Annex 16

REPORT OF THE STATISTICS WORKING GROUP WORKSHOP

International Scientific Committee for Tunas and Tuna-like Species in the North Pacific Ocean

> July 7, 2017 Vancouver, Canada

1.0 Welcome and Introduction

A one-day meeting of the Statistics Working Group (STATWG) was held on July 7 in Vancouver, Canada in conjunction with the 17th Meeting of the ISC Plenary.

Ren-Fen Wu, ISC STATWG Chairman, opened the meeting and welcomed 12 participants from Canada, Chinese Taipei, Japan, U.S.A., and WCPFC (Attachment 1). Gerard DiNardo, ISC Chairman, and Sarah Shoffler, Office of the ISC Chair, also participated in the meeting.

It was announced that Izumi Yamasaki has relinquished her role as the ISC Data Administrator (DA)after eight years of outstanding service to the ISC as the DA. Kirara Nishikawa will assume the role as the ISC DA, as well as retain her current role as the ISC Webmaster.

The STATWG welcomed new member Zane Zhang (Canada) who will replace John Holmes as the Data Correspondent for Canada.

2.0 Appointment of Rapporteurs

John Childers (U.S.A.) and Darryl Tagami (U.S.A.) were appointed as rapporteurs.

3.0 Adoption of Agenda and Tabling of Documents

The agenda for the STATWG workshop was considered and adopted for the meeting (Attachment 2).

Two Information Papers, one Working Paper and 6 other documents were distributed electronically, and presented at the meeting (Attachment 3). In

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addition, five presentations were made by the STATWG Chair, two by the ISC Data Administrator (DA), and two by the ISC Web master.

4.0 National Data Correspondents

National Data Correspondents were identified as follows:

Canada – Zane Zhang China – Xiaojie Dai (not present) Chinese Taipei – Wei-Jen Wang Japan – Koji Uosaki Korea –Youjung Kwon (not present) Mexico – Michel Dreyfus (not present) U.S.A. – John Childers IATTC – Nick Vogel (not present) WCPFC – Peter Williams (not present)

Data Managers for species Working Groups were identified as follows:

ALBWG – John Childers BILLWG – Darryl Tagami PBFWG – Osamu Sakai SHARKWG – Suzy Kohin

5.0 STATWG Inter-sessional Activities

Since the ISC16 Plenary, the STATWG Steering Group had one inter-sessional meeting on January 18-20, 2017, in La Jolla, California, U.S.A. The report of the STATWG was submitted by Chair Ren-Fen Wu to the ISC17 Plenary (ISC17/STATWG/INFO-1).

Several data issues discussed at this meeting required approval from the STATWG and were brought forward.

- 1. Members agreed that numbers of fish, and not percentages, will be used for Category III data submissions.
- 2. Members were not in consensus on expressing latitudes and longitudes with positive and negative values and discontinuing use of the Ocean and Quadrant codes.

 Members agreed that the sex code for Category III data will include Male, Female, and Unknown categories only; code for Immature will no longer be used.

6.0 Status of STATWG 2016 Work Plan

The STATWG chair reviewed the 2016 Work Plan proposed at ISC16 Plenary (Attachment 4). It was reported that four of six items of the work plan were completed successfully in the past year. The items regarding updating member metadata and reconciling discrepancies with data submissions were not completed.

Member metadata reports were distributed by the DA to the Data Correspondents in February, 2017. The Data Correspondents were responsible for reviewing and updating their metadata by July 2017. Japan and Taiwan replied to the DA, however Canada and U.S. may not have received the report that was sent by email. The group decided that the Data Correspondents will update their metadata and submit to the DA by July 13, 2017.

At the STATWG meeting for ISC14, the DA conducted a data comparison between the member's data re-submission in 2013-2014 and the historical data in the ISC database (ISC14/STATWG/WP-2). The Data Correspondents were responsible for reviewing and providing explanations for discrepancies in the data comparison in November, 2015 and then in November, 2016. However, the DA had not received any response by July 7, 2017. The group decided that the Data Correspondents will provide explanations to data discrepancies to the DA by July 13, 2017.

