



CCSBT-CC/2010/05 (Rev.2)

## 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<sup>1</sup> for shots or sets where southern bluefin tuna (SBT) was either targeted or caught. Since last year's paper (CCSBT-CC/1910/05 Rev2), all Members except South Africa have submitted ERS data for the 2019 calendar year. Two Members (New Zealand and Taiwan) also submitted revised ERS data for 2018 and one Member (Indonesia) submitted revised ERS data for 2010 to 2019. The revised data is the reason that some differences exist in the figures presented here for 2017 and 2018 compared to those figures in last year's paper.

All data submitted this year (including the revised data) were provided in the new format, which involved 5\*5 degree resolution by quarter and observer type (human, electronic), instead of statistical area and year.

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<sup>1</sup> 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**. Three Members (Japan, Korea and Taiwan) reported achieving or exceeding the overall target scientific observer coverage of 10% for all their SBT fleets last year (2019). Australia also recorded a 10% or greater “observer” coverage for all of its SBT fleets in 2019, but the coverage for its longline fleet was based on e-monitoring, not scientific observers. Indonesia has never reached the target and had an observer coverage of only 1% in 2019. 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.

There are no figures for the European Union (EU) in **Attachment 1**. This is because the EU reported that it had no vessels targeting or capturing SBT during the three years in question. There are no figures for South Africa in 2019 because South Africa has yet to provide these data.

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.

**Attachment 1** contains 25 representativeness figures (one figure for each of the 9 fleets for each of the 3 years<sup>2</sup>). Of these, there were only 10 fleet/year combinations with full (100%) representativeness of observer coverage. In addition, there were 11 fleet/year combinations with a representativeness of 50% or less.

### ***b) Usage of seabird mitigation measures***

This section contains no information for Indonesia because Indonesia has not provided information on its usage of mitigation measures with its EDE data.

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<sup>2</sup> Minus the two South African fleets for 2019, for which data has yet to be provided.

Table 1 of **Attachment 2** shows, the proportion of observed effort in Members’ long line fleets that used specific mitigation measures for fishing from 2017-2019 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<sup>3</sup>. With the exception of Japan, New Zealand and Taiwan, all observed vessels that fished for or caught SBT in these areas used at least the 2 required mitigation measures. During 2018 and 2019, over two thirds of observed Japanese vessels only used a single mitigation measure. The use of a single mitigation measures for observed New Zealand vessels decreased from 6% in 2017 to 1% in 2019. For Taiwan, the use of a single mitigation measure by its observed vessels increased from 0% in 2017 and 2018 to 8.6% in 2019.

Table 2 of **Attachment 2** shows the same information as Table 1, except this is restricted to fishing 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. South Africa and Taiwan were the only Members to have vessels observed in this area. All South Africa’s observed vessels used 3 mitigation measures each year and between 93.6% and 100% of Taiwan’s observed vessels used either 2 or 3 mitigation measures each year. The cases for Taiwan in 2018 and 2019 where either none or a single mitigation measure was used were in the areas that required two measures to be used.

Table 3 of **Attachment 2** shows the same information as Tables 1 and 2, except this is restricted to fishing in statistical areas 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. South Africa and Taiwan were the only Members to have vessels observed in this area and all observed effort used either 2 or 3 mitigation measures (which included tori lines).

### 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 four 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 <sup>4</sup>	X	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2018?	✓	n/a <sup>4</sup>	P <sup>5</sup>	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2019?	✓	n/a <sup>4</sup>	P <sup>6</sup>	✓	✓	✓	✓	✓
Data provided as required by the EDE in 2020?	✓	n/a <sup>4</sup>	P <sup>6</sup>	✓	✓	✓	✓	X <sup>7</sup>
<i>Data provided at species level where this is not a minimum requirement of the EDE<sup>8</sup>?</i>	P <sup>9</sup>	n/a <sup>4</sup>	✓	X	✓	✓	✓	-

<sup>3</sup> Note that the requirements of ICCAT, IOTC and WCPFC to use 2 out of 3 mitigation measures did not become mandatory on CCSBT authorised vessels from a CCSBT perspective until after CCSBT 25.

<sup>4</sup> 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.

<sup>5</sup> Indonesia was not able to provide the proportions of observed effort with specific mitigation measures.

<sup>6</sup> 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.

<sup>7</sup> South Africa has not yet provided any data for the 2020 EDE.

<sup>8</sup> 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.

