



ANNEX 17

*18th Meeting of the
International Scientific Committee for Tuna
and Tuna-Like Species in the North Pacific Ocean
Yeosu, Republic of Korea
July 11-16, 2018*

REPORT OF THE STATISTICS WORKING GROUP

July 2018

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*Annex 17***REPORT OF THE STATISTICS WORKING GROUP***International Scientific Committee for Tunas and Tuna-like
Species in the North Pacific Ocean*

July 6-7, 2018
Yeosu, Republic of Korea

1.0 Welcome and Introduction

A two-day meeting of the Statistics Working Group (STATWG) was held on July 6-7 in Yeosu, Korea in conjunction with the 18th Meeting of the ISC Plenary.

Ren-Fen Wu, ISC STATWG Chairman, opened the meeting and welcomed 15 participants from Canada, Chinese Taipei, Japan, Korea, U.S.A., and WCPFC (Attachment 1). John Holmes, ISC Chairman, Doonam Kim (Korea), and Hiroaki Okamoto (Japan) also participated in the meeting.

It was noted that Kirara Nishikawa continues to fulfill the roles of both the ISC Data Administrator (DA) and ISC Webmaster.

The STATWG welcomed new members Mi Kyung Lee who replaces Youjung Kwon as the Data Correspondent for Korea, Sung Il Lee for Korea, Hiromu Fukuda who replaces Osamu Sakai for Japan, and Russell Ito who will replace Darryl Tagami for the United States.

National Data Correspondents were identified as follows:

Canada – Zane Zhang
China – Xiaojie Dai (not present)
Chinese Taipei – Wei-Jen Wang (not present)
Japan – Koji Uosaki
Korea – Mi Kyung Lee (new)
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 – tbd
PBFWG – Hiromu Fukuda
SHARKWG – tbd

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

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

4.0 Tabling of Documents

Seven Information Papers, one Working Paper and five other documents were distributed electronically, and presented at the meeting (Attachment 3). In addition, 11 presentations were made: five by the STATWG Chair, five by the ISC Data Administrator (DA) / Web master, and one by Russell Ito.

5.1 STATWG Inter-sessional Activities - Presentation by Ren-Fen Wu

Since the ISC17 Plenary, the STATWG held a technical meeting on Dec 17-18, 2017 in Taipei, and a Steering Group meeting on March 14-15, 2018 in Shimizu, Japan. The report of the STATWG Steering Group meeting was submitted by Chair Ren-Fen Wu to the ISC18 Plenary (ISC18/STATWG/INFO-1).

The technical meeting in Taipei focused on the processing of ISC Category II data for public domain and the ISC database.

At the Steering Group meeting in Shimizu, new data procedures were discussed and that would require approval from the STATWG in the July 6-7 meeting, including:

1. Data checking protocols for Category I, II, and III data in the ISC database prior to publishing of public domain data; and
2. Data processing procedures to generate and submit modified Category II data to the ISC database by member countries.

Other items that were completed at the Steering Group meeting include:

- Review of the 2017 Work Plan
- Review of the improvements to the ISC database and online data submission system
- Review of the User's Manual for the ISC researcher's website
- Review of the responsibilities, duties and deliverables of the DA
- Draft the agenda for STATWG meeting in July 6-7 in Yeosu, Korea

5.2 Status of STATWG 2017 Work Plan - Presentation by Ren-Fen Wu

The STATWG chair reviewed the 2017 Work Plan that was proposed at ISC17 Plenary (Attachment 4). It was reported that seven of the eight items of the work plan were completed successfully in the past year. Updating of member metadata was not completed prior to the STATWG meeting on July 6, 2018 as instructed.

Member metadata reports were distributed by the DA to the Data Correspondents in June, 2018. The Data Correspondents were responsible for reviewing and updating their metadata before July 6, 2018. The DA received no responses by the start of the STATWG meeting in July 6. The group decided that the Data Correspondents will update their metadata and submit to the DA by July 8, 2018.

