EIGHTH REGULAR SESSION
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3rd ANNUAL REPORT FOR THE REGIONAL OBSERVER PROGRAMME

WCPFC8-2011/24
27 October 2011

Items Reported

1. Regional Observer Programme Operational Report

   a. ROP Audits
   b. Observer data management
   c. Observer coverage for purse seiners long liners and carriers
   d. Coordinating ROP activities with other RFMOs
   e. Observer special situations and observer providers
   f. Trial of onboard "Electronic Data Units"
   g. Secretariat support

2. Regional Observer Programme Implementation Constraints

   h. Transit without observers
   i. Transshipment issues
   j. Cross endorsement protocols
   k. Technical Advisory Group (TAG)

3. WCPFC8 is invited to review the report and to give consideration to the constraints noted in para 28 – 31 when discussing the recommendation for a Technical Advisory Group (TAG) contained in Paper **W**CPFC8-2011/24b

Introduction

4. Paragraph 3 of CMM 2007-01 states: "The Secretariat of the Commission shall provide an annual report to the Commission with regard to the Commission ROP and on other matters relevant to the efficient operation of the programme." This paper reports on different aspects of the operation of the ROP, and the outcomes of the TCC7 and WCPFC7 as required by the Convention and CMM 2007-01

5. The introduction of CMM 2008-01 - Conservation and Management Measure on Bigeye and Yellowfin Tuna in the Western and Central Pacific Ocean brought about a rush for available observers. As could be seen in the short two month trial period during the 2009 FAD closure, there were just enough observers available for short term 100% coverage for that period. However it was clear that there were not enough observers available to maintain a continuous 100% coverage and it was urgent to train more observers in a short period. FFA/SPC undertook short term training programmes to ensure there were enough observers available for the commencement of the 100% observer coverage of purse seiners on Jan 1st 2010. Some observers during this time were not fully trained in all gear types with the concentration

being on purse seining. As time has gone on observer programmes are now having some observers retrained and any new persons wishing to be observers are now being trained in all gear types.

6. A survey carried out in July 2010 indicated there were approximately 550 available observers for the ROP. A survey conducted in July 2011 indicated that this number had increased to approximately 620 observers.

7. The Pacific Island observer programmes supply sufficient observers for the 100% observer coverage of purse seiners, however with 5% coverage of long liners, and 100% coverage of carriers transhipping at sea and with the usual attrition rate that occurs in observer programmes, observer training will be required for most large programmes on a regular basis.

8. To ensure there is an adequate number of observers available. FFA, SPC and member countries are developing and training new observer trainers in each major observer centre. This will allow national programmes to develop observer training courses to meet the continual demands of supplying observers for national and ROP coverage.

1 ROP Operational Report

ROP audits

9. The ROP Section of the Commission Secretariat commenced its audits of Regional Observer Programmes (ROP) that were interim authorised in 2009 and 2010 and to date has completed audits on 16 of the 23 countries or organisations that are part of the ROP. The remaining audits will be completed in early 2012. The purposes of the audits is to ensure that Commission approved standards are being applied and/or are being developed and maintained by programmes that wish to gain ROP full authorisation before the due date of June 30th 2012.

10. Most of the programmes audited were well developed and are following the agreed Commission approved standards to the best of their ability. However there were some areas that needed improvement. A standard that most programmes (not all) were having problems with was observer debriefing. Debriefing development remains a priority of the WCPFC ROP programmes and with the exception of two programmes in the Pacific Islands, others contained only a small number of trained and qualified debriefers. All programmes audited had some debriefing in place but most were overwhelmed with the number of observers with which they had to deal. All countries audited were fully aware of the needs to have sufficient debriefers available, and for a few programmes it was recognized that it will take some time to get these programmes up to an appropriate level of debriefing.

11. There will be a need for continual training of debriefers to build up capacity. Training assistance and funding from FFA/SPC/WCPFC is helping to ensure that programmes will build up to required numbers for comprehensive and accurate debriefing of all ROP observer trips. The audit summary is discussed in more detail in '**Attachment 1"** to this report.

Observer Data Management

Observer data

12. The data service provider SPC presented a paper "Status of Observer Data Management - WCPFC SC 2011/ST IP-06 at SC7; the paper noted that that there is still an amount of ROP observer data to be sent to SPC for data entry. There is a need for providers to ensure that all data for ROP trips is made available for data entry as soon as soon as possible after the observer trip is completed. To indicate the estimated amount of data collected by observers on purse seine vessels; Tables 1 has been reproduced and updated from the above paper, noting that the figures are for 2010 collected data. Long line data plus

other gear type observer data is not included in these figures; when 5% coverage of long liners is attained there will be approximately an additional 800 trips to be entered.

Table 1. Provisional purse-seine observer trips undertaken in 2010, by major observer programme

Observer Programme	(Estimated) Trips undertaken	Trip data received at SPC	%	Trip data not yet received	%
FSM	350	123	35%	227	65%
Kiribati	200	87	44%	113	57%
RMI	82	56	68%	26	32%
Nauru	5	5	100%	0	0%
PNG	400	302	76%	98	24%
Solomon's	214	187	87%	27	13%
US MLT	279	239	86%	40	14%
FSM Arr.	221	171	77%	50	23%
Total	**1751**	**1170**	**67%**	**581**	**33%**

Notes

1. As at 12th September 2011
2. Values in red are approximate number of trips determined from anecdotal information.
3. Provisional values in blue are from Tim Park (pers. comm.)
4. Some of the FSM Arrangement trips may be counted in the national programme trips and the FSM Arrangement trips may not account for those FSM Arrangement vessels covered under the Reciprocal Arrangement (RA) between RMI and FSM, for example.

