



CCSBT-CC/2310/05

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 vessels¹ 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 Taiwan, no Member achieved the 10% target across all areas in 2022. For individual Members, it was 10% (LL) and 8% (PS) for Australia, 0% for Japan, 22% for Korea, 5% for New Zealand and 18% for Taiwan. Indonesia and South Africa's observer coverage for 2022 is not known because these Members have not yet submitted EDE data for 2022. There are no figures for the European Union (EU). This is 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.

Japan did not achieve any observer coverage in 2022 because of constraints based on COVID-19. Again due to the COVID-19 pandemic, neither Japan nor Korea placed scientific observers on their longline vessels targeting SBT in 2021. Korea also did not deploy scientific observers in 2020 but has resumed coverage in 2022.

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 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. No Member reported a representativeness of more than 50% during 2021. 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.

The low or lack of scientific observer coverage in 2022 by some Members along with the non-reporting of EDE data by two CCSBT Members is such that it is not possible to comment on overall implementation of ERS measures and performance with respect to ERS.

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 2020-2022. 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 2021;

- Korea had no observer coverage in 2020 and 2021; and
- South Africa has not provided any EDE data for 2020 to 2022.

The extent of unavailable information is so high that apart from New Zealand and Taiwan, it is not possible to examine changes in the use of mitigation measures from previous years to 2022.

- For New Zealand, there has been a significant increase (from 8.4% to 69.9%) in the percentage of trips where all three mitigation measures were used however this is now based on a lower observer coverage rate.
- Taiwan saw a drop in trips where all three mitigation measures were used and this was primarily offset by an increase in trips where only tori pole and weighted branchlines were 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 four 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	✓	✓	✓	✓	X ⁵
Data provided as required by the EDE in 2021?	✓	n/a ²	P ⁴	✓	✓ ⁶	✓	✓	X ⁵
Data provided as required by the EDE in 2022?	✓	n/a ²	P ⁴	✓ ⁷	✓ ⁶	✓	✓	X ⁵
Data provided as required by the EDE in 2023?	✓	n/a ²	X	✓ ⁷	✓	✓	✓	X ⁵
<i>Data for 2023 provided at species level where this is not a minimum requirement of the EDE⁸?</i>	P	n/a ²	n/a	-	-	✓	✓	n/a

South Africa has not yet provided the required EDE data for 2020-2023. Most other 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.

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 South Africa has not yet provided any data for the 2020, 2021, 2022, or 2023 EDEs.

⁶ However, Korea did not submit any observer data because it had zero observer coverage in 2020 and 2021.

⁷ However, Japan did not submit any observer data because it had zero observer coverage in 2021 and 2022.

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.

d) Participation and reporting to ERSWG meetings

The last three ERSWG meetings were in 2017, 2019 and 2022. 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
2017 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	P
2019 ERSWG meeting								
Participated at meeting	✓	X ⁹	X ⁹	✓	✓	✓	✓	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

The partial compliance of most Members with respect to the annual report is mostly due to the ERSWG annual report template not being fully completed, such as not providing any information on collection of data or incidental catches from non-observed sources (e.g. from log books), or not providing certain information on compliance monitoring or the level of compliance.

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-seabirds¹⁰, IPOA-sharks¹¹ 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 collected¹².

A summary of the above information reported by Members is provided in Table 3 and **Attachment 3**. The table and Attachment were compiled from the 2022 Annual CC/EC Report because the reports for the 2023 meeting were not available at the time of preparing this paper. The information provided by some Members in the 2022 Annual CC/EC Report was ambiguous, and this has been reflected in the footnotes to items in Table 3.

⁹ Both the EU and Indonesia advised that they would not be able to attend the ERSWG meeting on the proposed dates but agreed for the meeting to proceed in their absence so that an ERSWG meeting could be held during 2019.

¹⁰ International Plan of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries.

¹¹ International Plan of Action for the Conservation and Management of Sharks.

¹² 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.

