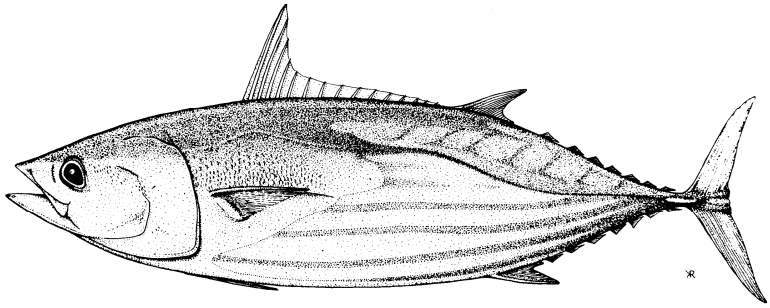
FOURTH PHILIPPINES/WCPFC ANNUAL TUNA FISHERIES CATCH ESTIMATES REVIEW WORKSHOP

16-17 May 2011
Eurotel Hotel Conference Room
Manila, Philippines



Western and Central Pacific Fisheries Commission
Pohnpei, Federated States of Micronesia
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Contents

1. INTRODUCTION

The Western and Central Pacific Fisheries Commission (WCPFC) has been involved in supporting tuna fishery data collection in the Philippines since 2006, initially through the Indonesia and Philippines Data Collection Project (IPDCP) and more recently through the ***West Pacific East Asia Oceanic Fisheries Management (WPEA OFM)*** project (funded by the Global Environment Facility - GEF), which began in 2010 (see http://www.wcpfc.int/doc/2009/wpea-ofm-project-document). The activities to be carried out under the WPEA project contribute towards the following objective:

"*To strengthen national capacities and international cooperation on priority transboundary concerns relating to the conservation and management of highly migratory fish stocks in the west Pacific Ocean and east Asia (Indonesia, Philippines and Vietnam)*"

The WPEA OFM project will cover, *inter alia*, the following key areas

(i) strengthen national capacities in fishery monitoring and assessment,
(ii) improve knowledge of oceanic fish stocks and reduce uncertainties in stock assessments,
(iii) strengthen national capacities in oceanic fishery management, with participant countries contributing to the management of shared migratory fish stocks,
(iv) strengthen national laws, policies and institutions, to implement applicable global and regional instruments.

The provision of annual tuna catch estimates is an important reporting obligation for member and cooperating non-member countries (CCMs) of the Western and Central Pacific Fisheries Commission (WCPFC). The official annual oceanic tuna catch estimates produced in the Philippines in the past by the Bureau of Agricultural Statistics (BAS) have been incomplete, in particular, they have not provided a breakdown of the oceanic tuna species (skipjack, yellowfin and bigeye tuna) catch BY GEAR, which is a fundamental requirement for the work of WCPFC, and consistent with reporting obligations of other Tuna Regional Fisheries Management Organisations (RFMOs) throughout the world. The Philippines domestic fisheries are widespread, diverse and numerous, and the logistics for undertaking data collection to obtain representative indications for use in WCPFC scientific work presents a challenging task.

Significant progress was made with the revision of annual catch estimates in previous Philippines-WCPFC Annual Tuna Catch Estimates Review Meetings, held in 2009 and 2010. These meetings resolved several problems with the previous annual catch estimates and the main outcomes of these workshops are agreement on improved annual catch estimates by gear and species.

In order to continue the work in resolving problems with the Philippines annual catch estimates, a two-day review workshop was convened in May 2011, and was attended by important stakeholders with knowledge and information on the tuna fisheries in the Philippines (Government, Industry and NGO representatives with an interest in the fishery). A summary of the discussions and outcomes of this workshop is presented in this report.

Atty. Benjamin FS Tabios, Jr., Assistant Director for Administrative Services, BFAR and Mr Noel Barut, Interim Deputy Executive Director, NFRDI (National Fisheries Research and Development Institute) co-chaired the workshop, and Ms Eunice Gasmin and Mr Peter Williams covered the rapporteuring duties.

Atty. Tabios provided an opening address highlighting the importance of this workshop to produce annual catch estimates that satisfies one of the most important requirements and reporting obligations as a member

of the WCPFC. He noted the diverse work backgrounds of the participants but that this level of participation was necessary to achieve the goal of producing annual catch estimates for the very complex Philippines tuna fisheries.

2. REVIEW OF ANNUAL OCEANIC TUNA CATCH ESTIMATES

This main focus of the workshop was the review of Annual Catch estimates for the domestic Philippines fisheries for each GEAR TYPE. The following sections briefly cover the key points from each presentation and subsequent discussion, noting that more detailed information is available in each presentation (see APPENDIX 3 for a list of presentations) and the tables of agreed Annual Catch Estimates (see APPENDIX 5).

2.1 Review of progress of recommendations from the Third Workshop

Mr. Barut presented each of the recommendations from the Third Workshop and asked the respective participants responsible to provide an update on any progress since November 2011. The following provides a summary of progress and discussions on each of the 3rd Workshop recommendations to date.

1. (a) Logsheets for 2008 and 2009 continue to be provided over the past six months and coverage for 2009 could be as high as 80%, which was very encouraging. However, provision of logsheets for 2010 was low at this stage, but it was noted that logsheets are usually provided (attached) to the catch certification documentation so potentially the data are available. BFAR would follow-up with the collection of 2010 logsheets.
   (b) The data fields on the EU certification documentation do not cover the requirements for provision of operational data to the WCPFC, only the catch logsheets cover the required fields. Instead, EU certification documentation are essentially documentation of the total trip landings. It was noted that ALL landings need to be covered by the EI certification documentation since it is not known at the point of landing whether the catch will end up being exported, either directly or after value-adding (e.g. canning, loining).
   (c) Further work is required in this area.
   (d) BFAR visits GSC on a regular basis, but has been constrained from undertaking visits on a quarterly basis.

2. This workshop has been convened as recommended and the next workshop will be held in May 2012.

3. An updated vessel list had been produced by BFAR and a presentation was provided at this workshop showing other variables that could be used to distinguish “baby” purse seine and larger purse seine vessels. It was also noted that WCPFC/SPC had begun work on separating out these two categories of vessel in the data used for stock assessment and more information would be provided in the lead-up to this year’s WCPFC Scientific Committee meeting (August 2011).

