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|  <p>Agreement on the Conservation<br/>of Albatrosses and Petrels</p> | <p><b>Ninth Meeting of the Seabird Bycatch Working Group</b><br/><i>Florianópolis, Brazil, 6 - 8 May 2019</i></p> <p><b>ACAP seabird bycatch performance indicators<br/>and reporting framework</b></p> <p><b><i>Sebastián Jiménez, Igor Debski, Wiesława Misiak,<br/>Nathan Walker, Anton Wolfaardt</i></b></p> |
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### SUMMARY

The ACAP Action Plan calls on the Advisory Committee to routinely review and update data on the mortality of albatrosses and petrels in commercial and other relevant fisheries. It has been agreed previously that the Status-Pressure-Response framework will be used by ACAP to measure performance, and that the main Pressure Indicator for bycatch P1 should be: total number of birds killed per year of ACAP species (by species where possible), and their bycatch rate, across each of the fisheries of member Parties.

Here we report on intersessional progress on the approach agreed at SBWG8. A reporting template was refined for the national reporting process ahead of AC11. The data received through this new reporting format was very limited. We identify the steps needed in the next intersessional period if any progress is to be achieved towards using seabird bycatch indicators to understand how ACAP can track and address the mortality of seabird in fisheries.

### RECOMMENDATIONS

We recommend that the Seabird Bycatch Working Group:

1. Consider the reporting format used and advise on any further refinements necessary to allow the collection of robust data for ACAP's bycatch indicator(s).
2. Request that the Advisory Committee reiterates the importance of Parties and Range States reporting bycatch estimates using appropriate statistical methods, or where this is not available, observed bycatch data using relevant strata.
3. Request that the Advisory Committee reiterates the importance of Parties and Range States identifying fisheries where data are either extremely poor or lacking altogether, and the reasons for those.

## **Indicadores de desempeño del ACAP para la captura secundaria de aves marinas y marco para la presentación de informes**

### **RESUMEN**

El Plan de Acción del ACAP solicita al Comité Asesor que revise y actualice en forma periódica los datos sobre mortalidad de albatros y petreles en pesquerías comerciales y demás pesquerías pertinentes. Con anterioridad, se ha acordado que el ACAP utilizaría el marco de Estado-Presión-Respuesta para la medición del desempeño y que el principal indicador de Presión (P1) para la captura secundaria debería ser la cantidad total de aves muertas por año que forman parte de las especies amparadas por el ACAP (en lo posible, según la especie) y la tasa de captura secundaria de estas últimas en cada una de las pesquerías pertenecientes a las Partes.

En este documento, se informa sobre los progresos logrados durante el periodo intersesional con respecto a la metodología acordada en la GdTCS8. Se ajustó una plantilla de presentación de informes según el proceso de presentación de informes de la Reunión CA11 a nivel nacional. Los datos recibidos mediante este nuevo formato de presentación de informes fueron muy limitados. Identificamos los pasos necesarios para el próximo periodo intersesional si se lograran avances en el uso de indicadores de captura secundaria de aves marinas a fin de comprender en qué forma el ACAP puede vigilar y abordar la mortalidad de aves marinas en pesquerías.

### **RECOMENDACIONES**

Se recomienda al Grupo de Trabajo sobre Captura Secundaria de Aves Marinas realizar las siguientes acciones:

1. Considerar el formato usado para la presentación de informes y sugerir ajustes adicionales que pudieran ser necesarios para posibilitar la recopilación de datos sólidos para el/los indicador/es de captura secundaria del ACAP.
2. Solicitar al Comité Asesor que reitere la importancia de que las Partes y los Estados del Área de Distribución informen sobre sus cálculos de captura secundaria utilizando los métodos estadísticos que correspondan, y de que, en caso de que estos últimos no estén disponibles, informen sobre los datos de captura secundaria observada utilizando los estratos pertinentes.
3. Solicitar al Comité Asesor que reitere la importancia de que las Partes y los Estados del Área de Distribución identifiquen pesquerías cuando exista una deficiencia extrema de datos o estos directamente no existan y expliquen las razones de ese fenómeno.

## **Indicateurs de performance relatifs à la capture accessoire d'oiseaux de mer et format de collecte des données**

### **RÉSUMÉ**

Le Plan d'action de l'ACAP prévoit que le Comité consultatif passe en revue et actualise régulièrement les données relatives au taux de mortalité des albatros et des pétrels enregistré dans les activités de pêche commerciale et autre pêche concernée. Il a été convenu précédemment que l'ACAP utiliserait le cadre état-pression-réponse pour mesurer la performance, et que le principal indicateur de pression pour la capture accessoire P1 devrait être le nombre total d'oiseaux inscrits à l'ACAP tués par an (par espèce, dans la mesure du possible), et le taux de capture accessoire dans les pêches de toutes les Parties à l'Accord.

Le présent document constitue un rapport sur les avancées accomplies conformément à l'approche adoptée lors de la réunion du GTCA8. Un modèle de rapport a été affiné pour les procédures nationales de préparation des rapports en prévision du CC11. Les données reçues par le biais de ce nouveau format de rapport étaient très limitées. Nous devons identifier les étapes nécessaires à prendre lors de la prochaine période intersessions pour permettre une meilleure utilisation des indicateurs de capture accessoire d'oiseaux de mer, afin de mieux comprendre comment l'ACAP peut surveiller la mortalité des oiseaux marins dans les pêcheries et de déterminer mesures à prendre en conséquence.

### **RECOMMANDATIONS**

Nous recommandons que le Groupe de travail sur la capture accessoire des oiseaux de mer :

1. examine le format des rapports employé et émette des conseils pour le perfectionner en vue de collecter des données solides pour alimenter les indicateurs de captures accessoires de l'ACAP.
2. prie le Comité consultatif d'insister sur le fait qu'il est important que les Parties et les États de l'aire de répartition communiquent les estimations de capture accessoire à l'aide de méthodes statistiques adéquates ou, si ce n'est pas possible, en utilisant les données relatives à la capture accessoire observée à l'aide des strates pertinentes
3. demande au Comité consultatif de réaffirmer l'importance de l'identification par les Parties et les États de l'aire de répartition des pêcheries où les données sont très rares ou inexistantes, et d'en déterminer les raisons.

## 1. BACKGROUND

The ACAP Action Plan calls on Parties *'to collect reliable, and where possible, verifiable data to enable accurate estimation of the nature and extent of albatross and petrel interactions with fisheries'* (Action 4.2). The Action Plan also expects the Advisory Committee regularly to review and update data on the mortality of albatrosses and petrels in fisheries (5.1f) as well as data on the distribution and seasonality of fishing effort for those fisheries that overlap with species listed in Annex 1 of the Agreement (5.1g). In order to achieve this objective, a web-based reporting system was developed to capture and use fisheries and bycatch data submitted by Parties and collaborating Range States. Since its inception, (see AC6 Doc 16 and [SBWG4 Doc 25 Rev 3](#)), the reporting format has undergone a number of reviews ([SBWG5 Doc 16](#), [SBWG6 Doc09](#), [SBWG7 Doc05](#), [SBWG8 Doc05](#)) to reflect discussions about the nature of data which would be submitted to ACAP and used to construct relevant bycatch indicators which would monitor changes in bycatch levels (and factors contributing to these changes), important data gaps that need to be filled, or capacity needs of Parties. The most recent reviews on the reporting format ([SBWG7 Doc 05](#), [SBWG8 Doc 05](#)) have reflected the recommendation made at SBWG6 that instead of providing raw or aggregated data, Parties could provide estimates that they themselves have derived. However, if these estimates are not available, the reporting format also allows unprocessed observer data to be incorporated.

## 2. RESULTS FROM 2018 - AC11 REPORTING

Following a review of the reporting forms at SBWG8 ([SBWG8 Doc 05](#)) and during subsequent consultations with data holders, the Secretariat made a number of improvements to the presentation of the bycatch forms in the ACAP database (**ANNEX 1**). Depending on the level of data availability for each taxon, seabird bycatch data can now be reported as total estimates of mortality, rate of bycatch or raw observed bycatch data within each fishery stratum on the same page. The ACAP seabird bycatch reporting template solicits bycatch and associated information from Parties in a manner that is intended to facilitate an understanding of the bycatch rates and estimates reported, including undetected mortality, uncertainty in estimation (including the representativeness of observer coverage) and uncertainty in species identification, as well as the mandated mitigation measures and those in use. We encourage further feedback from data custodians on the ease of use of the template, and suggestions for further amendments to allow for reporting of data from their jurisdiction.

Fishery and bycatch data review and submission of new data as part of the AC11 reporting round was very limited. A summary of the reporting status is provided in Annexes 2 and 3.

The database contains 95 fisheries from 14 Parties and Range States (**ANNEX 2**). Trawl was the dominant gear type, reported for 32 fisheries, followed by demersal longline (26 fisheries), and pelagic longline (21 fisheries). Seven fisheries were reported to use purse seines and four to use gillnet and entangling nets. Squid jig, pots/ trap, and bait boats fishing for tuna were reported in one fishery each. Seven fisheries did not have their gear type specified, and no fisheries were identified as boat seines.

