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DATA-RELATED TASKS FOR THE WCPFC SCIENTIFIC COMMITTEE

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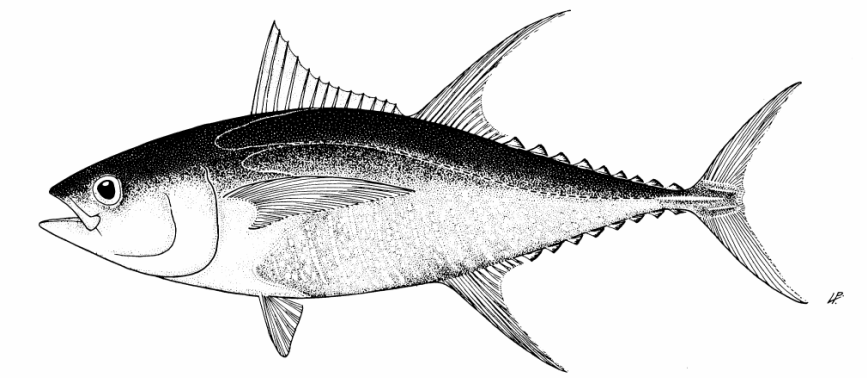

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INTRODUCTION

The final report of PrepCon Working Group II (Scientific Structure and Provision of Interim Scientific Advice) is presented in WCPFC/PrepCon/45 (Anon. 2004a). In Annex I (Summary of Major Recommendations from WG.II), recommendation C(4) states "*That the data-related tasks and policies that need to be addressed by the SC are as set out in Annex IV*". The data-related tasks and policies that are listed in Item III (Advice on Data Standards and Other Data Related Issues) in Annex IV of WCPFC/PrepCon/45 are as follows:

1. Draft the terms of reference of the Statistics Working Group

2. Draft a resolution on the scientific data to be provided by members of the Commission under Article 23 of the Convention

3. Draft a resolution on the principles and procedures for the dissemination of scientific data by the Commission

4. Advise the Commission regarding the contents of an annual report on the status of the collection, compilation and dissemination of data to be provided by the Commission's data managers

5. Monitor the status of data collection in the Philippines and the Pacific Ocean waters of Indonesia

6. Develop a strategy for improving the capacity of members to meet the data requirements of the Commission

7. Establish standards for the collection of scientific data, including operational catch and effort data, port sampling data and observer data

8. Advise the Commission regarding the scientific aspects of the regional observer programme to be developed under Article 28 of the Convention

9. Establish procedures for evaluating the quality of the scientific data compiled by the Commission

10. Harmonize data collection standards for the Western and Central Pacific Ocean and the Eastern Pacific Ocean in collaboration with the Inter-American Tropical Tuna Commission

11. Establish an agreement on the exchange of tuna fisheries data between the Inter-American Tropical Tuna Commission and the Commission

12. Harmonize the procedures for the compilation and dissemination of data by the Commission and the Interim Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean

13. Recommend that the Commission become a member of the Coordinating Working Party on Fishery Statistics

14. Recommend that the Commission become a partner in the Fisheries Resources Monitoring System

The Statistics Specialist Working Group (SWG) will not have sufficient time to address all of the tasks listed above during the inaugural meeting of the Scientific Committee (SC1). Hence, the tasks discussed below are limited to those that the Chairman of the Scientific Committee has included in the provisional agenda for SC1 and which therefore require immediate consideration by the Statistics SWG. These include tasks #1 (Terms of reference of the Statistics SWG), #2 (Scientific data to be provided to the Commission), #3 (Principles and procedures for the dissemination of scientific data by the Commission), #5 (Data collection in Indonesia and the Philippines), #8 (Scientific aspects of observer programmes) and #11 (Exchange of tuna fisheries data between the Inter-American Tropical Tuna Commission and the Commission).

Background information and, where appropriate, draft recommendations from the Scientific Committee to the Commission are presented below. In this regard, it should be noted that certain

tasks listed above and in Annex IV of WCPFC/PrepCon/45 refer to the drafting of resolutions to be considered by the Commission. However, it is not certain that the Commission will adopt all policies and procedures in the form of resolutions. The role of the Scientific Committee is perhaps best served simply by making recommendations to the Commission. If the Commission chooses to adopt them, it may adopt them as resolutions or otherwise, as it sees fit.

TERMS OF REFERENCE OF THE STATISTICS SPECIALIST WORKING GROUP

The terms of reference of the Statistics SWG should take into account the function of the Statistics Working Group of the Standing Committee on Tuna and Billfish (SCTB), which was established at SCTB11 in 1998 (Anon. 1998). The function of the SCTB Statistics Working Group was to coordinate the collection, compilation and dissemination of fisheries data.

When this function was established, the meaning of the words 'data collection, compilation and dissemination' was intended to be precise. The 'collection of data' refers to the use of forms to record various types of data (e.g., logsheets to record catch and effort data for individual vessels, observer data collection forms, port sampling forms, etc.). The 'compilation of data' refers to the provision of these forms (either hardcopy or their electronic equivalent) to national or international agencies. The 'dissemination of data' refers to the release of data to the users of the data.

This terminology was also used in the Article 13 of the Convention (Scientific Services):

> *In carrying out their work, the scientific experts may undertake the collection, compilation and dissemination of fisheries data according to agreed principles and procedures established by the Commission, including procedures and policies relating to the confidentiality, disclosure and publication of data.*

In addition to taking into account the function of the SCTB Statistics Working Group, the terms of reference or functions of the Statistics SWG must be consistent with those of the Scientific Committee. In this regard, the Convention states in Article 12 (Functions of the Scientific Committee) that:

> *The functions of the Committee shall be to (a) recommend to the Commission a research plan, including specific issues and items to be addressed by the scientific experts or by other organizations or individuals, as appropriate, and identify data needs and coordinate activities that meet those needs; (b) …*

The function of "coordinating data collection, compilation and dissemination" is thus consistent with the functions of the Scientific Committee.

The activities of the SCTB Statistics Working Group in regard to coordinating the collection, compilation and dissemination of data were also established at SCTB11:

> *It was proposed that the coordination of data collection by the SWG could be accomplished through (1) periodic reviews of all data collection forms in use, in order to ensure that they include a minimum standard of data; (2) periodic reviews of the level of coverage by logsheet and landings data for each of the fleets, in order to ensure that a minimum level of coverage is being achieved; (3) periodic reviews of the level of accuracy and reliability of the logsheet data, in order to ensure that the logsheet data have been subject to a minimum level of verification; and (4) the establishment of a regional sampling design for port sampling and observer programmes.*

The coordination of the compilation of data by the SWG could be accomplished through (1) specifying the data items that should be compiled for each type of data and (2) reviewing the data that have been compiled on an annual basis, for each type of data.

Coordination of the dissemination of data by the SWG could be accomplished by (1) establishing policies for the dissemination of data and (2) reviewing the instances of the dissemination of data on an annual basis.