4. WCPFC/SPC is proceeding with the separation of the Philippines and Indonesian fishery data in the stock assessments, as per a decision made in the WCPFC/SPC Pre-Assessment workshop, held in New Caledonia in April 2011. BFAR/NFRDI also reported that a genetic study was being conducted and preliminary results would be available soon.

5. The annual catch estimates by gear and species determined from the Philippines Annual Catch Estimates Workshops will be included in the Philippines Annual Report to the WCPFC, Part 1 to be prepared for this year' WCPFC Scientific Committee meeting.

6. Under this action item, it was noted that BAS had already prepared and submitted a proposal to WCPFC but funds had yet to be identified at this stage. The BFAR Regional offices make an attempt to estimate tuna catches of landing sites that they do not cover NSAP sites they cover and these data are presented at the annual NSAP tuna data review workshop, conducted just before the annual catch estimates workshop. The NSAP tuna data review workshop produces species composition estimates which are then used in the annual catch estimates workshop. There was some concern expressed over the need to ensure the long-term sustainability of projects such as the NSAP for providing fundamental data for the Philippines tuna fisheries. While NSAP data collection was expanded during 2010, it was unsure whether the necessary coverage could be maintained. A proposed ADB Climate Change project could potentially be the source of future funding of data collection in the Philippines tuna fishery, noting that the SEAPODYM work includes a climate change component and is seeking to improve the resolution of tuna fishery data to be able to provide more accurate forecasts.

7. The outcomes of the Third and Fourth Philippines/WCPFC Annual Catch estimates workshop (November 2010 and May 2011) will be summarised and presented in the SC7 Data Gaps paper. The reports of these workshops will be posted on the WCPFC web site. It was noted that BFAR/NFRDI has approached the PNG National Fisheries Authority (NFA) to provide them with the logsheets for the Philippines-flagged fleet based in PNG so that the catch estimates can be included in the WCPFC Annual Report Part 1. Clarification was also made that the charter and joint-venture Philippines flagged vessels based in PNG and Indonesia should **not** be included in the Philippines catch estimates (these are included in the coastal states fleet estimates).

2.2 Review of WCPFC Reporting obligations and current issues with Philippines annual catch estimates

The WCPFC representative provided an introductory presentation on the WCPFC requirements for scientific data and the current issues with the Philippines annual catch estimates, covering the following areas:

- Brief overview of WCPO fisheries by gear type
- Why we collect data from tuna fisheries including reasons why data collection, research and management must be conducted at the regional level
- The WCPFC member country data-reporting obligations (refer to http://www.wcpfc.int/doc/data-01/scientific-data-be-provided-commission-revised-wcpfc4-wcpfc6)
- A description of Annual catch estimates and why they are fundamental to the work of the WCPFC and member countries
- Current issues with Philippines domestic tuna data

The presentation concluded with a proposal for how this workshop would proceed in determining annual catch estimates, with the presentation of the final summarized 2009 catch estimates by GEAR, with notes and reconciliation to BAS estimates as the final slide and the objective (2010) for this workshop. The ensuing discussion, it was noted that the issues of the 2009 hook-and-line estimate (70,000t.) was considered too high by some participants and that further review was necessary. However, without any available information, it was difficult to validate or change this estimate, one way or another. It was agreed to defer further discussion until the specific session looking at 2010 hook-and-line estimates.

2.3 Overview of information used to prepare Annual tuna catch estimates in the Philippines

Mrs. Cynthia Valesteros from the Bureau of Agricultural Statistics (BAS) gave a brief presentation of the official Philippines tuna catch estimates for recent years. Total catch for 2010 showed a 5.5% decline (23,000 t.) over the total catch for 2009, with reductions in the skipjack and yellowfin catches but bigeye catch more than doubled (from 5,735t. to 11,645 t.). Significant catch estimates of bigeye tuna come from Regions 8, 9 and ARMM and the workshop noted that perhaps further information on the large catch estimates from these areas would be useful for further review. It was noted that the foreign-flagged catch (purse seine and longline) is included in the BAS catch estimates, so they need to be footnoted so that the WCPFC requirements for annual catch estimates could be satisfied.

Industry noted that there was a 30-40% decline in the catch from the industrial fleets in 2010 due to the high seas closure (which in the past has accounted for up to 50,000-70,000 t. per year), a reduction in catch rates and issues related to higher operating costs, particularly the higher cost of fuel. This resulted in a noted decline in the number of active vessels. The workshop noted the decline (5.5%) in the BAS estimates was not as high as that described by the industry (30-40%).

Mr Barut provided an overview of data compiled by BFAR that are used in the preparation of Annual tuna catch estimates in the Philippines. The BFAR National Stock Assessment Programme (NSAP) covers the port sampling of key landing sites throughout the Philippines. A summary of species catch composition by gear for 2010 was presented, showing that purse seine, ringnet, hook-and-line and handline gears account for the majority of the oceanic tuna catch, respectively.

BFAR also collects cannery data (since 2008) comprising the catch of foreign and domestic purse seine and domestic ring-net vessels. The 2010 cannery data have been provided for all canneries although one cannery (SEATRADE) provided receipts for only one month so a raised estimate was provided. The cannery data are broken down by foreign flag receipts (47%) and Philippine-flagged receipts (53%). The breakdown of the 2010 catch by species for the Philippine-flagged cannery receipts was SKJ (84%), YFT (13%) and BET (3%) which is similar to the 2009 cannery receipts. BFAR was asked to re-validate the cannery receipts data using other sources of information, where available.

Purse seine logsheet data have also been collected from the domestically-based fleet since 2008. The coverage of logsheet data received and processed for 2010 was currently very low so estimates from this source of data are not available at this stage. The catch by area from the logsheets varies by year and depends on the coverage of vessel providing the data and is probably not representative of actual fishing (particularly since it appears many “baby” purse seine vessels do not provide logsheets). It was noted that 2010 logsheets only show activity within the Philippines EEZ so far since the WCPFC high seas closure has limited the areas that these vessels can fish.