Data and monitoring requirements of the Commission's CMMs;

13. The ROP data collected by ROP observers resulted in a number of detailed SC reports this year. There is still a backlog of data available as noted above. The ROP data entry has been sufficiently funded in 2011, and therefore the backlog of data due to funding constraints in 2010 is diminishing. Technology problems with scanning the data to SPC have improved with funding assistance from SPC and WCPFC.

14. It was reported at TCC6 that only 4 FFA countries had agreed to supply data to the Commission because of previous agreements made with SPC on the release of data. All FFA countries and the sub regional programmes have since sent letters to the Commission Secretariat or to SPC agreeing to allow the release of ROP data collected by their observers to the Commission. Therefore all programmes are now committed to sending ROP collected data to the Commission Secretariat or to the Commission data provider.

Observer coverage for purse seine long line and carriers;

Purse Seine Coverage

15. The 100% observer coverage for purse seiners for period July 1st 2010 to June 30th 2011 includes the FAD closure period in 2010. Coverage was monitored by the Secretariat with information supplied by observer providers and flag States for purse seine vessels when fishing in the Convention Area 20N – 20S. A few discrepancies in information supplied by providers and flag States were crossed checked, and in most instances the vessels were either not fishing in the 20N – 20S portion of the Convention Area, or were fishing entirely in their own EEZ. Under the Convention vessels fishing in the waters of their flag State are not ROP trips, although most had observers on board as part of the national coverage, Solomon's, PNG, Philippines, etc.

16. Table 2 (July 1st 2010 – June 30th 2011) is an indication that purse seine vessels carried an ROP observer for the whole or part of the month indicated.

Table 2 Purse Seine Coverage July 2010 – Jun 2011

Vessel Flag State	Total Vessels	Jul 2010	Aug 2010	Sep 2010	Oct 2010	Nov 2010	Dec 2010	Jan 2010	Feb 2010	Mar 2011	Apr 2011	May 2011	Jun 2011
China	12	9	9	10	11	12	12	12	12	12	12	12	11
Chinese Taipei	34	27	26	29	31	30	33	33	34	33	33	34	34
Ecuador	9	6	6	6	8	8	9	9	8	8	8	8	8
El Salvador	2	2	2	2	2	2	2	2	2	2	2	2	2
FSM	7	7	7	7	6	6	6	6	5	5	7	7	7
Japan	36	30	32	28	36	34	35	35	34	30	31	35	34
Kiribati	5	5	5	5	5	4	4	4	4	4	4	4	4
Korea	28	28	28	25	27	27	27	28	28	27	28	28	28
RMI	10	8	10	10	9	9	9	8	8	8	8	10	10
New Zealand	4	4	4	4	3	3	3	2	2	2	2	4	4
PNG[1]	4	0	0	0	0	0	0	0	0	0	0	1	1
Philippines[1]	17	0	0	0	0	0	0	0	0	0	0	0	0
Solomon Islands [1]	5	0	0	0	0	0	0	0	0	0	0	0	0
Spain	4	4	4	4	4	4	4	4	4	4	4	4	4
Tuvalu	1	1	1	1	1	1	1	1	1	1	1	1	1
United States	36	31	31	30	32	31	33	33	30	32	31	33	33
Vanuatu	16	16	16	16	14	14	14	14	14	14	14	15	15
Total	**230**	**178**	**181**	**177**	**189**	**185**	**192**	**191**	**186**	**182**	**185**	**198**	**196**

1 - Vessels fished exclusively inside EEZ for all or most of reporting period

Long Line Coverage

17. The coverage for long liners has been set at 5% and this is to be achieved by June 30th 2012. During 2010 there was very little long line data being received by the WCPFC ROP data provider (SPC) and the estimate coverage for 2010 was still less than 1%. CCM's are reminded that the 5% coverage does not start on June 30; the wording in the CMM says the 5% coverage will be achieved by 30 June 2012; therefore CCMs should commence their coverage of long line vessels well before June 30th 2012 to achieve 5% coverage by that date.

Carrier Transshipment Coverage (Jan 1st – June 30th 2011)

18. The 100% monitoring of long line transshipments at sea commenced in 2011, and is being monitored by the ROP Section of the Commission Secretariat. The carriers that the Commission ROP is aware of, that are carrying out transshipment at sea, are vessels that are notified to the Secretariat by CCMs when they are placing an observer on a carrier, as well as carriers notifying the Commission Secretariat of their intentions to transship.

19. It is not known if all carrier vessels transshipping at sea are carrying an observer, as it is impossible for the Commission Secretariat to know how many carriers maybe in the area, and how many of these intend to transship at sea. The limitations of the WCPFC VMS make it impossible for the Commission to track carriers throughout the Convention Area. The VMS cannot differentiate between carriers that are intending to transship catch in authorised ports therefore not requiring an observer on board, and vessels intending to transship at sea and therefore requiring an observer. Table 3 indicates that there have been 18 different carriers transshipping at sea and these have been covered by 27 observers for the period Jan 1st – July 31st 2011. Table 3(a) indicates the amount of species reported as being transshipped in metric Tons.

Table 3 Carriers with observers for high seas transshipments

Carrier Flag	Number of Carriers	Observer Placements
Kiribati	4	5
Vanuatu	9	16
Korea	1	1
Japan	1	2
Panama	3	3

Table 3(a) Species Transhipped

Species	Weight mT	Species	Weight mT
Big-eye	9399	Blue Marlin	419
Yellowfin	1772	Shark	567
Striped Marlin	125	Shark Fin	21.5
Swordfish	1213	Albacore	2677
Black Marlin	42	others	675

Coordinating ROP activities with other RFMOs

Cross endorsement of observers

20. The cross endorsement of observers to operate in the IATTC and WCPFC Convention Areas has been approved by both organisations, a Memorandum of Cooperation (MoC) has recently been signed by the Director of IATTC and the Chair of WCPFC. Discussion on operational matters will take place with the IATTC by the WCPFC Executive Director early November 2011; refer paper WCPFC8/2011-35.