7.0 Performance of Member Countries

7.1 Submission of 2016 Data - Presentation by Kirara

The DA reviewed the submission of 2016 data by member countries by July 1, 2017 for Category Ic, Ie, II, and III.

Table 1. Submission of data (denoted by *) by Members for Categories Ic, Ie, II, and III by fishing gear.

| STATW | /G |
|-------|----|
|-------|----|

| Contra | Category | Gear | | | | | | | | | | | | | |
|---------|----------|------|----|---------|-----|----|---------|---------|---------|----|-----|---------|---------|---------|----|
| Country | | FPN | GN | GND | HAR | LH | LLD | LP | LTR | LX | MIS | NK | PS | RG | ТХ |
| CAN | 1c | | | | | | | | * | | | | | | |
| | 1e | | | | | | | | \star | | | | | | |
| | 2 | | | | | | | | \star | | | | | | |
| | 3 | | | | | | | | \star | | | | | | |
| CHN | 1c | | | | | | | | | | | | | | |
| | 1e | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | |
| JPN | 1c | ★ | | \star | | | * | * | \star | | * | \star | * | | |
| | 1e | | | | | | \star | \star | \star | | | | \star | | |
| | 2 | | | | | | * | \star | | | | | * | | |
| | 3 | | | \star | | | \star | \star | | | | | | | |
| KOR | 1c | | | | | | \star | | | | | | * | | |
| | 1e | | | | | | \star | | | | | | * | | |
| | 2 | | | | | | \star | | | | | | \star | | |
| | 3 | | | | | | \star | | | | | | \star | | |
| MEX | 1c | | | | | | | | | | | | \star | \star | |
| | 1e | | | | | | | * | | | | | * | * | |
| | 2 | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | \star | | |
| TWN | 1c | * | * | | * | | * | | | | * | | * | | |
| | 1e | | | | | | * | | | | | | * | | |
| | 2 | | | | | | \star | | | | | | * | | |
| | 3 | | | | | | * | | | | | | * | | |
| USA | 1c | | | * | * | * | \star | | * | * | * | | * | * | |
| | 1e | | | * | * | * | * | | \star | * | | | * | | |
| | 2 | | | * | * | | * | | * | | | | | * | |
| | 3 | | | | | | * | | * | | | | * | * | |

ISC Gear Codes*

| Code | Gear | Name |
|------|---------------|--|
| FPN | Set-net | Stationary uncovered pound nets |
| GND | Gill-net | Driftnets |
| GN | Gill-net | Unspecified Gill-net |
| HAR | Harpoon | Harpoons |
| LH** | Handline | Handline gear |
| LLD | Longline | Drifting longlines |
| LP** | Pole-and-line | Pole-and-line |
| LTR | Troll | Trolling lines |
| LX | Hook-and-line | Hooks and lines (not specified) |
| MIS | Other gears | Miscellaneous gear |
| NK | Not specified | Gear not known or not specified |
| PS | Purse-seine | Supporting nets with purse lines (purse-seine) |
| RG | Sport | Recreational fishing gears |
| TX | Trawl | Trawl (not specified) |

* FAO 1999. Definition and classification of fishing gear categories. FAO Fish. Tec. Pap. 222 Rev.1. ** IATTC code.

It was noted that data were not available for Category Ie for Japan's set pound net and drift gill net fisheries, although Category Ic data were available. The same was true for Taiwan's set pound net, gill net, and harpoon fisheries. Category Ie data were also not available for the U.S. sport fishery.