Table 3: Summary of required information reported by Members in their 2022 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	✓	✓	? ¹³	✓	✓	✓	✓	✓
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	✓	? ¹⁴	✓	✓	n/a	✓	✓
ERS Data collected and reported as required by IOTC	P ¹⁵	✓	✓	✓	✓	n/a	✓	✓
ERS Data collected and reported as required by WCPFC	✓	✓	✓	✓	✓	✓	✓	n/a

Attachment 3 shows the information provided by Members on methods used to monitor compliance with bycatch mitigation measures, including the level of coverage and the type of information collected. Most Members have reported the required information with the exception that the level of coverage by the different methods has generally not been well specified by Members.

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.

(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 4**. It should be noted that some of the shark mortalities are retained as commercial catch and are not all unwanted mortalities.

The 14th meeting of the ERSWG (ERSWG 14) met from 21-25 March 2022. ERSWG 14 confirmed its previously agreed advice for all shark species caught in SBT fisheries, that there were currently no specific concerns about shark bycatch that warranted additional mitigation requirements. In addition, ERSWG 14 did not seek to amend its previous advice that the level of interaction between seabirds and SBT fisheries is still a significant level of concern. Consequently, the remainder of this section focuses on seabirds, which is the main incidental catch of concern from SBT fisheries.

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.

¹³ 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.

¹⁴ 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.

¹⁵ Australia noted that for a variety of practical reasons, it is not able to provide size frequency data for sharks.

a) ERS mortality rate

Table 4 provides the observed mortality rate of seabirds for each Member from 2017 to 2022.

Table 4: Observed mortality rate of seabirds (kills per 1,000 hooks) for each Member from 2017 to 2022.

	AU	JP	KR	NZ	TW	ZA
2017	0.039	0.048	0.002	0.119	0.005	0.004
2018	0.015	0.291	0.051	0.312	0.016	0.000
2019	0.000	0.540	0.049	0.319	0.011	Not available
2020	0.000	0.157	Not available	0.022	0.010	Not available
2021	0.000	Not available	Not available	0.236	0.009	Not available
2022	0.000	Not available	0.059	1.049	0.015	Not available

Due to the lack of observer coverage or non-reporting of EDE data, no seabird mortality rate information is available for Japan or South Africa for 2022.

There is a large magnitude of difference each year between those Members with low rates of seabird mortalities and those with high rates of seabird mortalities. Japan and New Zealand have tended to have the highest seabird mortality rate of CCSBT Members. The observed mortality rate for New Zealand has gone up significantly from previous years.

There is no obvious annual trend in the rate of seabird mortalities over the six-year period, but there is substantial missing information for the last of these six years.

b) Total ERS mortality

Table 5 provides the raised number of seabirds killed for each Member from 2017 to 2022.

Table 5: Raised mortality of seabirds (in numbers of seabirds) for each Member from 2017 to 2022.

	AU	JP	KR	NZ	TW	ZA
2017	14	656	6	150	74	1
2018	9	5,216	139	427	233	0
2019	0	6,573	119	435	175	Not available
2020	0	1,620	Not available	30	161	Not available
2021	0	Not available	Not available	184	63	Not available
2022	0	Not available	136	633	255	Not available

As with the previous table and for the same reasons, no raised number of seabird mortalities are available for Japan or South Africa for 2022.

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 six-year period, but again, there is substantial missing information for the last of these six years. Overall raised mortality figures for those Members able to report are higher than those seen in recent years.

Attachment 1

Observer coverage (observed hooks / total hooks expressed as a percent) by flag, gear, fleet, year and CCSBT Statistical Area¹⁶. 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).