Only seven fisheries (New Zealand and USA) were able to report total estimated mortality of all seabirds. Bycatch rates of total seabirds or particular taxa were reported for 16 fisheries (New Zealand, Spain, Uruguay, and USA). Unprocessed observer data for any taxa was

reported for 76 fisheries. Seven Parties or Range States (Chile, New Zealand, Peru, South Africa, Spain, Uruguay and USA) provided information for 2016-2018.

Lack of resources/expertise to process data was reported by two Parties (Argentina and Chile) as the reason for total estimates of mortality or rates of bycatch not being available for their fisheries. Rates of bycatch could not be reported for some New Zealand fisheries due to lack of observer data in those fisheries. For some fisheries, total mortality or rates of bycatch were not reported as no seabirds were observed caught (i.e. observed bycatch was 0).

Information on mandated mitigation measures was provided in eight fisheries (Chile, New Zealand, Spain, Uruguay), and mitigation measures in use were reported for nine fisheries (Chile, New Zealand, Spain, Uruguay).

ACAP Species were reported bycaught in six (out of 9) gear types, along with seven other families of seabirds (**ANNEX 3**). The species most frequently reported in trawl were *Thalassarchestead*, *T.salvini*, *Procellariaaequinocialis*, *T.melanophris*, and *T.bulleri*. Those most frequently reported in pelagic longlines were *Phoebastrianigripes* and *P. immutabilis*, and for demersal longlines, *Procellariaaequinocialis*, *T.melanophris*, *Phoebastrianigripes* and *P. immutabilis*.

### 3. ACAP INDICATORS

ACAP has previously agreed that the primary Pressure Indicator for Bycatch (P1) should comprise two linked components: i) bycatch rates of seabirds (by species, where possible) across each of the fisheries of member Parties and ii) the total number of birds killed (bycaught) per year of ACAP species (again, preferably by species). From the limited data reported in the lead up to AC11 it is clearly not possible at this point in time to report these indicators to measure the performance across all ACAP Parties. The Working Group should consider the question of how much data, in terms of the proportion of the number of ACAP Party fisheries for which bycatch estimates are available, is required to allow meaningful reporting of the Pressure Indicator for Bycatch. This would inform the development of indicator reporting to be considered at SBWG10, ahead of MOP6.

State indicator 2 (S2) relates to the availability of bycatch data relevant to ACAP species. Progress in the availability of bycatch data is measured as an increasing number of Parties and/or fleets reporting bycatch estimates over time, and a change in methods used to those producing most robust estimates. The Working Group should consider reporting options ahead of development of reporting to be considered at SBWG10, ahead of MoP6.

Example State Indicator for Bycatch reporting template:

|  | 2018 (for AC11) |       |            |             | 2020 (for AC12) |       |            |             |
|--|-----------------|-------|------------|-------------|-----------------|-------|------------|-------------|
| Fisheries reporting:                                 | All             | Trawl | Pelagic LL | Demersal LL | All             | Trawl | Pelagic LL | Demersal LL |
| total estimates of mortality for <u>all seabirds</u> | 7/ 7%           | 2/ 2% | 2/ 2%      | 3/3%        |                 |       |            |             |
| rates of bycatch for <u>all seabirds</u>             | 10/10%          | 1/ 1% | 6/ 6%      | 3/ 3%       |                 |       |            |             |
| raw observer datafor <u>all seabirds</u>             | 16/17%          | 5 /5% | 6 /6%      | 5 /6%       |                 |       |            |             |

#### **4. FUTURE IMPLEMENTATION**

In order for the bycatch indicators work to move forward and be implemented at the next WG and AC meetings, the following issues need to be addressed:

1. Parties and collaborating Range States need to provide information on their relevant fisheries (or advise of the barriers to the provision of this information) in a timely manner. The fishery forms are available outside the AC reporting process and therefore data can be entered at any time.
2. What can ACAP do to address specific barriers to data provision?
3. The analysis and summary of data to be reported to the WGs and the AC/Parties as indicators will require additional resources to those currently available in the Secretariat.

## ANNEX 1. Question 4: Bycatch data form

Fisheries: SE nemo longline    - back to [edit fishery](#)    or    [Add records for new Stratum table](#)

**Fishery Strata**

Please provide information on this stratum below by season, area and vessel as appropriate. If reporting for all seasons, areas and vessels, leave the default "All seasons", "All areas" and "All vessels". You can chose several mitigation measures that are mandated and if different to those used please also specify what is actually being used by clicking on the options in the drop-down list. Then provide the technical specification in the text box below. If your option is not on the list, please email [secretariat@acap.aq](mailto:secretariat@acap.aq) and ask for it to be added to the list of mitigation measures. If you have estimated bycatch data, please provide details in Section 'A. Estimates' and continue to the taxa table at the bottom of the page. If not, please indicate what is preventing the submission of data at this level and continue to Section 'B. Rates'. If you have data on rates of bycatch for this stratum, please provide the details and continue to the taxa table at the bottom of the page. If not, please indicate what is preventing the submission of data at this level and continue to Section 'C. Observer data'. If you have observed bycatch data for this stratum, please provide the details and continue to the taxa table at the bottom of the page. If not, please save your answers and navigate out of the form via the save button in this section. If the list of total effort, observed effort or Bycatch data source does not have an option you need, please email [secretariat@acap.aq](mailto:secretariat@acap.aq). You can enter more than 1 type of data per page e.g. Estimates and Rates, depending on availability for each taxon or taxon grouping. If this is the case, please fill out Sections A and B. You can hide any sections that are not relevant to the type of data your are submitting via the 'Hide Estimates', 'Hide Rates' and 'Hide Raw' buttons at the top of each section. Please remember to save your data regularly and before navigating away from the form/ page.

**Year:**     **Season:**     **Area:**     **Vessel:**

Mandated mitigation measures -

Mitigation measures in use -

Details and technical specifications of mitigation measures in use (e.g. aerial extent of tori lines, line weighting regime applied) and any other comments.

Optionally select a map linked to this strata.  [Save and continue editing strata](#) or [Save and back to fishery](#)

Hide Estimates
Hide Rates
Hide Raw

### A. Estimates of total mortality

Do you have simple or stratified ratio estimates, model based or quantitative risk assessment estimates of seabird bycatch in this fishery?

**If Yes then**

If not, please provide more information (tick all that apply):

- ☐ Lack of resources/expertise to process data
- ☐ Lack of observer data
- ☐ Poor quality data
- ☐ Other (please provide details in text box)

Then continue to Rates →

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Estimates includes - tick all that apply: [\[edit picklist\]](#)

- ☐ birds landed on vessel that are dead
- ☐ live birds landed on board that are injured
- ☐ birds observed killed or injured by direct interaction with fishing gear but not landed on the fishing vessel
- ☐ undetected mortality (not observed) - if yes describe how this was quantified

Source of data - tick all that apply: [\[edit picklist\]](#)

- ☐ Observer programme
- ☐ Fishery logbooks
- ☐ Electronic Monitoring (EM)
- ☐ Other - use text box for details

Method comments :

Percent unit fishing effort observed for bycatch (This should reflect the proportion of actual fishing effort that was directly observed and not a proxy which includes e.g. travel time or other periods when the vessel was not engaged in fishing).  %

Any other comments on unit fishing effort

### B. Bycatch Rates

Do you have rates of seabird bycatch in this fishery?

**If Yes then**

If not, please provide more information (tick all that apply):

- ☐ Lack of resources/expertise to process data
- ☐ Lack of observer data
- ☐ Poor quality data
- ☐ Other (please provide details in text box)

Then continue to Observer Data →

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Rates includes - tick all that apply: [\[edit picklist\]](#)

- ☒ birds landed on vessel that are dead
- ☒ live birds landed on board that are injured
- ☐ birds observed killed or injured by direct interaction with fishing gear but not landed on the fishing vessel
- ☐ undetected mortality (not observed) - if yes describe how this was quantified

test a

Source of data - tick all that apply: [\[edit picklist\]](#)

- ☒ Observer programme
- ☐ Fishery logbooks
- ☐ Electronic Monitoring (EM)
- ☐ Other - use text box for details

test b

Percent unit fishing effort observed for bycatch (This should reflect the proportion of actual fishing effort that was directly observed and not a proxy which includes e.g. travel time or other periods when the vessel was not engaged in fishing).  %

Any other comments on unit fishing effort

### C. Raw/unprocessed Bycatch Data

Do you have any raw/unprocessed data (i.e. no estimates) for seabird bycatch in this fishery?

**If Yes then**

If not, please provide more information (tick all that apply):

- ☐ No observer programme in this fishery (data is not collected)
- ☐ Data collected, but not available from agency responsible
- ☐ Other (please provide details in text box)

Then [Save and back to fishery](#)

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| Quantity        | Type   |
|-----------------|--|
| Total Effort    | <input type="text"/> total number of hooks set based on complete reporting |
| Observed Effort | <input type="text"/> Number of hooks observed                              |

OR

Percent unit fishing effort observed for bycatch (This should reflect the proportion of actual fishing effort that was directly observed and not a proxy which includes e.g. travel time or other periods when the vessel was not engaged in fishing).  %

Bycatch data source  Observed caught

Comment



Please provide details of seabird bycatch for this stratum. Data can be entered as Estimates, Rates or numbers observed caught, depending on what is available for each taxon or group. Columns that are not needed for data entry can be hidden from view e.g. if you only have observed data, Rates and Estimates sections can be hidden. Or, if you have observed data for some species, but Rates data for other species, you can show and hide the appropriate columns as you proceed with data entry.

