

**Report of the Statistics Working Group of the 4th Interim
Scientific Committee for Tunas and Tuna-like Species in the
North Pacific Ocean (ISC)¹**

January 2004

¹Working document submitted to the Fourth Meeting of the Interim Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC), 26 January - 4 February 2004, Honolulu, Hawaii, USA. Document not to be cited without author's permission.

Report of the Statistics Working Group of the 4th Interim Scientific Committee for Tunas
and Tuna-like Species in the North Pacific Ocean (ISC)

January 27, 2004
Honolulu, Hawaii, USA

1.0 OPENING BUSINESS

Dr. Y. Uozumi, chairperson of the 2nd meeting of the ISC Statistics Working Group (STATWG), convened the 3rd STATWG meeting and welcomed participants from Canada, Chinese-Taipei, Japan, Korea, and IATTC (Attachment 1). The meeting was held in the Plumeria Room of the Ala Moana Hotel, Honolulu, Hawaii, USA. The first item of business was the election of a new chairperson. Dr. Uozumi volunteered for another term and was confirmed by the STATWG members. Al Coan and Kotaro Yokawa were appointed rapporteurs.

The meeting agenda was distributed and Dr. Uozumi proposed the addition of two additional agenda items, others and future work plan. The issue on farming will be discussed under the agenda item others. No additional changes were made and the agenda was approved (Attachment 2). One paper for the STATWG was distributed and numbered (01, Attachment 3). A copy of the STATWG-2 report was also tabled, INF 01 (Attachment 3).

2.0 SUMMARY OF AGREEMENTS FROM STATWG-2

Dr Uozumi briefly covered the agreements from STATWG-2. For more complete descriptions of the agreements refer to INF 01. The STATWG established three groups of data to be collected; Category I: total catch and effort (vessels); Category II: Catch and fishing effort and Category III: biological data (size composition).

Category I data will be reported by stock sub areas that will be defined by the appropriate species working groups. If the number of vessels cannot be reported by sub areas, then larger areas will be used. Any conversions or assumptions (e.g. numbers to weight, processed weights to round weights, use of average weights, etc) should be adequately documented and adhere to working group guidelines. Total catches will be in round weight by sub area, species and gear. Number of vessels will be reported by sub area, gear, and vessel size categories.

Category II data will be based on logbook type information and summarize catch and effort by country, gear type, month and 5x5 degree square for longline fisheries and 1x1 degree square for surface fisheries. Units of effort should be as specified in INF 01 and a complete description of effort should be supplied for some fisheries.

Category III data will be reported as length or weight frequencies with the same time-area resolutions as Category II data. Actual measurements should be reported along with the

standard measurement that will be specified by the appropriate species working group. Conversion relationships will be reviewed by the working groups.

The available Category II and III data are listed in INF-01, Tables 1 and 2. These data will be placed in the ISC database. Data reported by the IATTC and SPC should not include data submitted by individual members. Collection methods and procedures (including coverage rates, conversions, units, etc.) should be documented for a better understanding of the submitted statistics.

Category I data on catch, aggregated by the entire North Pacific, are considered public domain data. All other category I, II and III data are confidential and use is limited to contributors and authorized ISC working group scientists. Japan is responsible for management of the central data depository and will designate a control person. The control person will notify ISC members and observers of all requests for confidential data by non-contributing parties and will seek approval from contributors. Requests for specific species data will be referred to the appropriate species working group chair for approval. Requests for confidential data by contributors for purposes other than ISC related stock assessment activities will be handled by the control person following the same procedures delineated above. These guidelines were agreed to at the ISC plenary meeting in Nagasaki, 2002 and cannot be changed without consensus of all contributors

It was agreed that the ISC web site would be developed by Japan and would be used to facilitate ISC activities. The web site will contain area aggregated Category I data (public domain), reports of ISC WGs and plenary, and summary maps and figures of category II and III data.

3.0 STATUS OF THE ISC DATABASE

As part of the work plan for STATWG-2, a central database and clearing house for ISC fishery statistics was to be established. Included would be a FTP site or other means for secure transfer of data between the database and data correspondents. Work was to be completed by September 2002. Due to technical difficulties in obtaining Information Technology Specialists support, development needed to be delayed. The plan is now to develop a simple database to start and a more comprehensive database in the future. The FTP site will be completed and data correspondents will be notified of submission dates and appropriate formats. The STATWG recommended that the Ad hoc Statistics Submissions working group meet and discussed any changes that may be needed in the submission of data to the FTP site (Attachment 4).

