
**FIRST MEETING
OF THE
TECHNICAL AND COMPLIANCE COMMITTEE
OF THE COMMISSION FOR THE CONSERVATION AND MANAGEMENT OF
HIGHLY MIGRATORY FISH STOCKS IN THE WESTERN AND CENTRAL
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**THE MONITORING, CONTROL AND SURVEILLANCE (MCS) COMPONENT
OF THE REGIONAL OBSERVER PROGRAM**

Prepared by the Secretariat

I. INTRODUCTION

1. The Resolution on Conservation and Management Measures adopted at the First Session of the Commission directs the Technical and Compliance Committee to consider the regional observer program as well as the VMS program as a matter of priority at its 2005 meeting (WCPFC/Comm.1/8). This paper reviews the requirements of the Convention, progress on these issues during the Preparatory Conference (PrepCon) process, and existing regional and national observer programs to provide the necessary background discussion regarding the scope and design of the Commission's regional observer program.

II. THE CONVENTION ON THE OBSERVER PROGRAM

2. Article 28 of the Convention requires a regional observer program that has the following characteristics:

- Organized in a flexible manner;
- May be undertaken on a contractual basis;
- Coordinated with existing regional, sub-regional and national observer programs to avoid duplication;
- Consists of independent and impartial observers authorized by the Secretariat; and
- Training and certification of observers will occur in accordance with uniform procedures.

3. The Convention further specifies that each Member of the Commission shall ensure that vessels flying its flag in the Convention Area, except for vessels that operate exclusively within waters under the national jurisdiction of the flag State, are prepared to accept an observer from the regional observer program, if required by the Commission.

4. The Convention requires that the Commission develop a regional observer program, but it does not stipulate that the Commission must run the program. Article 28(2) of the Convention provides the Commission with flexibility to contract operation of the regional observer program to an independent party or parties, as determined by the Commission.

III. PREPARATORY CONFERENCE OUTCOMES

5. Discussions that have already taken place during the Preparatory Conference within both Working Groups I and III are reviewed here for background information.

6. At the second session of the WCPFC Preparatory Conference, Working Group I (WG. I) identified certain administrative needs of the Commission, including the operation of the regional observer program (WCPFC/PrepCon/WP.3). Several approaches were discussed by WG.I and are reproduced here for convenience. The report noted the variety of approaches taken by regional fishery management organizations (RFMOs) and provided options drawn from other programs and the provisions of the Convention.

7. The Working Group I report examined four possible approaches:

- (a) *Member Observers on the vessels of other Members in accordance with Commission guidelines (Commission for the Conservation of Antarctic Living Marine Resources, CCAMLR, approach)*

The CCAMLR approach involves the development of a program that prescribes that Commission observers must be from a Member of the Commission other than the Member upon whose vessel the observer is operating.

Members of the Commission would ideally enter into bilateral agreements to provide for “international” observers on their vessels. The CCAMLR approach details the minimum requirements of the bilateral agreements that Member States enter into to govern the exchange of observers. This approach satisfies many of the requirements and details covered in Article 28 of the Convention. It also provides details on how costs will be recovered but allows the flexibility for Members to agree to alternative approaches to the apportionment and recovery of costs.

Advantages articulated include: no direct cost to Commission associated with the placement of the observers; the Commission or its Secretariat do not become involved in the arrangements between Members concerning provision and placement of observers; this option does not involve the Secretariat in the training, equipping and placement of observers.

One key disadvantage of this approach may be the reliance upon bilaterally agreed arrangements for the recovery of costs associated with the placement of observers.

Implementing the CCAMLR approach would require the Secretariat to take an active role with respect to the warehousing, management and analysis of the data collected by observers and in producing observer manuals and data sheets that are used in the program. The Secretariat may also have to play a role in facilitation of bi-lateral arrangements.

- (b) *Commission Observers (Inter-American Tropical Tuna Commission, IATTC, approach)*

The design of the On-Board Observer Program implemented by the IATTC is driven by requirements of the Agreement on the International Dolphin Conservation Program (IDCP) and as such has protected species and compliance focuses which may not be applicable to the Commission.

Each Party to the IDCP may also maintain its own national observer program; however, at least 50% of each party must be by IATTC observers.

Using an “IATTC approach”, the Commission employs and trains the observers in the program and places the observers as necessary on vessels fishing in the Convention Area.

This approach requires a more extensive organizational structure to support the training, coordination, and placement of observers and management needs of the program. The IATTC program employs approximately 135 observers that cover the 135 purse seine vessels involved in the scheme (the IATTC program is providing observer coverage to the International Dolphin Conservation Program, which requires 100% observer coverage on large purse seine vessels).

In the IATTC, a portion of observer program is funded from within the Commission’s budget (that is based upon Members’ assessed contributions) and the remainder by a levy charged to vessels requiring observer coverage. At present the latter fee is an annual fee of approximately US\$12.50 per cubic meter of fish well space (the program is limited to purse seine vessels). For a 1000 cubic meter vessel this equates to an annual fee of US\$12,500.

(c) Use of existing observer programs

An alternative to the Commission assuming all responsibilities and costs associated with the running of a major observer program is for the Commission to utilise existing regional or sub-regional programs.

There are two existing sub-regional observer programs operating within the Convention Area and which incorporate coverage on the High Seas and in various EEZ jurisdictions. The programs are associated with the Multilateral Treaty on Fisheries between the Governments of Certain Pacific Island Countries and the Government of the United States of America (South Pacific Tuna Treaty) and the Federated States of Micronesia (FSM) Arrangement, both of which are administered by the Pacific Islands Forum Fisheries Agency (FFA). Both programs provide observers to purse seine vessels. In the case of the program under the South Pacific Tuna Treaty, coverage includes both the High Seas and areas within the EEZ jurisdictions of the Pacific Island countries that are signatory to the Treaty.

The Commission’s observer program will provide coverage for vessels fishing on the High Seas and vessels fishing in two or more coastal States in the Convention Area. All vessels currently subject to the existing sub-regional observer program may be required to carry Commission observers, unless the matter is explicitly clarified by the Commission.

Article 28(6)(f) of the Convention requires that the Commission’s regional observer program to avoid duplication with existing regional, sub-regional and national programs. The use of the existing sub-regional programs would be an appropriate approach should the Commission choose to use Commission observers or not.

(d) Hybrid approach

This approach would incorporate components of the “CCAMLR approach” and the use of existing sub-regional observer programs.

Under this approach Commission Members would be free to choose the source of observers from either the national observer programs of other Members or from the existing sub-regional programs. Regardless of the source of observers the program would be governed by a scheme similar to the approach adopted by CCAMLR. The vessels that currently carry sub-regional observers (South Pacific Tuna Treaty or under the FSM Arrangement) could continue to use these observers to fulfil Commission observer requirements. The existing sub-regional observer programs may offer expertise and observers to Commission Members other than those they have covered to date, thereby increasing the options for those seeking observer coverage.

This approach would incur few costs to the Commission with respect to Secretariat resources. The major of these will occur regardless of the options chosen, and is anticipated to be the preparation and printing of standardised materials.

Working Group I concluded that, on the basis of flexibility and minimisation of cost to the Commission, the hybrid approach was the best option for providing for the Commission’s need for an observer program.

