

A draft ERS recommendation on data collection and provision requirements in CCSBT for discussion at CCSBT-ERS-7

Delegations of Australia and New Zealand

Abstract

Noting the discussions at CCSBT ERS 6 (paragraphs 47 - 50) on the provision of advice to the Commission on ERS data collection and provision in CCSBT fisheries, Australia and New Zealand have further reviewed the draft recommendation developed at that meeting (CCSBT-ERS 6 Attachment 7). The review highlighted some changes that were needed to develop a more effective recommendation. These changes have been strongly endorsed by FAO COFI and UNGA in their work since February 2006. This paper provides rationale for the changes, a revised recommendation for consideration by CCSBT ERS 7 and recommendation to the CCSBT Commission, and documentation of the changes from the ERS 6 resolution.

Introduction

This paper is structured as follows:

- An introduction and general comments (page 1);
- A draft recommendation on ERS data collection and provision requirements in CCSBT for the consideration of ERS 7 (pages 2-7);
- A version of the ERS 6 Attachment 7 recommendation annotated to show the development of the ERS 7 draft recommendation (pages 8-11); and
- A copy of the ERS 6 Attachment 7 (pages 12-15).

We would expect the discussion of this paper to focus on the draft recommendation on ERS data collection and provision requirements in CCSBT (pages y-z). We have provided the background material so that all participants are aware of improvements made to the recommendation from the version discussed at ERS 6.

General Comments

In developing this recommendation, the need for text as preamble to the recommendation was identified. Text is proposed, outlining the clear justification for the draft recommendation.

We have simplified the text in minor ways and introduced formatting changes, with the intention of making the recommendation clearer and easier to read.

We reiterate that in accordance with the CCSBT Convention, which acknowledges the importance of information and data collection related to ecologically related species (ERS) and states that the parties shall provide this to the Commission and cooperate in data collection (Article 5) and that the Commission shall collect and accumulate statistical data relating to ERS (Article 8). These data will be important for the effective implementation of the seabird and shark recommendations.

ERS DATA COLLECTION AND PROVISION REQUIREMENTS FOR CCSBT FISHERIES

The **ERSWG**:

Noting the Terms of Reference of the Ecologically Related Species Working Group

“To provide information and advice on issues relating to species associated with southern bluefin tuna (SBT) (ecologically related species), with specific reference to:

- a. Species (both fish and non-fish) which may be affected by SBT fisheries operations
- b. Predator and prey species which may affect the condition of the SBT stock”.

In accordance with the CCSBT Convention, which acknowledges the importance of collecting scientific information relating to ecologically related species (ERS) and states that parties shall expeditiously provide to the Commission scientific information, fishing catch and effort statistics and other data relevant to the conservation of ERS (Article 5), and that the Commission shall collect and accumulate statistical data relating to ERS (Article 8).

In accordance with the terms of reference for the ERSWG which specifically includes the provision of recommendations on data collection programs with respect to ERS species (TOR 4).

Recognising that data requirements and their importance have been discussed in previous meetings (ERSWG5 Agenda Item 8, paragraph 43) and that it was noted in relation to the assessment of ERS interactions, the ERSWG is yet to achieve the objective of providing the Commission with an estimate of the level of incidental seabird take (ERSWG5 Agenda Item 8, Para. 44).

Recognising that at CCSBT12 there was general agreement on the importance of information on non-target species to aid with interpretation of CPUE data (CCSBT12 Agenda Item 18, Para. 123).

Recognising that at CCSBT12 there was general agreement that if advice on the management of ERS was not forthcoming from the ERSWG then consideration would need to be given as to whether it would be better to discuss ERS issues as part of annual meetings of the Extended Commission rather than as a stand alone group (CCSBT12 Agenda Item 18, Para. 121).

Recognising that at CCSBT13 the ERSWG expressed a commitment to conclude agreements on advice to the CCSBT on data collection and provision for ERS at ERSWG7 (in 2007).