Given the discussion above, the following draft recommendation is proposed:

Statistics SWG Draft Recommendation #1:

Terms of Reference of the Statistics SWG

The Terms of Reference of the Statistics SWG are to coordinate the collection, compilation and dissemination of tuna fisheries and related data. The 'collection of data' refers to the use of forms by national agencies or the Commission to record various types of data (e.g., logsheets or logbooks to record operational catch and effort data, observer data collection forms, port sampling forms, records of unloadings, etc.). The 'compilation of data' refers to the provision of data by national agencies to the Commission in accordance with policies and procedures that have been established by the Commission in this regard. The 'dissemination of data' refers to the release of data by the Commission to the users of the data.

The coordination of the collection of data shall include periodic reviews of the Commission's standards for data collection, such as (a) minimum standards for data collection forms, (b) sampling protocols for data collection programmes, (c) target coverage rates for data collection programmes, (d) sampling designs for data collection programmes and (e) procedures for the verification of data.

The coordination of the compilation of tuna fisheries and related data shall include periodic reviews of (a) the Commission's policies in regard to the provision of data, (b) the coverage of data compiled by the Commission and (c) the quality of data compiled by the Commission.

The coordination of the dissemination of data shall include periodic reviews of (a) the Commission's policies in regard to the dissemination of data and (b) the instances of the dissemination of data by the Commission.

The coordination of the collection, compilation and dissemination of data shall also include any other activities that the Scientific Committee considers to be appropriate.

The Statistics SWG shall advise the Scientific Committee in regard to issues concerning data that can be used for both scientific and compliance purposes, and that require liaison with the Technical and Compliance Committee.

SCIENTIFIC DATA TO BE PROVIDED TO THE COMMISSION

Article 23 (Obligations of members of the Commission) of the Convention, states that:

> *Each member of the Commission shall:*
>
> *(a) provide annually to the Commission statistical, biological and other data and information in accordance with Annex I of the Agreement and, in addition, such data and information as the Commission may require;*
>
> *(b) provide to the Commission in the manner and at such intervals as may be required by the Commission, information concerning its fishing activities in the convention Area, including fishing areas and fishing vessels in order to facilitate the compilation of reliable catch and effort statistics; …*

'Annex I of the Agreement' refers to the annex on 'Standard Requirements for the Collection and Sharing of Data' in the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (Anon. 1982).

An early task of the Commission will be to establish a policy concerning the scientific data to be provided by members under Article 23. The position of the Preparatory Conference in regard to the provision of scientific data is summarised under section IV (Data Requirements and Specifications) of the final report of Working Group II (Scientific Structure and Provision of Interim Scientific Advice) (Anon. 2004a):

> *Throughout the course of its work, WG.II adopted a range of recommendations on preferred scientific approaches and processes, and the data requirements and specifications which were expected to be relevant to the ongoing scientific activities and requirements of the Commission. In particular, WG.II attempted to identify the Commission's needs with respect to data requirements, including current gaps in data coverage and standards for data collection and management as well as research priorities, and research planning and coordination.*
>
> *Data requirements of the Commission*
>
> *WG.II recognized that accurate stock assessment depends on accurate data collected at an operational level i.e. long line and purse-seine sets, and pole and line and troll by day fished. Such data are a long-term data requirement of the Commission. WG.II therefore recommended that operational level data be collected by all fleets and be made available to the Commission for stock assessment and other scientific analyses, with appropriate arrangements for data security and confidentiality.*
>
> *Estimates of annual catches are an essential element of fisheries data. WG.II recommends that annual catches by species, gear and fleet in the Convention area be reported by flag states and coastal states.*
>
> *Size composition (length and/or weight frequency) data are also essential for stock assessment. WG.II recommended that size composition data should be collected, at the operational level (described above) where practical, according to a statistically sound sampling design to ensure that the data are representative of the fishery.*

WG.II recognized the unique characteristics of the WCPO fisheries, that the pathways for data communication may be complex, and that coastal states play a critical role in regional data collection. WG.II recommended flexibility be maintained in establishing data reporting requirements for the Commission and that coastal states and flag states cooperate in ensuring that the Commission receive data in a timely fashion.

A recommendation on the provision of scientific data to the Commission must take the above into account, together with Annex I of the Agreement.

It should be noted that operational catch and effort data, estimates of annual catch statistics and size composition data are only a subset of the types of scientific data that are required for stock assessment and other analyses. The full range of types of data that are currently being used for tuna fisheries research conducted by the SPC Oceanic Fisheries Programme is discussed in Lawson et al. (2002) and also includes records of unloadings; observer and port sampling species composition data; numbers of vessels active by size class; observer catch data for non-target species and discards of tuna; vessel and gear attributes; tag release and recapture data; oceanographic and meteorological data; genetic data; otolith ring counts; stomach contents data; and isotopic N15/C14 data. While the immediate concern of the Scientific Committee is to formulate a policy concerning the provision of annual catch estimates, operational catch and effort data and size composition data to the Commission, the Scientific Committee may wish to consider the collection and compilation of other types of data at a later date.

Article 6 (Data verification) of Annex I of the Agreement states that "*States or, as appropriate, subregional or regional fisheries management organizations or arrangements should establish mechanisms for verifying fishery data, such as: (a) position verification through vessel monitoring systems; (b) scientific observer programmes to monitor catch, effort, catch composition (target and non-target) and other details of fishing operations; (c) vessel trip, landing and transshipment reports; and (d) port sampling*".

Given the discussion above, the following draft recommendations are proposed:

Statistics SWG Draft Recommendation #2:

Scientific Data to be Provided to the Commission

1. Estimates of annual catches

The following estimates of catches during each calendar year shall be provided to the Commission for each gear type:

- catches of bigeye (*Thunnus obesus*), skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*), striped marlin (*Tetrapturus audax*), blue marlin (*Makaira mazara*), black marlin (*Makaira indica*) and swordfish (*Xiphias gladius*) in (i) the Convention Statistical Area and (ii) the WCPO Area; and

- catches of albacore (*Thunnus alalunga*) in (i) the South Pacific Area, (ii) the North Pacific Area, (iii) the Convention Statistical Area north of the Equator, (iv) the Convention Statistical Area south of the Equator, (v) the WCPO Area north of the Equator and (vi) the WCPO Area south of the Equator.

For trollers targeting albacore in the South Pacific Area, the following estimates of catches during the fishing season (July to June) shall also be provided:

- catches of albacore in the South Pacific Area.

All catch estimates shall be reported in tonnes. Longline catch estimates shall be for whole weight, rather than processed weight. Discards should be included.

The statistical methods that are used to estimate the annual and seasonal catches shall be reported to the Commission, with reference to the coverage rates for each type of data (e.g., operational catch and effort data, records of unloadings, species composition sampling data) that is used to estimate the catches and to the conversion factors that are used to convert the processed weight of longline-caught fish to whole weight.