PFDA (GSC) provided a presentation on the landings monitoring of the GSC markets. GSC Market 1 covers the handline landings and in 2010 totaled just over 7,000 t for all species. This level was a slight increase on the landings in 2009 (7,000 t.). GSC Market 2 caters for the landings of Ringnet vessels and small-scale craft delivering fresh fish with SKJ comprising 61% of the landings (~ 19,500 t in 2010) of a variety of tuna and small pelagic species; the total catch unloaded during 2010 was the highest on record (32,109t.). Market 3 mostly covers the ringnet gear and in 2010 landings totaled about 12,400 t (81% skipjack tuna) which was the lowest for more than 10 years. GSC Wharves 1 and 2 serve the large purse-seine unloadings and a delivery point to the GSC canneries; GSC Wharf 1 services the foreign purse seine fleets and accounts for 51% of the total GSC landings (excluding private landing sites). The GSC Wharf 2 services the “manila-based’ fishing company vessels providing to the GS canneries and accounted for 14% of the total GSC unloaded catch in 2010. The total

catch landed to the GSC wharves in 2010 was similar to 2009 levels (which was 70,000 t. and 20,000 t respectively). About 30% of the total landed catch at Markets 2 and 3 are destined for the canneries (70% of the catch is for local consumption). The catch unloaded to wharves 1 and 2 destined for the canneries are accounted for in the cannery receipt data collected by BFAR. The workshop noted that a breakdown of the landed catch by gear (purse seine and ringnet) would be very useful and a recommendation for PFDA to provide this breakdown in future workshops was formulated. There was no information from the private landing sites in GSC but the workshop noted that the domestic and foreign-fleet landings to these sites are provided to BAS and included in their estimates for Region 12. It was also noted that these landings would be accounted for in the cannery receipt data.

PFDA (Davao) provided a presentation on the foreign longine landings monitoring at the Davao fish port. Taiwanese and more recently Japanese longline vessels land their catches at Davao, which is the only port in the Philippines authorized to cater for foreign-longline fleet landings. The total longline catch unloaded in 2010 (3,514 t.), which was nearly 600t. more than in 2009.

2.4 Review of Philippines domestic fishery tuna catch estimates by Gear

The Workshop then reviewed each Philippines tuna fishery, one gear at a time, in an attempt to produce agreed catch estimates for 2010. The workshop considered the data/information provided in the previous presentations and any accompanying information provided by participants. The outcome of this process was the production of tables of provisional catch estimates by gear, with accompanying notes to explain the decisions made in regards to the estimation process and sources of information (see Appendix 5). Participants noted that the reliability of the estimates ranged from representative (for the purse seine fishery) to very rough ball-park estimates (for the hook-and-line fishery), which was essentially related to the availability of data. The workshop acknowledged that there was considerable work yet to be done and that it would be useful to document the process (i.e. step-by-step) and information required from each source so that the necessary intercessional work can be undertaken by all stakeholders responsible for providing information in the lead-up to future workshops (see Recommendations, APPENDIX 4). The establishment of the process was considered equally as important as the outcome in producing annual catch estimates at this stage.

The following sections contain the key points of the discussions and the outcomes for each gear type.

2.4.1. Purse seine

There are several key sources of data available for the purse seine fishery but none cover the catches completely. The Second Workshop (May 2010) noted that the Philippines has an obligation to report the catches of their purse-seine fleets active throughout the WCPFC Convention Area, including those vessels based in Papua New Guinea, which has proven to be difficult in the past. Since estimates for the Philippines fleet based in Papua New Guinea are compiled by the PNG National Fisheries Authority, catches from this sub-component of the Philippines purse seine fleet active in the PNG waters must be separated out from the catches of the other Philippine purse seine vessels fishing based in the Philippines to avoid double-counting. It was acknowledged that without a master vessel list which indicated vessel activity each year and where the vessel was based, it would be difficult to reconcile which sub-fleet a vessel belonged to.

While information from the purse seine fishery is probably the most complete of all Philippines fisheries, the workshop spent the most time on this gear reviewing the available information to determine annual catch estimates. The methodology for determining overall domestically-based purse seine vessel catch is similar to the Second Workshop (May 2010), using the following basic steps:

- Use the total cannery receipts for the domestically-based vessels only (i.e. exclude foreign-flagged vessel receipts and PH-flagged catches transshipped in foreign countries)
- Add the component of the catch landed at GSC markets 2 and 3 that is destined to the local market (considered to be 70% of the total tuna landed).
- Add the purse seine catch estimated from other regions determined by the NSAP Data Review Workshop

The initial 2010 catch estimate for purse seine determined from this process was considered to be too low (i.e. a 52% decline on 2009 estimate) and beyond the industry-estimated decline of around 30-40% (see Section 2.3 above). Further investigation was undertaken and an independent report from the Philippines Cannery associations indicated that there was only a 7% decline on cannery production in 2010, so the cannery estimates were adjusted upwards accordingly to produce the new estimate (93,760 t.) which was a 36% decline over 2009 catch estimates and more consistent with the industry's qualitative estimate of a 30-40% decline. Further evidence of the decline in available tuna product over the past year is that the GSC cold storage facilities are close to empty for the first time in a long while. The workshop recommended that BFAR consider a validation of the cannery receipt information.

In any event, the workshop agreed to consider the information at hand over the 1-2 weeks following the workshop and confirm this estimate one way or another.

An attempt to provide separate catch estimates for the traditional "baby" purse seine vessels and the larger purse seine vessels was not possible in the given time but will be attempted by WCPFC/SPC and reported next year.

2.4.2. Ringnet

As in the Second Workshop (May 2010), some of the issues for the purse-seine fishery (e.g. sources of data and incomplete coverage) were relevant to the ringnet fishery. Ensuring that there wasn't double-counting between sources of data and having a good indication of the vessel activity (numbers and whether they were active) were important inputs to the annual catch estimate process. The 2009 catch estimate provided in May 2010 was provided by industry, but in this workshop, there were sufficient sources of information available to compile a more reliable estimate (which was consistent with the 2009 catch estimate) for the ringnet fishery, which was viewed by the workshop as encouraging.