Observer special situations and providers

Observers for special situations

21. The Commission budget allocated US$30,000 for "Observers for Special Situations" in 2011, and it was decided that the funding for 2011 would be used for observers to assist in the Spill/Grab Sampling Project 60 being managed by SPC. A similar amount has been requested for 2012, with the funding of observers for "Special Situations" to be used for assisting the ROP to audit data collections of long line fleets, who may decide to use their own nationals on vessels that fish occasionally on the high seas

Observer providers to the ROP

22. The following programmes are authorized to supply observers for the WCPFC ROP (Table 4). Audits of all the programmes to ensure they are complying with or are developing standards as required by the Commission are continuing; included in the table are programmes that have been fully authorized to operate as a supplier of ROP observers. The remaining interim authorized programmes can continue to supply ROP observers until June 30th 2012 by which date they will be audited.

Table 4 - WCPFC ROP Observer Providers[1]

Providers for the ROP Observer Programme	Year Interim Authorised	Fully Authorised	Observer Coordinator Contact details[1]
Australia	2009	Audit Feb 2012	Mike Yates Mike.Yates@afma.gov.au
China	2009	Audit Oct 2011	Chen Xuejian admin@tuna.org.cn
Cook Islands	2009	Audit Sep 2011	Andrew Jones A.Jones@mmr.gov.ck
Federated States of Micronesia	2009	2011	Steven Retalmai steveretal@live.com
Fiji	2010	2011	Netani Tavaga stone_domain@hotmail.com
FSM Arrangement	2009	2011	FFA Secretariat timothy.park@ffa.int ambrose.orianihaa@ffa.int

Japan	2009	Audit Feb 2012	Shinobu Nakai shinobu_nakai@nm.maff.go.jp Wataru Tanoue Wataru_tanoue@nm.maff.go.jp
Kiribati	2009	Audit June 2011	Tekirua Riinga tekiruar@mfmrd.gov.ki
Korea	2009	2011	Dr. Zang Geun Kim zgkim@nfrdi.go.kr
Marshall Islands	2009	2011	Dike Poznanski dikep@mimra.com
US Multilateral Treaty on Fisheries	2009	2011	FFA Secretariat timothy.park@ffa.int ambrose.orianihaa@ffa.int
Nauru	2010	2011	Ace Capelle nrvms@ccnpac.net.nr
New Caledonia	2009	Audit Feb/Mar 2012	Hugues Gossuin hugues.gossuin@gouv.nc HuguesG@spc.int
New Zealand	2009	Audit Feb 2012	Andrew France Francea@fish.govt.nz
Palau	2009	Audit Dec 2011	To be advised
Papua New Guinea	2009	2011	Philip Lens plens@fisheries.gov.pg
Philippines	2009	2010	Alma C. Dickson alma_dickson@yahoo.com
Solomon Islands	2009	2011	Derrick Suimae dsuimae@fisheries.gov.sb
Chinese Taipei	2009	Audit Nov 2011	Mr Jungchun-tai Jungchun@ms1.fa.gov.tw
Tonga	2010	2011	Viliami Mo'ale vmoale@tongafish.gov.to
Tuvalu	2009	Audit Feb/Mar 2012	Falasese Tupau falasese@yahoo.com
USA	2009	2010	Joe Arceneaux stuart.arceneaux@noaa.gov
Vanuatu	2009	2011	John Mahit jmahit@gmail.com

[1] Detail as October 16th 2011

Electronic data collection

Trial of electronic data units

23. The WCPFC ROP has been trialling electronic reporting by observers using on-deck electronic instruments supplied by GEO EYE ("Osprey Personal Tracking Devices".) GEOEYE supplied the units free of charge for the trials, communication costs are funded by a grant from the US. There is potential for units like these to be able to allow observers to collect information and report it in near real time, with the probability that the data collected will do away with some paper reporting and will allow observers to record activities and send it as it occurs. The Units also have many safety reporting features that will enable observers to report almost immediately on any concerns regarding safety. The data currently goes into a secure trial data base back on shore as the observer reports on the vessel. It is early stages of the trials and results are preliminary and an early report on the trials by two observers and the units used is presented as **Attachment 2** for your information.

Secretariat support

ROP Co-ordinator

24. During the period since the last ROP report for WCPFC 7, the ROP Coordinator (ROPC) has assisted in a number of training sessions at the WCPFC head quarters, as well as in Kiribati, Fiji and also at the observer training centre at Navotas, Manila Philippines. The ROPC has been directly involved in the auditing of 11 countries and assisted with the audits of 5 other countries since the beginning of 2011, he has also assisted various CCM's on different aspects of observer placements and the requirements of the WCPFC ROP and CMM's.

ROP Data Quality Officer

25. The ROP Data Quality Officer (DQO) has been busy developing and maintaining WCPFC data bases for ROP information on Coverage, Catch Retention, Transshipment, Notifications, etc. The DQO has also been involved in helping with the audit procedures, and has been involved in the audits of a

number of the countries reviewed. He has also assisted various CCM's on different aspects of observer placements, and has serviced enquiries on observer coverage and requirements.

Travel/Meetings

26. The ROP Coordinator and the Data Quality Officer participated in TCC6 and SC6, (Pohnpei), WCPFC7 (Hawaii USA), as well as the PI Regional Observer Coordinators Workshop in Solomon Islands. The ROPC and DQO made contribution to each of these meetings on ROP matters and issues, as well as assisting with the general administration and organisation of these meetings.

27. Other travel for the ROPC and the DQO since TCC6 has been involved in auditing programmes in the USA, RMI, China, Kiribati, Fiji, Solomon Islands, Tonga, Chinese Taipei, Nauru, Korea, PNG, FFA and Vanuatu. Where possible audits were timed to correspond with observer training or other meetings.