Updated metadata were provided by Canada, Chinese Taipei, Japan, Korea and the United States by July 7. Only Mexico (not present) and China (not present) have not provided updated metadata.

6.0 Performance of Member Countries

6.1 Submission of 2017 Data - Presentation by Kirara Nishikawa

The DA reviewed the submission of 2017 data by member countries by July 1, 2018 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.

Country	Category	Gear													
		FPN	GN	GND	HAR	LH	LLD	LP	LTR	LX	MIS	NK	PS	RG	TX
CAN	1c								★						
	1e								★						
	2								★						
	3								★						
CHN	1c														
	1e														
	2														
	3														
JPN	1c	★		★			★	★	★		★	★	★		
	1e						★	★	★				★		
	2						★	★					★		
	3			★			★	★							
KOR	1c	★					★						★	★	
	1e						★						★		
	2						★						★		
	3						★						★		
MEX	1c												★		
	1e												★		
	2												★		
	3												★		
TWN	1c	★	★		★		★				★		★		
	1e						★						★		
	2						★						★		
	3						★						★		
USA	1c			★	★	★	★		★	★	★		★	★	
	1e			★	★	★	★		★	★			★		
	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 Category 1e data were not available for some countries and fisheries, although Category 1c data were available. This was confirmed.

6.2 Member Report Card - Presentation by Kirara Nishikawa

The DA presented the 2018 report card for Members (see Attachment 5) based on submission of 2017 data by the July 1, 2018 deadline. Timeliness grades were assigned for Category 1c, 1e, II, and III; and completeness grades were assigned for all required fisheries.

- Canada, Chinese Taipei, Japan, Korea, and United States submitted all 2017 data on time and were complete for all fisheries
- Mexico submitted 2017 purse seine data for Category 1c, 1e and III on time but emailed their data to the DA. Their 2017 purse seine data for Category II was submitted late via email to the DA.
- China has not provided any data to the ISC since 2010

It was noted that the Data Correspondent of Korea successfully used the ISC online data submission system in 2018; only Mexico has not used the online data submission system. The DA can provide training as necessary.

7.0 Review of Metadata - Presentation by Kirara Nishikawa

The DA presented tables of ISC metadata for Category I and II for the following member countries: Canada, Chinese Taipei, Japan, Korea, Mexico and United States.

Member metadata reports were also distributed by the DA to the Data Correspondents in March, 2018. The Data Correspondents were responsible for reviewing and updating their metadata by July, 2018. The DA received no responses by the start of the STATWG meeting in July. The group decided that the Data Correspondents will update their metadata and submit to the DA by July 8, 2018.

By July 7, updated metadata were provided by Canada, Chinese Taipei, Japan, Korea and United States. Only Mexico (not present) has not provided updated metadata.

This chart shows the submission status of metadata by the Data Correspondents in 2018.

Member	CAT Ic	CAT II
CAN		
CHN		
JPN		
KOR		
MEX		
TWN		
USA		

	Complete
	Not Provided
	Available but not submitted yet

8.0 Review of process on CAT II data publication - Presentation by Ren-Fen Wu

The STATWG and the ISC Plenary have agreed to publish the ISC Category II data online as public domain data, and were planning to do so by ISC18.

At ISC17, the Plenary agreed on the following conditions for publishing its Category II data:

- temporal resolution of month

- spatial resolution of one-degree square for surface fisheries and five-degree square for longline
- 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 spatial-temporal stratum in which fewer than three vessels are reporting will not be published.
- aggregated by all member countries combined

The above recommendations from the ISC17 Plenary proved to be difficult for the STATWG to implement. In December, 2017 the Steering Group developed R-code with Japanese and Taiwanese scientists and statisticians to filter data inside and outside the EEZs and disputed waters. “Disputed waters” involve disputes over territory and sovereignty of waters between sovereign states in regions with conflicting maritime claims. The Chair of the STATWG provided tables (from Attachment 3 of ISC18/STATWG/INFO-1) that listed over 30 disputed waters for the ISC member countries that would be excluded from the Category II public domain data.