Catch estimates shall also be provided for other major non-target species (e.g., sharks) and species of special interest (e.g., marine mammals, marine reptiles and seabirds) for which data are available to estimate annual catches in (i) the Convention Statistical Area and (ii) the WCPO Area.

2. Estimates of the number of vessels active

Estimates of the number of vessels active in the Convention Statistical Area during each calendar year shall be provided to the Commission for each gear type.

For longliners, pole-and-line vessels and purse seiners, the estimates of the number of vessels active must be provided by gross registered tonnage (GRT) class. The GRT classes are defined as follows:

- Longline: 0–50, 51–200, 201–500, 500+
- Pole-and-line: 0–50, 51–150, 150+
- Purse seine: 0–500, 501–1000, 1001–1500, 1500+

For trollers targeting albacore in the South Pacific Area, estimates of the number of vessels active in (i) the Convention Statistical Area and (ii) the South Pacific Area, during the fishing season (July to June), shall also be provided.

3. Operational catch and effort data

Operational level catch and effort data (e.g., individual sets by longliners and purse seiners, and individual days fished by pole and line vessels and trollers) shall be provided to the Commission, in accordance with standards to be established by the Commission. The standards shall concern the data items to be provided, the geographic area to be covered, target coverage rates, procedures for the verification of operational catch and effort data, and other standards as appropriate.

4. Catch and effort data aggregated by time period and geographic area

If the coverage rate of the operational catch and effort data that are provided to the Commission is less than 100%, then catch and effort data aggregated by time period and geographic area that have been raised to represent the total catch and effort shall be provided. Longline catch and effort data shall be aggregated by periods of month and areas of 5° longitude and 5° latitude. Catch and effort data for surface fisheries shall be aggregated by periods of month and areas of 1° longitude and 1° latitude.

If the coverage rate of the operational catch and effort data that are provided to the Commission is less than 100%, then catch and effort data that have been raised to represent the total catch and effort shall also be aggregated by periods of year and areas of national jurisdiction and high seas within the Convention Statistical Area.

The statistical methods that are used to derive the aggregated catch and effort data shall be reported to the Commission, with reference to the coverage rate of the operational catch and effort data, and the type of data and method used to raise the catch and effort data.

5. Size composition data

Length and/or weight composition data shall be provided to the Commission on an operational level (e.g., individual sets by longliners and purse seiners, and individual days fished by pole and line vessels and trollers), in accordance with standards that are consistent with those established for the provision of operational catch and effort data.

6. The roles of flag states and coastal states

Flag states or entities shall be responsible for providing scientific data covering vessels they have flagged to the Commission, except for vessels operating under joint-venture or charter arrangements with another state such that the vessels operate, for all intents and purposes, as local vessels of the other state, in which case the other state shall be responsible for the provision of data to the Commission.

Scientific data compiled by coastal states shall also be provided to the Commission.

7. Time periods covered and schedule for the provision of data

Estimates of annual or seasonal catches shall be provided to the Commission from 1950 onwards or, if the fleet began operating after 1950, from the year in which the fleet began operating.

Operational catch and effort data and size composition data shall be provided for all years, starting with the first year for which the data are available.

Estimates of annual catches during a calendar year shall be provided by April 30 following the end of the calendar year (e.g., estimates of catches during calendar year ‘x’ shall be provided by 30 April of year ‘x+1’). Catch estimates shall be revised, and the revised estimates provided to the Commission, as additional data become available.

Estimates of seasonal catches by trollers targeting albacore in the South Pacific Area shall be provided by April 30 of the year following the year in which the season ends (e.g., estimates of catches during the season from July of year ‘x’ to June of year ‘y’ shall be provided by 30 April of year ‘y+1’).

For all gear types, except trollers targeting albacore in the South Pacific Area, operational catch and effort data and size composition data covering a calendar year shall be provided by April 30 of the year following the calendar year (e.g., data covering calendar year ‘x’ shall be provided by 30 April of year ‘x+1’). For trollers targeting albacore in the South Pacific Area, operational catch and effort data and size composition data covering a fishing season (July to June) shall be provided by April 30 of the year following the year in which the season ends (e.g., data covering the season from July of year ‘x’ to June of year ‘y’ shall be provided by 30 April of year ‘y+1’).

8. Definition of statistical areas

(a) WCPO Area

The WCPO area was established at the Twelfth Meeting of the Standing Committee on Tuna and Billfish in June 1999 in order to delineate the Western and Central Pacific Ocean and the Eastern Pacific Ocean for statistical purposes. The WCPO Area is defined as follows: The northern boundary is the 50° parallel of north latitude. The eastern boundary is the 150° meridian of west longitude. The southern boundary is the 50° parallel of south latitude. The western boundary is from the 50° parallel of south latitude due north along the 141° meridian of east longitude to the south coast of Australia, then from the north coast of Australia due north along the 129° meridian of east longitude to its intersection with the 8° parallel of south latitude, thence due west along the 8° parallel of south latitude to the Indonesian peninsula, and from the Indonesian peninsula due east along the 2°30 parallel of north latitude to the Malaysian peninsula.

(b) South Pacific Area

The South Pacific Area is the portion of the Pacific Ocean that is south of the Equator.

(c) North Pacific Area

The North Pacific Area is the portion of the Pacific Ocean that is north of the Equator.

(d) Convention Statistical Area

The Convention Area is defined in the text of the Convention as follows: From the south coast of Australia due south along the 141° meridian of east longitude to its intersection with the 55° parallel of south latitude; thence due east along the 55° parallel of south latitude to its intersection with the 150° meridian of east longitude; thence due south along the 150° meridian of east longitude to its intersection with the 60° parallel of south latitude; thence due east along the 60° parallel of south latitude to its intersection with the 130° meridian of west longitude; thence due north along the 130° meridian of west longitude to its intersection with the 4° parallel of south latitude; thence due west along the 4° parallel of south latitude to its intersection with the 150° meridian of west longitude; thence due north along the 150° meridian of west longitude.

The western boundary of the Convention Area north of the north coast of Australia is not defined in the text of the Convention. Therefore, for statistical purposes, the western boundary of the WCPO Area will be used in this regard. The coordinates are as follows: from the north coast of Australia due north along the 129° meridian of east longitude to its intersection with the 8° parallel of south latitude, thence due west along the 8° parallel of south latitude to the Indonesian peninsula, and from the Indonesian peninsula due east along the 2°30′ parallel of north latitude to the Malaysian peninsula.

9. Periodic reviews of the requirements for scientific data

The Commission, through its Scientific Committee, shall periodically review the requirements for scientific data and shall provide the Commission with revised versions of this recommendation, as appropriate.

Item 9 (Periodic reviews of the requirements for scientific data) of draft recommendation #2 is meant to indicate that the requirements for scientific data are expected to evolve. For example, other types of data that the Commission may consider compiling include records of unloadings, which can be used to verify operational logsheet data, and species composition data collected by observers and port samplers under national programmes, which can be used to verify annual catch estimates and operational catch data for target species, and to estimate catches of non-target species.