The DA also presented a summary of the submission of stock assessment files by the species Working Groups. To date, the swordfish stock assessment files from 2014 are still outstanding for the BILLWG. In 2017 the albacore and blue shark stock assessments were completed, and the stock assessment files need to be submitted for archiving by the respective Working Groups by November, 2017.

| | ALB | | BILL | | PBF | SHA | ARK |
|------|-----|-----|------|-----|-----|-----|-----|
| | ALB | BUM | STM | SWO | PBF | BSH | SMA |
| 2014 | | | | | | | |
| 2015 | | | | | | | |
| 2016 | | | | | | | |
| 2017 | | | | | | | |

7.2 Member Report Card - Presentation by Kirara Nishikawa

The DA presented the 2017 report card for Members (see Attachment 5) based on submission of 2016 data by the July 1, 2017 deadline. Timeliness grades were assigned for Category Ic, Ie, II, and III; and completeness grades were assigned for all required fisheries.

- Canada, Chinese Taipei, Japan, Korea, and United States submitted all 2016 data on time and were complete for all fisheries
- Mexico did not submit any data for 2015 in 2016, but data for 2015 and 2016 were submitted by July, 2017, particularly for purse seine and sport fisheries

• China has not provided any data to the ISC since 2010

It was noted that Data Correspondents from Mexico and Korea were still not using the online data submission system; training can be provided as necessary.

8.0 Review of ISC Policy on Public Domain Data

Since other tuna Regional Fishery Management Organizations (RFMO) have already published Category II and Category III data online, the Steering Group decided to recommend that the ISC consider publishing aggregated Category II and Category III data to improve the transparency of the ISC's data sharing policy. This issue was discussed in the STATWG meeting, and the group decided to recommend the publishing of only Category II data to the Plenary for approval at ISC17. The group intends to recommend to the Plenary the publishing of Category III data at a later date as there remain some issues to be resolved with the Category III data.

The group decided on the following conditions for publishing Category II data only:

- temporal resolution of month
- spatial resolution of one-degree square for surface fisheries and five-degree square for longline
- aggregated by fishing gear and by member country
- data from only high-seas fisheries: longline, purse seine, pole-and-line, and troll fisheries
- enforcement of the 3-vessel rule for data confidentiality, i.e., any spatialtemporal stratum in which fewer than three vessels are reporting will not be published.

It was noted that while the STATWG supported publishing Category II online as public domain data to have consistency with the tuna RFMOs, the ISC Operations Manual contained conflicting language in the Data Access and Availability section. It was recommended that the Plenary review and amend the Operations Manual as necessary.

The Chair reported that with the current July 1 deadline for member data submission, the DA will not have sufficient time to validate the Category II data prior to publishing it online as public domain data. For that reason, the Chair proposed that the data submission deadline be moved from July 1 to June 1, annually. The members did not foresee any major issues with this proposal,

noting that the WCPFC data submission deadline is April 30.

9.0 Review of Catch Tables - presentation by Kirara Nishikawa

The DA presented catch tables by year, country, and gear for the following ISC species: swordfish, striped marlin, Pacific bluefin tuna, north Pacific albacore, black marlin, blue sharks, and mako sharks. The DA also presented a comparison report for the catch tables based on the data submitted to the ISC database by July 1, 2017 against the data presented in the national reports of members. This report identified discrepancies by fisheries and species from 2012 to 2016.

The catch tables were reviewed in the STATWG meeting, and the Member Data Correspondents were asked to explain the discrepancies and to select the correct values to be used in the catch tables of the ISC17 Plenary Report and to serve as the official ISC catch tables. Canada, Taiwan and U.S.A. responded to the DA during the meeting regarding their discrepancies.

The DA also presented plots of ISC Category II data and noted that there were cases of geographical positions located on land masses such as Australia and Papua New Guinea. It was noted that the member Data Correspondents will need to work with the DA to improve the data quality in the ISC database before the Category II data can be published online as public domain data.

10.0 Member Data Collection Systems

10.1 Data Revision Reports from Members

If Data Correspondents wish to revise submission data for more than the previous five years, then Data Correspondents are required to submit a Data Revision Report to the STATWG that provides the reasons for the data revision, detailed documentation of the data revision, and comparisons of the original and revised values, in accordance with Working Paper (ISC14/STATWG/WP-1).