2 ROP Implementation Constraints

28. During the year the Secretariat identified a number of constraints in the existing CMM's which were unable to be clarified and therefore made providing advice and direction to CCM's difficult. These were raised at TCC7 but remained unresolved, with TCC7 recommending the establishment of a Technical Advisory Group (TAG) for a limited period until September 2012. The issues are briefly addressed as follows and will be addressed by the TAG if approved by WCPFC8.

Transhipment

29. The identification and intentions of carriers wishing to tranship on the high seas or in EEZs requires some improvement, a number of issues presented at TCC7 that will assist ROP observer coverage will be addressed by the Technical Advisory Group if approved.

These issues include:

- monitoring problems to ensure all carriers transhipping at sea are carrying ROP observers,
- protocols for carriers when entering or exiting the Convention Area regardless of the reason; (the Secretariat is unable to know what the intentions of a carrier are if it does not contact the Secretariat when the carrier enters the Convention Area)
- protocols for carriers operating from home ports within the Convention Area that intend to tranship on the high seas;
- protocol to be used for informing the Commission ROP section of the Commission Secretariat on the name of the provider and observer when entering the Convention Area;
- Commission secretariat operational role in gathering information from carriers.

Purse seine vessels asking exemptions to transit in the Convention Area without an observer

30. A number of vessels have asked for permission to transit back to shipyards and not have to carry an ROP observer. Issues arising from these requests were brought to the attention of TCC7 including;

- for purse seiners requesting permission to be permitted to transit to shipyards without an observer from the last port of call in the 20N-20S section of the Convention Area to shipyards outside 20N – 20S section of the Convention Area;
- when a vessel is ready to leave the shipyard and transit back to the fishing areas in the 20N-20S section of the Convention Area to the first port of call without an ROP observer on board;
- on notification of timing before the scheduled departure to transit without an ROP observer;

- for reporting to Commission Secretariat if any catch on board and amount before departure to transit without an ROP observer;
- for acknowledgement by the Commission Secretariat that the vessel will transit without a ROP observer on board;
- to inform vessels on rules regarding transiting without a ROP observer i.e. stows all fishing gear, covers its nets, ensure that its booms are properly lowered and secured; no servicing or placement of FADs etc;

Cross endorsement observer protocols

31. Operational rules for Cross Endorsement of Observers taking into account IATTC comments on these matters including;

- approved observers from IATTC or WCPFC observer programmes that fish on high seas of the respective Convention Areas;
- collecting observer data in the different formats;
- training of observers to ensure that observers being used have been trained in both IATTC and WCPFC data collection and reporting formats;
- observers for the high seas in the overlap area;

Technical Advisory Group

32. TCC7 recommended a Technical Advisory Group (TAG) be created to assist the Secretariat in developing protocols for ROP operational matters. A Term of Reference (TOR) was presented to TCC7 for this TAG; these were modified slightly following comments and the latest version for consideration is presented in paper WCPFC8-2011/25.

Challenges

33. The ROP continues to have operational issues that need to be addressed, with continuing introduction of new CMMs requiring observer input. The formation and approval of a Technical Advisory Group to deal with these current issues will go a long way in giving guidance to operational matters which are not articulated in the current CMMs.

Credit

34. The ROP section of the Commission Secretariat thanks all the WCPFC ROP Coordinators and their staff from national programmes, the FFA observer programme staff, SPC OFP staff and especially thanks to all observers for their input into assisting the ROP during the last year.

Attachment 1

TECHNICAL AND COMPLIANCE COMMITTEE
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Pohnpei, Federated States of Micronesia

SUMMARY OF REGIONAL OBSERVER PROGRAMME AUDITS

WCPFC 2011-24 Attachment 1

1. The ROP section of the Commission Secretariat commenced its audits of Regional Observer Programme (ROP) interim authorised observer programmes in late 2010 and to date has completed audits on 17 of the 23 national or sub regional programmes that are part of the ROP. The remaining audits will be completed in early 2012.

2. Programmes reviewed so far are Philippines, Chinese Taipei, USA, Marshall islands, Fiji, Korea, Vanuatu, Tonga, Solomon Islands, FFA (UST) FFA(FSMA) Papua New Guinea, Kiribati, Cook islands, Fed States of Micronesia, Nauru, China,

3. The purpose of the audits is to ensure that Commission standards are being applied and/or is being developed and maintained by programmes that wish to gain ROP full authorisation before the due date of June 2012.

4. In most cases the programmes audited were well developed and were following the agreed Commission standards to the best of their ability. However there were some areas that needed improvement. The following observations are for each standard and note the problems that some programmes were having with these standards.

1. Minimum Data Fields

Standard

The standard for "Data Fields, Management, Distribution and Use" will be that CCMs will use existing data field formats collected by their national or sub regional observer programmes and that also they will ensure that the Commission minimum data standard fields for the ROP are included in their data collection formats.

Observation

The FFA/SPC formats which are used by most programmes were changed in 2009 to include all the WCPFC approved data fields. SPC/FFA released this version of the observer data collection formats in September 2011 and the new version contains all the WCPFC approved data fields.

2. Observer Training

Standard

Standard for "Observer Training" is that training programmes should be linked to the Commission's decisions in place, available for review and training programme materials provided to the Secretariat

Observation

The Pacific Island (PI) programmes are all using approved Pacific Island Regional Fisheries Observer (PIRFO) standards developed for observer training by FFA/SPC. Other non pacific island programmes have their own standards.

There has been an ongoing need for more observers in the PI countries as the programmes are coming to terms with 100% coverage on purse seiners and the 5% long line coverage commencing in 2012. Some of the problems detected during audits included that the quality of observer trainees chosen for observer courses in a couple of countries had been poor, and many trainees in these countries struggled to pass the basic requirements of the course. Selection of observer trainees is extremely important and the entrance criteria used in FFA/SPC courses has improved the quality of observers trained.