2.4.3. Large-fish Handline

The handline fishery catches in GSC are well covered by PFDA and NSAP monitoring, but there are other important landings sites elsewhere in the Philippines with significant catches, for example, Region 4B (Palawan) and Region 5 (Bicol) and an emerging fishery in Mindoro; there have been reports that the catches of large tuna in Mindoro could be as high as 7,000 t. but these landing centers were currently not monitored at all, so this is a priority area to investigate. BFAR/NFRDI indicated that NSAP sampling would hopefully cover this area in the coming year. The EU catch documentation scheme provides another source of information to verify catches obtained from other types of data collection, but these data have yet to be compiled. There was some discussion on potential large-fish handline catches landed in Davao but there were no landings data available to determine the extent of these catches.

The 2010 estimate from this fishery (11,729 t.), agreed by the workshop participants, was a 43% increase on the 2009 estimate

2.4.4. Hook-and-line

The catch estimates from the comprehensive, small-scale "hook-and-line" fishery in the Philippines is the most problematic. There are potentially tens of thousands of vessels in this fishery spread throughout the Philippines and the task of monitoring this fishery to get representative estimates is currently impossible. During the Second Annual Catch estimates workshop (May 2010), participants considered using the "Delphi" method by taking the consensus view of what the total tuna catch for 2009 might be according to the gathered experts, and then use the NSAP species composition data to breakdown the total tuna catch into estimates of skipjack, yellowfin and bigeye tuna (the results are contained in Table 7 of Appendix 5. The workshop acknowledged that catch estimates in previous years were probably too high and would therefore need revising.

In the absence of any further information to determine the annual catch estimates from the hook-and-line fishery for 2010, the 2009 estimate was carried over. Industry representatives felt that this estimate was too high, but other participants indicated the estimated number of vessels that could account for such a catch is realistic. For example, if the long-term average CPUE according to NSAP data (40kgs of TUNA/day) is considered, and if active vessels across the nation might, arbitrarily, fish FOR TUNA an average of 70 days per year, then this estimate (70,000 t.) equates to 25,000 active vessels FISHING FOR TUNA, which according to vessel inventories, is possible.

In any event, it was agreed that this fishery would need closer attention in the future and a set of recommendations were formulated to look at developing a proposal for future monitoring of this fishery and further potential studies that could provide more background on the potential volume of tuna catch from this fishery.

2.4.5. Other small-scale gears

An attempt to estimate the catches of tuna from the other small scale gears was attempted during a workshop on NSAP data in the previous week and these estimates were accepted as the best available estimates (see Appendix 5).

2.5 Final review of estimates and Reconciliation with the BAS estimates

Table 11 in Appendix 5 provides a breakdown of the catch by gear according to the process undertaken in this workshop with the current 2010 BAS estimates. The notes accompanying this table show that, after removing the foreign-flagged catch landed in the Philippines from the BAS estimate, the difference was positive 119,000 t. The meeting noted that the BAS estimates by SPECIES reconcile very well with the estimates from the workshop for Region 12, but the shortfall in catch compared to overall BAS estimate is understood to be due to the difficulties in estimating the diverse municipal fisheries and could be explained as possible bias in the probability surveys due to very low coverage. Unfortunately, there was no time to discuss where the discrepancies might lie, but the workshop participants noted that while the industrial fleet estimates are now becoming more reliable there is still a major problem in determining and validating the estimates of the small-scale municipal fisheries.

A recommendation was formulated to ensure that the work involved in compiling information and the detailed steps involved in producing estimates are documented and made available to all stakeholders so they are aware of their responsibilities in the lead-up to next year's workshop (see Recommendations, APPENDIX 4).

3. OTHER TYPES OF FISHERY DATA

The WCPFC noted the importance of standardized data collection for regional tuna stock assessments and that logsheet and observer data are fundamental types of data used by WCPFC scientists. BFAR provided two presentations on the progress in implementing these two data collection systems.

3.1 Progress with Logbook implementation

An earlier BFAR/NFRDI presentation briefly described the current status in the provision of Logsheet data from the domestic Philippines purse seine fleet. Purse-seine logsheet coverage for 2008 was now 127 vessels (~70-80%), for 2009 to date, 95 vessels (~ 70-80%) and for 2010 to date, 28 vessels have provided logsheets, which is a significant improvement on not having any logsheet data provided before 2007. The provision of logsheets for 2010 was low at this stage, but it was noted that logsheets are usually provided (attached) to the EU catch certification documentation so it was considered that 2010 logsheet data should be high. BFAR would follow-up with the collection of 2010 logsheets.

With logsheet coverage clearly not complete, the challenge was to obtain enough information to determine the actual vessel activity in the purse-seine fleet in order to raise the logsheet data to obtain representative estimates of catch and effort. It was noted that improving the coverage of logsheet data was an ongoing process that would need several approaches (e.g. review of monthly vessel activity against a vessel master list).

BFAR/NFRDI has been successfully using the TUFMAN system now for more than one year. This system allows BFAR/NFRDI to manage the logsheet data through data entry, data quality control and produce reports, maps and graphs, but also facilitate the preparation of the annual data submission to the WCPFC. WCPFC/SPC will continue to support this system as required.

3.2 Progress with the National Observer Programme and MCS data

The Philippines national observer programme has been established now for over the past three years and BFAR have already conducted 4 batches of training for the Fisheries Observer Programme and currently have a total of 106 observers. During 2010, a total of 48 observers were deployed covering 117 fishing vessels (purse seine and ring net) with a total catch of 3,888 MT, operating in the waters of Celebes Sea, Sulu Sea, South China Sea and the Eastern Pacific Seaboard (Pacific Ocean east of Mindanao). Data have been processed using the TUBS databse system (installed by WCPFC/SPC in February 2011) and currently covers 90 observer trips on vessels that conducted a total of 411 sets having a total catch of 2,962 MT. The fifth observer training course has been conducted since the establishment of the high seas area and FAD Closure.