Recalling the agreed Course of Actions for RFMOs from the Kobe meeting of joint tuna RFMOs, January 26, 2007 which included reviewing the performance of tuna RFMOs, implementation of the precautionary approach and an ecosystem-based approach to fisheries management including improved data collection on incidental by-catch and non-target species and development of data collection for shark fisheries under the competence of tuna RFMOs.

Noting the UNGA resolution on sustainable fisheries calls upon States and regional fisheries management organizations and arrangements to collect and, where appropriate, report to FAO required catch and effort data, and fishery-related information, in a complete, accurate and timely way, including for straddling fish stocks and highly migratory fish stocks within and beyond areas under national jurisdiction, discrete high seas fish stocks, and by-catch and discards (OP8).

Further noting the UNGA resolution on sustainable fisheries requests States and regional fisheries management organizations to promote and strengthen data collection programs to obtain standardized information to develop reliable estimates of the bycatch of seabirds and sea turtles (OP62).

Recommends that the Commission adopt the following Recommendations to enter into force from 01 January 2008:

Recommendation ERSWG – 2007-xx

Collection and submission of data on ERS catch and interactions

Recording of ERS in logbooks

1. Catch of all shark and non-fish species, and finfish species of interest to the ERSWG and Commission¹, both retained and non-retained, shall be recorded in the logbooks for each fishing operation². Retained species shall be recorded at the species level, for non-retained species at the lowest taxonomic level that is practical. Catch shall be recorded in numbers and where applicable for retained species, catch weight. The weight should be individual weight or at least total weight (for a given number) and accompanied by details of the type of processing state (e.g. headed and gutted or whole).
2. Interactions³ with non-retained species, particularly seabirds, marine mammals, marine reptiles and sharks should also be recorded in logbooks.

Note: All Members of Extended Commission collect data on retained ERS catch in their logbooks to varying levels of species identification. If Members of Extended Commission are to change their logbooks to meet this data requirement it is recognised that this could take some time to implement. Logbooks that reflect these requirements should be in place by December 2009.

Recording of ERS by observers

3. Catch of all shark and non-fish species, and finfish species of interest, both retained and non-retained, shall be recorded by observers for each fishing operation. The

¹ The list is attached as Appendix A.

² Fishing operation includes all fishing methods.

³ An 'interaction' is defined as any physical contact a fishing operation has with any retained or non-retained species. This includes all catching (hooked, netted, entangled) and collisions with an individual of these species.

catch shall be recorded at the species level. Catch shall be recorded in numbers and where possible, catch weight. The weight should be individual weight or at least total weight (for a given number). For retained species, the weight should be accompanied by details of the type of processing state (e.g. headed and gutted or whole).

4. Interactions with non-retained species, particularly seabirds, marine mammals, marine reptiles and sharks shall also be recorded at the species level where possible. Both the setting and hauling of longlines shall be monitored to observe any interactions or catch of non-retained species.
5. Observers shall also describe the use of mitigation methods⁴ and record which mitigation methods were used for each fishing operation.
6. Given the need for observers to collect data on target species and ERS, the ERS should be part of hierarchy of data collection (see Appendix B). The mode in which the observer is working shall be recorded for each fishing operation.
7. The hierarchy would ensure that for observed effort, catch (retained and non-retained) of all species, by species, is recorded for each fishery operation (Appendix A).

Provision of ERS logbook data

8. The catch, both retained and non-retained, and interaction data by species (or for non-retained catch at the species level where possible) in 5° x 5° squares for longline and 1° x 1° squares for all other gears, by each calendar month shall be provided to the Commission for each gear type. This shall be matched to SBT catch and effort reporting.

Provision of ERS observer data

9. The catch, both retained and non-retained, and interaction data by species in 5° x 5° grids for longline and 1° x 1° squares for all other gear, by each calendar month shall be provided to the Commission for each gear type. The mode of the observer shall be reported. This shall be matched to SBT catch and effort reporting.
10. The proportion of fishing operations where various mitigation devices or practices were used shall be provided to the Commission for each gear type. This would be summarised by 5° x 5° grids for longline and 1° x 1° squares for all other gears, by each calendar month.