The Data Correspondent of the U.S.A. presented a Data Revision Report for catch and effort estimates in the U.S.A. North Pacific albacore troll and pole-and-line fisheries (ISC17/STATWG/WP-1). The U.S. Data Correspondent reported that a new method of estimating annual effort corrects the over-estimation of effort for 2000-2016. Accordingly, revised Category II data for the same time period will

need to be re-submitted to the ISC database.

10.2 Shark Data Collection by Members

The Chair of the Shark Working Group reported that there was very little data on shark catches in the ISC database, and elsewhere. This prompted an inquiry of member countries' data collection systems from their respective fisheries for shark information. Several members have made changes to their logbook collections to meet WCPFC requirements for shark reporting that were established in 2009. The SHARKWG Chair reported that it would be useful to compile a list of time series by species for available shark catch data from each member country. STATWG members each provided information on their respective shark data collections.

Japan collects shark data in their longline logbooks for 13 shark species and 4 species groups. The shark species were added for the first time in 1994, and more species were added in 1997 and 2013. Japan does not collect shark data in their purse seine and pole-and-line logbooks (Attachment 6).

Taiwan collects shark data for 18 species in their logbooks. The shark species were added for the first time in 2003, and more species were added in 2009. (Attachment 6).

Canada began recording shark bycatch in 1996 but amounts are may be underestimated. The Canadian Department of Fisheries and Oceans provided a pictorial guide in their logbooks in 2011 for identifying shark species. The most commonly recorded species are blue shark and short-fin mako shark.

In U.S.A. fisheries, shark species are specifically listed in the logbooks for longline and drift gill net fisheries. Since the start of the U.S. longline logbook program in the Pacific Ocean in 1990, the following shark categories have been listed in the logbooks: blue shark, mako sharks, thresher sharks, and other sharks. Currently all sharks can be recorded to the species level.

11.0 Review of the duties and deliverables for the Data Administrator

A draft of the responsibilities, duties and deliverables for the ISC Data Administrator was presented; the group reviewed and revised the document (Attachment 7). The purpose of this document is to ensure continuity of operations with the transition from the former DA to the current DA. It was noted that member Data Correspondents have the primary responsibility for data quality of the ISC database.

12.0 Update of the Organizational Chart of the STATWG

The organization chart of the STATWG was reviewed and updated by the group (Attachment 8).

Luis Fleischer was removed from the STATWG, Zane Zhang replaces John Holmes as the Data Correspondent for Canada, and Kirara Nishikawa was added as the new Database Administrator. The ISC organization chart on the ISC website also needs to be updated to reflect these recent changes.

13.0 Report of the ISC Webmaster by Kirara Nishikawa

13.1 Improvements of ISC Website

The ISC Webmaster delivered a presentation on improvements and updates to the ISC website, and reported that she is assisted by Kana Chiba (Japan). Improvements were made in appearance/layouts, navigation, and viewing/downloading files. Other new features are a history table to log changes to the website, and a hierarchy chart for the website. It was suggested to replace the label "Continue" with "Preview" in document menus. It was also noted that the catch table for north Pacific albacore that is provided under "fisheries statistics" is incorrect.

13.2 Suggestions for ISC Website

The ISC Webmaster also gave a presentation on proposed improvements to the ISC website. These were related to the web pages for stock status, stock assessment reports, top bar menus, side bar menus, Working Groups working papers, and 404 error page. It was suggested that recent stock assessments reports should be highlighted or easier to locate on the website.

14.0 Update of the STATWG web page

A new web page for the STATWG that included a brief history and terms of reference was reviewed and revised by the group (Attachment 9). The ISC Webmaster will publish the new web page after the ISC17 Plenary.

15.0 Other Matters

No other matters were presented.

16.0 Conclusions, Future Work Plan, and Recommendations to Plenary

16.1 Future Work Plan

1. The DA will distribute the ISC data inventory for Category I, II, and III to ISC Data Correspondents for review by September 30, 2017. The DA will then distribute the ISC data inventory to Chairs of the species Working Groups by October 15, and publish on the ISC website by October 31, 2017.