The presentation provide a graphical description of the sampling protocol which involves the 'scooping' of at least one 40 kg tub of fish per brail. All fish in each 'tub' is subsequently identified to the species level and measured for length. It was noted that most of the purse seine vessels observed were baby-purse seine and that distinction with the larger purse seine vessels would be necessary in view of the stock assessment requirements that will use the size data collected by observers. Due to budget constraints, a total of 2 trips /

month will be the target in Region 12 this year. It was noted that observer size data have much better spatial resolution than the port sampling (NSAP) data and should be reviewed to identify any differences in the size and species composition of the catch over broad area (i.e. archipelagic versus 'oceanic' waters).

The Philippines Fisheries Monitoring Center (FMC) has been established at the BFAR MCS Station and Fishing Technology Laboratory in Navotas with the installed of the following THEMIS VMS Software (also includes WEATHER/OCEANO DATA, SATELLITE IMAGERY, VESSEL TRACKING). This center is currently tracking 76 VTAF, 7 Vessels fishing in IOTC area, 4 MCS Patrol Vessels and the M/V DA-BFAR. The FMC has been given access with "view only" privilege of of the WCPFC VMS data. The FMC plans the development of the Vessel Database Management System and other database including an IUUF component. The FMC is currently conducting a pilot project with the installation of 5 units THORIUM (transponder) on General Santos and Zamboanga-based Fishing Vessels.

4. RECOMMENDATIONS AND WORKSHOP CLOSE

The workshop participants reviewed and agreed on a list of nine recommendations based on discussions made during the two days (see **APPENDIX 4**). All participants agreed to review and attempt to action the recommendations relevant to their work in the tuna fisheries over the coming months.

The process of estimating annual catch estimates in the Philippines has further evolved since the first workshop in 2008, but despite encouraging signs and cooperation and commitment from all sections, there remains significant work to undertake. The WCPFC/WPEA is committed to holding this type of workshop on an annual basis in the short term to ensure the annual catch estimates for the Philippines are reliable.

The representatives from BFAR and the WCPFC provided brief closing remarks, thanking participants for their attendance and fruitful discussion. The meeting was then closed.

APPENDIX 1 – AGENDA

FOURTH PHILIPPINES/WCPFC ANNUAL TUNA FISHERIES CATCH ESTIMATES REVIEW WORKSHOP

16-17 May 2011
Eurotel Conference Room
Quezon City, Philippines

Agenda

1. OPENING

2. APPOINTMENT OF CHAIRPERSON AND RAPPORTEURS

3. ADOPTION OF THE AGENDA

4. REVIEW OF PROGRESS ON THIRD WORKSHOP RECOMMENDATIONS

5. REVIEW OF ANNUAL OCEANIC TUNA CATCH ESTIMATES

5.1 WCPFC Reporting obligations & current issues with the Philippines annual catch estimates
5.2. Update on the process to produce annual oceanic tuna catch estimates in the Philippines
5.3. Review of Philippines domestic fishery tuna Catch Estimates by Gear
  5.3.1 Purse seine fishery
  5.3.2 Ring-net fishery
  5.3.3 Large-tuna handline fishery
  5.3.4 Small-fish hook-and-line fishery
  5.3.5 Other Small-scale fisheries
5.4. Final review of estimates and Reconciliation with BAS estimates

6. OTHER TYPES OF FISHERY DATA

6.1. Progress with Logbook implementation
6.2. Progress with National Observer Programme

7. RECOMMENDATIONS AND WORKSHOP CLOSE

APPENDIX 2 – LIST OF PARTICIPANTS

FOURTH PHILIPPINES/WCPFC ANNUAL TUNA FISHERIES CATCH ESTIMATES REVIEW WORKSHOP

16-17 May 2011
Eurotel Conference Room
Quezon City, Philippines

List of Participants

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Dale Sacay	Frabelle Fishing Corporation
Reggie Cabana	Frabelle Fishing Corporation
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Romy Espeleta	RBL Fishing Corporation
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Fatma Idris	Regional Director, BFAR 11
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Eunice Gasmin	NFRDI
April Pagnatac	NFRDI
May Matucad	NFRDI
Peter Williams	WCPFC/SPC

APPENDIX 3 – List of Presentations / Background information

- WCPFC data requirements and current issues with the Philippines catch data
- A presentation showing the need to separate estimates for 'baby' purse seine and large purse seine and potential attributes to distinguish between the two categories.
- Summary of NSAP data collected in 2010
- Summary of BAS estimates for 2000-2010
- Summary of information collected at General Santos City Fish port by PFDA
- Summary of information collected at Davao Fish port by PFDA
- The Philippines National Observer Programme and MCS Center
- Presentations with background data used to produce 2010 Philippines annual catch estimates (one presentation per gear)
- Tables of agreed 2010 Philippines Annual Catch Estimates (see Appendix 5)

APPENDIX 4 – Workshop recommendations

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RECOMMENDATIONS

1. The workshop acknowledged that the 2010 catch estimates by gear and species are very provisional at this stage and that urgent work is required to resolve some of the potential issues that remain in these estimates. The following were identified as critical tasks, the first task to complete within the month after the workshop finishes to formalize the estimates for the Philippines domestic fleets:

    a. The provisional 2010 estimate for the purse seine gear was considered to be too low, so validation of the cannery receipts data is required. For example, 2010 production figures for each cannery should be used to validate the cannery receipts (**BFAR/NFRDI and Industry**). Also, 2010 logsheet data should be submitted and processed as soon as possible. **(This issue was subsequently resolved before the report was finalized and the updated purse seine estimates appear in this report).**
    b. For future workshops, **PFDA** attempt to separate and present the total tuna catch landings broken down by gear (e.g. purse seine and ringnet) and species.
    c. BFAR observer data should be used in the future to validate catch estimates and species composition **(BFAR).**

2. The workshop noted the considerable effort needed to determine accurate tuna catch estimates from the Municipal fisheries (particularly the **"hook-and-line"** gear), which account for a significant proportion of the total Philippines domestic catch, but continue to be a cause for concern.