3. Observer Trainers

Standard

The ROP standard for the Commission for "Observer for observer Trainers is: "CCMs will use existing national and or sub-regional training standards. CCMs will develop trainer qualifications, available for review by the Secretariat."

Observation

Senior observers from PI and other programmes are generally selected to be taught the techniques used in observer training. In the PI they are currently being trained by FFA/SPC at special sessions, and for practical experience are also being used under guidance of qualified trainers to assist in sub regional and national training sessions. The intention is that programmes will eventually be able to use their own personnel to train their own observers. This is a positive move so the PI and other programmes can become self sufficient in supplying their own qualified trainers.

4. Code of Conduct

Standard

The agreed standard for "Code of Conduct" is that each CCM should have a Code of Conduct in place, available to each observer, available for review and if not in place, to be developed.

Observation

All programmes audited had a "Code of Conduct" in place, and for the PI programmes most were similar to the guide produced by the Commission ROP. The "Code of Conduct" is explained during training sessions for observers, and includes protocols to investigate complaints or breaches. Depending on the outcome of these investigations, breaches are dealt with by a period of suspension determined by the severity of the incident. It was found in a couple of programmes that observers are only given the code at the beginning of their observer careers, whereas a few programmes re-issue the code when contracts are signed, and one programme gave a copy of the code to each observer as a standard issue for every trip. It has been suggested that each programme issue the code to the observers prior to each trip.

5. Sea Safety

Standard

The standard for "Sea - Safety" is that all ROP observers must undergo training in sea safety and emergency procedures to international recognized standards, and that such training procedures be made available to the Secretariat

Observation

In most programmes audited observers were confirmed as having been trained in "Sea Safety" by a qualified lecturer in international "Sea Safety" standards. Training in most cases took place in a fisheries or maritime college. All participants that passed were given "Certificates of Sea Safety" indicating they have completed and passed the course to international standards. A couple of programmes did not have a college to issue these certificates and relied on Patrol boat personnel to carry out this training.

6. Placement /Deployment

Standard

The standard for "Coordinating Placement" is that the

- *WCPFC National Observer Programme Coordinator should be in place,*
- *There should be a system for observer placement administration and that documentation describing observer placement administration should be provided to the Secretariat.*
- *Audit measures to check on deployment procedures will be developed by the Secretariat*

Observation

In all programmes audited there is a WCPFC ROP Coordinator in place. Procedures in some programmes are documented and copies of the procedures were made available to the ROP section of the Commission Secretariat; some programmes have not documented their basic system of administration for placing their observers and have all been advised to document the system and procedures they use for placement of observers. The procedures in the documents that were presented were acceptable; however given the situation of 100% observer coverage of purse seiners and 5 % coverage of long liners, the procedures in some cases, will need to be updated to better reflect current day situations.

7. Debriefing & Briefing

Standard

The standard for "Briefing and De-briefing of observers" is that there is a system for briefing and de-briefing of observers in place and documentation describing briefing and de-briefing available to the ROP section of the Commission Secretariat

Observation

The FFA/SPC debriefing format is used during the debriefing of all PI countries; other countries have their own formats. Unfortunately for all PI countries with the exception of two programmes there are only a very small number of debriefers trained and qualified by FFA/SPC; these organisations have the task of certifying debriefers in the FFA/SPC countries. The process of training debriefers is in place and is ongoing for FFA/SPC member country observer programmes. There is a need for a number of dedicated certified debriefers with proper facilities to operate in most PI countries.

It was noted, that the number of debriefers available in most PI countries is inadequate, and it will take time to get these programmes up to a respectable level of debriefing. Most countries visited were aware of the needs to have more debriefers, but in most cases had no allocation of space or funds to allow debriefers to operate. There is ongoing training of debriefers to build up capacity and quality in PI countries, but it will take a couple of years to be able to get the required numbers for comprehensive and accurate debriefing of all observer trips.

It was reported that unqualified debriefers such as senior fisheries observers, the fisheries observer coordinator and others not connected to the programmes were assisting to debrief some of the trips. A couple of programmes audited had only about 20% of trips debriefed, the other 80% were sent to SPC without any prior debriefing.

Comprehensive debriefing requires at least one to two full days to complete. Length of time spent on debriefing depends on how well an observer fills out his/her forms from a trip. Funding for training and setting up facilities is limited and unless rectified will hinder this important area of development for the PI programmes.

There are also ramifications on the unavailability of debriefers, as it is proposed elsewhere that vessels have access to information of the observer's trip aboard their vessel after an observer has been debriefed. This will be difficult to comply with if the observer data and information hasn't been debriefed and checked for correctness and completeness, due to the lack of available debriefers.

8. Debriefing Training

Standards

The Standard for qualification of observer debriefers is that debriefers will be experienced in observer matters and that CCMs will use existing national and sub-regional programme standards for debriefers. CCMs will prepare qualifications for a debriefer, available for review by the Secretariat.

Observation

Each programme uses their own standards for debriefer trainers, however all the PI programmes use the FFA/SPC debriefing standards developed as part of the FFA/SPC regional harmonization process. Most PI programmes have had a small number of persons trained in the area of debriefing, however these programmes are currently waiting further training sessions for the selected personnel to complete the FFA/SPC debriefing training programme.

Debriefing training is in the early stages of development with most PI countries; some of the newer programmes have difficulty in supplying debriefer as the requirement "d*ebriefers will be experienced in observer matters"* means the programme has some difficulty in supplying experienced observers because they have existed for only a short time. The ultimate goal of each programme is to have sufficient trained persons to be able to carry out full and comprehensive debriefings of all their observers.

9. Equipment and Materials

Standard

The standard for "Equipment and Materials" is that observers are provided with appropriate equipment, including safety equipment to carry out their roles and tasks on board a vessel.