Note: in instances where the provision of data at this spatial scale would result in breaches of domestic confidentiality agreements (e.g. identification of individual vessel operations), data should be provided at the finest possible scale, but no larger than the level of CCSBT Statistical area. Members and Cooperating Non-Members of the Extended Commission are encouraged to reconsider their domestic obligations regarding confidentiality in light of the CCSBT confidentiality arrangement given the benefits for ERSWG in having these finer scale data for future analysis.

⁴ Mitigation methods refers to mitigation devices (e.g. tori lines) and mitigation practices (e.g. night setting, offal discharge).

Logbook and observer data exchange and storage

11. The data shall be provided annually as part of the annual data exchange with the Commission, commencing May 2008. The Secretariat shall develop an appropriate database for the storage of ERS data.

Note: it is recognised that the time required to provide logbook data and observer data could differ.

Provision of historical data

12. Countries shall report to the Commission on the historical data available for ERS from logbooks, observers and other relevant sources by December 2007. The historical data will be provided to the Commission with the appropriate descriptions (metadata) by December 2008. The data shall include catch by species, or higher taxonomic level where species is not available, in 5° x 5° grids, during each calendar month for each gear type. The catch shall be matched to SBT effort data.

Data access arrangements

13. The access arrangements to the ERS data will be consistent with the Commission's data confidentiality policy.

Appendix A

Species of interest list for ERS data collection by fishers:

Species/Family/Order common name	Scientific name
Blue shark	<i>Prionace glauca</i>
Albacore	<i>Thunnus alalunga</i>
Ray's bream	<i>Brama brama</i>
Porbeagle shark	<i>Lamna nasus</i>
Dealfish	<i>Trachipterus trachipterus</i>
Lancetfish	<i>Alepisaurus ferox</i> & <i>A. brevirostris</i>
Moonfish	<i>Lampris guttatus</i>
Oilfish	<i>Ruvettus pretiosus</i>
Deepwater dogfish*	Squaliformes
Swordfish	<i>Xiphias gladius</i>
Butterfly tuna	<i>Gasterochisma melampus</i>
Mako shark	<i>Isurus oxyrinchus</i>
Rudderfish	<i>Centrolophus niger</i>
Bigeye tuna	<i>Thunnus obesus</i>
Yellowfin tuna	<i>Thunnus albacares</i>
Striped marlin	<i>Tetrapturus audax</i>
Bigscale pomfret	<i>Taractichthys longipinnis</i>
Thresher shark	<i>Alopias vulpinus</i>
Albatrosses	<u>Diomedeidae</u>
Shearwaters, petrels, and prions	<u>Procellariidae</u>
Storm petrels	<u>Hydrobatidae</u>
Diving petrels	<u>Pelecanoididae</u>
Cormorants	<u>Phalacrocoracidae</u>
Gulls	<i>Laridae</i>
Terns	<i>Sternidae</i>
Gannets and Boobies	<i>Sulidae</i>
Pelicans	<i>Pelecanidae</i>
Penguins	<i>Spheniscidae</i>
True Seals (e.g. elephant seals)	<i>Phocidae</i>
Eared seals (e.g.fur seals and sea lions)	<i>Otariidae</i>
Hard-shell sea turtles	<i>Chelonioidea</i>
Leatherback sea turtle	<i>Dermochelyidae</i>
Snakes	<i>Hydrophiidae</i>
Toothed whales & Dolphins	Order: <i>Cetacea</i> , Suborder <i>Odontoceti</i>
Baleen whales	Order: <i>Cetacea</i> Suborder <i>Mysticeti</i>