8. Working Group III identified additional elements for an observer program at its meeting during the third session of the Preparatory Conference (WCPFC/PrepCon/WP.6). The list of possible program elements contained in Annex II(B) of the report is as follows:

- (a) Parameters and Guidelines for Observer Programs with Respect to MCS functions;
- (b) Guidelines to Determine Effective Level of Coverage (which could vary from fishery to fishery depending on the specific needs with respect to specific species, fleet, or geographic area);
- (c) Possible Phase-in or Incremental Approach to Commission Observer Program for Various Fleets and Fisheries;
- (d) Provisions Regarding the Deployment of Observers on Board Various Fleets, Including the Possible Hiring by the Commission of Nationals of Fishing States/Entities for Deployment as Commission Observers on Vessels of that State/Entities;
- (e) Guidelines for Observer, Captain and Crew with Respect to Observer Safety, duties and Responsibilities, Accommodations, Access, etc.;
- (f) Standardize Observer Training.

9. WG.III subsequently developed *DRAFT Guidelines for the Rights, Duties and Responsibilities of Observers, Captain and Crew* during PrepCon5 (WCPFC/PrepCon/WP.17), attached as **Appendix A**. This paper was not discussed at PrepCon due to time constraints.

10. At PrepCon IV, WG.III identified the following matters for further consideration in developing the Commission’s observer program (WCPFC/PrepCon/26):

- (a) the usefulness of coordinating and communicating with the Chairman of WG.II on the data collection needs of the Commission in order to determine an effective level of coverage;
- (b) the need to consider practical difficulties in implementing the observer program which has bearing on the design of the observer programs;
- (c) the need for coordination and planning to ensure, to the maximum extent practicable, compatibility with sub-regional and national observer programs already in place in the region;

- (d) the desirability for standardization of data collection including standardized reporting formats for information that is collected;
- (e) procedures relating to data confidentiality;
- (f) that the purpose of the observer program in its initial stages should be to focus on validation of catch but that other useful information such as vessel sightings could also be reported under the program;
- (g) the value of ensuring standardized and quality observer training;
- (h) the significance of a phased or incremental approach to the Commission's observer program; and
- (i) cost effectiveness.

IV. SCIENTIFIC COMMITTEE – SC1 DRAFT REPORT

10. The First Regular Session of the Scientific Committee took place at Noumea, New Caledonia from August 8-19, 2005. The draft report includes the following references to the Commission's observer program (Draft_SC1_Report_220805):

(a) The Ecosystem and Bycatch Specialist Working Group (SWG) recommended: *Improvement of observer coverage of western and central Pacific pelagic fisheries by increasing coverage rates, centralizing and expanding observer data collection, designing specific observer programs to address specific objectives, and improving the identification and reporting of catch to species level and recording fate and condition.*

(b) A study presented a comparison of various sources of catch composition data, including observer-based sources, to the Statistics SWG (WCPFC-SC1-ST-WP-4). This analysis revealed that for certain data collection efforts there are significant differences in results and they suggested attention needs to be directed towards sources of bias and the need to ensure randomness in sampling. From a scientific data collection perspective, any discussion of observer data should incorporate alternatives and additional sources of similar data, such as the port sampling or final turn-out reports which can be used to determine or confirm catch or species composition.

11. In Noumea, the extensive agenda allowed only limited deliberation regarding the scientific aspects of a Commission observer program. Although in general there was a belief that observer coverage for most fleets in the region are too low, no specific recommendations on the size and scope of the program were made. It was suggested that absent direct interaction with the TCC, further elaboration of the observer program would be very difficult.

12. The draft report of the First Regular Session of the Scientific Committee seeks further elaboration regarding the types of data the observer program will collect, the appropriate coverage rates, the appropriate types of certifications and training, the need for independent and impartial observers, and the need for coordination between regional, sub-regional and national observer programs. It was recommended that a background study addressing the above cited needs be undertaken by the SPC-OFP and that the Technical and Compliance Committee (TCC) establish a parallel review for its needs. The SC recommended that the two reviews be closely coordinated. Other options for conducting such a review were not considered by the SC (e.g., the use of a private consulting firms etc.).

13. A provisional budget developed by the SC contains a line item for \$40,000 for “support for observer program training” with an explanatory comment of “Support SPC component of regional observer training program with focus on Commission standards and requirements”¹.

V. OBSERVER PROGRAM SCOPE

14. A recent review of regional and national observer programs worldwide², focusing primarily on those programs observing tuna fisheries, was undertaken for the development of the Indian Ocean Tuna Commission (IOTC) observer program. It was noted that observer programs could be classified into several types but common to all was collection of scientific data. Even those programs driven by compliance needs collect some data useful for scientific purposes. The report identified observer programs in the following categories:

(a) *Scientific Observer Program* that collects only scientific information.

(b) *Fisheries Observer Program* that primarily collects scientific information but concurrently monitors compliance issues. Observers have no enforcement powers and report compliance issues to the appropriate authority.

(c) *Surveillance Observer Program* that has primarily a compliance monitoring role but may collect basic scientific information.

This report also suggests that many Highly Migratory Species (HMS) observers are based on scientific data collection objectives and compliance duties and responsibilities are complimentary to these efforts. Surveillance directed programs do occur but tend to be in the minority of those reviewed.

15. In Article 26-1 the Convention suggests the collaboration of the SC and TCC in designing the Commission’s observer program and therefore indicates that the program envisaged is a *Fisheries Observer Program*.

16. The compliance requirements of the Commission’s observer program remain undefined as they are somewhat dependent upon management measures to be adopted in the future. Certain management measures could require 100% observer coverage of some fleets. The eastern Pacific large-vessel purse seine fishery monitored by IATTC and the Hawaii longline fishery for swordfish are two examples of fisheries with 100% observer coverage requirements, driven in both cases by bycatch concerns.

17. As specific management measures are developed by the Commission, the compliance related duties of observers will evolve. At this time the TCC must assess the range of possibilities and develop the minimum requirements for MCS-related observer activity to include in the Commission’s observer program.

¹ The entire enumerated draft budget for the SC calls for \$571,700, of which \$254,500 is allocated for stock assessment for target species, and \$152,200 for improved data collection in Indonesia – both work items have been approved at previous Commission or Precon meetings. The additional items enumerated are not prioritized, and given the limited fiscal resources available for to the Commission, it appears action will have to be taken by the Commission to prioritize and approve the \$40,000 requested for “observer program training”.

² *Recent situation of the regional Tuna Observer Programs (TOP)* Prepared by T. Nishida November, 2004 IOTC-2004-SC-INF09

VI. MCS COMPONENTS OF FISHERY OBSERVER PROGRAMS

18. Possibly one of the largest contributions that observers can make toward compliance is simply as a presence at the “front line” of fishing operations, thus serving as a deterrent from unauthorized activities. The following list includes major areas where observers can perform valuable duties in relation to MCS. These MCS components are essentially from the United Nations Food and Agriculture Organization (FAO) Fisheries Technical Paper 414, entitled *Guidelines for developing an at-sea fishery observer program*:

- (a) Logbook validation
- (b) High-grading and discarding
- (c) Monitoring of prohibited species, protected species, species of interest or incidental catch
- (d) Undersized and spawning species
- (e) Fishing area and season restrictions
- (f) Fishing gear documentation
- (g) Validation of processed fish
- (h) Documentation checks
- (i) Sightings of other vessels
- (j) Transshipment at sea
- (k) Recording and reporting violations

Additional detail of observer action and responsibilities under these sub-headings is located in **Appendix B**.