<sup>9</sup> Australia’s data contains a mixture of species and group level reporting.

South Africa has not yet provided the required EDE data in 2020. Most other Members have complied with the EDE requirements and more than half 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 ERSWG met in 2017 and 2019. 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 (which is unchanged from last year's version of this paper).

**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
<b>2017 ERSWG meeting</b>								
Participated at meeting	✓	X	X	✓	✓	✓	✓	X
Submitted annual report to meeting	✓	X	✓	✓	✓	✓	✓	✓
Completeness of annual report	✓	n/a	P	P	P	P	P	P
<b>2019 ERSWG meeting</b>								
Participated at meeting	✓	X <sup>10</sup>	X <sup>10</sup>	✓	✓	✓	✓	X
Submitted annual report to meeting	✓	X	✓	✓	✓	✓	✓	✓
Completeness of annual report	✓	n/a	P	P	P	✓	P	P

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-seabirds<sup>11</sup>, IPOA-sharks<sup>12</sup> 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<sup>13</sup>.

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 2019 Annual CC/EC Report because the reports for the 2020 meeting were not available at the time of preparing this paper. The information provided by some Members in the 2019 Annual CC/EC Report was ambiguous, and this has been reflected in the footnotes to items in Table 3.

<sup>10</sup> 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.

<sup>11</sup> International Plan of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries.

<sup>12</sup> International Plan of Action for the Conservation and Management of Sharks.

<sup>13</sup> 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 2019 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	✓	✓	?	✓	✓	✓	✓	✓
Implemented IPOA-Sharks	✓	✓	✓	✓	✓	✓	✓	✓
Implemented FAO-Sea Turtles	✓	✓	✓	✓	✓	✓	✓	✓
Complied with ICCAT ERS Measures	n/a	✓	n/a	✓	✓	n/a	✓	P <sup>14</sup>
Complied with IOTC ERS Measures	✓	✓	✓	✓	✓	n/a	✓	P <sup>14</sup>
Complied with WCPFC ERS Measures	✓	✓	✓	✓	✓	✓	✓	n/a
ERS Data collected and reported as required by ICCAT	n/a	✓	n/a	✓	✓	n/a	✓	P <sup>14</sup>
ERS Data collected and reported as required by IOTC	P <sup>15</sup>	✓	X <sup>16</sup>	✓	✓	n/a	✓	P <sup>14</sup>
ERS Data collected and reported as required by WCPFC	✓	✓	X <sup>17</sup>	✓	✓	✓	✓	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.

## (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.

ERSWG 13 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 13 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.

<sup>14</sup> It was difficult to determine whether all current binding and recommendatory ERS measures of the relevant RFMOs are being complied with from the response given in the Annual CC/EC Report.

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

<sup>16</sup> Indonesia stated that it has not yet complied with Resolution IOTC 2011/04 and that progress being made is to enhance personal capacity of observer and increase coverage level of observer program, as well as strengthening collaboration with Indonesia Tuna Association.

<sup>17</sup> 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.

**a) ERS mortality rate**

Table 4 provides the observed mortality rate of seabirds for each Member from 2017 to 2019.

**Table 4:** Observed mortality rate of seabirds (kills per 1,000 hooks) for each Member from 2017 to 2019.

	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

There is a large magnitude of difference each year between those Members with low rates of seabird kills and those with high rates of seabird kills.

Japan and New Zealand had the highest or second highest rate of seabird mortality each year from 2017 to 2019. These two Members (particularly Japan) also had an increasing trend in seabird mortality rates over the three years. The only Member with a declining trend in seabird mortality rates over the three years was Australia. We have no data to evaluate South Africa's seabird mortality rate in 2019.

**b) Total ERS mortality**

Table 5 provides the raised number of seabirds killed for each Member from 2017 to 2019.

**Table 5:** Raised mortality of seabirds (in numbers of seabirds) for each Member from 2017 to 2019.

	AU	JP	KR	NZ	TW	ZA
2017	14	656	6	150	74	1
2018	9	5,216	139	242	209	0
2019	0	6,636	128	247	347	Not available

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. The ERSWG further commented that the 2018 data may require the same caution to be applied.

## Attachment 1

Observer coverage (observed hooks / total hooks expressed as a percent) by flag, gear, fleet, year and CCSBT statistical area<sup>18</sup>. Representativeness is the proportion of statistical areas fished that reached the target of 10% observer coverage as per the SMMTG Recommendations.