Appendix B**Recommended hierarchy for data collection**

1. All vessel and shot information should be collected prior to the collection of catch/biological information

During the setting of the line

2. Record all species caught or interacted with.

During the Haul

3. Record all species caught and interacted with, including the number of individuals of each species.

4. Record whether the specimen was retained, landed and discarded or released without landing.

5. Record life status at time of landing and life status at time of release (where applicable).

6. Collect data on length and whole and/or processed weight (including processed state).

7. Check for presence of tags.

8. Record sex.

9. Collect biological samples.

10. Take photos.

Hierarchy for data collection by species for items 6-10 above

Species	Mode (1 is the highest priority)
SBT	1
Sharks, other tunas, billfish.	2
All other species (fish, birds, turtles etc)	3

CCSBT-ERS-6 Report Attachment 7 – ANNOTATED

Draft ERS Data Collection and provision requirements (for discussion by members at national level)

Rationale

Noting the Terms of Reference of the Ecologically Related Species Working Group

“To provide information and advice on issues relating to species associated with southern bluefin tuna (SBT) (ecologically related species), with specific reference to:

- c. Species (both fish and non-fish) which may be affected by SBT fisheries operations*
- d. Predator and prey species which may affect the condition of the SBT stock”*

In accordance with the CCSBT Convention, which acknowledges the importance of collecting scientific information relating to ecologically related species (ERS) and states that parties shall expeditiously provide to the Commission scientific information, fishing catch and effort statistics and other data relevant to the conservation of ERS (Article 5), and that the Commission shall collect and accumulate statistical data relating to ERS (Article 8);

In accordance with the terms of reference for the ERSWG which specifically includes the provision of recommendations on data collection programs with respect to ERS species (TOR 4);

Recognising that data requirements and their importance have been discussed in previous meetings (ERSWG5 Agenda Item 8, paragraph 43) and that it was noted in relation to the assessment of ERS interactions, the ERSWG is yet to achieve the objective of providing the Commission with an estimate of the level of incidental seabird take (ERSWG5 Agenda Item 8, Para. 44);

Recognising that at CCSBT12 there was general agreement on the importance of information on non-target species to aid with interpretation of CPUE data and it was noted that if advice on the management of ERS was not forthcoming from the ERSWG then consideration would need to be given as to whether it would be better to discuss ERS issues as part of annual meetings of the Extended Commission than as a stand alone group (CCSBT12 Agenda Item 18, Para. 121 - 123);

Comment: The preamble has been updated to reflect developments at CCSBT 13, the UNGA resolution and Kobe

Recommendation ERSWG - XXXX

Collection of data on ERS catch

1. *Recording of ERS in logbooks*

Catch of (and interactions with) both retained and non-retained species of interest to the ERSWG and Commission⁵, shall be recorded in the logbooks for each fishing operation⁶. Catch shall be recorded in numbers and where applicable for retained fish (including sharks), catch weight. The weight should be individual weight or at least total weight (for a given number) and accompanied by a details of the type of processing state (e.g. headed and gutted or whole).

Comment: The reporting of catch and interactions has been separated into two paragraphs. The species list has been updated. Wording has been improved.

Note: All Members of Extended Commission collect data on retained ERS catch in their logbooks to varying levels of species identification. If Members of Extended Commission are to change their logbooks to meet this data requirement it is recognised that this could take several years.

Comment: A timeline has been identified.

2. *Recording of ERS by observers*

Catch of (and interactions with) both retained and non-retained species of interest to the ERSWG and Commission shall be recorded by observers for each fishing operation. The catch shall be recorded at the species level consistent with the existing CCSBT species identification guides⁷. Catch shall be recorded in numbers and where applicable for retained fish (including sharks), catch weight. The weight should be individual weight or at least total weight (for a given number) and accompanied by a details of the type of processing state (e.g. headed and gutted or whole).

Comment: The reporting of catch and interactions has been separated into two paragraphs. Wording has been improved.

Observers will also record the use of mitigation devices or practices for each fishing operation.

Given the need for observers to collect data on target species and ERS, the ERS should be part of hierarchy of data collection (see Appendix A). The mode in which the observer is working shall be recorded for each fishing operation.