19. Observers may perform additional duties related to compliance, for example there may be needs related to the Commission’s vessel monitoring system. Observers could be tasked with inspecting the automatic location communicator when s/he initially boards the vessel. This inspection could include ensuring that the unit is turned on, or inspecting the unit to determine if has it been tampered with, determining if other equipment is plugged or wired to the unit, and confirming that the security seals are properly in place. After this initial inspection, the observer could periodically check to see if the unit is on whenever s/he is on the bridge. Although this may require some specialized training, it can be effectively implemented. Other sub-regional observers are currently tasked with this MCS-related duty.

20. Another area that may be of particular interest, given the target resource issues emerging in the Convention Area, could be having observers document the position of all FAD interactions including where and when the FAD was deployed, checked, set on, and picked up. Additionally, recording any identifying marks on the FAD could be expected as well. This issue will need to be deliberated and vetted with Members and their respective industries and commercial interests, given that many may view information related to FADs as proprietary (e.g., FAD construction, deployment and FAD fishing techniques). If these data are collected, they may need to be held and disseminated under elevated levels of control and with enhanced confidentiality standards.

VII. OBSERVER SAFETY CONSIDERATIONS

21. To date, the sub-regional observer programs in the WCPO have essentially confined their efforts to purse seine vessels. As a result, sub-regional observers have been deployed on relatively large, comfortable and safe vessels. The same situation exists in the IATTC regional observer program in the eastern Pacific Ocean (EPO). The Commission’s need for observer coverage on the longline, pole and line and troll fleets will have significant ramifications from an observer health and safety perspective. In most cases, vessels of these fleets are smaller, may be less

seaworthy and in some cases remain at sea for very long periods. The challenges of observing this fleet, in terms of observer safety, are significant.

22. Additionally, the combined WCPO longline fleet is at minimum an order of magnitude larger than the active purse seine fleet. The challenges of observing this fleet, in terms of observer safety, are significant.

23. Observers would be exposed to a variety of situations with respect to comfort and risk that in some instances may prove unacceptable. National observer programs may have fewer problems in this regard as the acceptable level of comfort and risk is relative to experience. Observers employed by their own flag State are likely to be familiar with and willing to observe vessels in national fleets.

24. Open and transparent communication between observer and crew is a key element to the success, comfort and safety of an observer. For example, although CCAMLR requires that observers be provided by a different member, they must speak the native language used aboard the vessel they observe. In the EPO, many nations fish within the IATTC area, however, many of the nations whose purse seine vessels are observed share Spanish as a common language. The diversity of languages spoken by fishers in the WCPO will be an issue for the Commission's observer program. As is the case with other Commission communications, English should be established as the standard for the observer program.

25. MCS components of any observer program affect the risk to observers. Observers collecting purely scientific information have significantly reduced likelihood of being exposed to coercion, threats, violence or bribery than observers with compliance duties. For example, a cap on protected species interactions that has the potential to close a fishery or result in significant enforcement action could result in extreme pressure on the observer concerned. All vessels that have been selected for observer placement as a result of a Commission mandate should be inspected prior to observer placement for health and safety reasons. These health and safety standards --as related to observer placement-- should be established by the Commission.

VIII. COST CONSIDERATIONS

26. Cost is one of the foremost concerns in the design of any potential Commission observer program. Cost comparisons between existing observer programs can be meaningless or misleading without careful attention to comparing the same expenses. The unit cost reported for an observer program could include: (a) all the costs for the program over an annual period, including among others, direct expenses, administrative support, office space, and training costs; or (b) just direct costs such as observer salary, travel and equipment needs.

27. Nishida (2004) summarized costs of the various programs in terms of US\$ per observer per month. The costs varied from a low of US\$4,500 per observer per month for the IATTC regional purse seine program to a high of US\$20,000 per observer per month for the U.S. program observing the domestic longline fleet based in Hawaii. Summary cost data for programs observing HMS are given in [Appendix C](#).

28. In Pacific HMS observer programs, it has been estimated that the direct costs of FFA deployed observers (employing Pacific Island nationals) on US purse seine fleet in the WCPO was approximately \$US 2,800 per observer month, and US\$2,300 per observer per month for the IATTC program operating in the Eastern Tropical Pacific. For the Hawaii-based longline fleet the

direct costs are estimated at US\$12,000 per observer month³. Chinese Taipei observers deployed on HMS vessels in the Indian Ocean are reported to cost approximately US\$2,500 per month⁴.

29. It is noted that many published or cited cost estimates for observer programs are derived from information and data that may cover aspects included in other facets of an overall fishery management effort or fisheries bodies' activities (i.e. data collection) and as such, it is difficult to make direct comparisons. What is important to note is that there is an order of magnitude difference between the highest and lowest cost per month and to a large extent this reflects the differences in the basic socio-economic conditions in the programs presented. Programs in the United States, Spain, France and Japan, employing observers and support staff cost between US\$13,000 and US\$20,000 per observer per month. The diversity of economies and therefore costs and salary levels within the Convention Area should be considered a key factor in the design of a regional program that the utilization and incorporation of national programs may minimize. Even at the lower end of the cost estimates provided, observer programs come at significant costs.

30. If an option is selected that implies that the Commission will be deploying observers on member vessels, either directly or through a contractor or proxy (e.g., other than under existing national and sub-regional programs), there will be a requirement for the collection of fees. This key administrative element received limited attention during the MHLIC and the PrepCon deliberations. Specifically, how are observer program-associated costs to be allocated and remunerated? Although the Convention makes it clear that this program (and for other programs such as the vessel monitoring system) will be developed and it has been implied that it be implemented under the "user pay" principle – the details of this type of a program need to be considered as a key determinant when choosing an implementation scenario.

31. In some instances it may be most efficient to amortize observer program costs, including elements such as data collection, compilation and summarization over the relevant national fleets and add this cost to the overall amount owed annually by Members of the Commission. Individual Members would then determine if and how the observer-associated costs are to be apportioned within its fishing vessels or fleets. The Commission and relevant national authorities would have to work closely together to ensure annual or seasonal payments are made in an orderly fashion. Another option is that the vessels pay directly to the Commission. The Secretariat could maintain a user friendly method such as an internet website to allow for electronic payment, as well as a site to allow fishery administrators to be sure that vessels are current with their allotted fees.

³ This figure does not include overhead charges related to observer support and placement, debriefing, data compiling and summarization—it is estimated that these bring up the monthly cost to US\$16,000/observer month. Source: NOAA Fisheries Unpublished data.

