seabirds (kills per 1,000 hooks) for each Member from 2017 to 2024.

	AU	JP	KR	NZ	TW	ZA
2017	0.000	0.048	0.002	0.119	0.005	0.004
2018	0.000	0.291	0.051	0.312	0.016	0.000
2019	0.000	0.540	0.049	0.319	0.011	0.028
2020	0.000	0.157	Not available	0.022	0.010	0.196
2021	0.000	Not available	Not available	0.236	0.009	0.036
2022	0.000	Not available	0.059	1.049	0.100	0.000
2023	0.040	0.083	0.036	0.334	0.056	0.244
2024	0.000	0.046	0.034	Not available	0.005	0.291

Observed mortality rates vary considerably across the Membership and there is no discernible trend across the fleet. In terms of the most recent observations, mortality rates for seabirds are generally lower than they were in 2023.

b) Total ERS mortality

Table 5 provides the raised number of seabirds killed for each Member from 2017 to 2024.

Table 5: Raised mortality of seabirds (in numbers of seabirds) for each Member from 2017 to 2024.

	AU	JP	KR	NZ	TW	ZA
2017	0	656	6	150	74	1
2018	0	5,216	139	427	233	0
2019	0	6,573	119	435	175	10
2020	0	1,620	Not available	30	161	77
2021	0	Not available	Not available	184	63	38
2022	0	Not available	136	627	1,578	0
2023	29	1,037	82	265	844	135
2024	0	459	65	Not available	49	302

The change in the raised number of seabird mortalities each year should be interpreted with caution. The May 2019 meeting of the ERSWG advised that the data for 2017 show a lower total number of reported seabird mortalities and the ERSWG noted that this was most likely to have resulted from inadequate and unrepresentative sampling and not from improved mitigation. Therefore, the ERSWG advised that the 2017 data should be treated with caution and that the 2018 data may require the same caution to be applied.

As with seabird mortality rates, there is no clear trend in the raised number of seabird mortalities over the period however 2024 estimates are generally lower than those from 2023.

Prepared by the Secretariat

Attachment 1

Observer coverage (observed hooks / total hooks expressed as a percent) by flag, gear, fleet, year and CCSBT Statistical Area[14]. Representativeness is the proportion of Statistical Areas fished that reached the target of 10% observer coverage as per the SMMTG Recommendations. Cells shaded in green have achieved at least 10% coverage (or 100% representativeness). Cells shaded in grey are strata with low effort (<25,000 hooks for longline and <5 sets for purse seine).

				Statistical area												
Member code	Gear code	Fleet code	Year	1	2	3	4	5	6	7	8	9	14	15	Total	Representativeness
AU	LL	AUD	2022		0%		11%			11%	0%				10%	50%
			2023		0%		10%			2%					10%	33%
			2024		14%		11%			6%	15%				11%	75%
	PS	AUD	2022			0%				8%					8%	0%
			2023							13%					13%	100%
			2024			0%				25%					17%	50%
ID	LL	IDD	2022	1%	0%										1%	0%
			2023	0%	4%										2%	0%
			2024	?	?	?	?	?	?	?	?	?	?	?	?	?
JP	LL	JPD	2022				0%	0%	0%	0%	0%	0%			0%	0%
			2023				3%	13%	11%	25%	18%	11%			17%	83%
			2024				19%	0%	0%	21%	24%	35%			25%	67%
KR	LL	KRD	2022								0%	24%			22%	50%
			2023								0%	22%			20%	50%
			2024								0%	20%			18%	50%
NZ	LL	NZD	2022				0%	0%	8%						5%	0%
			2023				0%	1%	6%						4%	0%
			2024					0%	0%						0%	0%
TW	LL	TWD	2022		23%						19%	18%	18%		19%	100%
			2023		30%		16%				22%		20%	60%	23%	100%
			2024		26%		41%			7%	33%	62%	16%	36%	24%	86%
ZA	LL	ZAD	2022									3%	0%	8%	4%	0%
			2023									13%	9%	15%	13%	67%
			2024									20%	30%	22%	22%	100%

[14] The coverage for Australia's longline fleet is based on e-monitoring, not human scientific observers.

Table 1: Proportion of observed effort in Members' long line fleets that used specific mitigation measures in Statistical Areas 3-10. These are the Statistical Areas that require 2 out of 3 mitigation measures to be used in the ICCAT, IOTC and WCPFC Convention Areas.