Korea requested that the disputed waters in the Yellow Sea between Korea and China be included in the list of excluded waters for public domain data. .

It was also noted that members would need more information on how the R program defines the EEZs and disputed areas. Japan noted that it would need to confirm the list of “Waters to be excluded from CAT II public domain data” and the definition of EEZ and disputed waters from its relevant authorities.

However, during the Steering Group meeting in March, 2018, it was discovered that using the current Category II data in the ISC database based on the central point for 5-degree and 1-degree squares would not be adequate to filter data inside and outside the EEZs and disputed waters. The filtering would need to be done at the operational level prior to data submission to the ISC database.

The STATWG reviewed four options that would allow filtering out the high seas data. The Data Correspondents indicated a preference on the option to continue submitting Category II data as in the past to ensure continuity of the data time series and not require any modifications to the database, but to also provide a separate Category II data to the DA that has already been filtered for inside and outside the EEZs and disputed waters. This approach would require additional work for the Data Correspondents and their respective member countries.

The U.S. indicated that they could not commit at this time to providing additional Category II data in a new format.

It was noted that if the public domain Category II data only included high seas data, a significant portion of Category II data from all countries would be excluded. It was suggested to compare the original Category II data and the high seas only Category II data to evaluate the data available for publishing in the public domain.

The group could not come to any agreement regarding publishing Category II data in the public domain. The group decided to make a recommendation to the Plenary to provide clear guidelines for the publishing of ISC Category II data in the public domain, including the definition for Category II public domain data.

It is possible that the Steering Group misunderstood the language in the ISC17 Plenary Report that states “only Category II data from high-seas fisheries will be published”. This was interpreted to be “only Category II data in the high-seas”.

The Group also 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.

9.0 Review of process on data checking- Presentation by Ren-Fen Wu

In order to ensure the quality and accuracy of the ISC data for publishing in the public domain and for their stock assessments, the Steering Group proposed implementing data checking protocols. Standard data checking protocols would be needed for Category I, II and III data.

The Chair noted that the Data Correspondents and their respective member countries have the responsibility to ensure the submission of high quality data. It was first suggested that the Data Correspondents be responsible for performing the data checking procedures.

Products of the data checking procedures include:

- CAT1c (by species) and CAT 1e : trend chart of historical data
- CAT2 effort : trend chart of historical data and effort distribution maps for the most recent five years
- CAT2 catch by species : trend chart of historical catch in mt, trend chart of mean weight by species, and catch distribution maps for the most recent five years

- CAT3 : trend chart of historical sampling size, and trend chart of mean size by species

It was further discussed that the species Working Groups may be more suited for this task; the Shark Working Group Chair agreed in principle. It was suggested that the Data Managers of the species Working Groups be responsible for performing these data checking procedures. No consensus was reached on this point. It should be noted that no other chairs of the species working groups were present except for the Shark Working Group Chair.

It was also suggested to prioritize data checking for only Category I and II data at this time since the projected work could be very time consuming. The group agreed to focus on data checking for only Category I and II.

The group could not decide on any course of action to take in regards to implementing the data checking protocols. The Steering Group agreed to draft a report documenting the proposed data checking protocols in detail and with examples by December 31, 2018. The report would also include an implementation plan for this data checking process. The STATWG would then review and revise the draft report; and the final report would be considered for approval in the 2019 STATWG meeting prior to the ISC19 Plenary.

10.0 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, blue marlin, blue sharks, and shortfin mako sharks. The DA also presented a comparison of the catch tables compiled from data submitted to the ISC database by July 1, 2018 against the catch tables presented in the national reports of member countries. This comparison identified discrepancies by fisheries and species within the past five years from 2013 to 2017.

The catch tables were reviewed in the STATWG meeting, and the Data Correspondents present were asked to review the discrepancies and to identify the correct values to be included in the ISC database and compiled into the catch tables for the ISC18 Plenary Report.