⁴ In 2001, Chinese Taipei deployed two HMS observers in the Indian Ocean, this number grew to nine in 2004. They report that in 2004, four individuals spent 726 days on HMS vessels in the Atlantic Ocean. The number of Atlantic Ocean observers dispatched increased to five in 2005 (with observers collecting fishery data, size measurements, and biological data for "bigeye, albacore, swordfish and bycatch and incidental non-target species"). The annual budget for observers has moved from US\$180,000 in 2003 to US\$850,000 for all three ocean areas. Authorities indicated that in the Atlantic they, "award quota to vessels that have observers aboard". No specific mention was made regarding Pacific Ocean-deployed observers nor were there any indications these observers have a compliance role or function. Source: NOAA Fisheries Unpublished data.

32. In all instances, the onus should be placed on Members to ensure payment is made in a timely fashion so as not to put either the Commission observer program or the Secretariat at any financial risk.

33. The observer program, and in turn the Secretariat, will also have a responsibility to ensure that the funds collected are maintained in a transparent and orderly manner. It will be important that these accounts are reported separately from base Commission accounts and every effort is made not to co-mingle funds. Issues including annual reporting and audits will be required to ensure the full confidence of the members. Assiduous efforts must be made to ensure that large carry-over amounts do not occur.

34. If an alternative is chosen that requires remuneration to go to the Secretariat, then it is likely that even under the most modest of options and scope, additional administrative resources will need to be provided to the Secretariat. These would be accounted for as an “overhead” cost associated to the observer program, and in turn paid for by the users.

35. Finally, during this and future deliberations on both the size and scope of the Commission-based observer program one needs to be constantly cognizant that this activity comes at very significant cost. Observer programs, even modest ones, are a substantial application of human and fiscal resources. Consideration should be given toward optimization of observer activities *vis-à-vis* other options for obtaining like data and information. Clearly, the Convention and its architects believed that these costs were justified in light of the need for scientific data and compliance needs. Nonetheless, although these costs may not be directly borne by the Commission, they are ultimately borne by someone (fishermen, taxpayers, etc.).

IX. NATIONAL AND REGIONAL PROGRAMS

36. There is considerable experience and coverage throughout the Convention Area by observers from national programs. As would be expected, the scope, abilities and developmental stage of these programs vary. A partial list of States, territories or fishing entities with active observer programs within the WCPFC area include: Australia, Chinese Taipei, FSM, Fiji, French Polynesia, Japan, Kiribati, Korea, Marshall Islands, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, and USA.

37. In addition to the national programs, are the two sub-regional programs administered by the FFA. More information on the FFA programs is provided in **Appendix D**.

X. ELEMENTS FOR CONSIDERATION

38. The Convention requires the avoidance of duplication of current observer programs, where possible. As detailed above, there may be considerable benefits to be gained by employing national and regional observer programs under the auspices of the Commission. However, the Convention also specifies that observers shall be independent and impartial. Balancing these two important facets may prove to be the key to implementing a viable Commission-based observer program in the immediate future.

39. A fundamental issue that emerges in developing any compliance-oriented observer program can be summarized as “Can nationals of a Member observe vessels of the same Member and be considered independent and impartial?” There seem to be diverging views among other RFMOs on this issue. CCAMLR requires observers to represent a different Member than the flag

State of the vessel being observed. IATTC allows national programs to observe their own vessels, but only up to a maximum of 50% of the required coverage. The remaining 50% must be observed by IATTC-employed observers. In contrast, the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) requires flag States to provide observer coverage on their own vessels at rates and standards specified by the CCSBT.

40. The existence and success of national programs implicitly suggests that independent and impartial information can be obtained by nationals on their own flag State vessels. Examples include current national programs in Papua New Guinea, FSM, Australia, New Zealand and the USA. However, some believe that the existence of a national observer program in of itself does not constitute a reliable compliance oversight mechanism.

41. As previously discussed, WG.I identified the administrative needs of the Commission, including the operation of the regional observer program (WCPFC/PrepCon/WP.3). Four alternative approaches were considered at that time: the CCAMLR approach, IATTC approach, utilization of current sub-regional programs and a hybrid approach that would allow members to choose who would provide their required coverage from among other members or the current FFA-based sub-regional programs. WG.I suggested that on the basis of flexibility and minimisation of cost to the Commission, the hybrid approach was the best option for providing for the Commission's need for a regional observer program. The hybrid approach incorporates the assumption that observers should be sourced from another member or a third party.

42. The reliance of a CCAMLR-like approach on bilateral agreements between Members and the potential for significant inequalities in bearing the cost of the program would suggest that this option only be undertaken if there was consensus that observers must be from a different Member than the flag State of the vessel being observed to ensure independent and impartial observations.

43. Coverage rates for the various fleets are to be determined based on a mix of scientific and compliance objectives. Absent analysis that defines the specific objectives of an observer program and acceptable levels of uncertainty, coverage rates of between 20% and 100% have been suggested to meet compliance needs of western Pacific MCS programs. Certain purse seine fleets operating in the western and central Pacific (e.g., the South Pacific Tuna Treaty and FSM Agreement vessels) have approximately a 20% coverage rate (although coverage is not measured the same way in both—see **Appendix D**).

44. Other than those rates imposed by national authorities, there are no standards for longline vessels operating in the Convention Area. For example, the Hawaii-based longline fleet (USA), has a coverage rate of between 20-100%, depending on the target species, while the Eastern Australia Tuna and Billfish Fishery has a coverage rate of 5.1% of hooks set (interestingly in each of the cases above the levels are set to monitor by-catch). It has been suggested by some regional authorities that an initial regional target for large (the precise definition to be determined) long line and pole and line vessels should be a minimum of 10%, with periodic review.

45. Large ultra low temperature longline vessels present additional logistical challenges in terms of observer placement and boarding as they often operate at sea for extended periods of time and only occasionally return to their home ports. Moreover, many do not visit ports in the region. Conversely, many small “fresh” fish or ice longline vessels operate from ports within the region and while they may be less challenging logistically, they may have greater health and safety issues.

46. A Commission observer program could collect scientific, management, environmental monitoring as well as compliance information. It is important that any of the standards for data collection be harmonized with existing regional and national programs. In the case of FFA member nations, all participate on a Data Consultative Committee (in conjunction with the SPC) that has been formulated to ensure that data collection and reporting procedures (forms etc.) that are employed regionally, including under bilateral and domestic arrangements, have harmonized formats and standards. All of the Pacific Island nation's observer programs currently use DCC-endorsed formats. It is reported that beyond DCC efforts at coordination, practical benefits such as savings on printing costs of workbooks, manuals and other information typically employed by observers are a result of the Committee's efforts. It should be considered that either the Commission develop a similar review process or ensure that Commission interests are represented at the deliberations of the DCC. The DCC meetings are held every other year, with the next one scheduled for December 2006.

47. FFA also convenes annual meetings of Pacific Island national observer program managers and coordinators. Other program representatives are invited from time to time (e.g., IATTC, NMFS [USA] etc.). These meetings allow discussion of a broad range of issues related to observer protocols, data collection, matters related to training, health and safety, by-catch handling and mitigation, technological developments and professional development. The Commission observer coordinator should attend and participate in these deliberations to ensure close cooperation between regional, sub-regional, national, and any program implemented by the Commission (the next meeting is tentatively scheduled for the first quarter of 2006).