Hide Taxon/Group Raw

Hide Taxon/Group Rates

Hide Taxon/Group Estimates

| Taxon/group                                 | Raw                      | Rates                |                         | Estimates            |   |   |   |                                 | Entered by |
|---|--------------------------|----------------------|-------------------------|----------------------|---|---|---|---------------------------------|------------|
|   | How many observed caught | Rate                 | Per unit fishing effort | Estimate             | Uncertainty (min - max)                     | Measure of uncertainty type e.g. 95% CI | How was 95% CI or other measure of uncertainty derived? | estimate_method [edit picklist] |            |
| Total seabirds                              | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Total Diomedidae                            | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Total albatrosses                           | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Total Procellariidae                        | <input type="text"/>     | 45                   | 1000 hooks set          | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Total petrels, prions and shearwaters       | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Total non-Procellariidae non-Diomedidae     | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Total other seabirds                        | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Diomedidae                                  | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Unidentified albatross                      | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Diomedea sp                                 | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Unidentified great albatrosses              | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Diomedea                                    | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| exulans/dabbenena /antipodensis             | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Wandering Albatross sensu lato (or complex) | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Diomedea amsterdamensis                     | <input type="text"/>     | 12.3                 | 1000 hooks set          | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Amsterdam albatross                         | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Diomedea antipodensis                       | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Antipodean albatross                        | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Diomedea dabbenena                          | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |
| Tristan albatross                           | <input type="text"/>     | <input type="text"/> | <input type="text"/>    | <input type="text"/> | <input type="text"/> - <input type="text"/> | <input type="text"/>                    | <input type="text"/>                                    | <input type="text"/>            |            |

**ANNEX 2.**

**Table 1. All reported fisheries with types of bycatch data reported in each fishery.**

|                  | Fishery  | Gear Type           | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|------------------|--|---------------------|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>Argentina</b> | CONGELADORES - MERLUZA DE COLA, POLACA Y MERLUZA NEGRA | Trawl               | 17                               | 2008                            | 2014                          |  |                                     | 4                              |
| <b>Argentina</b> | CONGELADORES - MERLUZA HUBBSI                          | Trawl               | 16                               | 2008                            | 2013                          |  |                                     | 3                              |
| <b>Argentina</b> | CONGELADORES - PALANGREROS                             | Longline - demersal | 25                               | 2008                            | 2012                          |  |                                     | 5                              |
| <b>Argentina</b> | CONGELADORES - TANGONEROS                              | Longline - demersal | 40                               | 2005                            | 2012                          |  |                                     | 8                              |
| <b>Argentina</b> | COSTEROS - FLOTA AMARILLA DE RAWSON                    | Trawl               | 35                               | 2006                            | 2012                          |  |                                     | 7                              |
| <b>Argentina</b> | COSTEROS - PELAGICAS - RED DE MEDIA AGUA               | Trawl               | 10                               | 2011                            | 2012                          |  |                                     | 2                              |
| <b>Argentina</b> | FRESQUEROS ALTURA - MERLUZA HUBBSI                     | Trawl               | 27                               | 2008                            | 2014                          |  |                                     | 7                              |
| <b>Argentina</b> | RADA O RIA - MERLUZA HUBBSI - PALANGRE                 | Longline - demersal | 5                                | 2009                            | 2009                          |  |                                     |                                |
| <b>Australia</b> | Eastern Tuna and Billfish                              | Longline - pelagic  | 50                               | 2004                            | 2013                          |  |                                     | 4                              |
| <b>Australia</b> | Gillnet, Hook & Trap - longline sector                 | Longline - demersal | 50                               | 2004                            | 2013                          |  |                                     | 6                              |
| <b>Australia</b> | Great Australian Bight Trawl Sector                    | Trawl               | 50                               | 2004                            | 2013                          |  |                                     | 1                              |
| <b>Australia</b> | Heard Island & McDonald Islands - Longline             | Longline - demersal | 50                               | 2004                            | 2013                          |  |                                     | 6                              |
| <b>Australia</b> | Heard Island and McDonald Islands - Trawl              | Trawl               | 50                               | 2004                            | 2013                          |  |                                     | 4                              |

|                  | Fishery  | Gear Type                   | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|------------------|--|-----------------------------|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>Australia</b> | Macquarie Island - Longline  | Longline - demersal         | 50                               | 2004                            | 2013                          |  |                                     |                                |
| <b>Australia</b> | Macquarie Island - Trawl   | Trawl                       | 45                               | 2004                            | 2012                          |  |                                     |                                |
| <b>Australia</b> | South-East Trawl including Victorian Inshore Trawl   | Trawl                       | 50                               | 2004                            | 2013                          |  |                                     | 7                              |
| <b>Australia</b> | Western Tuna and Billfish  | Longline - pelagic          | 50                               | 2004                            | 2013                          |  |                                     | 1                              |
| <b>Brazil</b>    | Monkfish gillnet   | gillnet and entangling nets | 15                               | 2011                            | 2013                          |  |                                     | 2                              |
| <b>Brazil</b>    | Pelagic longline for tuna and swordfish  | Longline - pelagic          | 50                               | 2004                            | 2013                          |  |                                     | 8                              |
| <b>Brazil</b>    | Pelagic Longline Fishery - Foreign-owned fishing boats rented by Brazilian fishing enterprises | Longline - pelagic          | 6                                | 2011                            | 2012                          |  |                                     | 1                              |
| <b>Canada</b>    | Commercial Pacific Halibut fishery (west coast of Canada)                                      | no data                     | 30                               | 2004                            | 2009                          |  |                                     | 4                              |
| <b>Canada</b>    | Commercial Pacific Salmon gillnet fishery  | no data                     | 10                               | 2009                            | 2010                          |  |                                     | 1                              |
| <b>Canada</b>    | Commercial Rockfish (west coast of Canada)   | no data                     | 30                               | 2004                            | 2009                          |  |                                     | 3                              |
| <b>Chile</b>     | PESQUERIA DE ARRASTRE DE CRUSTACEOS DEMERSALES   | Trawl                       | 17                               | 2013-2015                       | 2017                          |  | 1                                   | 3                              |
| <b>Chile</b>     | Pesquería industrial de cerco de pequeños pelágicos (sardina y anchoveta, otros)               | purse seines                | 16                               | 2014                            | 2017                          |  |                                     | 5                              |
| <b>Chile</b>     | Pesquería de cerco artesanal de pequeños pelágicos (sardina común y anchoveta)                 | purse seines                | 16                               | 2014                            | 2017                          |  |                                     | 4                              |
| <b>Chile</b>     | pesquería de cerco industrial sobre pelágicos medianos (Jurel, caballa).                       | purse seines                | 16                               | 2014                            | 2017                          |  |                                     | 3                              |

|                | Fishery   | Gear Type                   | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|----------------|---|-----------------------------|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>Chile</b>   | Pesquería artesanal de peces pelagicos mediano y tiburones  | Longline - pelagic          | 1                                | 2017                            | 2017                          |  |                                     | 1                              |
| <b>Chile</b>   | Pesquería Arrastre Fabrica (congelador) especies: Merlucciusaustralis, Macruronusmagellanicus, Genypterusblacodes, Micromesistiusaustralis y otras especies demersales. | Trawl                       | 20                               | 2012                            | 2017                          |  |                                     | 8                              |
| <b>Chile</b>   | Pesquería de arrastre fabrica Surimero especies objetivo : merluza de tres aletas (Micromesistiusaustralis), Merluza de cola (Macruronusmagellanicus)                   | Trawl                       | 21                               | 2012                            | 2017                          |  |                                     | 7                              |
| <b>Chile</b>   | Pesquería de Arrastre Hielero especies merluza del sur (merlucciusaustralis) y merluza de cola ( macruronusmagellanicus) y otras especies demersales.                   | Trawl                       | 21                               | 2012                            | 2017                          |  |                                     | 8                              |
| <b>Chile</b>   | Gillnets Swordfish Fishery  | gillnet and entangling nets | 16                               | 2011                            | 2017                          |  |                                     | 1                              |
| <b>Chile</b>   | Pelagic longline  | Longline - pelagic          | 50                               | 2004                            | 2013                          |  |                                     | 2                              |
| <b>Chile</b>   | Pelagic longline  | Longline - pelagic          | 66                               | 2004                            | 2017                          |  |                                     | 12                             |
| <b>Chile</b>   | Pesquería merluza del sur (Merlucciusaustralis), flota palangre industrial.   | Longline - demersal         | 60                               | 2004                            | Q3 (Jul-Sep)                  |  |                                     | 7                              |
| <b>Chile</b>   | Tootfish's fishery, Bacalao de profundidad Industrial   | Longline - demersal         | 57                               | 2004                            | 2017                          |  |                                     | 2                              |
| <b>Ecuador</b> | Artisanal demersal longline fishery in Santa Rosa   | Longline - demersal         | 20                               | 2010                            | 2013                          |  |                                     | 1                              |