The vessel size classes given in Item 2 (Estimates of the number of vessels active) of draft recommendation #2 were originally established by SCTB and represent the classes for which vessel numbers are currently provided. The Scientific Committee may wish to review the definition of vessel size classes during the next intersessional period and consider revising recommendation #2 accordingly at the second meeting of the Scientific Committee in 2006.

Draft recommendation #2 above refers to standards for the provision of operational catch and effort data. The following draft recommendation concerns these standards and are based on standards for tuna fishery catch and effort logsheets that were determined at the SCTB Statistics Working Group Session on Data Collection Forms, held from 14 to 15 June 1999 in Papeete, French Polynesia, during the Twelfth Meeting of the Standing Committee on Tuna and Billfish (Anon. 1999).

Statistics SWG Draft Recommendation #3:

Standards for the Provision of Operational Catch and Effort Data to the Commission

1. Data items to be provided to the Commission

1.1 Vessel identifiers, all gear types

Name of the vessel, country of registration, registration number, international radio call sign: The registration number is the number assigned to the vessel in the country where the vessel is flagged.

1.2 Trip information, all gear types

The start of a trip is defined to occur (a) when a vessel leaves port after unloading part or all of the catch to transit to a fishing area or (b) recommences fishing operations or transits to a fishing area after transshipping part or all of the catch at sea. The end of a trip is defined to occur when a vessel unloads part or all of the catch.

Port of departure, date of departure, port of unloading, date of arrival in port of unloading: These items can be used to cross-check the period covered by logsheet data and the period covered by landings records, such that landings records can be used to verify logsheet data.

1.3 Longline sets

Date of set and time of start of set: The date and start of set time should be GMT/UTC.

Position of start of set: The position of start of set should be reported in units of at least minutes of latitude and longitude.

Number of hooks set: This is a measure of fishing effort.

Number of hooks between floats: This measure is a proxy for average hook depth and is important in determining the effective effort for a given species.

Number of fish caught per set, by species, total weight or average weight of fish caught per set, by species: The total weight or average weight must refer to whole weights, rather than processed weights. All target species and major non-target species, including species of special interest (e.g., marine mammals, marine reptiles and sea birds), should be reported.

1.4 Pole-and-line days fished

Activity: This item is a code that is reported for each day from the start of the trip to the end of the trip. This item can be used to distinguish between days on which searching took place, but no fish were caught, and days on which no fishing or searching took place. Activities should include "a day fishing or searching with bait onboard"; "no fishing — collecting bait"; "no fishing — in transit"; "no fishing — gear breakdown"; "no fishing — bad weather"; and "no fishing — in port".

Date: The date must be reported for all days from the start of the trip to the end of the trip. The date should be GMT/UTC.

Noon position: The noon position should be reported in units of at least minutes of latitude and longitude.

Weight of fish caught per day, by species: All target species and major non-target species, including species of special interest (e.g., marine mammals, marine reptiles and sea birds), should be reported.

1.5 Purse-seine sets

Activity: This item is a code that should be reported for each set and for days on which no sets were made, from the start of the trip to the end of the trip. This item can be used to distinguish between days on which searching took place, but no fish were caught, and days on which no fishing or searching took place. Activities should include "a set"; "a day searched, but no sets made"; "no fishing — in transit"; "no fishing — gear breakdown"; "no fishing — bad weather"; and "no fishing — in port".

Date: The date must be reported for all days from the start of the trip to the end of the trip. The date should be GMT/UTC.

Time of start of set and time of end of set: The times of the start and end of set should be GMT/UTC.

Position of set or noon position: If a set is made, then the position must refer to the set. If searching occurs, but no sets are made, then the noon position must be reported. The position should be reported in units of at least minutes of latitude and longitude.

School association: All common types of school association should be reported with specific codes, while uncommon types of association should be recorded with a code for "other". Common types of school association are "free-swimming" or "unassociated"; "feeding on baitfish"; "drifting log, debris or dead animal"; "drifting raft, FAD or payao"; "anchored raft, FAD or payao"; "live whale"; and "live whale shark".

Weight of fish caught per set, by species: All target species and major non-target species, including species of special interest (e.g., marine mammals, marine reptiles and sea birds), should be reported.

1.6 Troll days fished

Activity: This item should be reported for each day fished and for days on which no fishing took place, from the start of the trip to the end of the trip. This item can be used to distinguish between days fished on which no fish were caught and days not fished. Activities should include "a day fished"; "no fishing — in transit"; "no fishing — gear breakdown"; "no fishing — bad weather"; and "no fishing — in port".

Date: The date must be reported for all days from the start of the trip to the end of the trip. The date should be GMT/UTC.

Noon position: The noon position should be reported in units of at least minutes of latitude and longitude.

Number of fish caught per day, by species and average weight, by species: All target species and major non-target species, including species of special interest (e.g., marine mammals, marine reptiles and sea birds), should be reported.

2. Geographic area to be covered by operational catch and effort data to be provided to the Commission

The geographic area to be covered by operational catch and effort data to be provided to the Commission shall be the Convention Statistical Area, except for fisheries targeting albacore in the Pacific Ocean south of the Equator, for which the geographic area shall be the South Pacific Area.

3. Target coverage rate for operational catch and effort data to be provided to the Commission

The target coverage rate for operational catch and effort data to be provided to the Commission is 100%.

4. Procedures for the verification of operational catch and effort data

Operational catch and effort data shall be verified as follows:

- The amount of the retained catch shall be verified with records of unloading obtained from a source other than the crew or owner or operator of the fishing vessel, such as an agent of the company responsible for stevedoring or onward shipping or purchasing of the catch. The target coverage rate for the verification of the amount of the retained catch with records of unloading is 100%.

- Positions of latitude and longitude shall be verified with information obtained from vessel monitoring systems. The target coverage rate for the verification of positions with information from vessel monitoring systems is 100%.

- The species composition of the catch shall be verified with sampling conducted by observers during fishing operations or by port samplers during unloading. The target coverage rate for the verification of the species composition of the catch shall be the same as the target coverage rate established by the Commission for observer programmes and port sampling programmes.

PRINCIPLES AND PROCEDURES FOR THE DISSEMINATION OF SCIENTIFIC DATA BY THE COMMISSION

Reference is made to "*agreed principles and procedures established by the Commission, including procedures and policies relating to the confidentiality, disclosure and publication of data*" in Article 13 (Scientific services) of the Convention (quoted above). In this regard, two issues are considered below: (a) data security and (b) principles and procedures for the dissemination of data.

Data security

The SPC Oceanic Fisheries Programme, which is currently managing the Commission's scientific data, follows or is implementing a series of procedures to maintain the security of the tuna fisheries and related data that it holds. These procedures are listed in Appendix I and concern the security of both physical and electronic data. The Scientific Committee may wish to consider and approve the data security procedures followed or to be implemented by the SPC Oceanic Fisheries Programme.