48. A key element of any Commission-based observer program in terms of compliance related actions is the timeliness of reporting serious violations to the countries concerned and the Commission secretariat. Mechanisms are required so that reporting of alleged infractions to countries can occur before the observer data are processed for other less time sensitive needs. Related to the issue of timeliness and the broader issue of data quality for both compliance and scientific purposes are the need for data verification and observer debriefing protocols. The Commission should ensure that these elements are established as soon as possible. This can be expensive and require a presence in each major port of the region. For instance the Hawaii-based longline fishery observer program (USA) has 12 debriefers that monitor approximately 400 trips annually. These individuals concentrate on data quality but are also the first land-based screeners of observer data in terms of adherence to fishery regulations. This element is essential to ensure high quality of data as well as timely action on allegations of infractions of fishery regulations and Commission resolutions. Ways to ensure observers provide high-quality data include employing only observers that produce high quality data, a fee structure for observers that encourages the generation of quality data, emphasis on data quality in the training of observers, recurrent efforts to improve data forms, and constant communication between observer program coordinators.

50. Other elements of the compliance components of observer duties can include collecting data on fishing operations, catch, length frequency, vessel/aircraft sightings, species of special interest, and critical incidents. Much of this information should be entered into the Commission held database. Consideration should be given to ensure that observer-generated data be made available in an easily assembled reporting system. Special summaries may need to be produced for certain types of information for specific compliance purposes (alleged violations, gear descriptions, information on fishing technique, information on marine mammals, turtles, sea birds, and sharks, vessel catch reporting, by-catch and discard reporting, telex or e-mail reporting, vessel sightings, and miscellaneous comments). An effort should be made early on to develop systems allowing the Commission Compliance Manager to track the benefits of observer

compliance data. This could be as simple as maintaining a register of major incidents noted by Commission-deployed observers as they are reported to the flag State and any resulting settlements or fines. Accordingly, the Commission's observer program should be required to do at least semi-annual reports of compliance and management-related information (see paragraph 54).

51. IATTC is developing advanced statistical methods to evaluate the EPO observer programs and eventually, individual observers, to identify unusual patterns of reporting (IDCP Doc. IRP-37-09, 10/2004). This approach may allow a relatively small Commission-based observer program to audit the sub-regional and national programs should they be recognized by the Commission observers. Another positive facet of this approach is the development of protocols and procedures for the recognition of other regional observers on those vessels authorized to fish under multilateral or regional access agreements. For instance, currently FFA deployed observers, who have been trained in IDCP reporting requirements can be authorized by the IATTC Executive Director to continue to observe on United States purse seine vessels as they move out of the U.S./Pacific Island Country Tuna Treaty area and into the IDCP area on a single trip with no interruption in vessel operations. The protocol established by the IATTC, the FFA, and the U.S. may serve as a model of cooperation called for in Article 22 of the Convention.

52. With respect to the detection of alleged violations by observers, it is recommended that those incidents noted by observers should be passed by observer program staff to national authorities who in turn may pass the allegation to fishery enforcement staff or enforcement attorneys. For the case of regional programs this typically entails informing the concerned country for their action in a timely manner. The ability to review observer supplied data and to develop any allegations or case materials should be a key consideration when establishing a Commission-based program.

53. Another use of observer information is that it can provide significant insight about a fishery to managers and policy makers. The tuna fisheries of the western and central Pacific Ocean occur mainly far from land where they are largely invisible to officials of government fishery agencies. A Commission-based observer program should produce information (e.g. annual regional summaries, annual country-specific summaries, information in the database) that could improve the managers' knowledge of the various tuna fisheries, and subsequently the effectiveness of their management. This is one area that could be strengthened throughout the western Pacific region and it is believed by many fishery administrators that such information is currently an under-utilized resource.

54. With the Commission Secretariat based in the Federated States of Micronesia and the limited staff positions authorized in the first three years of the Commission, observer coordination activities will in all likelihood be based from Pohnpei. This should be a viable location, however eventually some consideration will need to be made for placing staff in key ports around the region. IATTC has observer coordinators in key landing centers throughout Latin America. The PNG National Fisheries Authority has observer elements in several ports around the country. Conversely, although Honiara in the Solomon Islands is not considered a major fisheries off-loading port, the FFA observer program has been successful in terms of coordinating sub regional programs across the western and central Pacific and has a very strong record of in-country training activities. Eventually there may be a need for the Commission to consider posting additional staff in locations or ports convenient for industry contact. In the near-term, cooperation with national programs appears to be essential for this element.

55. A final consideration reviewed here is that there should be a formal technical evaluation of the compliance (and for that matter, scientific) aspects of whatever Commission-based observer program is implemented. This review or audit should be conducted after three full years of implementation. Ideally, this review will be conducted by an entity that has knowledge of the region and its nuances, but is not annealed to any program or national interest.

XI. PROPOSED WAY(S) FORWARD

56. Based on the above discussions, at least three options appear to emerge for developing the Commission observer program:

Option 1- A possible design incorporating flag State responsibility could include the following components:

- Members would be required to observe their own vessels at coverage rates and in accordance with standards determined by the Commission.
- The Commission could produce standardized materials such as reporting forms, procedures, training guidelines and manuals.
- Members could choose to obtain the required level of coverage by utilizing national, contracted, sub-regional programs, or any combination thereof, as long as Commission standards were maintained.
- Any observer programs participating in the Commission program would be required to accept inspection and audit by the Commission, this would include and not be limited to training programs and curricula, deployment of Commission-based or Commission-contracted observers on those fleets fishing on the High Seas or within the EEZ of a member.
- Data or information collected, both scientific and compliance related, shall be verified for accuracy and quality control purposes and transmitted in a timely fashion to the Secretariat or Contractor to become part of a centralized WCPFC database.
- Observer exchanges and recruitment from other members could be encouraged to maintain consistency and increase mutual trust.
- Eventually, oversight and quality control could be provided by a relatively small Commission-based program, employing data handling staff, debriefers, observers and statistical methods to audit and compare programs to find unusual patterns of reporting.

Option 2- The hybrid approach, recommended by WGI:

- Commission members are free to choose the source of observers from either the national observer programs of other members or from the existing sub-regional programs.
- The Commission would be responsible for setting data collection standards, producing forms and manuals and for receiving and managing observer information.
- Existing sub-regional observer programs may offer their expertise and observers to Commission members other than those they have covered to date, thereby increasing the options for those seeking observer coverage.
- Vessels currently carrying sub-regional observers could continue to use these observers to fulfill Commission observer requirements.
- The use of existing sub-regional and national programs would incur few costs to the Commission with respect to Secretariat resources; major costs would be with respect to data preparing and printing standardized materials.

Option 3 - Another alternative that is expected to be cost effective for the Commission would be:

Rather than looking at the Commission program as a single entity, it could be split into two components under the jurisdiction of the Commission.

- Longline and Pole and Line Observer Program
- Purse-seine Observer Program

Long line and Pole and Line Program

Due to the potential difficulty of placing observers on many longline vessels because of their style of operations etc., it is suggested that this portion of the program (at least in the near term) be implemented through the flag States. This could include an agreed upon coverage level for pole and line vessels, as well. Observers for these vessels will be trained to Commission standards and will be selected, funded and placed by flag States on request by the Commission and/or the national authority. The Commission would reserve the right to place its observers on national vessels on a case by case basis.