4.0 UPDATE CATEGORY II AND III DATA

Data correspondents were asked to provide updates to their task II and task III data (Table 1-2). A discussion ensued on the inclusion of observer data as part of the STATWG database. Some organizations (Inter-American Tropical Tuna Commission, IATTC) are using observer data in fishery analyses and concern was expressed that this practice may become more common. The STATWG decided that a wide range of data

and objectives are used in different observer programs and recommended that a paragraph be developed by each data correspondent briefly describing their observer programs, their purpose and data collected (Attachment 5). These descriptions will be made available to the species working groups. If the data is requested by the species working groups the STATWG will archive the data.

5.0 REVIEW OF ISC WEBSITE

The STATWG endorsed items to be included into ISC Web site, which were listed in the last working group meeting INF 01. The ISC web site was opened on December 2002 (<http://isc.ac.affrc.go.jp>). The website currently has functional modules with press releases, guidelines, membership, structure, and meeting reports. The module containing summary fishery statistics is still under construction and will be completed after data are entered to the ISC database and summary software is developed.

6.0 OTHER - FARMING STATISTICS

Dr. Uozumi raised the issue of how to treat fish caught for farming. Japan and Mexico have started farming (and/or culturing) Pacific bluefin tuna in recent years and other countries have indicated interest in starting farming operations. The STATWG recommended that all farmed fish, including those discarded before being transferred to pens (due to its mortality), be considered as “catch” and must be reported together with retained and landed catches. These farmed catches are needed to estimate total removals from the stock which is the basis for stock assessments. Therefore, the data reported as Category I, II, and III should include amount of catches transferred to farming operations and should be footnoted appropriately to identify that farmed fish are included. In addition, the STATWG recommended that the fish shipped from farming (or culture) pens to the market should be treated as “products of farming” and should not be mixed with landings from the normal fishing activities.

The STATWG identified that while the actual catch of farmed fish can be estimated in logbooks at the time of transfer to farming pens the sizes of these fish will be difficult to determine. The output quantity may provide data that can be used to back calculate the input when the input information is missing. The STATWG recommended that the member countries, that have tuna farming operations, investigate and report on those farming operations; especially on procedures for collection of catch and fish size as fish are placed in pens. Collection of set by set data from logbooks would also be useful. Experience in the Mediterranean Sea, where large amounts of Atlantic bluefin tuna are being farmed, have found that, while difficult to obtain, identification of fishing vessel, type of gear, as well as farming location is very important in determining the farmed catch. Also, the ICCAT-GFCM is currently conducting meetings on farming issues and the STATWG recommends that results of these meetings be reviewed for application to statistics collected from ISC monitored farming operations.

8.0 RECOMMENDATIONS AND FUTURE PLANS

ISC data needs and tasks to meet the needs were identified during the STATWG meeting were discussed in the appropriate sections of this report and are summarized here for easy reference.

- Establish central database and clearing house for ISC fishery statistics. Included in this task is the establishment of an FTP site for secure transfer of data between the database and Data Correspondents. Target completion date: **April 2004**. Lead: Fisheries Agency of Japan
- Develop and distribute to Data Correspondents the procedures and format for submission of ISC fishery statistics, particularly Category II and III statistics. Target completion date: **April 2004**. Lead: Statistics Submission Subgroup of STATWG
- Provide initial submission of all historical data (i.e. those data now archived in participants databases) to ISC. Target completion: **December 31, 2004**. Lead: Data Correspondents
- Regular submission of fisheries data starting in 2005. Lead: data correspondents..

July 1 - Preliminary estimates of all available data from the previous year (Category I data, in particular, but also whatever data can be available from Categories II and III)

- Updates of Categories I, II, and III data from all earlier years

- Develop software for summarizing Category I, II and III statistics and for general distribution of the summaries including posting on a Web site. Target completion date: **April 2005**. Lead: Fisheries Agency of Japan
- Coordinate with all ISC species working groups to:
 - [1] define sub-areas of the Pacific suitable for reporting of Category I data;
 - [2] define standard measurement types for each species for reporting of Category III data; and
 - [3] evaluate conversion relationships among various length and/or weight measurements and the standard for reporting of Category III data.