Member code	Gear code	Fleet code	Year	Statistical area										Total	Representativeness
				1	2	3	4	5	6	7	8	9	14		
AU	LL	AUD	2020		0%		8%			7%				8%	0%
			2021		0%		12%			0%				11%	33%
			2022		0%		11%			11%	0%			10%	50%
	PS	AUD	2020							11%				11%	100%
			2021			0%				28%				28%	50%
2022					0%				8%				8%	0%	
ID	LL	IDD	2020	0%	0%								0%	0%	
			2021	1%	1%								1%	0%	
			2022											?	?
JP	LL	JPD	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%	0%	
KR	LL	KRD	2020								0%	0%	0%	0%	
			2021								0%	0%	0%	0%	
			2022								0%	24%		22%	50%
NZ	LL	NZD	2020					9%	10%				9%	0%	
			2021				0%	6%	14%				10%	33%	
			2022				0%	0%	8%				5%	0%	
TW	LL	TWD	2020		22%						10%	10%	10%	13%	75%
			2021		18%						15%	2%	8%	12%	50%
			2022		21%						16%	18%	18%	18%	100%
ZA	LL	ZAD	2020											?	?
			2021											?	?
			2022											?	?

¹⁶ 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	Other
AU	AUD	2020	-	36.4%	-	63.6%	-	-	-	-
		2021	-	60.5%	-	39.5%	-	-	-	-
		2022	-	76.8%	-	23.2%	-	-	-	-
ID	IDD	2020	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
JP	JPD	2020	32.9%	17.9%	1.3%	14.0%	0.1%	29.2%	4.7%	-
		2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
KR	KRD	2020	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2022	-	100.0%	-	-	-	-	-	-
NZ	NZD	2020	20.1%	1.3%	13.1%	64.9%	-	0.6%	-	-
		2021	77.7%	7.4%	-	8.4%	0.7%	5.8%	-	-
		2022	20.7%	1.9%	-	69.9%	-	7.5%	-	-
TW	TWD	2020	99.1%	0.9%	-	-	-	-	-	-
		2021	67.9%	-	-	32.1%	-	-	-	-
		2022	54.6%	37.1%	-	-	-	8.3%	-	-
ZA	ZAD	2020	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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 20°-35°S. Two out of three mitigation measures are required to be used below 25°S 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	Other
ID	IDD	2020	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TW	TWD	2020	75.7%	11.6%	-	6.6%	-	6.1%	-	-
		2021	84.0%	-	-	16.0%	-	-	-	-
		2022	52.9%	38.7%	-	-	-	8.5%	-	-
ZA	ZAD	2020	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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 20°-35°S. In this Area, tori lines are required from 20°-25°S 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	Other
ZA	ZAD	2020	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2021	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		2022	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Information provided by Members on methods used to monitor compliance with bycatch mitigation measures, including the level of coverage and the type of information collected.

	Methods being used to monitor compliance with bycatch mitigation measures, including coverage level	Type of information collected
Australia	<p>Australia uses a number of methods to monitor compliance, including compliance with bycatch mitigation measures. These methods include electronic monitoring, observer reports, vessel monitoring system, aerial surveillance, at sea inspections and port inspections.</p> <p>Australian fisheries officers conduct inspections of landings at key SBT ports, as well as at sea boarding's and inspections of boats taking SBT in the longline and farm sectors. In 2020/21 Australian fisheries officers conducted 22 SBT inspections, 8 at sea and 14 in port. AFMA Management officers also attended ports during the course of the season to ensure fishers were aware of their obligations in relation to bycatch mitigation.</p>	<p>The information collected on mitigation measures includes;</p> <ul style="list-style-type: none"> • whether bycatch mitigation, such as tori lines, is being carried on board the vessel, • whether bycatch mitigation has been deployed appropriately • whether the bycatch mitigation complies with specifications.
EU	<i>Not applicable.</i>	<i>Not applicable</i>
Indonesia	Inspection by surveillance officer, report from observer on board, port sampling program.	Species identification, length, weight, geographical location, condition when caught and release, and sex.
Japan	Monitoring Japanese fishing vessels registered with the CCSBT through vessel radio communication. FAJ randomly confirms proper implementation, based on real time monitoring program (RTMP) reporting and VMS as well as inquiry. During the 2021/2022 fishing season, no inspection of Japanese fishing vessels registered with the CCSBT was conducted, because MCV was not dispatched to the Southern hemisphere for more urgent monitoring and inspection needs within Japan's EEZ.	Fishers have been mandated to write down seabird bycatch mitigation measures applied to their operations in the logbook since 2014.
Korea	Bycatch mitigation measures used are observed and monitored through the scientific observer program and the electronic reporting system.	The information includes sea bird mitigation measures used for reducing its bycatch and data on ERS interaction.