Purse-Seine Program

The purse seine fleet component will be operated by the Commission and they would directly organize the placement of the observers on vessels. Observers will be selected by the Commission from among its Members, with all being eligible to provide observers. The observers will be trained to Commission standards. As with the longline component, the coverage rates will be determined by the Commission.

There are at least two alternatives for the placements:

1. The Commission places the selected authorized observers onto the vessels;
2. The Commission utilizes regional programs such as the FFA, which currently manages two sub-regional programs and gives them the task of placing the observers onto the vessels through their network.

Funding could be similar to what is used in the FFA sub-regional observer program whereby every vessel pays a fee dependent on the amount of coverage determined by the Commission (see **Appendix D**).

X. NEXT STEP

57. Once the basic objectives, elements, and composition of an observer program are articulated by the Technical and Compliance Committee, then it is recommended that representatives of the TCC and the Scientific Committee meet to develop a consolidated recommendation for the Commission. This meeting should occur sometime in the first half of 2006.

**DRAFT GUIDELINES FOR THE RIGHTS, DUTIES AND RESPONSIBILITIES FOR
OBSERVERS, CAPTAINS AND CREW**

Prepared by the Chairman of Working Group III

1. At the second session of WG.III during PrepCon IV in Nadi, Fiji, the Working Group considered an informal discussion paper prepared by the Chairman on the MCS Component of the Commission's observer Program. In doing so the Working Group emphasized a number of considerations to be taken into account in the development of the Commission's observer Program (WCPFC/PrepCon/26). Following this discussion, the Working Group agreed that the most appropriate next step would be to begin to build on the principal elements for the development of the observer program agreed at PrepCon III (WCPFC/PrepCon/21), in close coordination with WG.II. Therefore, WG.III requested that the Chairman prepare a discussion document on proposed guidelines for the rights, duties, and responsibilities of observers, captains, and crew, drawing from similar guidelines adopted by other regional organizations and national governments.
2. WG.III recognized that the development of the Commission's observer program would require close consultation and cooperation with Working Group II. In this regard, the specific duties of observers, captains and crew may be influenced by the deliberations of Working Group II with respect to the science needs of the Commission.
3. The following are proposed guidelines for the rights, duties, and responsibilities of observers, captains, and crew. The proposed guidelines were developed after a thorough review of material provided by participating governments and the FFA Secretariat as well as similar guidelines adopted by the Convention for the Conservation of Antarctic Living Marine Resources (CCAMLR), the Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, and the Agreement on the International Dolphin Conservation Program (AIDCP). WG.III is invited to consider the following elements for possible inclusion in a comprehensive set of guidelines or procedures governing the operation of the Commission's observer program.

**DRAFT GUIDELINES FOR THE RIGHTS, DUTIES AND RESPONSIBILITIES FOR
OBSERVERS, CAPTAINS AND CREW**

Section A: Rights, Duties, and Responsibilities of On Board Observers

1. The rights of observers shall include:
 - (a) Access to all areas and facilities of the vessel necessary to conduct observer duties, including the bridge, pilothouse, deck, areas used to process, weigh, and store fish, gear, equipment, fish catch, and crew, as agreed by the Commission.
 - (b) Access to the vessel's records including its logs and documentation for the purpose of records inspection and copying, access to navigational equipment, charts and radios, and reasonable access to other information relating to fishing.
 - (c) Access to and use of communications equipment and personnel, upon request, for entry, transmission, and receipt of work related data or information.
 - (d) Access to additional equipment, if present, to facilitate the work of the observer while on board the vessel, such as high powered binoculars, electronic means of communication, etc.
 - (e) Access to the working deck during net or line retrieval and to specimens (alive or dead) in order to collect samples.
 - (f) Notice of at least fifteen (15) minutes before fish are brought on board, unless the observer specifically requests not to be notified.
 - (g) Access to food, accommodations, medical facilities, and sanitary facilities of a reasonable standard equivalent to those normally available to an officer on board the vessel.
 - (h) The provision of adequate space on the bridge or pilot house for clerical work and adequate space on the deck for observer duties.
 - (i) Freedom to carry out their duties without interference, intimidation, or obstruction.
2. The duties of observers shall include:
 - (a) Gathering pertinent information on the fishing operations of the vessel as needed to implement the Convention and as agreed by Members of the Commission.
 - (b) Making available to the vessel captain all measures adopted by the Commission.
 - (c) Making available to the vessel captain records of specific activities monitored by the Commission, if applicable.
 - (d) Preparing reports and providing the vessel captain with an opportunity to include any information or statements deemed relevant.
 - (e) Providing reports to the Commission or national program in accordance with procedures adopted by the Commission.
 - (f) Performing other functions as agreed by the Commission.
3. The responsibilities of observers shall include:
 - (a) Acceptance and compliance with agreed confidentiality rules and procedures⁵ with respect to the fishing operations of the vessels and of the vessel owners.

⁵ Procedures and guidelines relating to security and confidentiality of data and other information, as called for in Article 28, remain to be developed.

- (b) Maintenance of independence and impartiality at all times while on board the fishing vessel.
- (c) Compliance with the laws and regulations of the Member of the Commission that exercises jurisdiction over the vessel.⁶
- (d) Respecting the hierarchy and general rules of behavior that apply to all vessel personnel.⁷
- (e) Performance of duties in a manner that minimizes interference with fishing operations.
- (f) Familiarity with the emergency procedures aboard the vessel, including the locations of life rafts, fire extinguishers, and first aid kits.
- (g) Communicating regularly with the vessel captain.

Section B: Rights, Duties, and Responsibilities of Vessel Captains

1. The rights of vessel captains shall include:
 - (a) Expectation that a reasonable period of prior notice of the placement of an observer shall be given.
 - (b) Opportunity to review and comment on the observer's report, including the right to include additional information deemed relevant or a personal statement.
 - (c) Compliance by the observer with the general rules of behavior, hierarchy, and laws and regulations of the Member of the Commission that exercises jurisdiction over the vessel.
 - (d) Timely receipt from the observer of the relevant and current measures adopted by the Commission.
 - (e) Ability to conduct lawful fishing operations with minimum interference due to the observer's presence and performance of necessary duties.
 - (f) Ability to assign, at his or her discretion, a vessel crew member to accompany the observer when the observer is carrying out duties in hazardous areas.

2. The duties of vessel captains shall include:
 - (a) Accepting an approved observer that is part of the Commission's observer program, if required by the Commission.
 - (b) Assisting the observer to safely embark and disembark the vessel at an agreed place and time.
 - (c) Assisting the observer to carry out all duties safely.
 - (d) Providing the observer with food, accommodations, medical facilities, and sanitary facilities of a reasonable standard equivalent to those normally available to an officer on board the vessel.
 - (e) Facilitating access by the observer to all areas and facilities of the vessel necessary to conduct observer duties, including the bridge, communications equipment and personnel, pilothouse, deck, and areas used to process, weigh, and store fish, gear, and equipment.
 - (f) Permitting the observer to remove samples from the catch and providing appropriate storage space for specimens collected and retained by the observer.

3. The responsibilities of vessel captains shall include:

⁶ As long as these requirements are not incompatible with the provisions of the Convention or measures adopted pursuant to the Convention.