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	2017			0%	11%				14%					11%	67%
			2018		0%		12%				35%					12%	67%
			2019				12%				0%					12%	50%
	PS	AUD	2017								18%					18%	100%
			2018			0%					20%					20%	50%
			2019			0%					13%					13%	50%
ID	LL	IDD	2017	0%	1%										1%	0%	
			2018	1%	0%										1%	0%	
			2019	1%	1%											1%	0%
JP	LL	JPD	2017				6%				11%	4%	0%		5%	25%	
			2018				8%	0%		2%	14%	6%			6%	20%	
			2019				15%	16%		24%	13%	26%			22%	100%	
KR	LL	KRD	2017										18%		18%	100%	
			2018										21%		21%	100%	
			2019										22%		22%	100%	
NZ	LL	NZD	2017					18%	23%						20%	100%	
			2018				0%	14%	19%						15%	67%	
			2019					7%	10%						8%	0%	
TW	LL	TWD	2017		13%							12%	0%	12%	10%	75%	
			2018		15%						18%	20%	14%	28%	15%	100%	
			2019		26%						18%	5%	10%		17%	50%	
ZA	LL	ZAC	2017										100%	100%	100%	100%	
			2018										100%	100%	100%	100%	
			2019														N/A
	ZAD	2017										7%	0%	3%	5%	0%	
		2018										11%	16%	16%	15%	100%	
		2019														N/A	

<sup>18</sup> 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<sup>19</sup>.

Member	Fleet	Year	Tori pole + Night setting only	Tori pole + weighted branchline only	Night setting + weighted branchline only	Tori pole + night setting + weighted branchline	None	Single Measure (unspecified)	Night setting only	Tori pole only	Weighted branchline only	Other
AU	AUD	2017	-	51.7%	-	48.3%	-	-	-	-	-	-
		2018	-	29.9%	-	70.1%	-	-	-	-	-	-
		2019	-	44.0%	-	56.0%	-	-	-	-	-	-
JP	JPD	2017	10.9%	36.3%	-	23.6%	0.8%	28.4%	-	-	-	-
		2018	21.3%	-	-	-	-	78.7%	-	-	-	-
		2019	12.7%	10.2%	0.3%	3.0%	-	-	1.0%	66.7%	0.9%	2.9%
KR	KRD	2017	-	99.5%	-	0.5%	-	-	-	-	-	-
		2018	-	100.0%	-	-	-	-	-	-	-	-
		2019	-	100.0%	-	-	-	-	-	-	-	-
NZ	NZD	2017	94.0%	-	-	-	-	6.0%	-	-	-	-
		2018	67.4%	0.8%	-	27.5%	-	-	3.0%	1.2%	-	-
		2019	31.7%	2.1%	-	65.2%	-	-	0.5%	0.5%	-	-
TW	TWD	2017	92.4%	4.6%	-	3.1%	-	-	-	-	-	-
		2018	83.2%	0.2%	-	16.5%	-	-	-	-	-	-
		2019	57.9%	25.5%	8.0%	-	-	-	-	8.6%	-	-
ZA	ZAC	2017	-	-	-	100.0%	-	-	-	-	-	-
		2018	-	-	-	100.0%	-	-	-	-	-	-
	ZAD	2017	-	-	-	100.0%	-	-	-	-	-	-
		2018	-	-	-	100.0%	-	-	-	-	-	-

Table 2: Proportion of observed effort in Members' long line fleets that used specific mitigation measures in statistical areas 2 and 14.

Member	Fleet	Year	Tori pole + Night setting only	Tori pole + weighted branchline only	Night setting + weighted branchline only	Tori pole + night setting + weighted branchline	None	Single Measure (unspecified)	Night setting only	Tori pole only	Weighted branchline only	Other
TW	TWD	2017	80.2%	1.6%	-	18.3%	-	-	-	-	-	-
		2018	87.4%	1.9%	0.3%	9.8%	0.1%	-	0.5%	0.1%	-	-
		2019	64.6%	22.6%	2.7%	3.7%	0.1%	-	-	6.3%	-	-
ZA	ZAC	2017	-	-	-	100.0%	-	-	-	-	-	-
		2018	-	-	-	100.0%	-	-	-	-	-	-
	ZAD	2018	-	-	-	100.0%	-	-	-	-	-	-

Table 3: Proportion of observed effort in Members' long line fleets that used specific mitigation measures in Statistical area 15.