	Methods being used to monitor compliance with bycatch mitigation measures, including coverage level	Type of information collected
New Zealand	<p>Compliance with these measures is monitored through at-sea and in-port inspections by Fisheries Officers, aerial surveillance from military aircraft, and the placement of observers on board vessels. Observer reports indicating problems with use of mitigation equipment are prioritised for follow-up with vessel operators. These are then followed up by Fishery Officers. Additionally, new electronic reporting requirements that will come into effect in 2021 will require additional reporting for the surface longline (SLL) fleet on seabird mitigation measures and line weighting regimes.</p> <p>During the 2021 calendar year, inspections of vessels in port found incidents where breaches of seabird mitigation regulations occurred. The majority of these breaches were in relation to tori lines not meeting specifications as per domestic law. A graduated enforcement was applied to any noncompliance identified, ranging from commercial advice and aiding fishers to bring seabird mitigations up to specification, through to the issuing of warning letters to the fisher.</p>	<p>Fisheries Officers collect information about tori line, line-weighting and hook shielding devices that are present on vessels. For each vessel that uses a tori line, a 'tori line details' form is filled out which records information on:</p> <ul style="list-style-type: none"> • Tori line total length • Attachment point • Aerial extent • Number of streamers • Spacing of streamers • Streamer length • Streamer material <p>Observer reports provide information about mitigation gear usage, gear descriptions, and fisher attitudes toward seabird mitigation.</p>
South Africa	<p>All Large Pelagic Longline vessels are subjected to port inspection in line with Port State Measures and as per attached Annexure 5 of the Large Pelagic Longline permit conditions. This port inspection is carried out by the Fishery Compliance Officers in conjunction with the Observers. This includes the Tori line measurements, checking the availability of the de-hooking devices as well as line cutters. In addition, Patrol vessels are from time to time tasked to randomly board the large pelagic longline vessels for the inspection of the above</p>	<p>Through section B and C of the attached Annexure 5 of the Large Pelagic Longline permit conditions, an Observer is required to confirm the deployment of Tori line every day as well as weighted lines.</p>
Taiwan	<p>We dispatch observer to monitor compliance with bycatch mitigation measures. The observer coverage rate is over 10% by vessel in 2021/2022 fishing season. Besides, all SBT authorized vessels operating at south of 25°S shall report the usage of bycatch mitigation measures by fishers by logbook and e-logbook since 2017/18 fishing season. For alternative way, fishers shall report their seabirds-mitigation measure every week through Taiwan Tuna Association (TTA). Any conditions for not compliance identified during review by the FA officials shall trigger further investigations and enforcement of sanctions.</p>	<p>Fishers shall report the measures adopted by its vessels to the FA every day by E-logbook. Besides, observers shall record the mitigation measures adopted by the vessel on the observer's logbook since 2014.</p>

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.