⁷ Provided that they do not interfere with the duties of the observer or the responsibilities of the captain and crew.

- (a) Ensuring actions are consistent with regulations and procedures established under the Convention.
- (b) Complying with other guidelines, regulations, or conditions established by the Member of the Commission that exercises jurisdiction over the vessel.
- (c) Ensuring that captain or crew does not obstruct, intimidate, influence, or interfere with the observer or impede or delay observer duties.

Section C: Rights, Duties, and Responsibilities of Vessel Crew

1. The rights of vessel crew shall include:
 - (a) Expectation that the observer will comply with the general rules of behavior, hierarchy, and laws and regulations of the Member of the Commission that exercises jurisdiction over the vessel.
 - (b) Expectation that a reasonable period of prior notice of the placement of an observer shall be given.
 - (c) Reasonable expectation of privacy in crew personal areas.
 - (d) Ability to carry out duties associated with normal fishing operations with minimal interference by the observer in performance of their duties.
2. The duties of the vessel crew shall include:
 - (a) Accepting an approved observer that is part of the Commission's observer program, if required by the Commission.
 - (b) Assisting the observer to embark and disembark the vessel at an agreed place and time.
 - (c) Allowing access by the observer to all areas and facilities of the vessel necessary to conduct observer duties, including the bridge, pilothouse, deck, and areas used to process, weigh, and store fish, gear, and equipment.
 - (d) Assisting the observer to carry out all duties safely
 - (e) Permitting the observer to remove samples from the catch.
3. The responsibilities of the vessel crew shall include:
 - (a) Not obstructing, intimidating, influencing, or interfering with the observer or impeding or delaying observer duties.
 - (b) Compliance with regulations and procedures established under the Convention and other guidelines, regulations, or conditions established by the Member of the Commission that exercises jurisdiction over the vessel.
 - (c) Compliance with directions given by the vessel captain with respect to the observer or performance of observer duties.

Additional detail of MCS-related observer actions and responsibilities (Source: United Nations Food and Agriculture Organization (FAO) Fisheries Technical Paper 414: *Guidelines for developing an at-sea fishery observer program.*)

a. Logbook validation

Logbook reporting is the most common way for fisheries management authorities to gather geo-referenced information on catch and effort, and other parameters. The propensity to under-report target species and by-catch will vary depending on the type of 'use right' being exercised (including in relation to quotas, fishing areas, etc.), and the associated fees (quota fees, bycatch levies, etc.) that may constitute a serious violation.

b. High-grading and discarding

1. High-grading is the disposal of undersized or damaged target fish to increase the value of the processed catch, i.e. low-grade fish are discarded.
2. Discards usually take place to avoid paying by-catch levies or because a species (or their size) is not commercially viable.

Some discarding or high-grading may be unavoidable and, indeed, it may be acceptable by the fisheries authority at a particular rate (say, 10% of the catch) but it usually consists of non-commercial species and damaged fish.

Observers must be given clear explanations of the definitions of high grading and discarding in relation to agreed upon regulations and resolutions, as these definitions and the particular rules that apply can vary greatly between fisheries.

This is also a major part of logbook validation but it deserves to be mentioned separately as in some cases, when no logbook system is in place, there is regulation on high grading or discarding.

c. Monitoring of prohibited species, protected species, species of interest or incidental catch

Clear and specific guidelines must be given to observers on this issue. For example, retention of small amounts of incidental catch for the galley may not be considered a serious offence, whereas the deliberate killing of protected species of sea birds or marine mammals typically would. Observers will also require good guides for correctly identifying species.

d. Undersized and spawning species

Regulations often specify the minimum size of fish that can be landed. Or there may be regulations on the spawning state of fish, such as not allowing egg bearing females to be retained. These regulations can be quite complicated to interpret as catching and retaining are different things, but returning dead juvenile fish to the sea is not very sensible. Observers must fully understand and be prepared to document aspects related to regulations dealing with size, spawning state and or sexual condition.

Vessel operators may be expected to move fishing area if they are catching over a certain percentage of undersize fish. In other cases where there are regulations prohibiting discards and high-grading, the vessel may be obliged to land the total catch. Observers are in the ideal position to monitor controls such as these, but clear instructions must be given on what action to take.

e. Fishing area and season restrictions

In order to detect possible area violations observers typically require basic navigation skills. Observers must be trained in basic navigation skills, including the interpretation of charts and the use of satellite positioning equipment. If the observer suspects a violation of an area restriction s/he should first double-check the vessel's position before documenting the alleged infraction. The observer may choose to inform the vessel operator. If the vessel operator takes no action then this may be considered a serious violation that requires immediate reporting. Observers, of course, must be aware of the difference between steaming through an area and actually fishing. The Commission's vessel monitoring system (VMS) will also play a major role in spatial management.

f. Fishing gear documentation

Monitoring the structure, materials, set up and use of fishing gear is an important task not only for the purposes of compliance with any applicable fishing gear regulations but also in relation to the determination of fishing effort. For example, the number of hooks between floats or the dimensions of a purse seine, may be critical information for stock assessment purposes as well as ensuring compliance with setting regulations related to bycatch species.

It takes a high level of experience to really understand the gear set up of many fishing activities, but the observer is responsible for determining whether the gear or any modifications or attachments are unauthorized. If regulations exist on attachments or mesh and hook size, the observer must observe gear setting and hauling for further information or to detect a violation. If a vessel changes the gear after leaving port, before returning to port or when a patrol vessel is in the vicinity, observers document these actions. Another indication that the wrong gear or wrong set up is being used may be through the size distribution of the species being caught.

g. Validation of processed fish

When fish are processed and packaged on board the observer may be tasked with ensuring that packages are marked correctly. This is important when different languages are being used, and if there are different levies for different species. The marking of a high levy species as a lower levy species, or to avoid quotas, are common violations.

h. Documentation checks

Observers should make routine checks of the vessel's papers and documents (such as licenses and authorizations) to ensure that these are carried onboard and in order. Complications may occur in relation to the language of documents but generally infringements relating to documents are not a serious violation and can be reported once on shore. The observer should document any alleged shortcomings or violations and care must be taken if the vessel operator is approached regarding these issues.

i. Sightings of other vessels

Observers should be provided a list of licensed vessels as they may be able to detect unlicensed vessels fishing in an area. Any observations of this type should be reported immediately.

j. Transshipment at sea

If there are regulations prohibiting at-sea transshipment observers may be best positioned to monitor this both for their vessel and other vessels in the vicinity. Where possible, records should be kept of vessel details and the transshipped species and quantities.

k. Recording and reporting violations

From the above brief description of the possible activities that observers can undertake in support of compliance control it is evident that observer programs must carefully design both the background material in support of observations (i.e. the basis on which violations might be discerned) and the methods of recording and reporting of violations. Serious and less serious offences should be classified and observers must be aware of how to respond to violations in these two categories. Serious offences should be directly transmitted via radio, telex, fax, or VMS to the observer program, and in a coded format whenever possible. If the offence is less serious the report should be brought ashore for later follow-up.