The hierarchy would ensure that for observed effort, catch of all species, by species is recorded for each fishery operation (Appendix A). If this is not feasible, an alternative is that for at least one in 10 fishing operations the observer shall only collect information on the catch of all species, including those cut off without being landed. In this case the observer should record whether they are recording all catch for a shot or only catch of particular groups.

Comment: Minor changes to the wording

⁵ There were differing views about the extent of the list of species of interest. It was noted that this list needs to be developed and could change over time and desired taxonomic level of recording of these species may differ between logbook and observer recorded data

⁶ Fishing operations includes all fishing methods including farming operations

⁷ These id guides may need to be improved, this should be discussed with observers and fishers

Recommendation ERSWG - XXXX

Provision of ERS data to the Commission

Comment: Combined into a single recommendation

1. Provision of ERS logbook data

The catch and interactions by species (or taxonomic group) in 5° x 5° squares for longline and 1° x 1° squares for all other gears, by each calendar month shall be provided to the Commission for each gear type. This shall be matched to SBT catch and effort reporting.

2. Provision of ERS observer data

The catch and interactions by species in 5° x 5° grids for longline and 1° x 1° squares for all other gears, by each calendar month shall be provided to the Commission for each gear type. The mode of the observer shall be reported. This shall be matched to SBT catch and effort reporting.

Proportion of fishing operations where various mitigation devices or practices were used. This would be summarised by 5° x 5° grids for longline and 1° x 1° squares for all other gears, by each calendar month shall be provided to the Commission for each gear type.

Note: in instances where the provision of data at this spatial scale would result in breaches of domestic confidentiality agreements (e.g. identification of individual vessel operations), data should be provided at the finest possible scale, but no larger than the level of CCSBT Statistical area. Members and Cooperating Non-Members of the Extended Commission were encouraged to consider their domestic obligations regarding confidentiality in light of the CCSBT arrangement regarding confidentiality given the benefits of the ERSWG having these finer scale data for future analysis.

Comment: Minor wording improvements.

3. Logbook and observer data exchange and storage

The data shall be provided as part of the annual data exchange commencing within a timeframe to allow the ERSWG to begin analysing available data in preparation for its next meeting. The Secretariat shall develop an appropriate database for the storage of ERS data.

Comment: A timeline has been identified

Note: it is recognised that the time required to provide logbook data and observer data could differ. Available historical data will also be provided.

**

Comment: A new paragraph on the provision of historical data has been included.

4. Data access arrangements

The access arrangements to the ERS data will be consistent with the Commission's data confidentiality policy.

Appendix A
Recommended hierarchy for data collection

1. All vessel and shot information should be collected prior to the collection of catch/biological information
- During the Haul
2. Record all species caught
3. Record whether the specimen was retained, landed and discarded or released without landing.
4. Record life status at time of landing and life status at time of release (where applicable)
5. Collect data on length and whole and/or processed weight (including processed state)
6. Check for presence of tags
7. Record sex
8. Collect biological samples
9. Take photos

Comment: Setting data collection has been included

Hierarchy for data collection by species for items 5-9 above

Species	Mode (1 is the highest priority)
SBT	1
Sharks, Other tunas, billfishes, <i>Gasterochisma</i>	2
All other species (fish, birds, turtles etc)	3

Example of a Species List for fish (including sharks).