Observation

All basic equipment is supplied for observers to carry out their tasks; however safety equipment is not distributed by all programmes. Many programmes rely on agreement with vessels to provide observers with safety equipment when they are on board carrying out observer duties, therefore observers do have some safety equipment available when carrying out their duties on these vessels.

There is a need for programmes to budget enough funds to fit out all observers with quality safety equipment. This equipment should be properly monitored and maintained by the observers with distribution administered by a member of the observer programme staff. Observers should also take responsibility of the items issued to them, and be expected to compensate the programme for equipment lost or left behind on vessels or during travel.

10. Communications

Standard

The standard for "Communications " is that observers have access to appropriate communication facilities, including emergency communication facilities while on board a vessel."

Comment

Regular communications are useful for many purposes, including regular observer reports and the safety and well being of observers. Most observer programmes have no regular voice communications with their head quarters. Sometimes a "Satellite Phone" is used if supplied or available on vessels; however most observers send regular (weekly) Email or fax to their providers. Radio communications is included in the observer training programmes that have been audited so far. It is noted that many long liners do not have any communication facilities another than HF/VHF radio and all observers will need to be refreshed with Radio Communication protocols from time to time.

11. Performance of Observers

Standard

The standard for "Measuring Performance" is a means to report on the performance of the observer programme and a means to report on the performance of individual observers as part of the annual reporting requirements established by the Commission.

Observation

Most programmes use the reports from the debriefing of observers as a means to help determine performance of their observers; these are made available for each trip that is debriefed. SPC looks at the quality of individual observer data from time to time, and can produce if requested a report on the quality of data collected by individual observers. Long term appraisal will rely on the programme being able to debrief the observer properly and an opinion from SPC on the quality of the data collected by the observer. It was noted that observer coordinators interviewed indicated in some programmes, they have dismissed and suspended observers for not attaining standards that meet their programme requirements for data collections.

Training or retraining of observers is important to ensure quality data is collected at all times. Ensuring that proper debriefing occurs from qualified debriefers for each observer returning from a trip is extremely important for observer's development and for the overall quality of the programme.

12. Dispute mechanism

Standard

The standard for "Dispute Settlement" is a dispute resolution mechanism should be in place, and if not in place, to be developed, and a description of the dispute resolution mechanism provided to the Secretariat

Observation

Most programmes audited had as part of their 'Code of Conduct' protocols on how to handle disputes and most also have a consultation process and some suggested penalties for observer infringements. It was unclear in many programmes, other than a formal letter to the programme Director, whether there is a procedure or mechanism in place for vessels to complain about observer conduct and work ethic.

13. Authorisation process

Standard

The Secretariat will authorize national observer programmes, rather than individual observers; this is consistent with the Convention text. CMM-2007-01 Para 12(b) also states that the Secretariat will authorize observer providers.

Observation

All requirements were found to be adequate for the "Interim Authorisation" of all observer programmes who applied for ROP Interim Authorisation, and therefore all were eligible to apply for full authorisation.

14. Coverage

Standard

Commission determined observer coverage's are:

- *purse seiners 20N to 20S -100% coverage (start Jan 2010)*
- *outside this area 20% purse seine coverage*
- *long liners coverage is 5% by June 2012*
- *Carriers transshipping at Sea 100% (LL& P&L) (start Jan 2011) – Note that PS must still go to approved areas in Zones or ports to transship and long liners may need exemptions from certain countries to transship on the high seas.*

Observation

Most observer programmes audited were struggling to maintain observer numbers when the 100% observer coverage of purse seiners commenced. They were required to use observers from other programmes to assist with the supply of observers when it got busy in their ports; however with all the extra training, observer numbers for purse seine coverage are adequate in most programmes audited. However, a number of programmes interviewed stated they still need extra observers for future coverage of long liners, and the carriers, as well as replacements for the attrition of observers.

Most programmes cited different problems they were having with getting extra observers, including scheduling extra training because of lack of funds, lack of commitment by their Fisheries Departments/Divisions and the heavy commitments by FFA/SPC who have limited resources when it comes to supplying trainers. This will be resolved when an adequate number of qualified trainers become available for each programme.

15. Vessel Safety Certificate (VSC)

Standard

The interim minimum standard for a Vessel Safety Checklist (VSC) will be that a CCM should have a VSC in place, and to be used prior to an observer boarding a vessel; and if not in place, CCMs may use, as a guideline, the VSC developed by the Commission.

Observation

A few of the programmes audited so far, currently did not use a Vessel Safety Certificate (VSC) when placing an observer. Nor did they check a vessel for safety when an observer is placed on board. However all the PI programmes use the FFA/SPC pre boarding check list which does contain some aspects of vessel safety. A small number of programmes audited had comprehensive vessel safety check lists in place.

Following discussion with the PI Coordinators at the SPC/FFA Regional Observer Coordinators Workshop held recently, it was agreed that the FFA/SPC pre boarding check will be redesigned at the

next FFA/SPC Data Consultative Committee to include all aspects of Vessel Safety Checks. It was also agreed that a copy of the pre boarding report should be attached to the observer data and reports along with any briefing or debriefing reports. The Commission also has as a guide a comprehensive VSC that can be utilised by any programme requiring a safety checklist.

16. Insurance

Standard

The Interim Standard for Insurance of Observers for ROP duties is that CCMs will use existing national standards for health and safety insurance. CCM providers of observers will make sure an observer placed on a vessel for ROP duties has health and safety insurance.

Observation

Many programmes had limited insurance coverage for their observers; most observer are covered by national health and insurance schemes when on shore in their home countries, however when on board a vessel, observers are generally limited to the coverage given to them by the vessels insurance. It was found that not all observers were covered for insurance, especially when on long liners or when traveling to or from a vessel.