|                    | Fishery  | Gear Type                   | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|--------------------|--|-----------------------------|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>France</b>      | Pêcheriepalangrière À la L'Écologie Australe     | Longline - demersal         | 55                               | 2004                            | 2014                          |  |                                     |                                |
| <b>New Zealand</b> | Trawl  | Trawl                       | 288                              | 2002/2003                       | 2017                          | 279  | 279                                 | 3                              |
| <b>New Zealand</b> | Setnet   | gillnet and entangling nets | 6                                | 2012/13                         | 2017                          |  | 6                                   | 3                              |
| <b>New Zealand</b> | Purse seine                                      | purse seines                | 6                                | 2012/13                         | 2017                          |  | 6                                   | 3                              |
| <b>New Zealand</b> | Deepwater trawl                                  | Trawl                       | 51                               | 2004                            | 2014                          |  |                                     | 9                              |
| <b>New Zealand</b> | Demersal longline                                | Longline - demersal         | 57                               | 2004                            | 2017                          | 6  | 6                                   | 13                             |
| <b>New Zealand</b> | Inshore trawl                                    | no data                     | 51                               | 2004                            | 2014                          |  |                                     | 10                             |
| <b>New Zealand</b> | Middle depth trawl                               | no data                     | 51                               | 2004                            | 2014                          |  |                                     | 10                             |
| <b>New Zealand</b> | Pelagic longline                                 | Longline - pelagic          | 57                               | 2004                            | 2017                          | 6  | 6                                   | 13                             |
| <b>New Zealand</b> | Pelagic trawl                                    | Trawl                       | 52                               | 2004                            | 2014                          | 1  |                                     | 10                             |
| <b>Peru</b>        | Palangre de fondo                                | Longline - demersal         | 15                               | 2014                            | 2016                          |  |                                     |                                |
| <b>Peru</b>        | Arrastre industrial                              | Trawl                       | 35                               | 2010                            | 2016                          |  |                                     |                                |
| <b>Peru</b>        | Cerco : Pesca industrial de cerco para anchoveta | purse seines                | 50                               | 2007                            | 2016                          |  |                                     | 4                              |
| <b>Peru</b>        | Espinellartesanal                                | Longline - pelagic          | 26                               | 2005                            | 2010                          |  |                                     | 3                              |
| <b>Peru</b>        | Redes agalleras a la deriva                      | no data                     | 11                               | 2005                            | 2009                          |  |                                     | 1                              |

|                     | Fishery   | Gear Type   | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|---------------------|---|---|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>South Africa</b> | Large Pelagics  | Longline - pelagic                                      | 16                               | 2014                            | 2017                          |  |                                     | 2                              |
| <b>South Africa</b> | Demersal Shark Longline   | Longline - demersal                                     | 1                                | 2013                            | 2013                          |  |                                     |                                |
| <b>South Africa</b> | Demersal Trawl OFFSHORE   | Trawl   | 34                               | 2004                            | 2014                          |  |                                     |                                |
| <b>South Africa</b> | Patagonian Toothfish Longline   | Longline - demersal                                     | 50                               | 2004                            | 2013                          |  |                                     | 3                              |
| <b>South Africa</b> | Tuna / Swordfish Longline (South African vessels only)  | Longline - pelagic                                      | 45                               | 2004                            | 2012                          |  |                                     | 7                              |
| <b>South Africa</b> | Tuna Longline Fishery - Joint Venture Vessels only  | Longline - pelagic                                      | 50                               | 2004                            | 2013                          |  |                                     | 9                              |
| <b>Spain</b>        | Flota de arrastre cefalopodera y de peces de aleta congeladora (mã©tier OTB_MCF>70_0_0              | Trawl   | 3                                | 2015                            | 2017                          |  |                                     |                                |
| <b>Spain</b>        | Flota artesanal polivalente dirigida a especies demersales de Canarias (mã©tier MIS_DES_0_0_0)      | Longline - demersal<br>Longline - pelagic<br>pots/traps | 3                                | 2015                            | 2017                          |  |                                     |                                |
| <b>Spain</b>        | Flota artesanal de cerco dirigida a pequeños pelágicos en Canarias (mã©tier PS_SPF_10_0_0)          | purse seines  | 1                                | 2017                            | 2017                          |  |                                     |                                |
| <b>Spain</b>        | Flota de cebo vivo de Canarias y tropical (base en Dakar) de tãºnidos y especies afines. Bait boat! | bait boats fishing for tuna                             | 2                                | 2016                            | 2018                          |  |                                     |                                |

|              | Fishery   | Gear Type   | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|--------------|---|---|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>Spain</b> | Palangre de Fondo dirigida a Austromerluza patagónica en aguas de SIOFA (Océano Índico)   | Longline - demersal   | 2                                | 2017                            | 2018                          |  | 1                                   | 1                              |
| <b>Spain</b> | Palangre de superficie dirigido a pez espada (WCPFC)                                      | Longline - pelagic  | 10                               | 2010                            | 2011                          |  |                                     | 1                              |
| <b>Spain</b> | Pesquería dirigida a especies demersales y pelágicas en zonas ICES (VI, VII, VIII y IX)   | gillnet and entangling nets<br>Longline - demersal<br>purse seines<br>Trawl | 58                               | 2004                            | 2017                          |  |                                     | 2                              |
| <b>Spain</b> | Palangre y arrastre de fondo en el Mediterráneo español (excepto tiburidos)               | Longline - demersal<br>Trawl  | 25                               | 2009                            | 2017                          |  |                                     |                                |
| <b>Spain</b> | Pesquería de arrastre dirigida a crustáceos en Atlántico Centro-Este                      | Trawl   | 13                               | 2010                            | 2017                          |  |                                     |                                |
| <b>Spain</b> | Pesquería de arrastre de fondo dirigida a la merluza en Atlántico Centro-oriental (CECAF) | Trawl   | 7                                | 2010                            | 2017                          |  |                                     |                                |
| <b>Spain</b> | Palangre de superficie dirigido a pez espada O. Atlántico (ICCAT-ATL)                     | Longline - pelagic  | 14                               | 2011                            | 2017                          |  | 1                                   | 1                              |
| <b>Spain</b> | Palangre de superficie dirigido a pez espada en océano Índico (IOTC)                      | Longline - pelagic  | 54                               | 2004                            | 2017                          |  | 2                                   | 3                              |
| <b>Spain</b> | Palangre de superficie dirigido a grandes pelágicos del Mediterráneo                      | Longline - pelagic  | 44                               | 2004                            | 2017                          |  | 5                                   | 7                              |
| <b>Spain</b> | PALANGRE DE SUPERFICIE PACÍFICO (IATTC)   | Longline - pelagic  | 20                               | 2011                            | 2018                          |  | 2                                   | 3                              |

|                       | Fishery  | Gear Type           | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|-----------------------|--|---------------------|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>Spain</b>          | Pesquería de Palangre de fondo en el océanoAntártico (CCAMLR)  | Longline - demersal | 29                               | 2010                            | 2018                          |  |                                     |                                |
| <b>Spain</b>          | PESQUERÍA AS LEJANAS ARRASTRE GRAN ALTURA NORTE  | Trawl               | 11                               | 2012                            | 2017                          |  |                                     |                                |
| <b>Spain</b>          | Pesquería de arrastre de gran altura en Atlántico Sudoeste (ATSW-MALVINAS)                                   | Trawl               | 19                               | 2011                            | 2017                          |  |                                     | 1                              |
| <b>United Kingdom</b> | Bluenose/Bluefish (Hyperoglypheantarctica) - Tristan da Cunha  | Longline - demersal | 50                               | 2004                            | 2013                          |  |                                     | 4                              |
| <b>United Kingdom</b> | Demersal longline fishery for Patagonian toothfish (Dissostichuseleginoides) - Falkland Islands <sup>1</sup> | Longline - demersal | 45                               | 2004                            | 2012                          |  |                                     | 3                              |
| <b>United Kingdom</b> | Demersal longline fishery for Patagonian toothfish - South Georgia <sup>1</sup>                              | Longline - demersal | 50                               | 2004                            | 2013                          |  |                                     | 8                              |
| <b>United Kingdom</b> | Finfish demersal trawl fishery - Falkland Islands <sup>1</sup>   | Trawl               | 45                               | 2004                            | 2012                          |  |                                     | 9                              |
| <b>United Kingdom</b> | Finfish pelagic trawl fishery - Falkland Islands <sup>1</sup>  | Trawl               | 45                               | 2004                            | 2012                          |  |                                     | 3                              |
| <b>United Kingdom</b> | Illexargentinus jig fishery - Falkland Islands <sup>1</sup>  | squid jig           | 45                               | 2004                            | 2012                          |  |                                     |                                |
| <b>United Kingdom</b> | Loligogahi demersal trawl fishery - Falkland Islands <sup>1</sup>  | Trawl               | 45                               | 2004                            | 2012                          |  |                                     | 4                              |
| <b>United Kingdom</b> | Trawl fishery for Antarctic krill (South Georgia) <sup>1</sup>   | Trawl               | 50                               | 2004                            | 2013                          |  |                                     |                                |
| <b>United Kingdom</b> | Trawl fishery targeting Icefish (Champsocephalusgunnari) in CCAMLR 48.3 (South Georgia) <sup>1</sup>         | Trawl               | 50                               | 2004                            | 2013                          |  |                                     | 9                              |