Discrepancies in annual catches were found for albacore (Canada, U.S.A.), Pacific bluefin tuna (Korea, U.S.A.), blue marlin (U.S.A.), blue shark (Japan), and shortfin mako shark (Japan, U.S.A.). The Data Correspondents responded to the DA and resolved their discrepancies by the end of the meeting.

11.0 Review of the archival of stock assessment files - presentation by Kirara Nishikawa

The DA also presented a summary of the submission of stock assessment files by the species Working Groups to the ISC researcher's website. In 2017 the albacore and blue shark stock assessments were completed, and the stock assessment files for albacore and blue shark were archived by November, 2017. The 2014 swordfish stock assessment files were submitted by the Billfish Working Group in July, 2018.

In 2018 the swordfish, Pacific bluefin tuna and shortfin mako shark stock assessments were completed, and the deadline for submitting these stock assessment files by the respective Working Groups for archiving is November, 2018.

This chart shows the submission status of stock assessment files by the species working groups from 2014 to 2018.

	ALB	BILL			PBF	SHARK	
	ALB	BUM	STM	SWO	PBF	BSH	SMA
2014							
2015							
2016							
2017							
2018							

	Stock assessment was done, and stock assessment files were submitted.
	Stock assessment was done, but stock assessment files were not submitted.
	Stock assessment was done, and stock assessment files are due by Nov, 2018.
	No stock assessment

12.0 Member Data Collection Systems

12.1 Data Revision Reports from Members

Data revision reports from Mexico and Japan were submitted and presented, in accordance with established STATWG protocols (ISC14/STATWG/WP-1).

Ren-Fen Wu presented the data revision report for Mexico for longline landings of blue sharks (1976-2014) and shortfin mako sharks (1976-2016). See ISC18/STATWG/INFO-2, ISC18/STATWG/INFO-3, and ISC18/STATWG/INFO-4.

Koji Uosaki presented the data revision report (ISC18/STATWG/WP-1) for Japan for:

- Category 1c (1994-2016) for blue shark and shortfin mako shark
- Category 1e (2011-2016) for longline
- Category 2 (2010-2016) for longline

The group accepted the data revision reports from Mexico and Japan.

12.2 E-Reporting Systems of Member Countries

The STATWG focused on the topic of electronic reporting systems used by fishing vessels from ISC member countries. Russell Ito delivered a presentation of the e-Log system currently being developed for the Hawaii longline fleet and planned to go into production later in 2018. Informative discussions followed as each country shared their issues and successes with electronic reporting.

See Attachment 6 for more detailed summaries of e-reporting systems from Canada, Chinese Taipei, Japan, Korea and United States.

13.0 Species Working Groups Needs

Traditionally the STATWG allots time for Chairs of the species Working Groups to address their data needs and to see where the STATWG may be able provide services and support.

Mikihiko Kai, Chair of the Shark Working Group, was the only Working Group Chair to participate in the STATWG meeting.

The Chair of the STATWG addressed Kai directly and informed him of the following:

- Mexico provided improved catch estimates for blue and shortfin mako sharks
- Catch data for Mexico in the ISC database will be updated

- Category II data for blue and shortfin mako sharks will be excluded from publishing on public domain due to poor availability of data

14.0 Report of the ISC Webmaster

14.1 Improvements to ISC Website by Kirara Nishikawa

The ISC Webmaster delivered a presentation on improvements and updates to the ISC website, and reported that she is assisted by Kana Chiba (Japan). General improvements were made in construction and layouts, and in the addition of side bar menus on every page. There are convenient links to Stock Status by year for the ISC species of interest; and the Stock Status page structure was improved.

14.2 Improvements to the ISC researcher's web site by Ren-Fen Wu

The Chair demonstrated the newly improved ISC researcher's website and encouraged Data Correspondents and Chairs of the species Working Groups to utilize the features available here. He demonstrated how to query and download fishery data from the ISC database, how to download the member's metadata tables, and how to download the stock assessment files.

A new User's Manual for the ISC researcher's website was completed and reviewed at the 2018 Steering Group meeting in Shimizu, and then distributed to the Data Correspondents. It was suggested that this new User's Manual should be also submitted to the ISC and Chairs of the species working groups.