Target completion date: **April 2004**. Lead: STATWG Chairman.

9.0 UPDATE DATA CORRESPONDENTS

Changes (*italics*) were made to the list of data correspondents as follows:

<u>Member</u>	<u>Data Correspondent</u>
Canada	<i>Max Stocker</i>
Chinese-Taipei	<i>Shui-Kai Chang</i>
Japan	Harumi Yamada
Korea	Dae-Yeon Moon

Mexico	Michael Dreyfus
Peoples Republic of China	(to be designated)
USA	<i>Robert Skillman</i>
IATTC	Michael Hinton
SPC	Timothy Lawson

10.0 TIME AND PLACE OF NEXT STATWG MEETING

Participants of STATWG 3 agreed to meet again at the next scheduled meeting of the ISC plenary. The STATWG recommends that the meeting of the STATWG occur after the meetings of the species working groups so that data concerns of the species working groups can be addressed.

11.0 CLOSE OF STATWG MEETING

Dr. Uozumi thanked all of the participants and rapporteurs for their contributions to a successful meeting and closed the 3rd meeting of the STATWG at 15:30 on January 27, 2004. The report was adopted on January 28, 2004 and forwarded to the plenary.

Table 1. Inventory of available catch and effort statistics for fisheries harvesting tuna and tuna-like species in the North Pacific Ocean.

Year	Country	Gear	Fishery ¹	Method ²	Coverage ³	Species ⁴	Time Unit	Area Unit	Catch Unit	Effort Unit
<i>Canada</i>										
1999-2002	Canada	Troll	Distant Water ¹	Logbook	~100%	ALB	Month	1°x1°	No. of fish	Fishing days
<i>Chinese-Taipei</i>										
1964-2002	Chinese-Taipei	Longline	Distant Water	Logbook	30-50%	ALB, BET, YFT, SWO, MLS, BLZ	Month	5°x5°	No. of fish	hooks
1996-2002	Chinese-Taipei	Purse Seine	Distant Water	Logbook	~100%	BET, YFT, SKJ	Month	5°x5°	tons	days
<i>Japan</i>										
1952-2002	Japan	Longline	Distant Water	Logbook	95% (raised to 100%)	BFT, BET, YFT, ALB, SWO, MLS, BLZ, SKJ	Month	5°x5°	No. of fish	hooks
1952-2002	Japan	Longline	Offshore	Logbook	90% (raised to 100%)	BFT, YFT, BET, ALB, SWO, MLS, BLZ, SKJ	Month	5°x5°	No. of fish	hooks
1994-2002	Japan	Longline	Coastal	Logbook	80%?	BFT, YFT, BET, ALB, SWO, MLS, BLZ, SKJ	Month	5°x5°	No. of fish	hooks
1967-2002	Japan	Purse Seine	Distant Water	Logbook	100%	BFT, YFT, BET, SKJ	Month	1°x1°	tons	Fishing days
1967-2002	Japan	Purse Seine	Offshore	Logbook	80%	BFT, YFT, BET, SKJ	Month	1°x1°	tons	Fishing days
1971-2002	Japan	Pole-and-Line	Distant Water	Logbook	80%	BFT, YFT, BET, SKJ, ALB	Month	1°x1°	tons	Fishing days
1971-2002	Japan	Pole-and-Line	Offshore	Logbook	>80%	BFT, YFT, BET, SKJ, ALB	Month	1°x1°	tons	Fishing days

Table 1. --- continued.