|                | Fishery   | Gear Type           | Number of strata in this fishery | Strata year - earliest reported | Strata year - latest reported | Number of strata with Estimates of total mortality | Number of strata with Bycatch rates | Number of strata with Raw data |
|----------------|---|---------------------|----------------------------------|---------------------------------|-------------------------------|--|-------------------------------------|--------------------------------|
| <b>Uruguay</b> | Palangre de fondo (Cherna Polyprionamericanus)                        | Longline - demersal | 2                                | 2015                            | 2016                          |  | 2                                   | 2                              |
| <b>Uruguay</b> | Palangre de fondo (Merluza Negra Dissostichuseleginoides)             | Longline - demersal | 2                                | 2015                            | 2016                          |  | 2                                   | 2                              |
| <b>Uruguay</b> | PalangrepelÃgico  | Longline - pelagic  | 7                                | 2004                            | 2010                          | 4  | 7                                   | 7                              |
| <b>USA</b>     | Alaska demersal longline  | Longline - demersal | 38                               | 2004                            | 2017                          | 5  |                                     | 14                             |
| <b>USA</b>     | Alaska Demersal Groundfish Trawl                                      | Trawl               | 54                               | 2004                            | 2017                          | 5  |                                     | 14                             |
| <b>USA</b>     | At-Sea Hake Trawl (Motherships & Catcher Processors; U.S. West Coast) | Trawl               | 30                               | 2004                            | 2009                          |  |                                     | 6                              |
| <b>USA</b>     | Limited Entry Sablefish-endorsed Fixed Gear (U.S. West Coast)         | pots/traps          | 30                               | 2004                            | 2009                          |  |                                     | 5                              |
| <b>USA</b>     | Open Access Fixed Gear (U.S. West Coast)                              | no data             | 30                               | 2004                            | 2009                          |  |                                     | 1                              |
| <b>USA</b>     | Pacific halibut (Alaska)  | Longline - demersal | 49                               | 2004                            | 2017                          | 5  |                                     | 5                              |
| <b>USA</b>     | Hawaii-based Pelagic Longline, Deep Set                               | Longline - pelagic  | 75                               | 2004                            | 2018                          | 37   | 75                                  | 75                             |
| <b>USA</b>     | Hawaii-based Pelagic Longline, Shallow Set                            | Longline - pelagic  | 75                               | 2004                            | 2018                          | 15   | 53                                  | 53                             |

<sup>1</sup>A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sandwich del Sur) and the surrounding maritime areas.

**Table 2. All reported fisheries with mitigation use reported in each fishery.**

|                  | Fishery  | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures |
|------------------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>Argentina</b> | CONGELADORES - MERLUZA DE COLA, POLACA Y MERLUZA NEGRA | Trawl               | 17                               |  |  | N  |  |  |  |
| <b>Argentina</b> | CONGELADORES - MERLUZA HUBBSI                          | Trawl               | 16                               |  |  | N  |  |  |  |
| <b>Argentina</b> | CONGELADORES - PALANGREROS                             | Longline - demersal | 25                               |  |  |  | 5  | 2  | 2008<br>2009                             |
| <b>Argentina</b> | CONGELADORES - TANGONEROS                              | Longline - demersal | 40                               |  |  | N  |  |  |  |
| <b>Argentina</b> | COSTEROS - FLOTA AMARILLA DE RAWSON                    | Trawl               | 35                               |  |  | N  |  |  |  |
| <b>Argentina</b> | COSTEROS - PELAGICAS - RED DE MEDIA AGUA               | Trawl               | 10                               |  |  | N  |  |  |  |
| <b>Argentina</b> | FRESQUEROS ALTURA - MERLUZA HUBBSI                     | Trawl               | 27                               |  |  | N  |  |  |  |
| <b>Argentina</b> | RADA O RIA - MERLUZA HUBBSI - PALANGRE                 | Longline - demersal | 5                                |  |  | N  |  |  |  |

|                  | Fishery                                    | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|------------------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>Australia</b> | Eastern Tuna and Billfish                  | Longline - pelagic  | 50                               |  |  | Y  | 5  | 8  | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013                 |
| <b>Australia</b> | Gillnet, Hook & Trap - longline sector     | Longline - demersal | 50                               |  |  | Y  | 5  | 10   | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013 |
| <b>Australia</b> | Great Australian Bight Trawl Sector        | Trawl               | 50                               |  |  | Y  |  |  |  |
| <b>Australia</b> | Heard Island & McDonald Islands - Longline | Longline - demersal | 50                               |  |  | Y  | 7  | 10   | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013 |

|                  | Fishery  | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|------------------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>Australia</b> | Heard Island and McDonald Islands - Trawl          | Trawl               | 50                               |  |  | Y  | 4  | 10   | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013 |
| <b>Australia</b> | Macquarie Island - Longline                        | Longline - demersal | 50                               |  |  | Y  | 9  | 7  | 2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013                         |
| <b>Australia</b> | Macquarie Island - Trawl                           | Trawl               | 45                               |  |  | Y  | 2  | 4  | 2004<br>2005<br>2006<br>2010   |
| <b>Australia</b> | South-East Trawl including Victorian Inshore Trawl | Trawl               | 50                               |  |  | Y  |  |  |  |

|                  | Fishery  | Gear Type                   | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                     |
|------------------|--|-----------------------------|----------------------------------|--|--|--|--|--|--|
| <b>Australia</b> | Western Tuna and Billfish  | Longline - pelagic          | 50                               |  |  | Y  | 4  | 8  | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013 |
| <b>Brazil</b>    | Monkfish gillnet   | gillnet and entangling nets | 15                               |  |  | N  |  |  |  |
| <b>Brazil</b>    | Pelagic longline for tuna and swordfish  | Longline - pelagic          | 50                               |  |  | Y  | 3  | 3  | 2011<br>2012<br>2013   |
| <b>Brazil</b>    | Pelagic Longline Fishery - Foreign-owned fishing boats rented by Brazilian fishing enterprises | Longline - pelagic          | 6                                |  |  |  | 2  | 2  | 2011<br>2012   |
| <b>Canada</b>    | Commercial Pacific Halibut fishery (west coast of Canada)                                      | no data                     | 30                               |  |  | Y  |  |  |  |
| <b>Canada</b>    | Commercial Pacific Salmon gillnet fishery  | no data                     | 10                               |  |  | N  |  |  |  |
| <b>Canada</b>    | Commercial Rockfish (west coast of Canada)   | no data                     | 30                               |  |  | Y  |  |  |  |
| <b>Chile</b>     | PESQUERIA DE ARRASTRE DE CRUSTACEOS DEMERSALES   | Trawl                       | 17                               |  |  | N  |  |  |  |
| <b>Chile</b>     | Pesquería industrial de cerco de pequeños pelágicos (sardina y anchoveta, otros)               | purse seines                | 16                               |  |  | N  |  |  |  |

|              | Fishery   | Gear Type                   | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures |
|--------------|---|-----------------------------|----------------------------------|--|--|--|--|--|--|
| <b>Chile</b> | Pesquería de cerco artesanal de pequeño pelágicos (sardina común y anchoveta)   | purse seines                | 16                               |  |  | N  |  |  |  |
| <b>Chile</b> | pesquería de cerco industrial sobre pelágicos medianos (Jurel, caballa).  | purse seines                | 16                               |  |  | N  |  |  |  |
| <b>Chile</b> | Pesquería artesanal de peces pelágicos mediano y tiburones  | Longline - pelagic          | 1                                |  |  |  |  |  |  |
| <b>Chile</b> | Pesquería Arrastre Fabrica (congelador) especies: Merluccius australis, Macrurus magellanicus, Genypterus blacodes, Micromesistius australis y otras especies demersales. | Trawl                       | 20                               |  |  | Y  | 1  | 3  | 2012<br>2013<br>2016                     |
| <b>Chile</b> | Pesquería de arrastre fabrica Surimero especies objetivo : merluza de tres aletas (Micromesistius australis), Merluza de cola (Macrurus magellanicus)                     | Trawl                       | 21                               |  |  | Y  | 1  | 1  | 2014                                     |
| <b>Chile</b> | Pesquería de Arrastre Hielero especies merluza del sur (merluccius australis) y merluza de cola (macrurus magellanicus) y otras especies demersales.                      | Trawl                       | 21                               |  |  |  | 1  | 3  | 2012<br>2013<br>2014                     |
| <b>Chile</b> | Gillnets Swordfish Fishery  | gillnet and entangling nets | 16                               |  |  | N  |  |  |  |

|       | Fishery  | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|-------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| Chile | Pelagic longline   | Longline - pelagic  | 50                               |  |  | Y  | 5  | 7  | 2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013                         |
| Chile | Pelagic longline   | Longline - pelagic  | 66                               | 3  | 2  | Y  | 7  | 10   | 2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014<br>2015<br>2016 |
| Chile | Pesquería merluza del sur (Merluccius australis), flota palangre industrial. | Longline - demersal | 60                               |  |  | Y  | 9  | 8  | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013                 |