Dissemination of Data

The SPC Oceanic Fisheries Programme has managed highly confidential data, including operational catch and effort data covering all flag states and entities operating in the region, for over 20 years. The basic principle of SPC's policy regarding the dissemination of data has been that the data compiled by the OFP are released to users of the data only if the sources of the data — which include SPC member governments and territories, non-SPC member governments, and private companies — have authorised the release of their data. In this way, the sources of the data maintain full control over the use of their data and do not give up their 'ownership' of the data when providing it to the OFP.

The OFP's policy regarding the dissemination of data were adopted by SCTB in the procedures for the dissemination of data that were established by the SCTB Statistics Working Group at SCTB11. The procedures for the dissemination of catch and effort data are as follows (Anon. 1998):

> *Catch and effort data grouped by 5° longitude by 5° latitude by month for longline and 1° longitude by 1° latitude by month for surface fisheries, for all fishing nations combined, are considered to be in the public domain.*
>
> *Catch and effort data grouped by 5° longitude by 5° latitude by month for longline and 1° longitude by 1° latitude by month for surface fisheries, stratified by fishing nation, are available for release at the discretion of the SPC Oceanic Fisheries Programme, for those sources of data which have so authorised the OFP. For those sources of data that have not authorised the OFP to release data at its discretion, authorisation for the release of data must be obtained from the sources of the data.*
>
> *Catch and effort data grouped at a finer level of time-area stratification may be released with authorisation from the sources of the data.*

Catch and effort data are released for research purposes only, and to individuals who can be trusted to use the data responsibly. The person requesting the data is required to provide a description of the research project. The data are released only for use in the specified research project and the data must be destroyed upon completion of the research project. However, catch and effort data may be released for long-term usage for research purposes, such that the data need not be destroyed, with authorisation from the sources of the data.

The person requesting the data will be asked to provide a report of the results of the research project to the OFP, for subsequent forwarding to the sources of the data.

The sources of the catch and effort data held by the OFP have agreed that longline catch and effort data aggregated by 5° longitude and 5° latitude and month, and surface fishery catch and effort data aggregated by 1° longitude and 1° latitude and month, for all fishing nations combined, are in the public domain and these data are available on the SPC/OFP website. However, this criteria for public domain catch and effort data is restrictive in that data for individual fishing nations are not considered to be in the public domain.

Other regional fisheries bodies, such as the International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Indian Ocean Tuna Commission (IOTC), consider that catch and effort data aggregated by time-area for individual fishing nations or entities are in the public domain. For example, aggregated longline or purse-seine data are available on the ICCAT website for countries and entities including Canada, Chinese Taipei, France, Japan, the Republic of Korea and the United States of America, which are also members or observers of the WCPFC.

The policy for the dissemination of data by IOTC is as follows: "*Catch-and-effort and length-frequency data grouped by 5° longitude by 5° latitude by month for longline and 1° longitude by 1° latitude by month for surface fisheries stratified by fishing nation are considered to be in the public domain, provided that the catch of no individual vessel can be identified within a time/area stratum. In cases when an individual vessel can be identified, the data will be aggregated by time, area or flag to preclude such identification, and will then be in the public domain.*" [1] Several members of the IOTC are members or observers of the WCPFC, such as Australia, China, France, Indonesia, Japan and the Republic of Korea.

In the interest of making data more easily available for research on tuna fisheries in the region, the WCPFC should adopt the same criteria as ICCAT and IOTC for public domain data.

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[1] Indian Ocean Tuna Commission Resolution 98/02, Data Confidentiality Policy and Procedures: http://www.iotc.org/English/resolutions/reso_detail.php?reso=2

The following draft recommendation concerns the Commission's policy in regard to the dissemination of scientific data.

Statistics SWG Draft Recommendation #4:

Principles and Procedures for the Dissemination of Scientific Data by the Commission

The basic principle for the dissemination of scientific data by the Commission is that all instances of the dissemination of data shall be authorised by the sources of the data. The authorisation to disseminate data that the Commission considers to be in the public domain shall be taken for granted. The authorisation to disseminate data that the Commission does not consider to be in the public domain shall be sought from the sources of the requested data and, when authorised, the individuals that have requested the data must sign a Confidentiality Agreement prior to the release of the data.

The Commission shall disseminate scientific data according to the following procedures.

1. Estimates of annual catches

Estimates of annual catches of target and major non-target species by flag, gear type and statistical area are considered to be in the public domain. They shall be (a) published in statistical bulletins, (b) made available for downloading on the Internet and (c) released on request.

2. Catch and effort data

Longline catch and effort data aggregated by 5° longitude and 5° latitude and month, and surface catch and effort data aggregated 1° longitude and 1° latitude and month, for individual fishing nations or entities, are considered to be in the public domain, provided that the catch of no individual vessel can be identified within a stratum. In cases when an individual vessel can be identified, the data shall be aggregated to preclude such identification.

Catch and effort data considered to be in the public domain shall be (a) made available for downloading on the Internet and (b) released on request.

Catch and effort data aggregated at a finer level of time and area, and operational catch and effort data, may be released with authorisation from the sources of the requested data, subject to acceptance of the Confidentiality Agreement below.

3. Other types of scientific data

The principles and procedures for the dissemination of catch and effort data shall also apply to the dissemination of other types of scientific data by the Commission.

4. Confidentiality Agreement for the dissemination of non-public domain data

Individuals requesting non-public domain data shall provide a description of the research project, including the objectives, methodology and intentions regarding publication. The research project must be consistent with the objective of the Convention, i.e., to ensure, through effective management, the long-term conservation and sustainable use of highly migratory fish stocks in the western and central Pacific Ocean.

Prior to the release of non-public domain data, the individuals requesting the data shall sign a Confidentiality Agreement that states:

- Prior to the publication of the results of the research project, the manuscript shall be provided to and cleared by the Executive Director, who shall ensure that any data that are published are considered to be in the public domain.
- The data shall be (a) used only for the research project for which the data were requested, (b) accessed only by the individuals requesting the data, and (c) destroyed upon completion of the research project.
- All published reports of the results of the research project shall be provided to the Executive Director for subsequent forwarding to the sources of the data and to the Scientific Committee.

If the sources of the data have authorised the use of the data under conditions that are different from those presented above, then the Confidentiality Agreement will be modified accordingly.

5. Documentation of the dissemination of scientific data by the Commission

The WCPFC data managers shall document all instances of the dissemination of scientific data and shall make the documentation available for periodic review by the Scientific Committee.