15.0 Update of the species working groups web pages by Ren-Fen Wu

The Chair pointed out that the species Working Group web pages are out of date, and the Biological Profiles and Fisheries information are in particular need of updating and new content. It was suggested that a standardized format and minimum required information for each ISC species of interest would be desirable.

The Shark Working Group Chair suggested that the ISC Webmaster send an email request to each species working group chair to provide updates for their respective web pages.

It was also agreed by the group that the old Stock Status information from previous years be removed from the website and only the latest stock status information be listed. This is a common practice among other t-RFMOs.

16.0 Other Matters

No other matters were presented.

17.0 Conclusions, Future Work Plan, and Recommendations to Plenary

17.1 Future Work Plan

1. The DA will continue to distribute the ISC data inventory for Category I, II, and III to ISC Data Correspondents for review by September 30, 2018. 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, 2018.
2. The DA will continue to archive stock assessment files from 2017-2018 ISC assessments which are required to be submitted by Chairs of species Working Groups by November 1, 2018.
3. The DA will continue to distribute Member's metadata by March 30, 2019. The Data Correspondents will review and update their metadata by July 1, 2019 prior to the ISC19 Plenary, and the metadata will be published on the ISC researcher's website by August 31, 2019.
4. The DA will continue to request any necessary ISC database modifications recommended by the STATWG to the database contractor by November 1, 2018. The DA will revise and update the User's Guide for Online Data Submission accordingly, and distribute to the Data Correspondents by December 31, 2018. The DA will conduct training for Data Correspondents as necessary.
5. The Chair of STATWG and the DA will jointly draft a report documenting the proposed data checking protocols in detail and with examples by December 31, 2018. This report will then be distributed to STATWG members for review and revision. This final report will be discussed and considered for approval in the STATWG meeting in 2019 prior to the ISC 19 Plenary.
6. The DA and the Chair of STATWG will annually review the responsibilities, duties and deliverables of the DA to ensure that they are accurate and practical, and revise them as necessary.
7. The STATWG Steering Group will hold an intersessional meeting in January 29-30, 2019 in Shimizu, Japan to conduct work for this work plan.

17.2 Recommendations to the Plenary

1. The STATWG recommends that the Plenary provides clear guidelines for the publishing of

ISC Category II data in the public domain, including the definition for Category II public domain data.

2. The STATWG requests the scheduling of a one and one half day meeting prior to the ISC19 Plenary in July, 2019.

18.0 Election of Chair

Ren-Fen Wu has completed his eighth year as Chair of the STATWG; Darryl Tagami has also completed his eighth year as Vice-Chair of the STATWG. Under the Rules and Procedures of the ISC, neither are eligible to serve additional terms.

John Holmes, Chair of the ISC, presided over the election of Chair and Vice-Chair of the STATWG. There were no nominations for either Chair or Vice-Chair. The absence of a Chair and Vice-Chair will be brought forward for discussion at the ISC18 Plenary session.

19.0 Update of the Organizational Chart of the STATWG

The organization chart of the STATWG was reviewed and updated by the group (Attachment 7).

Mi Kyung Lee replaces Youjung Kwon as the Data Correspondent for Korea, Sung Il Lee is added for Korea, Hiromu Fukuda replaces Osamu Sakai for Japan, and Russell Ito replaces Darryl Tagami for the United States.

The ISC organization chart on the ISC website will also need to be updated to reflect these recent changes.

20.0 Adjournment

The next STATWG meeting is planned to be held prior to ISC19 for one and one half days in July, 2019, 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 Kirara Nishikawa (Japan) for serving as the ISC Database Administrator and ISC Webmaster. The STATWG collectively thanked the hosts (Korea) for their hospitality and overall support for the meeting.

The meeting of the ISC STATWG was adjourned at 12:30 pm on July 7, 2018.