    a. It was recommended that **BAS, BFAR and other interested parties** develop a proposal for determining the methodology and resources required to conduct targeted censuses of municipal landing sites to determine accurate tuna catch levels by GEAR and SPECIES.
    b. **BFAR** will continue to improve tuna catch estimates from the Municipal fisheries by considering additional information from non-NSAP monitored sites which will be part of future NSAP Review meetings (e.g. May 2012).
    c. **Industry** offered to assist **BFAR** prepare a proposal to request more resources for data collection through an increase in the annual budget to ensure that annual catch estimates submitted to the WCPFC are more reliable.
    d. **BFAR/NFRDI and WPCFC/SPC** consider a study of all Philippines regions that looks at environmental conditions (e.g. oceanography, bathymetry) of the waters restricted to municipal fisheries (with 15km) to determine the likelihood that hook-and-line vessels at nearby landing sites would catch significant amounts of oceanic tuna species. (A similar study

has already been done in Palawan and is currently being validated with the establishment of NSAP sampling in areas outside of PPC).

3. **BFAR/NFRDI and WCPFC/SPC** will document, in detail, the steps involved and responsibilities in compiling and providing data to be used in the catch estimation process. This document should be distributed to all relevant stakeholders before the end of 2011 to prepare for the estimation of 2011 catches, with all stakeholders, (**BFAR, BAS, PFDA** and **Industry Associations/Representatives)** expected to provide presentations of their estimates at future workshops. This document should be reviewed and updated each year to take into account any improvements in the process.

4. The workshop acknowledged the significant progress in the compilation and provision of cannery receipt and logsheet data from the purse seine fishery over the past 2-3 years.
    a. **Industry** (fishing companies and canneries) were strongly encouraged to continue improving the coverage and provision of these data to BFAR, including the continued search and provision of historical logsheet data, which is viewed as a very positive initiative by the WCPFC.
    b. The workshop acknowledged the requirement for fishing companies/vessels to provide both Catch Documentation forms and logsheets, and recommended **BFAR** to look into streamlining the process of submission wherever possible. **BFAR** should clearly explain the two distinct purposes of the EU Catch documentation form and the logsheet.
    c. **BFAR, WCPFC/SPC and Industry** were encouraged to investigate how to raise awareness in the fishing industry with respect to the provision of logsheets. Fishing stakeholders should be made aware of the importance that this information plays in ensuring the sustainable exploitation of the tuna instead of only highlighting the need for provision for compliance purposes. For example, translation of the WCPFC requirements with respect to data.
    d. The Workshop recommended **BFAR/NFRDI** to conduct quarterly visits to GSC to conduct consultative meetings and collect logsheets from the purse seine fishery.

5. The workshop served to inform participants of the member-country obligations for the provision of scientific data to the WCPFC and provided a mechanism for reviewing and agreeing on estimates in the future. It was therefore recommended that this workshop continue on (at least) an annual basis in the short-term until some of the more crucial problems with annual catch estimates have been resolved. **The fifth Annual Catch estimates Workshop will therefore be scheduled for May 2012.**

6. The workshop agreed that it will be necessary to separate the tuna catch/effort and size data for (i) large purse-seine vessels and (ii) the "Baby" Purse-seine/ Ringnet vessels (targeting oceanic tuna species) due to the clear differences in catch rates and the size selectivity by broad fishing area, and the effect this would have on stock assessments. **WCPFC/SPC and BFAR.**

7. The annual catch estimates by gear and species determined from the Philippines Annual Catch Estimates Workshops should also be included as an ANNEX in the Philippines Annual Report to the WCPFC, Part 1. For this year, the Part 1 report should be prepared prior to the WCPFC SC7 meeting to be held in August 2011.

8. The **WCPFC/SPC** will take note of the outcomes of this workshop and include relevant text on the discussions and recommendations in papers prepared on data provisions for the upcoming WCPFC Scientific Committee meeting to be held in August 2011.

9. Invitations to future workshops will be extended to all tuna fishery-related Industry Associations/Representatives from all regions (**BFAR**).

APPENDIX 5 –Provisional 2010 Annual catch estimates tables

Table 1. A comparison of 2010 PURSE-SEINE catch estimates from different sources

2010 Philippine PURSE SEINE tuna catch estimates

FLEET	Source of estimate	SKJ		YFT		BET		TOTAL
		MT	%	MT	%	MT	%	MT
PHILIPPINES DOMESTICALLY-BASED CATEGORY #1	Cannery receipts + GSC wet markets + NSAP estimates (excl. GSC)	77,532	83%	14,061	15%	2,166	2.3%	93,760
	Cannery receipts	65,215	83%	10,987	14%	1,980	3%	78,182
	GSC M2/M3 --> local market							*9,578*
	NSAP data (outside GSC)							*6,000*
	Logsheets (Raised)							
	NSAP data (all regions)	32,734	79%	8,170	20%	495	1%	41,398
PHILIPPINE "PIC-BASED" CATEGORY #2	Logsheets to PNG/NFA							
FOREIGN CATEGORY #3 and #4	Cannery receipts - Foreign flag	61,102	84%	10,243	14%	1,139	2%	72,485

Notes

1 The best estimate for the Philippine domestically-based purse seine fleet in 2010, taking into account all sources of data, is 93,760 mt. This estimate has been determined in the following manner:

-- Cannery receipts for the domestically-based purse seine fleet were 78,182 t. (Philippines cannery production for 2010 was reported as a 7% decline on 2009).
-- The total TUNA catch from market wharves 2 and 3 was determined by taking the total catch and applying the species composition for SKJ, YFT and BET. The total tuna catch from these wharves was estimated to be (20,550t. + 10,546t. = 31,096t.)
-- GSC market wharves 2 and 3 receive purse seine catch of which some are destined for canneries and some for the local wet market. An estimated 30% of the total TUNA catch unloaded to market wharves 2 and 3 are destined for the canneries, so the balance (70% = 21,767 t.) represents that part of the PS and RN catch sold at the domestic markets from GSC Markets 2 and 3, according to PFDA data.
-- An estimated 44% of the catch from market wharves 2 and 3 is PURSE SEINE CATCH and an estimated 56% is RINGNET catch (according to NSAP data), so 44% of 21,767t (= 9,578t) represents the purse seine catch sold at the GSC wet markets.
-- An estimated 6,000 t. landed by purse seine vessels based in other regions (according to NSAP and non-NSAP landing sites) was added.