DATA COLLECTION IN INDONESIA AND THE PHILIPPINES

The lack of accurate catch statistics, effort data, and species composition and size composition data for the Philippines and the Pacific Ocean waters of Indonesia has been responsible for much of the uncertainty in the stock assessments for bigeye and yellowfin in the Western and Central Pacific Ocean. At the fifth session of the Preparatory Conference, a specific proposal relating to strengthening data collection from the domestic fisheries of the Philippines and the Pacific Ocean waters of Indonesia was considered by Working Group II, taking into account the comments on this issue made at the 16th Meeting of the Standing Committee on Tuna and Billfish and at meetings of the Scientific Coordinating Group (SCG). This proposal stemmed from one of the recommendations aimed at improving the quality and coverage of the data available for stock assessment that had been made by Working Group II during its third session. Working Group II agreed that the proposal be further developed, in cooperation with Indonesia and the Philippines, and that participants in the Preparatory Conference further consider how they might assist this initiative, through services or financial support.

At the sixth session of the Preparatory Conference, a revised draft proposal, prepared by the SPC Oceanic Fisheries Programme (Anon. 2003a), for monitoring the catches of highly migratory species in the Philippines and the Pacific Ocean waters of Indonesia, was considered further by Working Group II. To this end a Steering Committee was formed that included representatives from Indonesia, the Philippines, the two donors at that time — Chinese Taipei had contributed USD 20,000 and the United States of America had contributed USD 60,000 — the OFP and the Chairman of Working Group II. The Steering Committee was tasked with implementing the project to the extent possible with available funds. The total funding required for two years of port sampling in each of Indonesia and the Philippines, and associated activities, is USD 292,000. The Steering Committee decided to allocate the funds that were available at the time of its meeting to project activities in the Philippines (Anon. 2004b).

At the seventh session of the Preparatory Conference, Working Group II was informed that project activities in the Philippines had commenced in July 2004 with a review of the tuna fisheries and the current statistical system in the Philippines. A workshop was subsequently held in Manila from 20 to 21 October 2004 (Anon. 2004c) to consider the recommendations from the review and to plan port sampling, which commenced in January 2005. During the seventh session of PrepCon, New Zealand announced that it would contribute USD 60,000 to the IPDCP.

The Project has so far been managed by the OFP; however, this has been problematic. Neither Indonesia nor the Philippines are SPC members, and management of the Project is not part of the regular OFP work programme; therefore, OFP involvement has been limited.

With respect to the Indonesia and Philippines Data Collection Project, Working Group II therefore recommended that:

(a) The Commission adopt the Project and assume responsibility for its management as soon as possible;

(b) The Commission transfer those funds from the Preparatory Conference Organizational Fund (PCOF) that have been contributed for the Project to the Special Requirements Fund of the Commission;

(c) the Commission establish the IPDCP Steering Committee to monitor project activities and developments in regard to funding, and to report thereon to the Scientific Committee; and

(d) Commission members and potential members contribute, as soon as possible, the balance of the funds required to implement the Project.

The following draft recommendation is in regard to (a), (c) and (d) above.

Statistics SWG Draft Recommendation #5:

Indonesia and Philippines Data Collection Project (IPDCP)

As recommended by PrepCon Working Group II in paragraph 39(c) of WCPFC/PrepCon/45 (Final Report of Working Group II), it is recommended that:

- the Commission adopt the Indonesia and Philippines Data Collection Project and assume responsibility for its management as soon as possible;
- the Commission establish the IPDCP Steering Committee to monitor project activities and developments in regard to funding, and to report thereon to the Scientific Committee. Membership of the Steering Committee should include Indonesia, the Philippines, donors, the Chairman of the Scientific Committee and the SPC Oceanic Fisheries Programme; and
- Commission members and potential members contribute, as soon as possible, the balance of the funds required to implement the IPDCP.

In regard to Item (b) in the recommendation from Working Group II, the Commission, at its inaugural meeting, directed that "*monies credited to the Preparatory Conference Organizational Fund for specific purposes, including the Indonesia and Philippines Data Collection Project*

(IPDCP), be transferred to the Special Requirements Fund established under Financial Regulation 7 and authorize the Executive Director to make expenditures from such Fund in accordance with relevant decisions of the Commission relating thereto" (Anon 2004d).

SCIENTIFIC ASPECTS OF OBSERVER PROGRAMMES

Article 28 (Regional observer programme) of the Convention states that "*the Commission shall develop a regional observer programme to collect verified catch data, other scientific data and additional information related to the fishery from the Convention Area and to monitor the implementation of the conservation and management measures adopted by the Commission*".

The Scientific Committee shall advise the Commission regarding the scientific aspects of the regional observer programme. In the interest of harmonising regional and national observer programmes, the Scientific Committee may also wish to make recommendations concerning the scientific aspects of both regional and national observer programmes. Aspects of observer programmes that should be considered include the scientific objectives of observer programmes, standards for data collection, sampling protocols and target coverage rates.

Regarding standards for data collection, it would not be appropriate for the Scientific Committee to propose standard observer data collection forms, given the differences in the requirements of the existing national observer programmes. Rather, the Scientific Committee should establish minimum standards that can be used to determine whether the data collection forms that are in use in the region are adequate for the primary scientific objectives of observer programmes, such as monitoring the catches of target and non-target species and the collection of data on the size composition data. The information recorded on the observer forms developed by the SPC/FFA Tuna Fisheries Data Collection Committee, which are the most widely used observer forms in the region, may be a useful starting point. The reports of the meetings of the DCC (e.g., Anon. 2003b) contain copies of all data collections forms maintained by the DCC, including the observer forms.

Regarding sampling protocols for the collection of data on the size composition and the species composition of the catch, the most widely-used protocols in the WCPO are those of the observer programmes for which technical support is provided by SPC and FFA (i.e., the national programmes of the Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Marshall Islands, New Caledonia, Palau, Papua New Guinea, Solomon Islands and Tonga, and the regional observer programme under the US Treaty). For offshore longliners, the sampling protocol is to record the species and length of all fish from all sets during a trip. For distant-water longliners, the sampling protocol is to record the species and length of all fish from two out of every three consecutive sets during a trip. For purse seiners, the sampling protocol is to measure the species and length of five fish that are randomly selected from each brail of each set during a trip.

Regarding target coverage rates, the SCTB Statistics Working Group considered this aspect of observer programmes at SCTB16 (see Appendix 5 in Anon. 2003c) and concluded that "*each of the studies showed that the establishment of coverage rates depends on the species for which estimates of catches were required and the level of the coefficient of variation of the estimates that is considered acceptable*". In particular, a study on observer coverage rates for offshore longline fleets targeting South Pacific albacore (Lawson 2003) concluded that "*the observer coverage rate that should be applied will depend on the species of interest and the coefficient of variation (i.e., the 'reliability' or the 'confidence') of the estimates that is required. If the objective is to monitor all species and if cost or the availability of observers are not limiting factors, then 100% coverage is appropriate. If 100% coverage is not possible, then coverage of 20% may be an appropriate compromise, given that further increases in coverage result in smaller incremental improvements in*

the reliability of the estimates." Similar conclusions were drawn from a study on offshore longliners targeting bigeye and yellowfin in tropical waters (Lawson 2004). Further analyses of coverage rates should be directed towards the purse-seine fleets, for which considerable observer data are available. Unfortunately, the observer data that are currently available for the distant-water longline fleets in the WCPO are insufficient for such analyses.