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Attachment 2

AGENDA

Statistics Working Group

International Scientific Committee for Tunas and Tuna-like Species in the North Pacific Ocean
6-7 July 2018, Yeosu Expo Convention Center,
Yeosu, Korea

1. Welcome and Introduction
2. Appointment of Rapporteurs
3. Adoption of Agenda
4. Tabling of Documents
5. Status of STATWG Work Plan and Inter-sessional Activities
6. Performance of Member Countries
 - i. Data submission for 2017
 - ii. Report card
7. Review of Metadata
8. Review of process on CAT II data publication
9. Review of process on data checking
10. Review of catch tables
11. Data revision report of member and Data Collection System
 - i. Blue shark and shortfin mako historical catch revision of Mexico 0
 - ii. Data revision report of Japan as of 2018
12. Introduction of ISC research website
13. Species Working Groups Needs
 - iii. BILL WG
 - iv. ALB WG
 - v. PBF WG
 - vi. SHARK WG
14. Review of proposal on ISC website update
15. Review of the stock assessment file archiving
16. Other Matter
17. Conclusions, Future Work Plan, and Recommendations to Plenary
18. Election of chair and vice chair
19. Review of the Organization Chart of STATWG
20. Adjournment

Attachment 3

List of Papers and Presentations

INFORMATION PAPERS

1. ISC18/STATWG/INFO-1: Report on STATWG Intercessional Meeting 2018 – by Ren-Fen Wu
2. ISC18/STATWG/INFO-2: Unofficial blue shark catch estimations for the Mexican Pacific (1976-2011) – by Mexico
3. ISC18/STATWG/INFO-3: Unofficial blue shark catch estimations for the Mexican Pacific (1976-2014) – by Mexico
4. ISC18/STATWG/INFO-4: Estimations of the Shortfin Mako Shark (*Isurus oxyrinchus*) catches by Mexican Pacific fisheries, An update – by Mexico
5. ISC18/STATWG/INFO-5: The User’s Manual of ISC Research Website, Version.2018 – by Kirara Nishikawa
6. ISC18/STATWG/INFO-6: The inventory of assessment data storage – by Kirara Nishikawa
7. ISC18/STATWG/INFO-7: STATWG Work Plan for 2017-2018 – by Ren-Fen Wu

WORKING PAPERS

1. ISC18/STATWG/WP-1: Data Revision Report of Japan as of 2018 – by Koji Uosaki

PRESENTATIONS

1. Presentation 1 – STATWG Inter-sessional Activities – by Ren-Fen Wu
2. Presentation 2 – Status of STATWG 2017 Work Plan – by Ren-Fen Wu
3. Presentation 3 –Submission of 2017 Data and Member Report Card - by Kirara Nishikawa
4. Presentation 4 – Review of Metadata - by Kirara Nishikawa
5. Presentation 5 – Review of process on CAT II data publication - by Ren-Fen Wu
6. Presentation 6 – Review of process on data checking- by Ren-Fen
7. Presentation 7 – Review of the ISC Catch Tables - presentation by Kirara Nishikawa
8. Presentation 8 – Review of the archival of stock assessment files - by Kirara Nishikawa
9. Presentation 9 – Report of ISC Webmaster: Improvements - by Kirara Nishikawa
10. Presentation 10 – Updating the Working Group’s Web Pages - by Ren-Fen Wu

Attachment 4

2017 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. **COMPLETED**
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-STATWGW1. **COMPLETED**
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. **NOT COMPLETED**
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. **COMPLETED**
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. **COMPLETED**
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. **COMPLETED**
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. **COMPLETED**
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. **COMPLETED**

Attachment 5

2018 Data Submission Report Card for ISC Members

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

	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
	Not Provided

Attachment 6

Electronic Reporting Systems of Members

Canada

Department of Fisheries & Oceans (DFO) Canada initiated an arrangement with the Tuna Advisory Board to conduct an Electronic Logbook (E-log) pilot program for the albacore tuna fishery. The PC based software application follows the current paper version of the logbook for the tuna fleet.