|                    | Fishery   | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures   |
|--------------------|---|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>Chile</b>       | Tootfish's fishery, Bacalao de profundidad Industrial | Longline - demersal | 57                               |  |  | Y  | 5  | 11   | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014         |
| <b>Ecuador</b>     | Artisanal demersal longline fishery in Santa Rosa     | Longline - demersal | 20                               |  |  | N  |  |  |  |
| <b>France</b>      | Pêcherie palangrière À la L'Égine Australe            | Longline - demersal | 55                               |  |  | Y  | 13   | 4  | 2011<br>2012<br>2013<br>2014   |
| <b>New Zealand</b> | Trawl   | Trawl               | 288                              | 3  | 8  | Y  | 2  | 12   | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014<br>2015<br>2016<br>2017 |



|                    | Fishery           | Gear Type                   | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|--------------------|-------------------|-----------------------------|----------------------------------|--|--|--|--|--|--|
| <b>New Zealand</b> | Setnet            | gillnet and entangling nets | 6                                |  |  | N  |  |  |  |
| <b>New Zealand</b> | Purse seine       | purse seines                | 6                                |  |  | N  |  |  |  |
| <b>New Zealand</b> | Deepwater trawl   | Trawl                       | 51                               |  |  | Y  | 3  | 9  | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014         |
| <b>New Zealand</b> | Demersal longline | Longline - demersal         | 57                               | 5  | 9  | Y  | 7  | 10   | 2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014<br>2015<br>2016<br>2017 |

|                    | Fishery            | Gear Type          | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|--------------------|--------------------|--------------------|----------------------------------|--|--|--|--|--|--|
| <b>New Zealand</b> | Inshore trawl      | no data            | 51                               |  |  | N  | 4  | 7  | 2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014                         |
| <b>New Zealand</b> | Middle depth trawl | no data            | 51                               |  |  | Y  | 5  | 9  | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014         |
| <b>New Zealand</b> | Pelagic longline   | Longline - pelagic | 57                               | 3  | 6  | Y  | 3  | 10   | 2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014<br>2015<br>2016<br>2017 |

|                     | Fishery  | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                             |
|---------------------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>New Zealand</b>  | Pelagic trawl                                    | Trawl               | 52                               |  |  | Y  | 5  | 9  | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014 |
| <b>Peru</b>         | Palangre de fondo                                | Longline - demersal | 15                               |  |  | N  |  |  |  |
| <b>Peru</b>         | Arrastre industrial                              | Trawl               | 35                               |  |  | N  |  |  |  |
| <b>Peru</b>         | Cerco : Pesca industrial de cerco para anchoveta | purse seines        | 50                               |  |  | N  |  |  |  |
| <b>Peru</b>         | Espinel artesanal                                | Longline - pelagic  | 26                               |  |  | Y  | 1  | 1  | 2009   |
| <b>Peru</b>         | Redes agalleras a la deriva                      | no data             | 11                               |  |  | Y  |  |  |  |
| <b>South Africa</b> | Large Pelagics                                   | Longline - pelagic  | 16                               |  |  | Y  | 8  | 4  | 2014<br>2015<br>2016<br>2017   |
| <b>South Africa</b> | Demersal Shark Longline                          | Longline - demersal | 1                                |  |  |  | 3  | 1  | 2013   |

|                     | Fishery  | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                             |
|---------------------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>South Africa</b> | Demersal Trawl OFFSHORE  | Trawl               | 34                               |  |  |  | 4  | 9  | 2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013<br>2014 |
| <b>South Africa</b> | Patagonian Toothfish Longline  | Longline - demersal | 50                               |  |  | Y  |  |  |  |
| <b>South Africa</b> | Tuna / Swordfish Longline (South African vessels only)   | Longline - pelagic  | 45                               |  |  | Y  |  |  |  |
| <b>South Africa</b> | Tuna Longline Fishery - Joint Venture Vessels only   | Longline - pelagic  | 50                               |  |  | Y  |  |  |  |
| <b>Spain</b>        | Flota de arrastre cefalopodera y de peces de aleta congeladora (mã©tier OTB_MCF>70_0_0)        | Trawl               | 3                                |  |  |  |  |  |  |
| <b>Spain</b>        | Flota artesanal polivalente dirigida a especies demersales de Canarias (mã©tier MIS_DES_0_0_0) | Longline - demersal | 3                                |  |  |  |  |  |  |
|                     |  | Longline - pelagic  |                                  |  |  |  |  |  |  |
|                     |  | pots/traps          |                                  |  |  |  |  |  |  |
| <b>Spain</b>        | Flota artesanal de cerco dirigida a pequeÃ±ospelágicos en Canarias (mã©tier PS_SPF_10_0_0)     | purse seines        | 1                                |  |  |  |  |  |  |

|              | Fishery   | Gear Type                   | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures |
|--------------|---|-----------------------------|----------------------------------|--|--|--|--|--|--|
| <b>Spain</b> | Flota de cebo vivo de Canarias y tropical (base en Dakar) de t  nidos y especies afines. Bait boat! | bait boats fishing for tuna | 2                                |  |  |  |  |  |  |
| <b>Spain</b> | Palangre de Fondo dirigida a Austromerluza patag  nica en aguas de SIOFA (O  ano Indic  )           | Longline - demersal         | 2                                | 1  | 1  |  |  |  |  |
| <b>Spain</b> | Palangre de superficie dirigido a pez espada (WCPFC)  | Longline - pelagic          | 10                               |  |  |  |  |  |  |
| <b>Spain</b> | Pesquer  a dirigida a especies demersales y pel  gicas en zonas ICES (VI, VII, VIII y IX)           | gillnet and entangling nets | 58                               |  |  |  |  |  |  |
|              |   | Longline - demersal         |                                  |  |  |  |  |  |  |
|              |   | purse seines                |                                  |  |  |  |  |  |  |
|              |   | Trawl                       |                                  |  |  |  |  |  |  |
| <b>Spain</b> | Palangre y arrastre de fondo en el Mediterr  neo espa  ol (excepto t  nidos)                        | Longline - demersal         | 25                               |  |  |  |  |  |  |
|              |   | Trawl                       |                                  |  |  |  |  |  |  |
| <b>Spain</b> | Pesquer  a de arrastre dirigida a crust  ceos en Atl  ntico Centro-Este                             | Trawl                       | 13                               |  |  | N  |  |  |  |
| <b>Spain</b> | Pesquer  a de arrastre de fondo dirigida a la merluza en Atl  ntico Centro-oriental (CECAF)         | Trawl                       | 7                                |  |  | N  |  |  |  |

|                       | Fishery  | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures |
|-----------------------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>Spain</b>          | Palangre de superficie dirigido a pez espada O. Atlántico (ICCAT-ATL)      | Longline - pelagic  | 14                               |  |  | Y  |  |  |  |
| <b>Spain</b>          | Palangre de superficie dirigido a pez espada en océano Índico (IOTC)       | Longline - pelagic  | 54                               |  |  |  |  |  |  |
| <b>Spain</b>          | Palangre de superficie dirigido a grandes pelágicos del Mediterráneo       | Longline - pelagic  | 44                               |  | 1  | N  |  |  |  |
| <b>Spain</b>          | PALANGRE DE SUPERFICIE PACÃ FICO (IATTC)                                   | Longline - pelagic  | 20                               |  |  | Y  |  |  |  |
| <b>Spain</b>          | Pesquería de Palangre de fondo en el océano Antártico (CCAMLR)             | Longline - demersal | 29                               | 3  | 3  | Y  |  |  |  |
| <b>Spain</b>          | PESQUERÍA AS LEJANAS ARRASTRE GRAN ALTURA NORTE                            | Trawl               | 11                               |  |  |  |  |  |  |
| <b>Spain</b>          | Pesquería de arrastre de gran altura en Atlántico Sudoeste (ATSW-MALVINAS) | Trawl               | 19                               |  |  | Y  |  |  |  |
| <b>United Kingdom</b> | Bluenose/Bluefish (Hyperoglyphe antarctica) - Tristan da Cunha             | Longline - demersal | 50                               |  |  | Y  | 3  | 5  | 2004<br>2005<br>2006<br>2007<br>2008     |

|                       | Fishery   | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|-----------------------|---|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>United Kingdom</b> | Demersal longline fishery for Patagonian toothfish (Dissostichus eleginoides) - Falkland Islands <sup>1</sup> | Longline - demersal | 45                               |  |  | Y  | 6  | 9  | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012         |
| <b>United Kingdom</b> | Demersal longline fishery for Patagonian toothfish - South Georgia <sup>1</sup>                               | Longline - demersal | 50                               |  |  | Y  | 18   | 10   | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013 |
| <b>United Kingdom</b> | Finfish demersal trawl fishery - Falkland Islands <sup>1</sup>  | Trawl               | 45                               |  |  | Y  | 2  | 9  | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012         |

|                       | Fishery   | Gear Type | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|-----------------------|---|-----------|----------------------------------|--|--|--|--|--|--|
| <b>United Kingdom</b> | Finfish pelagic trawl fishery - Falkland Islands <sup>1</sup>     | Trawl     | 45                               |  |  | Y  | 5  | 9  | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012         |
| <b>United Kingdom</b> | Illexargentinus jig fishery - Falkland Islands <sup>1</sup>       | squid jig | 45                               |  |  | N  |  |  |  |
| <b>United Kingdom</b> | Loligogahi demersal trawl fishery - Falkland Islands <sup>1</sup> | Trawl     | 45                               |  |  | Y  | 1  | 6  | 2007<br>2008<br>2009<br>2010<br>2011<br>2012                                 |
| <b>United Kingdom</b> | Trawl fishery for Antarctic krill (South Georgia) <sup>1</sup>    | Trawl     | 50                               |  |  | Y  | 8  | 10   | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013 |