The following draft recommendation refers to scientific aspects of observer programmes, including objectives, coverage rates, sampling protocols and standards for data collection forms.

Statistics SWG Draft Recommendation #6:

Scientific Aspects of Observer Programmes

It is recommended that the Commission and its members consider the following in regard to the development of national and regional observer programmes:

Objectives

The primary scientific objectives of observer programmes are (a) the collection of data that can be used to estimate the catches of target and non-target species (including species of special interest, such as marine mammals, marine reptiles and sea birds) and (b) the collection of data that can be used to estimate the distribution of the catch by the size of individual animals (i.e., the size frequency of the catch).

Coverage rates

In order to accurately and reliably estimate the catches of all species, including species of special interest, 100% coverage by observers is appropriate. If 100% coverage is not possible, then 20% is an appropriate target coverage rate for scientific objectives, given that further increases in coverage result in smaller incremental improvements in the reliability of catch estimates based on observer data.

Sampling protocols

The observer sampling protocols that are currently used in most programmes in the Western and Central Pacific Ocean are as follows: For offshore longliners, the sampling protocol is to record the species and length of all fish from all sets during a trip. For distant-water longliners, the sampling protocol is to record the species and length of all fish from two out of every three consecutive sets during a trip. For purse seiners, the sampling protocol is to measure the species and length of five fish that are randomly selected from each brail of each set during a trip.

Standards for data collection forms

Until standards for observer data collection forms have been established by the Scientific Committee, the data items that are recorded on the observer data collection forms that have been developed by the SPC/FFA Tuna Fisheries Data Collection Committee, and which are currently used in several programmes in the Western and Central Pacific Ocean, should be considered.

EXCHANGE OF TUNA FISHERIES DATA BETWEEN THE INTER-AMERICAN TROPICAL TUNA COMMISSION AND THE WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION

In March 2003, an Agreement on the Exchange of Tuna Fisheries Data Between IATTC and SPC was reached. The IATTC–SPC Agreement concerns the exchange of operational catch and effort data, other types of operational data and aggregated catch and effort data for the Western and Central Pacific Ocean (WCPO) and the Eastern Pacific Ocean (EPO). The text of the agreement is presented in Appendix II.

At the time of writing (July 2005), the following sources of operational data for the EPO held by the OFP had authorised the release of their data to IATTC: Cook Islands, Federated States of Micronesia, French Polynesia, Kiribati, Marshall Islands, Papua New Guinea, Solomon Islands, Vanuatu and the Forum Fisheries Agency (in respect of data covering the United States purse-seine fleet). No responses to requests for authorisation to release operational data have been received from Fiji.

The following sources of aggregated catch and effort data for the WCPO held by the OFP have authorised the release of their data to IATTC: Japan, New Zealand, the Republic of Korea and the Forum Fisheries Agency (in respect of data covering the United States purse-seine fleet). Chinese Taipei responded negatively to the request for authorisation. The sources of all other aggregated catch and effort data for the WCPO have authorised the OFP to release their data at the discretion of the OFP. The first release of data by the OFP to IATTC took place on 12 July 2005. The first release of data by IATTC to the OFP is forthcoming.

The Scientific Committee may wish to recommend that the WCPFC, together with IATTC, adopt the IATTC–SPC Agreement, such that operational data are exchanged by IATTC and WCPFC. The SPC Oceanic Fisheries Programme, which is currently managing the Commission's data, will then exchange data with IATTC on the Commission's behalf.

Statistics SWG Draft Recommendation #7:

Exchange of tuna fisheries data between IATTC and WCPFC

It is recommended that the Western and Central Pacific Fisheries Commission, together with the Inter-American Tropical Tuna Commission, adopt the Agreement on the Exchange of Tuna Fisheries Data Between IATTC and SPC, such that operational data are exchanged by IATTC and WCPFC.

REFERENCES

Anonymous. 1982. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks: http://www.un.org/depts/los/convention_agreements/texts/fish_stocks_agreement/conf164_37.htm

Anonymous. 1998. Report of the Eleventh Meeting of the Standing Committee on Tuna and Billfish, 28 May – 6 June 1998, Honolulu, Hawaii, United States of America. Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.spc.int/oceanfish/html/sctb/sctb11/sctb11.pdf

Anonymous. 1999. Report of the Twelfth Meeting of the Standing Committee on Tuna and Billfish, 16–23 June 1999, Tahiti, French Polynesia. Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.spc.int/oceanfish/html/sctb/sctb12/sctb12.pdf

Anonymous. 2003a. Proposal for Monitoring the Catches of Highly Migratory Species in the Philippines and the Pacific Ocean Waters of Indonesia, Prepared for the Preparatory Conference for the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific. Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.spc.int/oceanfish/html/sctb/sctb17/inf-swg-3.pdf

Anonymous. 2003b. Report of the Fifth Meeting of the SPC/FFA Tuna Fisheries Data Collection Committee, 2–6 December 2002, Brisbane, Queensland, Australia. Oceanic Fisheries Programme, Noumea, New Caledonia and South Pacific Forum Fisheries Agency, Honiara, Solomon Islands. http://www.spc.int/oceanfish/docs/statistics/dcc5.pdf

Anonymous. 2003c. Report of the Sixteenth Meeting of the Standing Committee on Tuna and Billfish, 9–16 July 2003, Mooloolaba, Queensland, Australia. Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.spc.int/oceanfish/html/sctb/sctb16/sctb16_final.pdf

Anonymous. 2004a. Final report of Working Group II. WCPFC/PrepCon/45. Preparatory Conference for the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific. http://www.wcpfc.org/pdf/wcpfc_prepcon_45_Final_report_wgii_.pdf

Anonymous. 2004b. Report of the First Meeting of the Indonesia and Philippines Data Collection Steering Committee. Annex IV in WCPFC/PrepCon/38. Report of Working Group II. Sixth Session of the Preparatory Conference for the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific. http://www.wcpfc.org/pdf/wcpfc_prepcon_38(report_of_wgii).pdf

Anonymous. 2004c. Report of the Philippines Tuna Fishery Data Collection Workshop, 20–21 October 2004, Quezon City, Metro Manila, Philippines. Information Paper ST IP–4. First meeting of the WCPFC Scientific Committee, 8–19 August 2005, Noumea, New Caledonia. Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.wcpfc.org/pdf/sc1_st_ip_4.pdf

Anonymous. 2004d. First Session of the Commission, Summary Record. WCPFC/Comm.1/8. Western and Central Pacific Fisheries Commission, 10 December 2004. http://www.wcpfc.org/pdf/comm_8_summary_record.pdf