Year	Country	Gear	Fishery ¹	Method ²	Coverage ³	Species ⁴	Time Unit	Area Unit	Catch Unit	Effort Unit
Korea										
1988-2000	Korea	Longline	Distant Water	Logbook	64%	BET, YFT, ALB, SWO, MLS, BLZ, SKJ, SHK	Month	5°x5°	No. of fish & tons	Hooks
1980-2000	Korea	Purse Seine	Distant Water	Logbook	74%	SKJ, YFT	Month	1°x1°	tons	Sets
1998-2001	Korea	Purse Seine	Coastal Water	Logbook	86%	BFT	Month	1°x1°	tons	Sets
Mexico⁵										
1980-2002	Mexico	Purse Seine	Offshore	Logbook	100%	YFT, SKJ, BFT, ALB	Month	1°x1°	tons	Fishing days
1992-2002	Mexico	Purse Seine	Offshore	Observer	100%	YFT, SKJ, BFT, ALB	Month	1°x1°	tons	Fishing days
2001	Mexico	Longline	Coastal	Logbook	100%	SWO, billfishes	Month	5°x5°	tons	hooks
2001	Mexico	Longline	Coastal	Observer	30%	SWO	Month	5°x5°	No. of fish & tons	hooks
1998	Mexico	Drift Gillnet	Coastal	Observer	Unknown	SWO, SHK	Month	5°x5°	No. of fish	Fishing days/sets
1980-2002	Mexico	Pole-and-Line	Coastal	Logbook	100%	YFT, SKJ	Month	1°x1°	tons	Fishing days
USA										
1961-2002	USA	Pole-and-Line	Distant Water	Logbook	80%	ALB	Month	1°x1°	No. of fish	fishing days
1962-2002	USA	Troll	Distant Water	Logbook/ Observer	61%/ <1%	ALB	Month	1°x1°	No. of fish	fishing days
1974-2002	USA	Harpoon	Coastal	Logbook	100%	SWO	Month	1°x1°	No. of fish	fishing days

Table 1. --- continued.

1981-2002	USA (CWP)	Purse Seine	Distant Water	Logbook/ Observer	100%	SKJ, YFT, BET, MLS, BLZ	Month	5°x5°	tons	fishing days
1990-2002	USA	Longline	Distant Water	Logbook/ Observer	100%/20%	ALB, BET, BFT, BLZ, MLS, SWO, YFT, SKJ	Month	5°x5°	No. of fish	hooks
IATTC										
~1930-2002	Participating Countries ⁶	Pole-and-Line	EPO	Logbook	80-90%	Tunas	Month	1°x1 ⁰⁷	tons	fishing days
~1959-2002	Participating Countries ⁶	Purse Seine	EPO	Logbook	80-90%	Tunas	Month	1°x1 ⁰⁷	tons	fishing days
~1989-2002	Participating Countries ⁶	Purse Seine	EPO	Observer	10-50%	Billfishes	Month	1°x1 ⁰⁷	No. of fish	fishing days
~1980-2002	Participating Countries ⁶	Purse Seine	EPO	Observer/ Logbook	80-90%	Tunas	Month	1°x1 ⁰⁷	tons	fishing days
SPC⁵										
Various ⁸	SPC ⁹	Longline	CWP	Varies ¹⁰	Varies ¹⁰	ALB, BET, YFT, SKJ, BFT, MLS, BLZ, BLM, SWO, SAL, SHK	Month	5°x5°	No. of fish & tons	hooks & sets
Various ⁸	SPC ⁹	Pole-and-Line	CWP	Varies ¹⁰	Varies ¹⁰	SKJ, YFT	Month	1°x1 ⁰	tons	fishing days
Various ⁸	SPC ⁹	Purse Seine	CWP	Varies ¹⁰	Varies ¹⁰	SKJ, YFT, BET (estimated)	Month	1°x1 ⁰	tons	sets & days

¹ Fishery codes EPO = eastern Pacific Ocean; CWP = central-western Pacific.

² Observer data may contain catch and effort statistics.

³ Coverage as percent (%) of catch.

⁴ Species codes are: ALB = albacore, BET = bigeye tuna, BFT = bluefin tuna, SKJ = skipjack tuna, SWO = swordfish, YFT = yellowfin tuna, BLZ = blue marlin, MLS = striped marlin, BLM = black marlin, SAL = sailfish, and SHK = sharks.

⁵ No information was available for updating data of Mexico and SPC. Information shown is from STATWG 1 report.

⁶ Major participating countries in 2002 were Belize, Bolivia, Chinese-Taipei, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Spain, U.S.A., Vanuatu, and Venezuela.