Member	ERS Species Group	Observer Coverage			Mortality Rate			Raised Mortalities		
		2020	2021	2022	2020	2021	2022	2020	2021	2022
Australia	Blue shark	8%	12%	13%	0.032	0.018	0.209	13	8	102
	Shortfin mako	15%	13%	11%	0.194	0.207	0.087	26	76	28
	Other sharks	8%	13%	12%	0.032	0.050	0.055	13	25	28
	Turtles		10%	10%		0.000	0.000	-	-	-
	Other seabirds		10%			0.000		-	-	-
Indonesia	Blue shark	n/a	n/a	n/a	1.828	0.775	n/a	n/a	n/a	n/a
	Shortfin mako	n/a	n/a	n/a	0.071	0.055	n/a	n/a	n/a	n/a
	Other sharks	n/a	n/a	n/a	0.476	0.512	n/a	n/a	n/a	n/a
	Turtles	n/a	n/a	n/a		0.017	n/a	n/a	n/a	n/a
	Other albatrosses	n/a	n/a	n/a		0.069	n/a	n/a	n/a	n/a
	Other seabirds	n/a	n/a	n/a	0.096	0.053	n/a	n/a	n/a	n/a
Japan	Blue shark	10%	0%	0%	2.815	n/a	n/a	32,128	n/a	n/a
	Shortfin mako	10%	0%	0%	0.031	n/a	n/a	403	n/a	n/a
	Porbeagle shark	9%	0%	0%	0.626	n/a	n/a	5,557	n/a	n/a
	Other sharks	10%	0%	0%	0.058	n/a	n/a	488	n/a	n/a
	Dark coloured albatrosses	16%	0%	0%	0.052	n/a	n/a	190	n/a	n/a
	Large albatrosses	13%	0%	0%	0.024	n/a	n/a	148	n/a	n/a
	Other albatrosses	12%	0%	0%	0.090	n/a	n/a	632	n/a	n/a
	Giant petrels	11%	0%	0%	0.081	n/a	n/a	596	n/a	n/a
	Other seabirds	14%	0%	0%	0.014	n/a	n/a	54	n/a	n/a
Korea	Blue shark	0%	0%	24%	n/a	n/a	0.479	n/a	n/a	1,102
	Shortfin mako	0%	0%	18%	n/a	n/a	0.000	n/a	n/a	-
	Porbeagle shark	0%	0%	24%	n/a	n/a	0.044	n/a	n/a	97
	Other sharks	0%	0%	23%	n/a	n/a	0.086	n/a	n/a	186
	Dark coloured albatrosses	0%	0%	20%	n/a	n/a	0.026	n/a	n/a	30
	Other albatrosses	0%	0%	24%	n/a	n/a	0.046	n/a	n/a	89
	Giant petrels	0%	0%	44%	n/a	n/a	0.007	n/a	n/a	4
	Other seabirds	0%	0%	26%	n/a	n/a	0.009	n/a	n/a	13
New Zealand	Blue shark	12%	13%	13%	2.933	3.296	3.846	4,383	3,968	2,320
	Shortfin mako	12%	13%	15%	0.116	0.229	0.072	160	376	40
	Porbeagle shark	11%	16%	13%	0.487	1.686	1.639	709	1,269	989
	Other sharks	12%	13%	16%	0.099	0.072	0.041	142	88	13
	Turtles	14%	9%		0.070	0.000		12	-	-
	Other albatrosses	13%	22%	14%	0.020	0.225	0.266	10	110	158
	Unidentified albatrosses		22%	13%		0.030	0.095	-	15	26
	Giant petrels	16%	22%	15%	0.029	0.120	0.818	20	59	448
	Other seabirds		10%	16%		0.000	0.000	-	-	-
	Whales	17%		16%	0.000		0.000	-	-	-
Taiwan	Blue shark	13%	13%	18%	0.305	0.157	0.359	4,630	1,650	5,655
	Shortfin mako	14%	14%	18%	0.064	0.048	0.038	992	389	547
	Porbeagle shark	23%		20%	0.026		0.083	100	-	779
	Other sharks	19%	14%	19%	0.109	0.012	0.003	1,000	73	34
	Dark coloured albatrosses	29%		23%	0.006		0.014	5	-	18
	Large albatrosses	28%		23%	0.009		0.019	10	-	49
	Other albatrosses	16%	19%	20%	0.027	0.024	0.017	117	43	112
	Giant petrels		13%	20%		0.043	0.028	-	20	64
	Other seabirds	26%		18%	0.021		0.005	30	-	12