Member	Fleet	Year	Tori pole + Night setting only	Tori pole + weighted branchline only	Night setting + weighted branchline only	Tori pole + night setting + weighted branchline	None	Single Measure (unspecified)	Night setting only	Tori pole only	Weighted branchline only	Other
TW	TWD	2018	100.0%	-	-	-	-	-	-	-	-	-
ZA	ZAD	2017	-	-	-	100.0%	-	-	-	-	-	-
		2018	-	-	-	100.0%	-	-	-	-	-	-

<sup>19</sup> For 2017 and 2018 data, the ERS Data Exchange template did not include specific single mitigation measures. So, for these years, single mitigation measures were recorded as "unspecified". For the 2019 data (and any revised earlier data), the template required specification of those single mitigation measures. Therefore, some years in this table have single mitigation measures shown as unspecified and other years have the actual mitigation measures listed.



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.

	<b>Methods being used to monitor compliance with bycatch mitigation measures, including coverage level</b>	<b>Type of information collected</b>
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 monitor SBT landings at key ports, as well as undertake at sea inspections of boats taking SBT in the longline and purse seine fisheries. In 2017/18 Australian fisheries officers conducted 18 inspections of SBT/ETBF boats, 14 inspections at sea and 4 inspections in port.</p>	<p>The information collected on mitigation measures includes;</p> <ul style="list-style-type: none"> <li>• whether bycatch mitigation, such as tori lines, is being carried on board the vessel,</li> <li>• whether bycatch mitigation has been deployed appropriately, and</li> <li>• whether the bycatch mitigation complies with specifications.</li> </ul>
EU	<i>No information (not applicable).</i>	<i>No information (not applicable)</i>
Indonesia	<i>Inspection by surveillance officer.</i>	Catch composition including by-catch and ERS.
Japan	<p>Inspection of Japanese fishing vessels registered with the CCSBT through vessel radio communication and visual confirmation relevant to bycatch mitigation measures had been conducted by monitoring and control vessel (MCV). During the 2018/2019 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.</p>	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.

	<b>Methods being used to monitor compliance with bycatch mitigation measures, including coverage level</b>	<b>Type of information collected</b>
<b>New Zealand</b>	<p>Compliance with these measures is monitored through at-sea and in-port inspections from 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.</p> <p>In the 2017 calendar year, the inspections undertaken found six incidents where breaches of seabird mitigation regulations may have occurred across the New Zealand surface longline fleet. The six cases have resulted in warnings.</p> <p>During the 2018 calendar year, inspections found two incidents where breaches of seabird mitigation regulations may have occurred across the New Zealand surface longline fleet.</p> <p>One of the cases has resulted in a warning, whilst the other case is being processed for possible prosecution.</p>	<p>Fisheries Officers collect information about tori line and line-weighting gear that is present on vessels.</p> <p>Observer reports provide information about mitigation gear usage, gear descriptions, and fisher attitudes toward seabird mitigation.</p>
<b>South Africa</b>	<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>
<b>Taiwan</b>	<p>We dispatch observer to monitor compliance with bycatch mitigation measures. The observer coverage rate is about 10.2% (efforts) by vessel in 2017/2018 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 (copies shown as Attachment C) every week through Taiwan Tuna Association (TTA). Any conditions for not compliance identified during review by FA officials shall trigger further investigations and enforcement of sanctions.</p>	<p>Fishers shall report the measures adopted by its vessels to FA every week. 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.