⁷ Aggregated non-ISC member data available at 1 x 1. Individual State data for non-ISC members available at 5 x 5 level, and 1 x 1 level when IATTC has release permission from the State.

⁸ Years covered by available data can be found in the *Oceanic Fisheries Programme (OFP) Tuna Fishery Data Catalogue*.

⁹ Data are provided to SPC by member countries with domestic fleets and/or those member countries that have access arrangements with distant-water fishing nations (DWFNs). Member countries that have provided data are: Australia, the Cook Islands, the Federated States of Micronesia, Fiji, French Polynesia, Kiribati, the Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, the United States, Vanuatu and Samoa. In addition, the SPC maintains aggregated databases (longline, purse seine, and pole-and-line) provided by distant-water fishing nations (Chinese-Taipei, Japan, Korea, and USA).

¹⁰ The coverage rate, by fleet and year, varies for different types of logbook and observer data held by the SPC. The rate are found in “*Working Paper 4 of 1st STATWG- Coverage of western and central Pacific tuna fisheries by data held by the SPC Oceanic Fisheries Programme*”, which is available from the SPC.

Table 2. Inventory of available data on sizes of fish caught for tuna and tuna-like fisheries in the North Pacific Ocean.

Year	Country	Gear	Fishery ¹	Method	Coverage ²	Species ³	Time Unit	Area Unit	Length Type	Length Unit	Weight Type ⁴	Weight Unit
<i>Canada</i>												
1984-2001	Canada	Troll	Distant Water	Port Sampling	2%	ALB	Month	1°x1°	FL	1 cm	not used	not used
<i>Chinese-Taipei</i>												
1981-2002	Chinese-Taipei	Longline	Distant Water	Fishermen	5-20%	BFT, YFT, BET, ALB, SWO	Quarter	10°x20°	FL	2 cm	not used	not used
<i>Japan</i>												
1960-2002	Japan	Longline	Distant Water	Onboard measurement/Port Sampling	5%	BFT, YFT, BET, ALB, SWO, MILS, BLZ	Month	10°x20°	FL/EFL	1 cm	PW	kg
1960-2002	Japan	Longline	Offshore Water	Port Sampling	20%	BFT, YFT, BET, ALB, SWO, MILS, BLZ	Month	10°x20°	FL/EFL	1 cm	PW	kg
1960-2002	Japan	Longline	Coastal Water	Port Sampling	20%	BFT, YFT, BET, ALB, SWO, MILS, BLZ	Month	10°x20°	FL/EFL	1 cm	PW	kg
1981-2002	Japan	Purse Seine	Distant Water	Port Sampling	15%	BFT, YFT, BET, SKJ	Month	1°x1°	FL	1 cm	WW/PW	kg
1981-2002	Japan	Pole-and-line	Distant Water	Port Sampling	30%?	BFT, ALB, YFT, BET, SKJ	Month	1°x1°	FL	1 cm	WW	kg
<i>Mexico⁵</i>												
2000	Mexico	Longline	Coastal	Observer	NA	SWO	Month	5°x5°	FL	1 cm	not used	not used
1998	Mexico	Drift Gillnet	Coastal	Observer	NA	SWO, SHK	Month	5°x5°	FL	1 cm	not used	not used
<i>USA</i>												
1961-2002	USA	Pole-and-Line	Distant Water	Port Sampling	2%	ALB	Month	1°x1°	FL	1 cm	not used	not used
1961-2002	USA	Troll	Distant Water	Port Sampling/Observer	2%/ <1%	ALB	Month	1°x1°	FL	1 cm	not used	not used

Table 2. --- continued.