2. The DA will continue to archive stock assessment files from 2016-2017 ISC assessments which are submitted by Chairs of species Working Groups by November 1, 2017. The DA will archive the stock assessment files according to the procedures documented in ISC13-STATWGWP1.

3. The DA will generate and distribute Member's metadata by March 30, 2018. The Data Correspondents will review and update their metadata by July 1, 2018 prior to the ISC18 Plenary, and the metadata will be published on the ISC website by August 31, 2018.

4. The DA will request any necessary ISC database modifications recommended by the STATWG to the database contractor by November 1, 2017. The DA will revise and update the User's Guide for Online Data Submission accordingly, and distribute to the Data Correspondents by December 31, 2017. The DA will conduct training for Data Correspondents as required.

5. The Chair of STATWG and the DA will jointly draft a new User's Manual for the ISC researcher's website by December 31, 2017, and this manual will be reviewed in the Steering Group meeting. This manual will be distributed to the Chairs and Data Managers of the species working groups by March, 2018. There will be a demonstration at the STATWG meeting in 2018 on downloading fishery data from the ISC researcher's website.

6. The Chair of STATWG, Data Correspondents and the DA will jointly draft and review data checking protocols for data submitted by members by December 31, 2017. This protocol will be reviewed in the Steering Group meeting in January, 2018,

and discussed in the STATWG meeting in 2018 prior to publishing Category II data after the ISC 18 Plenary.

7. The DA and the Chair of STATWG will jointly review and maintain the responsibilities, duties and deliverables of the DA to ensure that they are accurate and practical, and revise items as necessary.

8. The STATWG Steering Group will meet in January, 2018 (in Shimizu, Japan) to conduct work on items 4 to 7 of this work plan.

16.2 Recommendations to the Plenary

- 1. The STATWG recommends that the Plenary approve the publishing of ISC Category II data online as public domain data, consistent with the practices of other RFMOs.
- 2. The STATWG recommends that the Plenary consider revising the current data submission deadline from July 1 to June 1, in order to provide sufficient time for the DA to validate Category II data prior to publishing online on the ISC website.
- 3. The STATWG recommends that the Plenary formally review the ISC Operations Manual to correct inconsistent and inaccurate information.
- 4. The STATWG requests the scheduling of a two-day meeting prior to the ISC18 Plenary in July, 2018.

17.0 Election of Chair

Ren-Fen Wu has completed his second term as Chair of the STATWG; he has actually completed his seventh year as Chair. He is eligible to serve for a maximum of two more one-year terms if elected. The U.S.A. nominated Wu as Chair for a oneyear term, and Canada seconded the nomination; Wu was elected unanimously as Chair. Tagami was also unanimously elected to serve as Vice-Chair.

18.0 Adjournment

The next STATWG meeting is planned to be held prior to ISC18 for 2 days in July, 2018, at a time and place to be determined.

The Chairman expressed his appreciation to all participants for their contributions and cooperation in completing a successful meeting. The STATWG recognized the efforts and contributions of the former ISC Database Administrator, Izumi Yamasaki, after eight years of service. The STATWG collectively thanked the hosts (Canada) for their hospitality and overall support for the meeting.

The meeting of the ISC STATWG was adjourned at 17:20 pm on July 7, 2017.

Attachment 1

LIST OF PARTICIPANTS

Canada

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7/10/17

STATWG

Attachment 2

AGENDA

International Scientific Committee for Tunas and Tuna-like Species in the North Pacific Ocean

Statistics Working Group 7 July 2017 Vancouver, Canada

- 1. Welcome and Introduction
- 2. Appointment of Rapporteurs
- 3. Adoption of Agenda and Tabling of Documents
- 4. Inter-sessional Activities
- 5. Status of the 2016 STATWG Work Plan
- 6. Performance of Member Countries
 - i. Data submission for 2016
 - ii. Member Report Card
- 7. Reviewing ISC Policy on Public Domain Data
- 8. Review of the Member Catch Tables
- 9. Data Collection Systems
 i. Member Data Revision Report: U.S.A.
 ii. Shark Data Collection Systems of Members
- 10. Review of the Duties and Deliverables of the Data Administrator
- 11. Update of the Organization Chart of STATWG
- 12. Report of the Webmaster
- 13. Update of the Webpage of STATWG
- 14. Other Matters
- 15. Conclusions, Future Work Plan, and Recommendations to Plenary
- 16. Election of Chair
- 17. Adjournment