Comment: Expanded to include non-fish at a higher taxonomic level

Species common name	Scientific name
Blue shark	<i>Prionace glauca</i>
Albacore	<i>Thunnus alalunga</i>
Ray's bream	<i>Brama brama</i>
Porbeagle shark	<i>Lamna nasus</i>
Dealfish	<i>Trachipterus trachipterus</i>
Lancetfish	<i>Alepisaurus ferox</i> & <i>A. brevirostris</i>
Moonfish	<i>Lampris guttatus</i>
Oilfish	<i>Ruvettus pretiosus</i>
Deepwater dogfish*	Squaliformes
Swordfish	<i>Xiphias gladius</i>
Butterfly tuna	<i>Gasterochisma melampus</i>
Mako shark	<i>Isurus oxyrinchus</i>
Rudderfish	<i>Centrolophus niger</i>
Bigeye tuna	<i>Thunnus obesus</i>
Yellowfin tuna	<i>Thunnus albacares</i>
Striped marlin	<i>Tetrapturus audax</i>
Bigscale pomfret	<i>Taractichthys longipinnis</i>
Thresher shark	<i>Alopias vulpinus</i>

CCSBT-ERS-6 Report Attachment 7 - ORIGINAL

Draft ERS Data Collection and provision requirements (for discussion by members at national level)

Rationale

Noting the Terms of Reference of the Ecologically Related Species Working Group

“To provide information and advice on issues relating to species associated with southern bluefin tuna (SBT) (ecologically related species), with specific reference to:

- e. Species (both fish and non-fish) which may be affected by SBT fisheries operations*
- f. Predator and prey species which may affect the condition of the SBT stock”*

In accordance with the CCSBT Convention, which acknowledges the importance of collecting scientific information relating to ecologically related species (ERS) and states that parties shall expeditiously provide to the Commission scientific information, fishing catch and effort statistics and other data relevant to the conservation of ERS (Article 5), and that the Commission shall collect and accumulate statistical data relating to ERS (Article 8);

In accordance with the terms of reference for the ERSWG which specifically includes the provision of recommendations on data collection programs with respect to ERS species (TOR 4);

Recognising that data requirements and their importance have been discussed in previous meetings (ERSWG5 Agenda Item 8, paragraph 43) and that it was noted in relation to the assessment of ERS interactions, the ERSWG is yet to achieve the objective of providing the Commission with an estimate of the level of incidental seabird take (ERSWG5 Agenda Item 8, Para. 44);

Recognising that at CCSBT12 there was general agreement on the importance of information on non-target species to aid with interpretation of CPUE data and it was noted that if advice on the management of ERS was not forthcoming from the ERSWG then consideration would need to be given as to whether it would be better to discuss ERS issues as part of annual meetings of the Extended Commission than as a stand alone group (CCSBT12 Agenda Item 18, Para. 121 - 123);

Recommendation ERSWG - XXXX
Collection of data on ERS catch

3. *Recording of ERS in logbooks*

Catch of (and interactions with) both retained and non-retained species of interest to the ERSWG and Commission⁸, shall be recorded in the logbooks for each fishing operation⁹. Catch shall be recorded in numbers and where applicable for retained fish (including sharks), catch weight. The weight should be individual weight or at least total weight (for a given number) and accompanied by a details of the type of processing state (e.g. headed and gutted or whole).

Note: All Members of Extended Commission collect data on retained ERS catch in their logbooks to varying levels of species identification. If Members of Extended Commission are to change their logbooks to meet this data requirement it is recognised that this could take several years.

4. *Recording of ERS by observers*

Catch of (and interactions with) both retained and non-retained species of interest to the ERSWG and Commission shall be recorded by observers for each fishing operation. The catch shall be recorded at the species level consistent with the existing CCSBT species identification guides¹⁰. Catch shall be recorded in numbers and where applicable for retained fish (including sharks), catch weight. The weight should be individual weight or at least total weight (for a given number) and accompanied by a details of the type of processing state (e.g. headed and gutted or whole).

Observers will also record the use of mitigation devices or practices for each fishing operation.

Given the need for observers to collect data on target species and ERS, the ERS should be part of hierarchy of data collection (see Appendix A). The mode in which the observer is working shall be recorded for each fishing operation.

The hierarchy would ensure that for observed effort, catch of all species, by species is recorded for each fishery operation (Appendix A). If this is not feasible, an alternative is that for at least one in 10 fishing operations the observer shall only collect information on the catch of all species, including those cut off without being landed. In this case the observer should record whether they are recording all catch for a shot or only catch of particular groups.