2 The species composition from the NSAP data collected during 2010 has been applied to the total estimated tuna catch destined to local markets for the GSC Markets 2 and 3 and NSAP data for regions outside of GSC.

3 The decline in purse seine catch from 2009 to 2010 (36%) is in line with the industry estimate of a reduction of about 30-40% in the fishery due to the high seas closure, lower catch rates and fewer vessels active in the fishery due to high costs related to fuel and other operating costs.

4 Further information is required from SEATRADE to verify they were operational during 2010 and confirm the overall totals for cannery receipts.

Table 2. Annual catch estimates for the Philippines domestically-based PURSE SEINE fleet (Category #1)

	SKJ		YFT		BET		TOTAL
Year	MT	%	MT	%	MT	%	MT
2000	69,409	71%	23,088	24%	5,513	6%	98,010
2001	65,920	72%	21,776	24%	3,423	4%	91,119
2002	83,355	82%	16,650	16%	1,105	1%	101,110
2003	99,013	77%	26,550	21%	2,436	2%	127,999
2004	99,502	76%	28,744	22%	3,193	2%	131,439
2005	91,372	68%	36,280	27%	6,719	5%	134,371
2006	97,724	66%	44,420	30%	5,923	4%	148,067
2007	128,178	75%	39,308	23%	3,418	2%	170,904
2008	146,527	75%	43,787	23%	3,762	2%	194,076
2009	123,736	84%	21,381	14%	2,663	2%	147,780
2010	77,532	83%	14,061	15%	2,166	2%	93,760

Table 3. A comparison of 2010 RINGNET catch estimates from different sources

2010 Philippine RINGNET tuna catch estimates							
	SKJ		YFT		BET		TOTAL
Source of estimate	MT	%	MT	%	MT	%	MT
Cannery receipts + GSC wet markets + NSAP estimates (excl. GSC)	26,417	83%	5,363	17%	218	0.7%	31,997
Cannery receipts	14,068	89%	1,655	11%	8	0%	15,731
GSC M2/M3 --> local market							*12,190*
NSAP data (outside GSC)							*4,077*
NSAP data	20,338	76%	6,106	23%	344	1%	26,789
Industry estimate							26,250

Notes

1 The best estimate for the Philippine RINGNET fleet in 2010, taking into account all sources of data, is 31,997 mt. This estimate has been determined in the following manner:

-- Cannery receipts for the domestically-based purse seine fleet were 15,731 t.
-- The total TUNA catch from market wharves 2 and 3 was determined by taking the total catch and applying the species composition for SKJ, YFT and BET. The total tuna catch from these wharves was estimated to be (20,550t. + 10,546t. = 31,096t.)
-- GSC market wharves 2 and 3 receive RINGNET catch of which some are destined for canneries and some for the local wet market. An estimated 30% of the total TUNA catch unloaded to market wharves 2 and 3 are destined for the canneries, so the balance (70% = 21,767 t.) represents that part of the PS and RN catch sold at the GSC wet markets (Markets 2 and 3), according to PFDA data.
-- An estimated 44% of the catch from market wharves 2 and 3 is PURSE SEINE CATCH and an estimated 56% is RINGNET catch (according to NSAP data), so 56% of 21,767t (= 12,190 t) represents the RINGNET catch sold at the GSC wet markets.
-- An estimated 4,077 t. landed by RINGNET vessels based in other regions (according to NSAP and non-NSAP landing sites) was added.

2 The species composition from the NSAP data collected during 2010 has been applied to the total estimated tuna catch destined to local markets for the GSC Markets 2 and 3 and NSAP data for regions outside of GSC.

3 The decline in RINGNET catch from 2009 to 2010 (15%) is less than the industry estimate of a reduction of about 30-40% in the fishery (due to the high seas closure, lower catch rates and fewer vessels active in the fishery due to high costs related to fuel and other operating costs), possibly since this fishery is based close to port and was less affected that the purse seine fishery.

4 Further information is required from SEATRADE to verify they were operational during 2010 and confirm the overall totals for cannery receipts.

Table 4. Annual catch estimates for the Philippines RINGNET fleet

	SKJ		YFT		BET		TOTAL
Year	MT	%	MT	%	MT	%	MT
2000	10,019	74%	3,148	23%	457	3%	13,624
2001	9,654	76%	2,727	22%	285	2%	12,666
2002	12,023	86%	1,995	14%	37	0%	14,055
2003	13,541	76%	3,866	22%	385	2%	17,792
2004	13,399	73%	4,560	25%	311	2%	18,270
2005	12,363	66%	5,979	32%	336	2%	18,678
2006	13,623	66%	6,175	30%	823	4%	20,621
2007	16,629	69%	6,652	28%	713	3%	23,994
2008	17,761	67%	8,421	32%	322	1%	26,504
2009	29,862	80%	7,347	20%	291	1%	37,500
2010	26,417	83%	5,363	17%	218	1%	31,997

Table 5. A comparison of 2010 HANDLINE catch estimates from different sources

2010 Philippine Large-tuna HANDLINE tuna catch estimates							
Source of estimate	SKJ		YFT		BET		TOTAL
	MT	%	MT	%	MT	%	MT
NSAP data	131	1%	11,314	96%	284	2%	11,729
PFDA							7,041

Notes

1 The best estimate for the large-tuna HANDLINE in 2010 was sourced from NSAP monitored sites (primarily GSC) but also considering those other sites with Handline fleets that are not monitored by NSAP where possible.

2 Large-tuna Handline catches are monitored by NSAP in GSC, Region 4B (Puerto Princessa), Region 5 and Region 8.

3 It was uncertain whether handline vessels landing in Davao, with their catch trucked to GSC, are covered in PFDA/NSAP monitoring. It was uncertain what extent this catch represented.

4 Catches of large tuna from Handline activities have been reported in Mindoro but are not included here. The extent of these catches is currently not known but could be as high as 4,000 t.