Member	Fleet	Year	Tori pole + Night setting only	Tori pole + weighted branchline only	Night setting + weighted branchline only	Tori pole + night setting + weighted branchline	Night setting only	Tori pole only	Weighted branchline only	Nil	Other
AU	AUD	2022	-	76.8%	-	23.2%	-	-	-	-	-
		2023	-	57.8%	-	42.2%	-	-	-	-	-
		2024	-	61.5%	-	38.5%	-	-	-	-	-
ID	IDD	2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
JP	JPD	2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2023	4.8%	54.8%	0.0%	14.2%	0.1%	25.8%	0.0%	-	-
		2024	5.7%	48.6%	0.1%	18.4%	0.2%	27.0%	-	-	-
KR	KRD	2022	-	100.0%	-	-	-	-	-	-	-
		2023	-	100.0%	-	-	-	-	-	-	-
		2024	-	100.0%	-	-	-	-	-	-	-
NZ	NZD	2022	20.7%	1.9%	-	69.9%	-	7.5%	-	-	-
		2023	32.9%	3.5%	-	63.6%	-	-	-	-	-
		2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TW	TWD	2022	30.6%	16.1%	-	6.4%	8.6%	35.9%	-	2.4%	-
		2023	33.8%	12.1%	-	9.7%	0.0%	44.3%	-	0.1%	-
		2024	25.5%	13.5%	-	4.3%	4.0%	42.3%	-	10.5%	-
ZA	ZAD	2022	-	-	100.0%	-	-	-	-	-	-
		2023	-	-	63.2%	30.3%	6.5%	-	-	-	-
		2024	8.8%	-	75.4%	15.8%	-	-	-	-	-

Table 2: Proportion of observed effort in Members' long line fleets that used specific mitigation measures in Statistical Areas 2 and 14. These Statistical Areas are in the Indian Ocean with latitudes ranging from 20º-35ºS. Two out of three mitigation measures are required to be used below 25ºS in the Indian Ocean.

Member	Fleet	Year	Tori pole + Night setting only	Tori pole + weighted branchline only	Night setting + weighted branchline only	Tori pole + night setting + weighted branchline	Night setting only	Tori pole only	Weighted branchline only	Nil	Other
AU	AUD	2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2024	-	67.5%	-	32.5%	-	-	-	-	-
ID	IDD	2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2023	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2024	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TW	TWD	2022	30.3%	18.7%	-	9.0%	1.9%	39.7%	-	0.4%	-
		2023	27.2%	19.4%	-	11.1%	0.3%	40.9%	-	1.1%	-
		2024	15.2%	17.1%	-	5.2%	14.1%	37.2%	-	11.2%	-
ZA	ZAD	2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2023	-	-	17.9%	-	-	-	82.1%	-	-
		2024	-	-	100.0%	-	-	-	-	-	-

Table 3: Proportion of observed effort in Members' long line fleets that used specific mitigation measures in Statistical Area 15. This Statistical Area is in the Atlantic Ocean with latitudes ranging from 20º-35ºS. In this Area, tori lines are required from 20º-25ºS and 2 out of 3 mitigation measures are required for the remainder of this Area.

Member	Fleet	Year	Tori pole + Night setting only	Tori pole + weighted branchline only	Night setting + weighted branchline only	Tori pole + night setting + weighted branchline	Night setting only	Tori pole only	Weighted branchline only	Nil	Other
TW	TWD	2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2023	35.9%	-	-	-	-	64.1%	-	-	-
		2024	37.3%	-	-	-	-	62.7%	-	-	-
ZA	ZAD	2022	-	-	69.7%	30.3%	-	-	-	-	-
		2023	-	-	25.9%	74.1%	-	-	-	-	-
		2024	1.7%	1.5%	31.8%	65.0%	-	-	-	-	-

Attachment 3

Observer coverage, mortality rate and raised total mortality for each of the species groups defined in the EDE for each Member. The observer coverage has been calculated as the percentage of fishing effort that was observed for all strata (year * Statistical Area * Member) where the species was captured regardless of whether a mortality of that species occurred. Mortality rates are kills per 1,000 hooks. Raised mortalities have not been provided where the overall observer coverage is less than 5%. Blank cells mean there were no encounters of the species, “n/a” means we don’t have the data.