Lawson, T. 2003. Observer coverage rates and the accuracy and reliability of estimates of CPUE for offshore longline fleets targeting South Pacific albacore. Working Paper SWG–4. Sixteenth Meeting of the Standing Committee on Tuna and Billfish, 9–16 July 2003, Mooloolaba, Queensland, Australia. Oceanic Fisheries Programme, Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.spc.int/oceanfish/html/sctb/sctb16/swg-4.pdf

Lawson, T. 2004. Observer coverage rates and reliability of CPUE estimates for offshore longliners in tropical waters of the Western and Central Pacific Ocean. Working Paper SWG–4. Seventeenth Meeting of the Standing Committee on Tuna and Billfish, 9–18 August 2004, Majuro, Marshall Islands. Oceanic Fisheries Programme, Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.spc.int/oceanfish/html/sctb/sctb17/swg4.pdf

Lawson, T., P. Williams, C. Millar & E. Schneiter. 2002. Data requirements of the SPC Oceanic Fisheries Programme and status of data. Oceanic Fisheries Programme Internal Report No. 47. Secretariat of the Pacific Community, Noumea, New Caledonia. http://www.spc.int/oceanfish/docs/internal/index.asp - ir47

APPENDIX I

DATA SECURITY PROCEDURES FOLLOWED BY THE SPC OCEANIC FISHERIES PROGRAMME

Data security is defined as the protection of data from accidental or intentional unauthorized access, modification, destruction, or disclosure. The procedures that are followed or being implemented by the OFP with respect to both physical and electronic access to data are presented below.

Physical Data Security

Procedures in place to secure physical access to buildings:

- Install numeric key-pad locks on all doors with access to physical data or physical components accessing electronic data
- Maintain a list of authorized staff having access to each area

Procedures in place to secure physical access to hardcopy data:

- Ensure procedures are in place with respect to access to buildings housing hardcopy data (see above)
- Install locks on filing cabinets containing hardcopy data
- Maintain a list of authorized staff having access to the area where hardcopy data reside

Procedures in place to ensure physical data security with respect to visitors to the OFP:

- Ensure that the general attestation for data confidentiality (to be signed by the visitor) includes clauses covering all aspects of physical data security

Other procedures and resources to ensure physical data security:

- Install shredders on levels where confidential hard-copy output of data will be produced

Electronic Data Security

Procedures in place to secure electronic access to data:

- The SPC Information Technology (IT) Section have established security measures that cover all programmes within the SPC:

  All SPC computers must have secure login/passwords covering authorized staff only.

  Maintain a list of authorized staff having access to the SPC network servers, including the level of access relevant to their work and responsibilities. Use this list to establish access to the SPC network servers.

  All SPC users will be required to renew their passwords every 6 weeks.

  Procedures in place to protect from outside invasion:
  - Install and maintain suitable Virus Software
  - Restrict outside access to SPC servers through appropriate Internet protection software
  - Ensure there is constant review and installation of the best virus software available on the market

Maintain a comprehensive data backup system, including security measures for storing the physical media. For example, the magnetic tapes containing the backup data should be stored in a secure, lockable safe.

- OFP Data Security:

  Procedures in place to secure physical access into computers or electronic media (e.g., CDs and DVDs):
  - Establish an automatic log-off after three minutes of inactivity on all OFP computers
  - Encourage all OFP staff to lock their computer when they leave their desk
  - Encourage staff not to store confidential information on their local computer drives
  - Ensure electronic media (e.g., CDs, DVDs) with confidential information are stored in a secure place
  - Maintain a list of authorized staff having access to OFP computers

  Maintain a list of authorized staff having direct access to the OFP databases and other confidential electronic information. The list should include the level of access relevant to their work and responsibilities. Use this list to establish access to the OFP databases and other confidential electronic information.

  Maintain an off-site backup system for the OFP databases and other confidential information stored on the OFP network server. For example, off-site backups of the OFP network server should be sent via the diplomatic bag to Fiji (and stored in a safe at SPC-Suva), on a monthly basis.

  Ensure OFP staff are aware of the data security procedures through an induction process and ongoing training.

Data dissemination procedures:

- Ensure that all OFP staff are aware of, and adhere to, the data dissemination policies of the OFP

Procedures in place with respect to visitors to the OFP:

- Establish a system to provide a temporary login/password with restricted access to the OFP network server and databases depending on the level of work undertaken
- Ensure that the general attestation for data confidentiality (to be signed by the visitor) includes clauses covering all aspects of electronic data security

APPENDIX II

AGREEMENT ON THE EXCHANGE OF TUNA FISHERIES DATA BETWEEN IATTC AND SPC

The Inter-American Tropical Tuna Commission (IATTC) and the Oceanic Fisheries Programme of the Secretariat of the Pacific Community (SPC), subject to fulfilling their internal requirements regarding data confidentiality, agree to the following conditions for exchange and release of data from fisheries which capture tunas and tuna-like species.

1. Operational Data

1.1 IATTC and SPC will exchange operational-level tuna fisheries data (e.g. data covering sets by longline and purse seine gear and days fished by pole-and-line and troll gear) on at least an annual basis. These data shall include logsheet, logbook, observer, landings and port sampling data.

1.2 IATTC will provide to SPC data for trips with fishing effort west of 150°W (WCPO).

1.3 SPC will provide to IATTC data for trips with fishing effort east of 150°W (EPO).

2. Aggregated Data

2.1 IATTC and SPC will exchange data on catch and fishing effort for individual flag-States of fishing vessels by gear type aggregated by time and area on an annual basis.

2.2 Data for longline gear shall be aggregated by 5° latitude by 5° longitude by month. Data for surface gear shall be aggregated by 1° latitude by 1° longitude by month. Purse-seine data shall also be aggregated by set type within the time-area strata.

2.3 Data raised to represent total catch and effort are preferred. If the data are raised, then information concerning the method that was used to raise the data will also be exchanged.

2.4 IATTC will provide data covering the EPO.

2.5 SPC will provide data covering the WCPO.

3. Other Data

These data will be exchanged between IATTC and SPC on an ad hoc basis.

4. Release of Data Obtained by this Agreement

4.1 Operational Data

4.1.1 The IATTC and the SPC each agree to neither release these data to a third party nor publish these data, unless they have been aggregated by time-area strata together with other data held in their data files.

4.1.2 The time-area stratification for the inclusion of operational data in a data release to a third party, or for publication of the data, shall be at least 1° latitude by 1° longitude by month for data from surface gear types, and 5° latitude by 5° longitude by month for longline gear.

4.1.3 Data published or released for non-scientific purposes will be aggregated for all flag-States combined within time-area strata.

4.2 Aggregated Data

Neither the IATTC or the SPC will release these data to a third party without prior authorization of the data provider.

4.3 Other Data

Conditions for release or publication of these data are to be determined at the time of exchange.

Agreed on 26 March 2003.