However, albacore harvesters appear to be unwilling to use E-log, in general. Three vessels volunteered to use E-Logs, in 2017. However, only one vessel submitted an E-Log, using the E-log software developed in 2012. All other vessels submitted the paper logs.

DFO does not have funding available to run an E-Log pilot for the 2018 fishing season, but will work to put in a request for funding to run a pilot for the 2019 fishing season. Even if there is a pilot in 2019, E-Logs will not be a requirement for licence holders. Licence holders can choose to use hard-copy logbooks or E-logs. During the pilot phase, vessel owners testing the software will be asked to submit both hard-copy and E-logs to QA/QC the catch data.

Chinese Taipei

Taiwan has also introduced electronic logbook system of large scale tuna longline fleet in the Pacific Ocean since 2014, and Agency started implementing the electronic logbook system on STLL vessels in 2015, and all STLL vessels operating outside the EEZ of Taiwan have to report their catches through the satellite transmission daily from 2016. All purse seiners have been requested to report their operation data via iFIMS (integrated Fisheries Information Management System) in a real-time manner since 2015.

Japan

In Japan, an electronic logbook system became available since November 2016 for distant water longline fishery. It allows for fishermen to fill out logbook in electronic file and submit the electronic file of logbook once in ten days through web site to the server running by the Fishery Agency of Japan. Fishermen can submit the electronic logbook from either at-sea or from company on land. Fishermen are moving to change from paper log sheets to the electronic logbook system, but the coverage of electronic logbook is still low.

Korea

Since 1st September 2015, the Act on Fisheries Information and Data Reporting has obliged fishers of distant-water fisheries to report catch information to the National Institute of Fisheries Science (NIFS) in real time through the Electronic Reporting (ER) system. The coverage of data reporting by ER is 100%. It includes data collection and reporting requirements recently adopted by the all tRFMOs regarding especially ecologically important species, discard/release and

bycatch mitigation, etc. In 2018, Korea has a plan to develop the system that fishers can input individual size data measured onboard.

United States

Hawaii's largest commercial fishery is the longline fishery for tunas and swordfish. Its area of operation is the North Pacific Ocean. All of the longline vessels are located in Honolulu which makes monitoring ideal. The current method of data submission is paper logbooks when a vessel returns from a trip. The Pacific Islands Fisheries Science Center (PIFSC) began working on an electronic logbook system from 2014. Longline logbook data would be submitted at-sea and the PIFSC would receive the data in near real time. When developing the elog system, the application would need to meet Information and Technical Services (ITS) data security requirements, be easy for fishermen to use, be compatible with a vessel's Vessel Monitoring System (VMS) for transmission and be able to send data reliably. The elog system also allows each fisherman to keep his data records secure from other operators.

The elog application is easy to use, prompts the user at which stage of a fishing operation he or she is at, prefills much information which would have to be written on each logsheet, and populates date, time and location from a vessel's VMS system. The application also allows the user to review his or her entry with a screen view that resembles a paper logsheet. A feature requested by fishermen which the application provides a view of cumulative catch on a current trip or catch totals from previous trips was added to the the elog application.

The elog system has passed extensive in-house and at-sea beta testing and is moving into production. Distribution of the elog application is limited but anticipated to expand rapidly as its use gains increasing acceptance by fishermen. As more data is collected and submitted by the elog system, the timeliness of the data will improve and the use of the data can be used in monitoring fishery quotas with an improvement in accuracy of real-time catch estimates and of forecasting dates when the quota limit would be reached.

Attachment 7

New Organization Chart for STATWG (July 7, 2018)

Web Master	Data Administrator	STATWG
5. K. Nishikawa	5. K. Nishikawa	Chair - vacant
		Vice-Chair - vacant
		1. Z. Zhang
		2. X. Dai
		3. W.-J. Wang
		4. M.-K. Lee
		4. S.-I. Lee
		5. H. Fukuda
		5. K. Uosaki
		6. M. Dreyfus
		7. J. Childers
		7. R. Ito
		9. P. Williams
		10. N. Vogel
		11. A. Beeching