Table 6. Annual catch estimates for the Philippines HANDLINE fleet

	SKJ		YFT		BET		TOTAL
Year	MT	%	MT	%	MT	%	MT
2000	0	0%	9,454	95%	510	5%	9,964
2001	0	0%	8,914	96%	349	4%	9,263
2002	0	0%	9,943	97%	336	3%	10,279
2003	0	0%	12,540	96%	472	4%	13,012
2004	0	0%	13,099	98%	263	2%	13,362
2005	0	0%	12,990	95%	670	5%	13,660
2006	0	0%	14,498	96%	555	4%	15,053
2007	0	0%	16,853	97%	521	3%	17,374
2008	0	0%	15,712	96%	637	4%	16,349
2009	102	1%	7,768	95%	330	4%	8,200
2010	131	1%	11,314	96%	284	2%	11,729

Table 7. A comparison of 2010 HOOK-AND-LINE catch estimates from different sources

2010 Philippine HOOK-AND-LINE tuna catch estimates							
Source of estimate	SKJ		YFT		BET		TOTAL
	MT	%	MT	%	MT	%	MT
NSAP data	*25,200*	36%	*43,400*	62%	*1,400*	2%	70,000

Notes

1 The 2010 estimate for total tuna catch has been arbitrarily set at 70,000 t. based on the advice of key experts, acknowledging that while this fishery is widespread throughout the Philippines, the extent of tuna catch is not known. NSAP data for 2010 has been used to determine the species composition.

2 The catch estimates for this fishery present the most uncertaintity and will therefore need the most attention in the future.

3 If you consider the long-term average CPUE according to NSAP data is 40kgs of TUNA/day and that active vessels across the nation might, arbitrarily, fish FOR TUNA an average of 70 days per year, then this estimate (70,000 t.) equates to 25,000 active vessels FISHING FOR TUNA.

4 The relatively high % of BET in 2010 may need to be investigated further.

Table 8. Annual catch estimates for the Philippines HOOK-AND-LINE fleet

	SKJ		YFT		BET		TOTAL
Year	MT	%	MT	%	MT	%	MT
2000	28,887	39%	41,991	56%	3,951	5%	74,829
2001	27,005	39%	38,904	56%	3,659	5%	69,568
2002	27,516	36%	45,406	59%	4,274	6%	77,196
2003	34,527	35%	57,763	59%	5,436	6%	97,726
2004	35,830	36%	58,974	59%	5,548	6%	100,352
2005	48,217	47%	51,295	50%	3,078	3%	102,590
2006	53,132	47%	56,524	50%	3,391	3%	113,047
2007	61,327	47%	65,241	50%	3,914	3%	130,482
2008	61,327	47%	65,241	50%	3,914	3%	130,482
2009	23,899	34%	43,172	62%	2,929	4%	70,000
2010	25,200	36%	43,400	62%	1,400	2%	70,000

Table 9. A comparison of 2010 OTHER GEARS catch estimates from different sources

2010 Philippine OTHER GEARS tuna catch estimates								
GEAR	Source of estimate	SKJ		YFT		BET		TOTAL
		MT	%	MT	%	MT	%	MT
DRIFT GILLNET	NSAP data	374	85%	65	15%	1	0%	440
TROLL	NSAP data	1,040	75%	340	24%	15	1%	1,395
TUNA DRIFT LL	NSAP data	65	54%	55	46%	0	0%	120
MULTIPLE HOOK-AND-LINE	NSAP data	688	52%	1,039	48%	349	0%	2,076
OTHER GEARS TOTAL	NSAP data	2,167	52%	1,500	48%	365	0%	4,031

Notes

1 Estimate covers NSAP landing centres and an estimate from non-NSAP landing centers in some regions.

Table 10. Annual catch estimates for the Philippines OTHER GEARS

Year	SKJ		YFT		BET		TOTAL
	MT	%	MT	%	MT	%	MT
2000	575	28%	1,333	66%	125	6%	2,033
2001	538	28%	1,236	65%	117	6%	1,891
2002	538	26%	1,420	68%	140	7%	2,098
2003	668	25%	1,798	68%	190	7%	2,656
2004	704	26%	1,849	68%	174	6%	2,727
2005	836	30%	1,775	64%	167	6%	2,778
2006	922	30%	1,956	64%	184	6%	3,062
2007	1,064	30%	2,257	64%	213	6%	3,534
2008	1,110	12%	7,915	86%	210	2%	9,235
2009	1,355	50%	1,327	49%	15	1%	2,697
2010	2,167	52%	1,500	48%	365	0%	4,031

Notes

1 Estimate covers NSAP landing centres and an estimate from non-NSAP landing centers in

2 The high catch of yellowfin tuna in 2008 needs to be reviewed.

Table 11. Reconciliation of 2010 tuna catch estimates by gear with the 2010 BAS total tuna catch

Workshop Outcome			
Domestically-based Fleets	2010 total tuna catch		BAS total tuna estimate	
Purse seine	93,760		387,099	1
Ringnet	31,997		52,799	2
Handline	11,729		3,514	3
Hook-and-line	70,000			
Drift Gillnet	440			
Mult. Hook-and-line	2,076			
Troll	1,395			
Tuna Drift LL	120			
	211,517	5	330,786	
			119,270	4

Notes

1 BAS 2010 estimate of tuna catch: SKJ-228,178 t.; YFT-147,276 t.; BET-11,645 t. (59% : 38% : 3%)

2 BAS includes the landings of foreign flag purse seine and Phil. Flag based in PNG in their estimates, but these should be excluded.

3 BAS includes the landings of foreign-flag longline catch landed at Davao, but these should be excluded.

4 The BAS estimates by SPECIES reconcile very well with the estimates from the workshop for **Region 12**, but the shortfall in catch compared to overall BAS estimate is understood to be due to the difficulties in estimating the diverse municipal fisheres and could be explained as possible bias in the probability surveys due to very low coverage.

5 Estimate of catch by species: SKJ-131,448 t.; YFT-75,638 t.; BET-4,432 t. (62% : 36% : 2%)