17. CMM adherence

Standard

T*he providers are to ensure that all observers fully understand the content of the CMM's especially in relation to their roles and tasks in monitoring the CMM's*

Observation

Many programmes interviewed for the audits so far said they had problems with CMM adherence.
The problem - coordinators said they were having, was on learning what has been changed, or what is a new, not only for CMM's but also for other observer requirements and issues. Many said this was caused by the lack of feedback from their senior staff on some of the issues after they attended relevant meetings; also they noted that circulars sent to official contacts on these issues were hardly ever forwarded to them for their information. They not only said this was a problem with WCPFC but was also a problem from other PI regional organisations as well.

Realizing that this an ongoing problem with many programmes, the WCPFC ROP section of the Commission Secretariat undertook to ensure all CMM's resolutions or directives that were relevant to observer operations or coverage would be compiled each year, as soon as practical after the WCPFC annual meeting, and would be sent directly to all ROP coordinators, observer trainers and other senior observers. This will commence in early 2012.

18. Summary

Since the introduction of the 100% observer coverage for purse seiners, most observer programmes have coped well in supplying observer numbers , but all programmes have said that they require continual training to upgrade the observers, and to ensure they have enough for all the demands put on them by the WCPFC different gear type coverage requirements.

It was noted, that many programmes (not all) have totally inadequate numbers of debriefers for their debriefing programmes, and this should be a priority to be rectified. This is an area that is developing in many PI countries, but funding and recognition of this important aspect of observing is not forthcoming in many national programmes.

There is a need to increase the number of available observers for most programmes, as this will allow for some attrition of the "not so good" observers, as well as being able to cover the expected increased need for observers to satisfy long line and carrier observer coverage requirements.

The quality of the observers needs to be monitored carefully, as it has been reported that the data collections held by SPC indicated that a percentage of observer data is not useable, because it is collected incorrectly, or is not collected at all. This is clearly a waste of valuable resources, and shows the need for better trained and qualified observers, it also highlights that a proper debriefing programme needs to be in place for all programmes.

The quality of observers is extremely important and an entrance criteria for training needs to be rigidly applied as does the initial selection process. It was found in a - few programmes that some observer trainees were placed in courses by the hierarchy without going through any criteria, and in many cases these persons failed the courses and took time and effort away from persons who could have passed.

The sending of data to the SPC or WCPFC after each observer trip is extremely important and unfortunately many programmes are not sending data in a timely manner. SPC and WCPFC ROP have been working hard to rectify this problem by supplying equipment, personnel and other means in transferring the data in a quick and timely manner.

There is a need to assure that observers are covered by insurance when travelling, on board vessels, and when working as an observer on shore. Many programmes had some insurance for observers but most observers were not covered for all the periods they worked as observers.

Health checks (Medicals) by programmes on their observers varied from being comprehensive to none at all. The Commission does not have a standard for health checks, however it is recommended given the issues that some programmes have had with observers being unfit to carry out trips on vessels because of health constraints, that all programmes adopt a standard that requires observers to have a full health check (medical) when first trained and then a regular check after this, suggested to be every 18 months to two years.

Most programmes will be authorised as some of the standards required through no fault of the programme are just not available in a timely basis, for example.

- Debriefing and Debriefer training –For PI and some other countries this is under development with the help of FFA, SPC, WCPFC and NMFS and given another couple of years this problem should be rectified. The development of the debriefing should not hinder full authorisation,

however a follow up check in a couple of year's time to ensure the standard has been reached is recommended

The WCPFC ROP has audited 14 programmes and still is to audit 9 programmes before June 2012, a report will be compiled after all the audits have been completed. Table 1 indicates programmes that have been audited up to 1st August 2011. Table 2 indicates tentative dates for programmes still to be audited**.**

Table 1. Programmes Audited by the ROP section of the Commission Secretariat.

Programme	Audited
Philippines	**May 2010**
USA	**November 2010**
Marshall Islands	**March 2011**
Korea	**March 2011**
Fiji	**March 2011**
Tonga	**March 2011**
Vanuatu	**April 2011**
Kiribati	**May 2011**
Solomon Islands	**June 2011**
US Treaty (FFA)	**June 2011**
FSM Arrangement (FFA)	**June 2011**
PNG	**June 2011**
Nauru	**June 2011**
FSM	**July 2011**
Chinese Taipei	**Oct 2011**
China	**Oct 2011**
Cook Islands	**Sept 2011**

Table 2 Programmes still to be audited

Programme	Tentative Audit Dates
Australia	**Feb 2012**
New Zealand	**Feb 2012**
Palau	**Dec 2011**
New Caledonia	**Feb/Mar 2012**
Tuvalu	**Feb/Mar 2012**
Japan	**Feb 2012**

Attachment 2

TECHNICAL AND COMPLIANCE COMMITTEE
Seventh Regular Session
28 September - 4 October 2011
Pohnpei, Federated States of Micronesia

ROP - Preliminary Trial of GEO EYE "Osprey Global Tracking Units)

Introduction

1. The ROP Programme Coordinator had sent a few companies a request on what they may be able to supply on the requirements to collect observer data at sea and transmit it electronically back to a base on shore. Some of the companies just sent back brochures with price lists to purchase units if we wished to trial them. GeoEye[1] was the only company that responded by saying they would provide 3 units to trial free of charge. They also agreed to develop reporting software free of charge to enable observers to collect a trial set of 25 data fields. The units are capable of collecting a lot more data fields, but it was decided that for the trials 25 fields would be sufficient to assess it for real time reporting.

2. Two observers were selected with the assistance of the FSM ROP Coordinator from the FSM observer programme. Both observers were given a short training on how to operate the units and one was sent out on a vessel in May and the other in July. The third unit was taken by the VMS Manager to trial during his travels. The trial is in the very early stages and the response of the two observers after their trip is all that is included in this report. The units will be sent out again to continue the trial. Refer to the Q&A table for comments on the use and monitoring of the Osprey unit by the observers and the ROP Data Quality Officer.