Member	ERS Species Group	Observer Coverage			Mortality Rate			Raised Mortalities		
		2017	2018	2019	2017	2018	2019	2017	2018	2019
Australia	Blue shark	11%	12%	13%	0.117	0.103	0.060	50	60	20
	Shortfin mako	11%	12%	14%	0.331	0.194	0.110	154	111	33
	Porbeagle shark	11%			0.156			60	-	-
	Other sharks	11%	12%	14%	0.175	0.044	0.000	72	26	-
	Turtles	11%			0.000			-	-	-
	Other albatrosses		12%			0.015		-	9	-
	Unidentified albatrosses	14%			0.143			14	-	-
Whales	11%			0.000			-	-	-	
Indonesia	Blue shark	N/A	N/A	N/A	0.956	1.148	0.775	167	12,926	7,793
	Shortfin mako	N/A	N/A	N/A	0.546	0.079	0.151	49	75	56
	Porbeagle shark	N/A	N/A	N/A		0.034		-	-	-
	Other sharks	N/A	N/A	N/A	0.764	0.778	0.655	23	5,260	5,155
	Turtles	N/A	N/A	N/A	0.067	0.053	0.045	-	142	96
	Dark coloured albatrosses	N/A	N/A	N/A	0.018			1	-	-
	Other albatrosses	N/A	N/A	N/A	0.018			1	-	-
	Giant petrels	N/A	N/A	N/A		0.072	0.229	-	354	1,091
	Other seabirds	N/A	N/A	N/A	0.273	0.053		32	117	-
Japan	Blue shark	8%	7%	24%	1.874	2.619	1.436	23,646	36,727	19,092
	Shortfin mako	8%	7%	24%	0.048	0.019	0.051	466	241	588
	Porbeagle shark	8%	7%	24%	0.410	0.298	0.229	6,522	4,071	2,568
	Other sharks	8%	7%	24%	0.031	0.064	0.015	339	1,020	140
	Turtles			23%			0.000	-	-	-
	Dark coloured albatrosses		6%	25%		0.048	0.059	-	323	378
	Large albatrosses	8%	7%	25%	0.003	0.006	0.040	32	80	359
	Other albatrosses	8%	7%	24%	0.032	0.195	0.358	296	3,451	3,944
	Unidentified albatrosses	8%	9%	30%	0.007	0.007	0.004	102	76	14
	Giant petrels	8%	7%	24%	0.007	0.059	0.149	59	1,071	1,924
	Other seabirds		6%	30%		0.011	0.007	-	77	17
	Unidentified seabirds		14%	23%		0.002	0.000	-	7	-
Korea	Blue shark	18%	21%	22%	1.586	1.220	1.229	4,449	3,340	3,027
	Shortfin mako	18%	21%	22%	0.016	0.077	0.227	44	210	659
	Porbeagle shark	18%	21%	21%	0.269	0.412	0.029	754	1,128	56
	Other sharks	18%	21%	22%	0.210	0.181	0.026	589	497	52
	Dark coloured albatrosses		21%	18%		0.009	0.014	-	24	17
	Large albatrosses		21%	23%		0.002	0.011	-	5	9
	Other albatrosses	18%	21%	20%	0.002	0.040	0.044	6	110	102
	Giant petrels							-	-	-
Other seabirds							-	-	-	
New Zealand	Blue shark	20%	17%	12%	3.673	4.382	6.901	5,270	6,747	5,337
	Shortfin mako	20%	17%	12%	0.227	0.314	0.203	271	347	170
	Porbeagle shark	20%	17%	12%	1.375	0.732	1.247	1,983	916	1,122
	Other sharks	20%	20%	15%	0.108	0.146	0.074	113	242	75
	Turtles	18%	8%		0.000	0.000		-	-	-
	Large albatrosses	23%	51%		0.008	0.027		6	2	-
	Other albatrosses	20%	28%	17%	0.072	0.362	0.417	96	206	167
	Unidentified albatrosses	23%	23%	9%	0.016	0.027	0.000	11	4	-
	Giant petrels	20%	28%	14%	0.036	0.053	0.109	51	30	79
Other seabirds		8%	9%		0.000	0.000	-	-	-	
Taiwan	Blue shark	10%	16%	17%	0.441	0.383	0.287	7,452	6,424	6,242
	Shortfin mako	12%	16%	20%	0.030	0.040	0.039	422	607	652
	Porbeagle shark			23%			0.035	-	-	221
	Other sharks	12%	16%	19%	0.050	0.018	0.049	730	250	318
	Dark coloured albatrosses	12%	16%	32%	0.003	0.011	0.013	9	49	7
	Large albatrosses	12%	17%	17%	0.003	0.015	0.004	9	38	6
	Other albatrosses	12%	20%	22%	0.002	0.025	0.011	33	34	76
	Unidentified albatrosses			15%			0.006	-	-	7
	Giant petrels	12%	21%	20%	0.002	0.018	0.008	9	88	93
Other seabirds	13%		15%	0.002		0.018	15	-	158	
South Africa	Blue shark	42%	30%		2.379	7.767		10,484	10,832	-
	Shortfin mako	42%	30%		2.274	3.147		7,796	3,847	-
	Other sharks	42%	31%		0.008	0.054		2	11	-
	Turtles		16%			0.000		-	-	-
	Other albatrosses	100%			0.005			1	-	-