Year	Country	Gear	Fishery ¹	Method	Coverage ²	Species ³	Time Unit	Area Unit	Length Type	Length Unit	Weight Type ⁴	Weight Unit
1981-1997	USA	Harpoon	Coastal	Port Sampling	<1%	SWO	Month	1°x1°	Cleithrum-Fork	1 cm	not used	not used
1981-1997/ 1990-2000	USA	Drift Gillnet	Coastal	Port Sampling/ Observer	<1%	SWO	Month	1°x1°	Cleithrum-Fork, FL	1 cm	not used	not used
1988-2002	USA	Purse Seine	Distant Water	Port Sampling	20%	BET, YFT, SKJ	Month	1°x1°	FL	1 cm	not used	not used
1987-2002	USA	Longline	Distant Water	Port Sampling	<1%-100%	ALB, YFT, BET, BFT, SWO, BLZ, MLZ	Month	5°x5°	FL	1 cm	WW, PW	0.5 lb.
1994-2002	USA	Longline	Distant Water	Observer	<1%-20%	ALB, YFT, BET, BFT SWO, BLZ, MLZ	Month	5°x5°	FL & others	1 cm	not used	not used
IATTC												
~1959-2002	Participating Countries ⁶	All	EPO	Port Sampling	NA	Tunas	Month	measure- ment area	FL	1 cm	not used	not used
~1988-2002	Participating Countries ⁶	Purse Seine	EPO	Observer	NA	Billfishes	Month	1°x1°	FL	1 cm	not used	not used
SPC⁵												
Avail ⁷	SPC ⁸	Longline	CWP	Port Sampling	Avail (by fleet & yr) ⁹	Target & landed by- catch	Month	varies ⁸	FL	1 cm	PW	kg
Avail ⁶	SPC ⁷	Longline	CWP	Observer	Avail (by fleet & yr) ⁸	Target & by-catch	Month	1°x1°	FL	1 cm	not used	not used
Avail ⁶	SPC ⁷	Pole-and-Line	CWP	Port Sampling	Avail (by fleet & yr) ⁸	SKJ, YFT, BET	Month	varies ⁸	FL	1 cm	not used	not used

Table 2. --- continued.

Year	Country	Gear	Fishery ¹	Method	Coverage ²	Species ³	Time Unit	Area Unit	Length Type	Length Unit	Weight Type ⁴	Weight Unit
Avail ⁶	SPC ⁷	Pole-and-Line	CWP	Observer	Avail (by fleet & yr) ⁸	Target & by-catch	Month	1°x1°	FL	1 cm	not used	not used
Avail ⁶	SPC ⁷	Pole-and-Line	CWP	Tagging	Avail (by fleet & yr) ⁸	SKJ, YFT, BET	Month	1°x1°	FL	1 cm	not used	not used
Avail ⁶	SPC ⁷	Purse Seine	CWP	Port Sampling	Avail (by fleet & yr) ⁸	SKJ, YFT, BET	Month	varies ⁸	FL	1 cm	not used	not used
Avail ⁶	SPC ⁷	Purse Seine	CWP	Observer	Avail (by fleet & yr) ⁸	Target & by-catch	Month	1°x1°	FL	1 cm	not used	not used

¹ Fishery codes are: EPO = eastern Pacific Ocean, CWP = central-western Pacific.

² Coverage as percent (%) of catch, NA = not available for this measurement.

³ Species codes are: ALB = albacore, BET = bigeye tuna, BFT = bluefin tuna, BLZ = blue marlin, MLZ = striped marlin, SHK = sharks, SKJ = skipjack tuna, SWO = swordfish, and YFT = yellowfin tuna

⁴ Weight Type codes are: PW = Processed Weight, WW = Whole Weight.

⁵ No information was available for updating data of SPC and Mexico. Information shown is from STATWG 1 report.

⁶ Major participating countries in 2002 were Belize, Bolivia, Chinese-Taipei, Colombia, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Spain, U.S.A., Vanuatu, and Venezuela.

⁷ A detailed breakdown of years for data held by the SPC can be found in the *Oceanic Fisheries Programme (OFP) Tuna Fishery Data Catalogue*.

⁸ Data are provided to SPC by member countries with domestic fleets and/or those member countries that have access arrangements with distant-water fishing nations (DWFNs). Member countries that have provided data are: Australia, the Cook Islands, the Federated States of Micronesia, Fiji, French Polynesia, Kiribati, the Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, the United States, Vanuatu and Samoa. In addition, the SPC maintains aggregated databases (longline, purse seine, and pole-and-line) provided by distant-water fishing nations (Chinese-Taipei, Japan, Korea, and USA).

⁹ The coverage rate, by fleet and year, varies for different types of port sampling and observer data held by the SPC. The rates are found in “Working Paper 4 of 1st STATWG - Coverage of western and central Pacific tuna fisheries by data held by the SPC Oceanic Fisheries Programme”, which is available from the SPC.