⁸ There were differing views about the extent of the list of species of interest. It was noted that this list needs to be developed and could change over time and desired taxonomic level of recording of these species may differ between logbook and observer recorded data

⁹ Fishing operations includes all fishing methods including farming operations

¹⁰ These id guides may need to be improved, this should be discussed with observers and fishers

Recommendation ERSWG - XXXX
Provision of ERS data to the Commission

1. Provision of ERS logbook data

The catch and interactions by species (or taxonomic group) in 5° x 5° squares for longline and 1° x 1° squares for all other gears, by each calendar month shall be provided to the Commission for each gear type. This shall be matched to SBT catch and effort reporting.

2. Provision of ERS observer data

The catch and interactions by species in 5° x 5° grids for longline and 1° x 1° squares for all other gears, by each calendar month shall be provided to the Commission for each gear type. The mode of the observer shall be reported. This shall be matched to SBT catch and effort reporting.

Proportion of fishing operations where various mitigation devices or practices were used. This would be summarised by 5° x 5° grids for longline and 1° x 1° squares for all other gears, by each calendar month shall be provided to the Commission for each gear type.

Note: in instances where the provision of data at this spatial scale would result in breaches of domestic confidentiality agreements (e.g. identification of individual vessel operations), data should be provided at the finest possible scale, but no larger than the level of CCSBT Statistical area. Members and Cooperating Non-Members of the Extended Commission were encouraged to consider their domestic obligations regarding confidentiality in light of the CCSBT arrangement regarding confidentiality given the benefits of the ERSWG having these finer scale data for future analysis.

3. Logbook and observer data exchange and storage

The data shall be provided as part of the annual data exchange commencing within a timeframe to allow the ERSWG to begin analysing available data in preparation for its next meeting. The Secretariat shall develop an appropriate database for the storage of ERS data.

Note: it is recognised that the time required to provide logbook data and observer data could differ. Available historical data will also be provided.

5. Data access arrangements

The access arrangements to the ERS data will be consistent with the Commission's data confidentiality policy.

Appendix A
Recommended hierarchy for data collection

10. All vessel and shot information should be collected prior to the collection of catch/biological information

During the Haul

11. Record all species caught
12. Record whether the specimen was retained, landed and discarded or released without landing.
13. Record life status at time of landing and life status at time of release (where applicable)
14. Collect data on length and whole and/or processed weight (including processed state)
15. Check for presence of tags
16. Record sex
17. Collect biological samples
18. Take photos

Hierarchy for data collection by species for items 5-9 above

Species	Mode (1 is the highest priority)
SBT	1
Sharks, Other tunas, billfishes, <i>Gasterochisma</i>	2
All other species (fish, birds, turtles etc)	3

Example of a Species List for fish (including sharks).

Species common name	Scientific name
Blue shark	<i>Prionace glauca</i>
Albacore	<i>Thunnus alalunga</i>
Ray's bream	<i>Brama brama</i>
Porbeagle shark	<i>Lamna nasus</i>
Dealfish	<i>Trachipterus trachipterus</i>
Lancetfish	<i>Alepisaurus ferox</i> & <i>A. brevirostris</i>
Moonfish	<i>Lampris guttatus</i>
Oilfish	<i>Ruvettus pretiosus</i>
Deepwater dogfish*	Squaliformes
Swordfish	<i>Xiphias gladius</i>
Butterfly tuna	<i>Gasterochisma melampus</i>
Mako shark	<i>Isurus oxyrinchus</i>
Rudderfish	<i>Centrolophus niger</i>
Bigeye tuna	<i>Thunnus obesus</i>
Yellowfin tuna	<i>Thunnus albacares</i>
Striped marlin	<i>Tetrapturus audax</i>
Bigscale pomfret	<i>Taractichthys longipinnis</i>
Thresher shark	<i>Alopias vulpinus</i>