|                       | Fishery  | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                                     |
|-----------------------|--|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>United Kingdom</b> | Trawl fishery targeting Icefish (Champsocephalusgunnari) in CCAMLR 48.3 (South Georgia) <sup>1</sup> | Trawl               | 50                               |  |  | Y  | 10   | 10   | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012<br>2013 |
| <b>Uruguay</b>        | Palangre de fondo (Cherna Polyprionamericanus)   | Longline - demersal | 2                                | 1  | 1  |  |  |  |  |
| <b>Uruguay</b>        | Palangre de fondo (Merluza Negra Dissostichuseleginoides)  | Longline - demersal | 2                                | 4  | 4  | Y  |  |  |  |
| <b>Uruguay</b>        | PalangrepelÃgico   | Longline - pelagic  | 7                                |  |  | Y  |  |  |  |
| <b>USA</b>            | Alaska demersal longline   | Longline - demersal | 38                               |  |  | Y  | 1  | 8  | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011                 |
| <b>USA</b>            | Alaska Demersal Groundfish Trawl   | Trawl               | 54                               |  |  | N  |  |  |  |
| <b>USA</b>            | At-Sea Hake Trawl (Motherships & Catcher Processors; U.S. West Coast)                                | Trawl               | 30                               |  |  | N  |  |  |  |

|            | Fishery   | Gear Type           | Number of strata in this fishery | Number of unique Mandated Mitigation measures (all strata) | Number of unique Mitigation measures in use (all strata) | Q8.1 Any mitigation measures currently required in this fishery? | Q8.1 How many unique mitigation measures used in all years | Q8.1 How many years with mitigation measures | Q8.1 Which years had mitigation measures                             |
|------------|---|---------------------|----------------------------------|--|--|--|--|--|--|
| <b>USA</b> | Limited Entry Sablefish-endorsed Fixed Gear (U.S. West Coast) | pots/traps          | 30                               |  |  | N  |  |  |  |
| <b>USA</b> | Open Access Fixed Gear (U.S. West Coast)                      | no data             | 30                               |  |  |  |  |  |  |
| <b>USA</b> | Pacific halibut (Alaska)                                      | Longline - demersal | 49                               |  |  |  |  |  |  |
| <b>USA</b> | Hawaii-based Pelagic Longline, Deep Set                       | Longline - pelagic  | 75                               |  |  | Y  | 5  | 9  | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011<br>2012 |
| <b>USA</b> | Hawaii-based Pelagic Longline, Shallow Set                    | Longline - pelagic  | 75                               |  |  | Y  | 4  | 8  | 2004<br>2005<br>2006<br>2007<br>2008<br>2009<br>2010<br>2011         |

<sup>1</sup>A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Islas Malvinas), South Georgia and the South Sandwich Islands (Islas Georgias del Sur e Islas Sandwich del Sur) and the surrounding maritime areas.

## ANNEX 3.

**Number of strata per gear type reporting bycatch of each taxon or taxonomic group (as total estimated mortality or rate or raw observed numbers).**

| Taxa   | Longline - demersal | Longline- pelagic | Trawl | squid jig | pots/traps | purse seines | boat seines | gillnet and entangling nets | bait boats fishing for tuna |
|--|---------------------|-------------------|-------|-----------|------------|--------------|-------------|-----------------------------|-----------------------------|
| Total seabirds   | 26                  | 148               | 299   |           |            | 11           |             | 7                           |                             |
| Total Diomededidae<br>Total albatrosses  | 3                   | 136               | 279   |           |            |              |             |                             |                             |
| Total Procellariidae<br>Total petrels, prions and shearwaters                        | 18                  | 156               | 36    |           |            |              |             |                             |                             |
| Total non-Procellariidae non-Diomededidae<br>Total other seabirds                    | 9                   | 149               | 24    |           |            | 2            |             | 2                           |                             |
| Diomededidae<br>Unidentified albatross   | 8                   | 33                | 19    |           |            | 1            |             |                             |                             |
| Diomedeasp<br>Unidentified great albatrosses   |                     | 4                 |       |           |            |              |             |                             |                             |
| Diomedeaexulans/dabbenena/antipodensis<br>Wandering Albatross sensulato (or complex) |                     | 1                 | 1     |           |            |              |             |                             |                             |
| Diomedeamsterdamensis<br>Amsterdam albatross   | 5                   | 10                | 11    |           |            |              |             |                             |                             |
| Diomedeaantipodensis<br>Antipodean albatross   | 8                   | 18                | 15    |           |            |              |             | 3                           |                             |
| Diomedeadabbenena<br>Tristan albatross   | 6                   | 12                | 11    |           |            |              |             |                             |                             |
| Diomedeaexulans<br>Wandering albatross   | 12                  | 33                | 58    |           |            |              |             | 3                           |                             |
| Diomedeaepomophora/sanfordi<br>Royal Albatross                                       |                     | 3                 | 1     |           |            |              |             |                             |                             |
| Diomedeaepomophora<br>Southern royal albatross                                       | 11                  | 22                | 74    |           |            |              |             | 3                           |                             |
| Diomedeeasandfordi<br>Northern royal albatross                                       | 8                   | 17                | 28    |           |            |              |             | 3                           |                             |
| Thalassarchesp<br>Unidentified mollymawks  |                     | 1                 |       |           |            | 1            |             | 2                           |                             |
| Thalassarchemelanophris/impavida<br>Black-browed or Campbell Albatross               | 1                   | 3                 |       |           |            |              |             |                             |                             |
| Thalassarchemelanophris<br>Black-browed albatross                                    | 29                  | 55                | 159   |           |            | 2            |             | 4                           |                             |
| Thalassarcheimpavida<br>Campbell albatross   | 6                   | 10                | 13    |           |            |              |             |                             |                             |
| Thalassarchecausta/steady<br>Shy-type albatross                                      |                     | 6                 |       |           |            |              |             |                             |                             |
| Thalassarchecausta<br>Shy albatross  | 7                   | 20                | 20    |           |            |              |             |                             |                             |
| Thalassarchesteady<br>White-capped albatross   | 12                  | 19                | 243   |           |            |              |             | 3                           |                             |
| Thalassarchesalvini<br>Salvin's albatross  | 13                  | 20                | 192   |           |            |              |             | 3                           |                             |

| Taxa  | Longline -<br>demersal | Longline -<br>pelagic | Trawl | squid jig | pots/traps | purse seines | boat seines | gillnet and<br>entangling<br>nets | bait boats<br>fishing for<br>tuna |
|---|------------------------|-----------------------|-------|-----------|------------|--------------|-------------|-----------------------------------|-----------------------------------|
| <i>Thalassarcheeremita</i><br>Chatham albatross                     | 9                      | 8                     | 67    |           |            |              |             | 3                                 |                                   |
| <i>Thalassarcheclororhynchos/carteri</i><br>Yellow-nosed albatross  |                        |                       |       |           |            |              |             |                                   |                                   |
| <i>Thalassarchecarteri</i><br>Indian yellow-nosed albatross         | 8                      | 11                    | 14    |           |            |              |             | 3                                 |                                   |
| <i>Thalassarcheclororhynchos</i><br>Atlantic Yellow-nosed Albatross | 5                      | 34                    | 13    |           |            |              |             |                                   |                                   |
| <i>Thalassarchechrysostoma</i><br>Grey-headed albatross             | 10                     | 20                    | 24    |           |            |              |             | 3                                 |                                   |
| <i>Thalassarchebulleri</i><br>Buller's Albatross                    | 13                     | 27                    | 153   |           |            |              |             | 3                                 |                                   |
| <i>Phoebetria</i> sp<br>Unidentified sooty albatross                | 2                      |                       |       |           |            |              |             |                                   |                                   |
| <i>Phoebetria palpebrata</i><br>Light-mantled Albatross             | 8                      | 8                     | 14    |           |            |              |             | 3                                 |                                   |
| <i>Phoebetria fusca</i><br>Sooty Albatross                          | 6                      | 14                    | 11    |           |            |              |             |                                   |                                   |
| <i>Phoebastriaalbatrus</i><br>Short-tailed albatross                | 8                      | 5                     | 11    |           |            |              |             |                                   |                                   |
| <i>Phoebastriaimmutabilis</i><br>Laysan albatross                   | 22                     | 114                   | 13    |           |            |              |             |                                   |                                   |
| <i>Phoebastriairrorata</i><br>Waved albatross                       | 6                      | 7                     | 11    |           |            |              |             |                                   |                                   |
| <i>Phoebastrianigripes</i><br>Black-footed albatross                | 22                     | 121                   | 15    |           | 5          |              |             |                                   |                                   |
| <i>Procellariidae</i><br>Unidentified petrel/shearwater             | 4                      | 7                     | 6     |           |            |              |             |                                   |                                   |
| <i>Macronectes</i> sp<br>Giant petrel                               | 2                      | 11                    | 6     |           |            | 1            |             |                                   |                                   |
| <i>Macronectes giganteus</i><br>Southern Giant Petrel               | 14                     | 19                    | 29    |           |            |              |             |                                   |                                   |
| <i>Macronecteshalli</i><br>Northern Giant Petrel                    | 10                     | 16                    | 22    |           |            | 1            |             | 3                                 |                                   |
| <i>Procellariasp</i><br>Unidentified Procellaria petrel             | 2                      |                       | 2     |           |            | 1            |             | 2                                 |                                   |
| <i>Procellariaaequinoctialis</i><br>White-chinned Petrel            | 33                     | 55                    | 186   |           |            |              |             | 4                                 |                                   |
| <i>Procellariaconspicillata</i><br>Spectacled petrel                | 5                      | 15                    | 11    |           |            |              |             | 1                                 |                                   |
| <i>Procellariacinerea</i><br>Grey petrel                            | 13                     | 15                    | 86    |           |            | 1            |             | 4                                 |                                   |
| <i>Procellariaparkinsoni</i><br>Black petrel                        | 15                     | 15                    | 43    |           |            |              |             | 3                                 |                                   |
| <i>Procellariawestlandica</i><br>Westland petrel                    | 12                     | 15                    | 96    |           |            |              |             | 3                                 |                                   |
| <i>Daptioncapense</i><br>Cape petrel                                | 9                      | 8                     | 17    |           |            | 1            |             | 2                                 |                                   |