Attachment 3

List of Papers and Presentations

INFORMATION PAPERS

- 1. ISC17/STATWG/INFO-1: Report on STATWG Intercessional Meeting by Ren-Fen Wu
- 2. ISC17/STATWG/INFO-2: Suggestions for ISC Website Kirara Nishikawa

WORKING PAPERS

1. ISC17/STATWG/WP-1: Revision of Catch and Effort Estimates in the U.S.A. North Pacific Albacore Troll and Pole-and-Line Fishery - by Arjun Joshi, Yuhong Gu, John Childers, and Steven L. H. Teo

PRESENTATIONS

- 1. Presentation 1 STATWG Inter-sessional Activities presented by Ren-Fen Wu
- 2. Presentation 2 Status of STATWG 2016 Work Plan presented by Ren-Fen Wu
- 3. Presentation 3 Member Submission of 2016 Data and Member Report Card presented by Kirara Nishikawa
- 4. Presentation 4 Review of the ISC Catch Tables presentation by Kirara Nishikawa
- 5. Presentation 5 Reviewing of the Duties and Deliverables for the Data Administrator presentation by Ren-Fen Wu
- 6. Presentation 6 Report of ISC Webmaster: Improvements presentation by Kirara Nishikawa
- 7. Presentation 7 Report of ISC Webmaster: Suggestions presentation by Kirara Nishikawa
- 8. Presentation 8 Updating the STATWG Web Pages presentation by Ren-Fen Wu
- 9. Presentation 9 Future Work Plan, and Recommendations to Plenary presentation by Ren-Fen Wu

Attachment 4

2016 Work Plan

- DA will distribute the ISC data inventory for Category I, II, and III to ISC Data Correspondents for review by August 1, 2016. DA will then distribute the ISC data inventory to Chairs of the species Working Groups by September 30, and publish on the ISC website by October 15, 2016.
 COMPLETED
- Data Correspondents will provide by November 1, 2016 appropriate explanations for any discrepancy identified in the DA's comparison report which was distributed in September, 2015. The comparison report compared the re-submission of the Member time series data in 2013-2014 and the historical data in the ISC database. NOT COMPLETED
- 3. DA will continue to archive stock assessment files from 2013-2015 ISC assessments which have not yet been submitted by Chairs of species Working Groups by November 1, 2016. DA will archive the stock assessment files according to the procedures documented in ISC13-STATWG-WP1. COMPLETED
- DA will generate and distribute a Member's metadata report by May 30, 2017. The Data Correspondents will review and update their metadata report by July, 2017 prior to the ISC17 Plenary.
 NOT COMPLETED
- 5. STATWG will develop a work plan with prioritized recommendations and revisions for the ISC online data submission system and User's Manual by September 30, 2016. DA will distribute a proposal of revisions to Data Correspondents for review by October 31, 2016. DA will request any necessary ISC database modifications to the database contractor by November, 2016. DA will revise and update the User's Manual, including the data codes, and distribute to the Data Correspondents by May 1, 2017.

COMPLETED

6. STATWG Steering Group will meet in January, 2017 in San Diego, U.S.A. COMPLETED

Attachment 5

| Member | CAT Ic | CAT Ie | CAT II | CAT III |
|--------|--------|--------|--------|---------|
| CAN | | | | |
| CHN | | | | |
| JPN | | | | |
| KOR | | | | |
| MEX | | | | |
| TWN | | | | |
| USA | | | | |

2017 Data Submission Report Card for ISC Members

| On Time and Complete |
|--|
| On Time but Incomplete and/or not in ISC format |
| Submitted Late but Complete |
| Submitted Late and Incomplete and/or not in ISC format |
| Not Provided |

Attachment 6

Shark Data Collection Systems of Members

Japan

In Japan, there are duty logbook systems for longline, pole-and-line and purse seine. There are no fields for retained catch of shark species in the logbooks of pole-and-line and the purse seine fisheries.