Appendix C

Comparison of observer program costs. Source: Nishida T, 2004.					
Country / RFMO	Year	Type of observer program (Area)	Total annual budget (Million US \$)	Ave. cost per observer per month	Budget source and share (100% if % are not indicated)
Offshore and distant-water fisheries (Cruise longer than 3 weeks)					
U.S.A.	2002	tuna LL fisheries off Hawaii	2.55	\$20,900	Government
Spain/ France	1997 - 1999	bigeye year (tuna PS) (Atlantic)	0.52	\$17,900	ICCAT
Japan	2000	tuna/skipjack fisheries (PS & LL)	0.73	\$17,300	Government
		(three oceans)			
Spain	1999	ESTHER (fishing)	0.19	\$15,900	Government
France	-2001	effort in PS fishing (Atlantic & Indian Ocean)			
Spain	1994	Incidental catch in	0.37	\$15,500	ICCAT
France	-1995	PS (Atlantic, Indian Ocean)			
Spain	2002	swordfish LL	0.10	\$14,300	Government
	-2006	fisheries (three oceans)			
Japan	2000	tuna/skipjack fisheries (three oceans)	0.73	\$13,800	Government
Spain/France	1997 - 2000	Moratorium on PS (Atlantic)	0.73	\$13,500	PS fishing industry
Coastal and offshore fisheries (Cruise less than 2 weeks)					
France	1993 - 1994	albacore driftnet (coastal and offshore)	0.19	\$10,600	Government
Canada	2002	Tuna LL fisheries in eastern coast	1.45	\$11,000	Industry (72%), Government (28%)
U.S.	2001	Tuna LL (Atlantic)	0.35	\$9,800	Government
U.S.	2002	swordfish driftnet fisheries off California	0.80	\$8,000	Government
IATTC	2002	Tuna/skipjack PS	3.55	\$4,500	Industry (67%), IATTC(33%)

FFA Observer Programs

The Forum Fisheries Agency controls and administers two regional observer programs: the US Treaty Program and the Federated States of Micronesia Arrangement Program. There are approximately 50 purse seine vessels in these two programs, with all vessels required to pay observer placement fees and carry observers when required by FFA. The FFA Observer Program is a branch of the Monitoring Control and Surveillance Division (MCS Division). The placement program and observer training is coordinated and managed by an Observer Program Manager (OPM); the OPM has a temporarily employed assistant to help with placements. This will be made a full time position in the very near future. A Data Entry person is also employed to enter all the observer data onto the FFA observer data base.

The coverage requirements are different for the two programs, although after application of these requirements, the actual percentage coverage of the annual sea/fishing days of both fleets is over 20%. FFA does not employ observers on a full-time basis and instead employs observers on individual contracts, on a trip to trip basis. Only FFA/SPC Certified Observers from any of the FFA member countries are used in the two Regional programs. All observers trained are also used in their own national programs to cover vessels under bilateral agreements with their country. Data collected by FFA regional observers carrying out work on UST or FSMA vessels is sent to FFA for data entry and analysis. Data collected under national programs from bilaterally licensed vessels is used by the country, with some or all of the data sent to SPC for analysis.

The South Pacific Tuna Treaty Observer Program

The Treaty observer program was initiated in 1987. FFA has administered the program in accordance with the agreed statement on the implementation of the observer program signed by the United States and 16 Pacific Island member countries. The objective of the program is to collect compliance and scientific data and to monitor and ensure that US purse seine operations are conducted in accordance with the requirements of the Treaty.

There is a requirement that a minimum of 20% coverage of all trips is made each licensing period. The licensing Period commences on 15 June and expires on 14 June in the following year. The trip coverage was low for the initial years of the first Treaty, however following the renewal of the Treaty (2nd Extension) there has been constant trip coverage of over 20% since 1995. The maximum coverage attained was 28% trip coverage in 2001. Trip durations vary from about from 35 to 100 days, however the average time is around 55 days per trip.

All observer costs for the US treaty program are covered by the US Fleet licensed under the Treaty, using the placement funding formula (below) that applies annually:

“FIXED COST COMPONENT + (NUMBER OF LICENSED VESSELS X 5 TRIPS X 20% X \$4,500.)

Currently, the fixed component of the Observer placement program consists of Management = \$30,000, Training Fee = \$17000.

A report of program expenditure, vessel activities and observer activities as well as a proposed budget is presented annually at the US Treaty meeting held in March of each year. Operational issues and problems reported by observers are discussed directly with owners, captains and the US Tuna Foundation at the Informal Technical and Broader Cooperation meetings held around October of each year. The vessel captains and owners also get a chance to highlight any problems with observers and or placements at this meeting. Recently the US Government has agreed to

support enhanced observer training for protected species identification and reporting, and FFA will be implementing this enhanced training in the future.

The FSM Agreement Observer Program

The Arrangement came into force on 23 September, 1995. Parties to the Arrangement are Federated States of Micronesia, Republic of Kiribati, Republic of Nauru, Republic of the Marshall Islands, Republic of Palau, Papua New Guinea and Solomon Islands. Tuvalu has agreed in principle to the Arrangement but has yet to accede.

The Observer program was established early in 1996 and has been placing observers on vessels operating under this Arrangement since 1996. The number of vessels under the Arrangement remained low until 2001, when vessel numbers began to increase rapidly to 32 (*May 2004*).

Initial coverage under the Arrangement was 20% of trips undertaken during a calendar year. However, many of the FSMA vessels carried out short trips and although the vessel was in compliance with the placement of observers, FSMA Parties determined better observer coverage was required. At the 2003 FSMA meeting, Parties decided that each FSMA vessel must take an observer for a minimum of at least 50 sea days each calendar year. The result is that most vessels now have to take an observer for at least two trips in a calendar year. Since the introduction of this coverage requirement in June 2003, there has been an increase in boarding, resulting in most coverage of most vessels for over 50 days in 2003. This also represents over 20% coverage of sea time by observers.

Training of Observers

The training of observers for the regional programs is the same as it is for all FFA member country national programs within the western and central Pacific. The training is carried out at a course organized by experts from FFA and SPC and are assisted by the U.S. National Marine Fisheries Service based in Hawaii. Participants are selected to attend national and regional training after being nominated by their respective countries. From these nominations, participants who pass the entrance criteria developed by FFA and SPC are selected for training. Training includes Sea Safety, Basic Navigation, Purse-seining, Long-lining, Pole and Line Gear Technologies and Operations, Report Writing, Species Identification, Environmental Reporting, Species of Special Interest Interaction Reporting, Sampling and Recording of other specified Species, Monitoring Catch and Vessel activities, other aspects of Scientific and Compliance reporting are also included.

For select courses, observers are also introduced to the Inter American Tropical Tuna Commission (IATTC) formats that are required to be carried out by observers on vessels that cross over into the Eastern Pacific. The normal training session lasts approximately four weeks and is both comprehensive and intensive.

Observer Collected Data

Data for all the regional and national observer programs is collected on specially developed FFA/SPC harmonized formats. This allows for easier cross referencing and data base processing. The majority of FFA Regional Observer Program data is checked and then entered into a data base housed at FFA in Honiara. National observer program data and Length Frequency Data are entered into a data base held at the SPC in Noumea. Individual vessel data is available to only authorized persons, however there are public reports available showing data in an aggregated form.