| Taxa  | Longline -<br>demersal | Longline -<br>pelagic | Trawl | squid jig | pots/traps | purse seines | boat seines | gillnet and<br>entangling<br>nets | bait boats<br>fishing for<br>tuna |
|---|------------------------|-----------------------|-------|-----------|------------|--------------|-------------|-----------------------------------|-----------------------------------|
| <i>Fulmarus glacialis</i><br>Northern Fulmar            | 15                     | 2                     | 13    |           |            |              |             |                                   |                                   |
| <i>Fulmarus glacialoides</i><br>Antarctic fulmar        | 1                      | 1                     | 3     |           |            |              |             |                                   |                                   |
| <i>Pterodromasp</i><br>Gadfly petrels                   |                        |                       | 1     |           |            |              |             |                                   |                                   |
| <i>Pterodromamacroptera</i><br>Great-winged petrel      |                        | 3                     | 2     |           |            |              |             |                                   |                                   |
| <i>Pterodromaneglecta</i><br>Kermadec petrel            |                        | 1                     | 1     |           |            |              |             |                                   |                                   |
| <i>Pterodromaaminjoniana</i><br>Trindade Petrel         |                        | 1                     |       |           |            |              |             |                                   |                                   |
| <i>Halobaenacaerulea</i><br>Blue petrel                 |                        |                       | 1     |           |            |              |             |                                   |                                   |
| <i>Calonectris</i> sp<br>Calonectris shearwater         |                        |                       |       |           |            |              |             |                                   |                                   |
| <i>Calonectris diomedea</i><br>Scopoli's Shearwater     |                        | 5                     |       |           |            |              |             |                                   |                                   |
| <i>Calonectris borealis</i><br>Cory's Shearwater        |                        |                       |       |           |            |              |             |                                   |                                   |
| <i>Calonectris edwardsii</i><br>Cape Verde Shearwater   |                        |                       |       |           |            |              |             |                                   |                                   |
| <i>Ardennasp</i><br>Unidentified Ardenna shearwater     | 6                      | 31                    | 4     |           |            |              |             |                                   |                                   |
| <i>Ardenna gravis</i><br>Great shearwater               | 5                      | 9                     | 4     |           |            |              |             | 2                                 |                                   |
| <i>Ardennacreatopus</i><br>Pink-footed Shearwater       |                        | 1                     | 1     |           |            | 11           |             |                                   |                                   |
| <i>Ardennapacifica</i><br>Wedge-tailed shearwater       |                        | 1                     | 4     |           | 5          |              |             |                                   |                                   |
| <i>Ardennatenuirostris</i><br>Short-tailed shearwater   | 2                      |                       | 1     |           |            |              |             |                                   |                                   |
| <i>Ardennacarneipes</i><br>Flesh-footed shearwater      | 6                      | 2                     | 1     |           |            |              |             |                                   |                                   |
| <i>Ardennagrisea</i><br>Sooty shearwater                | 2                      | 12                    | 9     |           |            | 8            |             |                                   |                                   |
| <i>Puffinus</i> sp<br>Unidentified Puffinus petrel      |                        | 3                     |       |           |            |              |             | 2                                 |                                   |
| <i>Puffinus mauretanicus</i><br>Balearic Shearwater     |                        | 6                     | 1     |           |            |              |             |                                   |                                   |
| <i>Hydrobatidae</i><br>Unidentified storm petrel        |                        |                       |       |           |            | 2            |             |                                   |                                   |
| <i>Oceanites oceanicus</i><br>Wilson's storm petrel     |                        |                       | 1     |           |            | 1            |             |                                   |                                   |
| <i>Spheniscus</i> sp<br>Unidentified Spheniscus penguin |                        |                       |       |           |            | 4            |             |                                   |                                   |
| <i>Spheniscushumboldtii</i><br>Humboldt Penguin         |                        |                       |       |           |            | 7            |             |                                   |                                   |

| Taxa   | Longline -<br>demersal | Longline -<br>pelagic | Trawl | squid jig | pots/traps | purse seines | boat seines | gillnet and<br>entangling<br>nets | bait boats<br>fishing for<br>tuna |
|--|------------------------|-----------------------|-------|-----------|------------|--------------|-------------|-----------------------------------|-----------------------------------|
| <i>Spheniscusmagellanicus</i><br>Magellanic penguin    | 7                      |                       | 8     |           |            | 2            |             |                                   |                                   |
| <i>Pygoscelispapua</i><br>Gentoo penguin               | 2                      |                       | 1     |           |            |              |             |                                   |                                   |
| <i>Pelecanusthagus</i><br>Peruvian Pelican             |                        |                       | 4     |           |            | 9            |             |                                   |                                   |
| <i>Morusbassanus</i><br>Northern gannet                |                        | 5                     |       |           |            |              |             |                                   |                                   |
| <i>Moruscapensis</i><br>Cape Gannet                    |                        | 2                     |       |           |            |              |             |                                   |                                   |
| <i>Sula dactylatra</i><br>Masked booby                 |                        |                       |       |           |            |              |             |                                   |                                   |
| <i>Sula variegata</i><br>Peruvian Booby                |                        |                       |       |           |            | 7            |             |                                   |                                   |
| <i>Phalacrocoraxsp</i>                                 | 1                      |                       |       |           |            | 1            |             |                                   |                                   |
| <i>Phalacrocoraxbougivillii</i><br>Guanay Cormorant    |                        |                       |       |           |            | 3            |             |                                   |                                   |
| <i>Phalacrocoraxmagellanicus</i><br>Rock Shag          |                        |                       | 2     |           |            |              |             |                                   |                                   |
| <i>Larus</i>   | 8                      | 10                    | 3     |           |            |              |             |                                   |                                   |
| <i>Larusdominicanus</i><br>Kelp gull                   | 4                      |                       | 2     |           |            | 7            |             |                                   |                                   |
| <i>Ichthyaetusmelanocephalus</i><br>Mediterranean gull |                        | 3                     |       |           |            |              |             |                                   |                                   |
| <i>Laruspipixcan</i><br>Franklin's gull                |                        |                       | 1     |           |            | 1            |             |                                   |                                   |
| <i>Rissa tridactyla</i><br>Black-legged kittiwake      |                        | 1                     |       |           |            |              |             |                                   |                                   |
| <i>Larosternainca</i><br>Inca tern                     |                        |                       |       |           |            | 1            |             |                                   |                                   |
| <i>Sterna hirundinacea</i><br>South American Tern      |                        |                       |       |           |            | 1            |             |                                   |                                   |
| <i>Phaethon lepturus</i><br>White-tailed Tropicbird    |                        | 1                     | 1     |           |            |              |             |                                   |                                   |
| <i>Stercorariuspomarinus</i><br>Pomarin skua           |                        | 3                     |       |           |            |              |             |                                   |                                   |
| <i>Catharactaskua</i><br>Great skua                    |                        | 2                     |       |           |            |              |             |                                   |                                   |
| <i>Catharactasp</i><br>Unidentified skua               |                        |                       |       |           |            |              |             |                                   |                                   |
| <i>Uriaaalge</i><br>Common Murre                       |                        |                       | 4     |           |            |              |             |                                   |                                   |
| <i>Brachyramphusmarmoratus</i><br>Marbled Murrelet     | 1                      |                       | 1     |           |            |              |             |                                   |                                   |
| <i>Cephuscolumba</i><br>Pigeon Guillemot               |                        |                       | 1     |           |            |              |             |                                   |                                   |
| <i>Cerorhincamonocerata</i><br>Rhinceros Auklet        | 2                      |                       | 3     |           |            |              |             |                                   |                                   |

| Taxa                        | Longline -<br>demersal | Longline -<br>pelagic | Trawl | squid jig | pots/traps | purse seines | boat seines | gillnet and<br>entangling<br>nets | bait boats<br>fishing for<br>tuna |
|-----------------------------|------------------------|-----------------------|-------|-----------|------------|--------------|-------------|-----------------------------------|-----------------------------------|
| <i>Unidentified seabird</i> | 8                      | 16                    | 4     |           |            |              |             | 2                                 |                                   |