		Observer Coverage			Mortality Rate			Raised Mortalities		
Member	**ERS Species Group**	**2022**	**2023**	**2024**	**2022**	**2023**	**2024**	**2022**	**2023**	**2024**
Australia	Blue shark	13%	10%	11%	0.209	0.121	0.026	102	87	43
	Shortfin mako	11%	10%	12%	0.087	0.019	0.030	28	10	27
	Porbeagle shark		11%	13%		0.019	0.016	-	10	9
	Other sharks	12%	10%	11%	0.055	0.067	0.043	28	48	50
	Turtles	10%	100%	10%	0.000	0.000	0.000	-	-	-
	Unidentified albatrosses			4%			0.000	-	-	-
	Other seabirds		18%	10%		0.274	0.000	-	29	-
Indonesia	Blue shark	n/a	n/a	n/a	1.038	1.546	n/a	n/a	n/a	n/a
	Shortfin mako	n/a	n/a	n/a	0.056	0.447	n/a	n/a	n/a	n/a
	Porbeagle shark	n/a	n/a	n/a		0.015	n/a	n/a	n/a	n/a
	Other sharks	n/a	n/a	n/a		0.227	n/a	n/a	n/a	n/a
	Turtles	n/a	n/a	n/a	0.085	0.068	n/a	n/a	n/a	n/a
	Unidentified seabirds	n/a	n/a	n/a		0.027	n/a	n/a	n/a	n/a
Japan	Blue shark	0%	18%	26%	n/a	1.136	1.042	n/a	12,765	10,908
	Shortfin mako	0%	19%	26%	n/a	0.005	0.005	n/a	74	38
	Porbeagle shark	0%	18%	26%	n/a	0.251	0.137	n/a	2,565	1,516
	Other sharks	0%	19%	26%	n/a	0.013	0.007	n/a	231	73
	Dark coloured albatrosses	0%	13%	42%	n/a	0.083	0.013	n/a	115	17
	Large albatrosses	0%	16%	31%	n/a	0.008	0.006	n/a	45	20
	Other albatrosses	0%	19%	27%	n/a	0.055	0.026	n/a	602	238
	Unidentified albatrosses	0%	15%	16%	n/a	0.004	0.006	n/a	14	5
	Giant petrels	0%	18%	29%	n/a	0.023	0.017	n/a	191	115
	Other seabirds	0%	79%	45%	n/a	0.169	0.034	n/a	71	63
Korea	Blue shark	24%	23%	20%	0.479	2.656	0.474	1,102	6,042	900
	Shortfin mako	18%	26%	20%	0.000	0.008	0.034	-	14	60
	Porbeagle shark	24%	23%	20%	0.044	0.018	0.150	97	32	263
	Other sharks	23%	22%	20%	0.086	0.731	0.102	186	1,604	194
	Dark coloured albatrosses	20%		20%	0.026		0.007	30	-	10
	Large albatrosses		28%	20%		0.004	0.014	-	5	20
	Other albatrosses	24%	22%	20%	0.046	0.038	0.013	89	77	20
	Giant petrels	44%			0.007			4	-	-
	Other seabirds	26%		20%	0.009		0.010	13	-	15
New Zealand	Blue shark	13%	6%	0%	3.846	7.645	n/a	2,298	12,281	n/a
	Shortfin mako	15%	8%	0%	0.072	0.000	n/a	39	-	n/a
	Porbeagle shark	13%	6%	0%	1.639	0.275	n/a	979	425	n/a
	Other sharks	17%	6%	0%	0.041	0.147	n/a	13	197	n/a
	Large albatrosses		14%	0%		0.035	n/a	-	16	n/a
	Other albatrosses	14%	12%	0%	0.266	0.297	n/a	157	172	n/a
	Unidentified albatrosses	11%	7%	0%	0.095	0.229	n/a	26	31	n/a
	Giant petrels	15%	12%	0%	0.818	0.078	n/a	444	47	n/a
	Other seabirds	17%	2%	0%	0.000	0.000	n/a	-	-	n/a
	Whales	17%	14%	0%	0.000	0.000	n/a	-	-	n/a
Taiwan	Blue shark	20%	23%	24%	0.814	0.554	0.226	12,641	7,865	2,273
	Shortfin mako	19%	23%	25%	0.039	0.045	0.047	573	629	520
	Porbeagle shark	21%	23%	24%	0.246	0.145	0.054	2,490	2,017	432
	Other sharks	20%	22%	30%	0.007	0.001	0.004	71	14	20
	Dark coloured albatrosses	22%	24%		0.012	0.012		47	81	-
	Large albatrosses	23%	23%	35%	0.011	0.039	0.004	51	51	12
	Other albatrosses	21%	24%	27%	0.157	0.027	0.005	1,173	309	25
	Giant petrels	21%	26%	39%	0.025	0.090	0.038	76	335	9
	Other seabirds	23%	25%	30%	0.070	0.016	0.002	231	67	3
South Africa	Blue shark	9%	15%	24%	3.518	3.051	8.462	1,142	1,515	8,783
	Shortfin mako	8%	15%	25%	1.804	2.771	2.087	503	1,371	2,129
	Porbeagle shark		44%	33%		0.000	0.025	-	-	14
	Other sharks	9%	15%	27%	0.125	0.610	0.724	12	353	681
	Turtles		14%	31%		0.000	0.000	-	-	-
	Other albatrosses	15%	16%	31%	0.000	0.537	0.408	-	121	257
	Giant petrels		20%	16%		0.087	0.356	-	13	36
	Other seabirds			8%			0.731	-	-	9