There are several fields for the shark species for the longline, depending on the kind of license. The logbook for offshore licenses, including small offshore license, has fields for blue shark, salmon shark, shortfin mako, and oceanic whitetip shark as single species, and thresher sharks NEI as group of species. The logbook for distant water licenses has the same fields as the offshore license and the fields for species code of silky shark, pelagic thresher, bigeye thresher, common thresher, winghead shark, great hammerhead, and smooth hammerhead as single species, and Carcharhinus NEI, hammerhead sharks NEI, Lamna NEI as group of species.

Originally there had been the field of just "sharks" in the longline logbooks. Fields of blue shark, salmon shark, and shortfin mako were added in 1994 for the first time. Then, fields of oceanic whitetip shark and thresher sharks NEI were added in 1997. In 2013, fields for codes of silky shark, pelagic thresher, bigeye thresher, common thresher, winghead shark, great hammerhead, smooth hammerhead, Carcharhinus NEI, hammerhead sharks NEI, Lamna NEI were added only for distant water license.

Chinese Taipei

In Chinese Taipei, there are three sources for the data collection of shark species: logbook system, landing records and observer data. In the logbook system, shark catches were not recorded prior to 1980, and then shark catches were recorded as "sharks" until 2003. The category of sharks on the logbooks has been further separated into four sub-categories, including blue sharks, mako sharks, silky sharks, and other sharks since 2003. Shark conservation and management has been a concern for Regional Fisheries Management Organizations (RFMOs) in recent years. Accordingly, Chinese Taipei has continued to revise their logbook format so as to conform to the requirements of RFMOs for shark species since 2009. Currently, there are 18 species of sharks added to the logbooks.

For landing records, the staff can record the catch by species at domestic fishing ports. And the dominant shark species include blue shark, mako sharks and silky shark.

For observer data, the observers were required to collect fisheries data on target species and to record detailed bycatch species, such as sharks. They record shark species for 37 different shark codes.

Attachment 7

Responsibilities, Duties and Deliverables for the ISC Database Administrator

Responsibilities:

- 1. Duties related to data submission by members:
 - designing, developing. and amending online data submission system;
 - tabling and updating the user's manual for online data submission;
 - reviewing and summarizing submitted data by species and fishery;
 - updating metadata;
 - producing data report card.

Deliverables:

- Data report card (to be reported and presented in STATWG and Plenary July annually)
- Metadata (to be reported and presented in STATWG July annually)
- Revisions and updates to the data submission user's manual (May annually, as needed)
- 2. Duties related to database and archiving:
 - archiving and maintaining stock assessment files;
 - maintaining past fishery data submissions;
 - conducting data quality checks;
 - maintaining data in fishery database;
 - producing data inventory;
 - maintaining, developing, and documenting the ISC researcher's website.

Deliverables:

- Data inventory (to be distributed to species WG's chairs/data managers August annually)
- Data comparison reports (to be presented at STATWG July annually, as needed)
- 3. Duties related to data distribution
 - producing data inventory for publishing on ISC website;
 - producing fishery statistics on the ISC website;
 - producing public domain data on ISC website(Category I now; Category II & Category III after Plenary's approval).