Attachment 1: List of Participants

Max Stocker	Canada DFO
Jesng-Rock Koh	Korea NFRDI, Busan
Chien-Chung Hsu	Chinese-Taipei National Taiwan University
Shih-Chin Chou	Chinese-Taipei OFDC
Keith Bigelow	US PIFSC
Bob Humphreys	US PIFSC
Bob Skillman	US PIFSC
Jerry Wetherall	US PIFSC
Brent Miyamoto	US PIFSC
Al Coan	US SWFSC
Suzanne Kohin	US SWFSC
Ray Conser	US SWFSC
Kevin Hill	US SWFSC
Kevin Piner	US SWFSC
Gary Sakagawa	US SWFSC
Ziro Suzuki	Japan NRIFSF
Naozumi Miyabe	Japan NRIFSF
Harumi Yamada	Japan NRIFSF
Kotaro Yokawa	Japan NRIFSF
Yukio Takeuchi	Japan NRIFSF
Mio Takahashi	Japan NRIFSF
Hirokazu Saito	Japan NRIFSF
Yuji Uozumi	Japan NRIFSF
Peter M. Miyake	Japan Japan Tuna
Michael G. Hinton	IATTC
Pedro Ulloa	Mexico INP
Luis Fleischer	Mexico INP

Attachment 2: Meeting Agenda

Fourth Meeting of the Interim Scientific Committee
For Tuna and Tuna-like Species in the North Pacific Ocean (ISC)

Statistics Working Group Meeting

27, January 2004

Plumeria Room (1:30 am), Ala Moana Hotel, Honolulu, Hawaii

Agenda – Chair Yuji Uozumi

1. Opening of STATWG meeting
2. Appointment of Chairperson and Rapporteurs
3. Adoption of Agenda
4. Tabling of Documents
5. Review of the agreements at the previous STATWG meeting
6. Review of the current status of the ISC database
7. Update inventory of the available data for categories II and III
8. Review of the ISC internet website
9. Other - Farming Statistics
10. Recommendations and future plan
11. Update of the Data Correspondent Group
12. Time and place of next STATWG meeting
13. Close of STATWG meeting

Attachment 3: List of Documents

ISC/04/STAT/01 - Catalog of U.S. North Pacific highly migratory species catch-effort and size composition data. (A. Coan and J. Wetherall)

ISC/04/STAT/INF01 – ISC3/PLEN/14 Report of statistics working group Interim Scientific Committee for tuna and tuna-like species in the North Pacific Ocean (ISC)

Attachment 4: Report of the Ad hoc Statistics Submission Working Group

Harumi Yamada-chair (NRIFSF)

The working group met to discuss changes that may be needed in the format of data submitted to the FTP database site (Appendix 5, INF 01). Data correspondents from Japan, USA, IATTC, and Chinese Taipei were present. The working group noted that the species code for Pacific bluefin tuna had changed from BFT to PBF when the species was recognized as *Thunnus orientalis*. The group felt that no other changes were needed.

Attachment 5: Observer Programs

Reports from ISC working group participants describing their observer programs for fisheries capturing tunas and tuna-like species.

CANADA – No observer programs for tuna.

CHINESE-TAIPEI

The government launched an experimental observer program in 2001 to better understanding target species and by-catch from distant-water fisheries and be in line with the international trends on the conservation of marine living resources. Observations covered by this program include: target species, sharks, seabirds, sea turtles, discards, dolphins and whales on longline and purse seine vessels. In 2002 and 2003, six observers placed in three major Ocean areas. The program will continue in 2004. The government fisheries authority and scientists from different fields will evaluate the results of these programs annually.

JAPAN

The Japanese purse seine fishery observer program covers several purse seiners operating in the tropical western Pacific. Observers collect a variety of data including size samples

KOREA

Korea has observer programs on domestic purse seiners and distant-water longliners. Each program has a uniquely different data collection system. Pacific bluefin tuna domestic purse seiners operate in coastal waters off Korea. Korean distant-water longliners operate in offshore areas in the central-western Pacific and catch swordfish and marlin.

MEXICO

Catches and tuna fishery performance have been closely monitored (100% coverage) by scientific observers aboard all Mexican tuna purse vessels (>360 cubic meter well capacity) since 1992. Fifty percent are observers from the Mexican National Program (PNAAPD) and the rest is covered by the IATTC international observer program. Pertinent observer data, from these two sources, have been made available to the ISC and other organizations. Mexican observers are also placed on longliners.

IATTC

The observer program of the Inter-American Tropical Tuna Commission (IATTC) currently obtains information on fishing activity of purse seine vessels larger than 363 cubic meters well capacity. The program was initiated to monitor interactions with marine mammals, however the information obtained on fishing activities may be of use in stock assessments of target and non-target species observed in the catch.

Specific information on fishes and fishing activities which may be of interest to various working groups include:

1. Trip dates and days of fishing effort
2. Search time and nature of searching effort
3. Date of set
4. Set location
5. Set type
6. Estimated tons of catch by species

The IATTC generally uses observer data in its analyses of fisheries in preference to logbook data when observer data is available for a trip. National programs of IATTC member countries and parties of the International Dolphin Conservation Program (AIDCP) maintain and provide data to the IATTC observer program, which is also maintained and utilized by the IATTC in its analyses of fisheries and fisheries resources. Copies of data collection forms and procedures are available on request.

USA

Longline fisheries – NMFS established an observer program in the Hawaii longline fishery in 1994 to monitor interactions with sea turtles. During the first 6 yrs of the program, observers were placed on about 4-5% of all fishing trips. Since August 2000, observer coverage has been 20% or higher, as mandated by the U.S. District Court in Honolulu. Within each quarter, a systematic sample of fishing trips is selected for observation. Although the primary purpose of the program is to monitor turtle interactions, observers also collect many other kinds of data, including the amount and configuration of gear used on each fishing operation; the number, condition, and disposition of tunas, billfishes, other fishes, seabirds, and marine mammals caught; and more. Fish length measurements and other biological data are collected to satisfy needs of NMFS researchers. When feasible, satellite tags are placed on sea turtles prior to their release. At the conclusion of a fishing trip, observers are debriefed, and then enter collected data directly into an Oracle database developed and maintained by NMFS. Observers typically have a college degree in biological sciences and complete a comprehensive training course in data collection procedures. Observers are recruited, trained, and managed by a private company contracted by the NMFS Pacific Islands Regional Office.

Observers are placed on longline vessels based California. Observers in the California-based fleet have been placed since 2002. The coverage is approximately 20%. Data collected include size frequency; daily catches, discards, and fishing effort (hooks) by 1-minute square; by-catches of fish, marine mammals, turtles and birds and various other statistics on fishing activities.

Purse seine fisheries – Observers are placed on large purse seiners fishing in the eastern tropical Pacific by the inter-American Tuna Commission (IATTC). Coverage is 100% of large purse seines. Data have been collected since 1989 and include catch and effort by

set and 1-minute square, species composition, by-catch (marine mammals, turtles and other fish) and discards. Data on discards are collected and interactions with marine mammals documented. Observers also measure the catch for length.

Observers are also placed on U.S. purse seiners operating in the central-western Pacific under the South Pacific Regional tuna Treaty by the Forum Fisheries Agency in Honiara, Solomon Islands. Data have been collected since 1989 and include catch and effort by set and 1-minute square, species composition, by-catch (marine mammals, turtles and other fish) and discards. Observers also collect size measurements of the targeted catch and monitor adherence to Treaty requirements.

Troll fisheries – Observers have been placed on troll vessels operating in the North Pacific on an opportunistic basis since 1990. Coverage has been less than 1%. Observers collect catch and effort by day and 1 minute square, document by-catch, and measure albacore for fork length. A more formal observer program is slated to start in 2004 and last for 2 years.

Gillnet Fisheries - Observers have been placed on drift gillnet vessels operating in coastal waters of California since 1990 by the California Department of Fish and Game and NMFS. Coverage is currently 23%. Observers collect catch and effort by set and 1 minute square. Observers also record interactions with marine mammals, turtles and birds; measure catches of conversion from alternate lengths to total and fork lengths, and conduct other special biological sampling.