Deliverables:

- Catch tables (to be reported at Plenary and to be published on ISC website and in the ISC Plenary Report July annually)
- Data inventory (to be published on ISC website for RFMOs September annually)
- Graphs of annual catches for major ISC species by country and fishing gear (to be published as fishery statistics on the ISC website October annually)
- Category I data (to be published as public domain on the ISC website October annually)
- Category II data, and later Category III data (to be published as public domain on the

STATWG ISC website after receiving approval from Plenary – by July 2018) Attachment 8

New Organization Chart for STATWG (July 7, 2017)

| Web Master | Data Administrator | STATWG |
|-----------------|---------------------------|------------------|
| 5. K. Nishikawa | 5. K. Nishikawa | 3. RF. Wu(Chair) |
| | | 7. D. Tagami(VC) |
| | | 1. Z. Zhang |
| | | 2. X. Dai |
| | | 3. WJ. Wang |
| | | 4. Y. Kwon |
| | | 5. O. Sakai |
| | | 5. K. Uosaki |
| | | 6. M. Dreyfus |
| | | 7. J. Childers |
| | | 9. P. Williams |
| | | 10. N. Vogel |
| | | 11. A. Beeching |

Attachment 9

New STATWG Web Pages

History of ISC STATWG

In 1996, ISC1 recognized the importance of collecting and archiving data for stock assessment purposes, and established a working group to address fisheries data collection, data processing and data distribution matters. Japan assumed the leadership of the Statistical Working Group (STATWG) and guidelines for addressing fisheries statistics were developed. The guidelines were approved at the ISC2 Plenary in 1999.

The first STATWG meeting was held on January 18-19 1999, chaired by Dr. Gary Sakagawa, with participants from Japan, Mexico, United States, Chinese Taipei, IATTC and SPC. The group reached agreement on the provision of historical Category I, II, and III data on an annual basis.

Terms of Reference of STATWG

The Statistics Working Group is currently responsible for overseeing the collection, compilation, archiving, and dissemination of fishery, biological and other data needed for stock assessments and for monitoring fishery development, statistics and bycatch. The STATWG is also responsible for the development and maintenance of the ISC database and the ISC website.

Membership

Membership of STATWG meetings include Data Correspondents of members, Chair and Data Manager of species Working Groups, Chair and Vice Chair of STATWG, ISC Data Administrator and ISC Webmaster.

Organizational structure of STATWG

The STATWG Chair is responsible for conducting meetings of the STATWG, facilitating the development of annual and multi-year work plans, coordinating and implementing work plan assignments, scheduling meetings, and ensuring that Committee assignments are completed as required. The Chair is also responsible for meeting logistics including preparation of agendas, scheduling of presenters, appointing rapporteurs, and providing assignments for members. The Vice Chair of the STATWG assists the Chair with processing the aforementioned matters, and in the absence of the Chair, the Vice Chair assumes all duties and responsibilities of the Chair.

ISC Database Administrator

The ISC Database Administrator (DA) is responsible for managing a centralized database for storing data and files used or produced by ISC.

Duties include:

- developing and maintaining the ISC database, including contracting development work to modify/improve the database;
- supporting a working group portal system for members to submit their fishery statistics annually;
- maintaining selective fishery statistics for monitoring the fisheries and for use in ISC

general reports and on the ISC website;

- sharing ISC fishery statistics with other fishery and scientific organizations;
- producing the ISC catch tables annually for the ISC Plenary Report; and
- archiving ISC stock assessment files for the species Working Groups.

ISC Webmaster

The ISC Webmaster (WM) is responsible for coordinating all aspects of the ISC website including:

- maintaining the site and all data portals so that content is easily created, posted, and maintained by content contributors,
- ensuring that the website is updated with current information on meetings, schedules, reports, fisheries statistics, and stock status,
- ensuring that information can be quickly searched and retrieved, and
- ensuring that all web pages are easily navigated and have a graphically pleasing and coordinated design.

Data Correspondent of ISC Members

Each member of the ISC is required to provide a Data Correspondent to participate in the ISC STATWG. The Data Correspondent is responsible for providing fisheries data and the data collection system information to the ISC STATWG annually, and serves as the member's representative at STATWG meetings.

Meetings

The STATWG will convene one meeting per year in the week prior to the ISC Plenary. The meeting will be typically 1-2 days, as needed. The STATWG Steering Group can also conduct intercessional meetings, web meetings, or conference calls, as needed.