3. Besides the entry by observers and sending of the ROP data in near real time, the units have many features that would enhance the safety of any observer when on board a vessel.

4. There is potential for units like these to be able to allow observers to collect information and report it in near real time to a data base onshore, with the possibility that the data collected will do away with some paper reporting and observer data entry. The data currently goes into a secure trial data base set up on shore as the observer reports on the vessel. It is very early stages of the trials and results are preliminary and an early report on the trials and the units used are presented for your information. Some trial information is included for your interest in a Q&A Table, as well as Tables 1 and 2, with tracks shown in Figure 1- 2.

[1] Website Comment - GeoEye-1 is the world's highest resolution and most accurate commercial Earth-imaging satellite; they operate two color Earth-imaging satellites, GeoEye-1 and IKONOS, and three airplanes with advanced high-resolution imagery collection capabilities.

Q& A Interview with Observer on use of Geo-Eye, Osprey Unit.

Question	Answer observer 1	Answer observer 2
1. Did the unit work ok during the trip?	Worked ok! Took a little time to get used to entering data.	Yes had no problems at all with the Unit
2. What problems did you have?	1st Trip took time to get used to entering data, also battery charger seemed to have problems as unit wasn't charging some times, Not sure if it was charger or the power source on the vessel. It took a couple of hours to charge properly	No problems everything worked ok for the duration of the trip, including the charger. Unit- held enough charge for unit to work for 2-3 days
3. Did you use the unit all the time when on the trip?	There were a couple of days I had problems with the charger that I didn't send any messages out.	I used the unit every day.
4. Did the screen size cause any problems?	No! it was ok; I could see everything, it would be nice to be a bit bigger but it was fine.	No! it was good, if it was bigger that's ok but I had no problems with the current size of the screen.
5. Did the screen resolution cause any problems?	Yellow on black was fine, I could see it all the time	No problems a good contrast.
6. Did the screen resolution cause any problems in the bright sunlight?	A little dull, but not really, it was ok.	No problems.
7. Did the screen resolution cause any problems in the rain or when unit was wet?	Don't really know, didn't want the unit to get wet so didn't use it on deck when it was a wet situation, used it when off the deck and punched the info then.	I used the unit in the rain and it worked fine screen was ok.
8. How difficult was it to use the scroll down method in finding the correct info to send?	It took time to get used to it, when I got used to it was pretty quick;	Not a problem got better when I knew exactly where to scroll but at no time was it difficult.
9. Was it a nuisance having to hold the unit all the time when on deck?	A little bit as I had other work to do I would need to put it down safely somewhere.	Did not hold it all the time, I placed it in a safe position, but a special belt to clip the unit onto the observer would be good.
10. Did you have any problems getting a signal from the satellite to the unit?	Yes – 1 st problem was getting a signal for the unit, I found that there were only a couple of areas that I could get a decent signal – one was on top of the bridge – the other was in the middle of the back deck working area.	I found that had to move around to get a signal when the boat was stationary, also took a little longer to fix a position when vessel was stationary. When the vessel was moving had no real trouble getting a position fix.
11. Did you have any problems sending the information?	Yes a little it took the unit about 5-7 minutes to send the information I had entered in the unit.	Generally 3 to 5 minutes to send the information out.
12. How long did it take to enter the data you wanted to send?	A few seconds more or less depending on the information.	A few seconds.

13. When did you send the information?	Sometimes as soon as the event occurred, but a lot of the time I waited until the end of the set or when I was off the deck from other work and then sent the information.	When an activity occurred, however also stored some activities when occurring in quick succession and then sent them out as a package.
14. You were only given about ½ days training; how long do you think we would need to train a person on the uses of this unit?	I would say 2-3 days training with lots of practical work; it took me a few days on board the vessel to get used to using the unit.	½ day was fine for me, but someone not used to these types of instruments would need at least a day.
15. What improvements could be made to the unit?	Definitely a keyboard as well as putting more data collection fields in the unit, there were times that it was frustrating not being able to enter some of the required data as the fields were not available in the unit. Catch data fields need to be more accurate to the ton and not the ranges as are in the unit now.	Key board attachment would be good so can compile messages. More data fields in fact I think all PS-2 and PS-3 forms could easily be collected on this unit. Also I see a real good use and easier to use for long liners. Could do away with nearly all forms.
Unit Review by Observers and WCPFC		
Problems encountered in receiving signal;	Unit did not send the report due to heavy rain and heavy cloud cover according to observer. (Geo eye says that cloud cover has no bearing on fixing satellites)	2nd observer had similar problems and said It was difficult getting satellite fixes on really heavy overcast days particularly when vessel wasn't moving. If vessel was moving it was never a real problem getting a fix.
Problems with information sent to WCPFC office;	Sometimes the GPS readings between events were not the position when the event occurred. In some cases the Observer waited a while to get different data and then sent a number of activities together and the unit would read the GPS signal at that point and this would be sent as where all the activities occurred when in fact the activities may have occurred elsewhere. The Unit needs to be able to record the position at the time the activity was recorded and this be stored in the unit until the message or messages are sent.	2nd observer information had similar problems as the first observer

Units of measurement used on the Osprey Tracking Device;	Need to change measurement units used, for example, speed km/h to knots which are commonly used by VMS, observers and database. Also weight caught data fields need to be expanded.	2nd observer information had similar problems as the first observer
Extended or wireless antenna;	This needs to be included with all units as this will allow observers to continue to send reports on the fishing operation from his/her working space (cabin)	Did not have an antenna but could see some use if one was supplied.
Modification;	There is a need to tidy up all the default reports in the unit to make it an observer only type unit. Some default reports are not relevant to observers.	Found some reports are not required.
Communication;	Space for composing text message in viewpoint is too short (42 characters) and sometimes hard for observer to understand.	Pre composed text messages covered most situations but a keyboard attachment would be good so other messages could be sent.

Table 1 Activity codes used in the trial

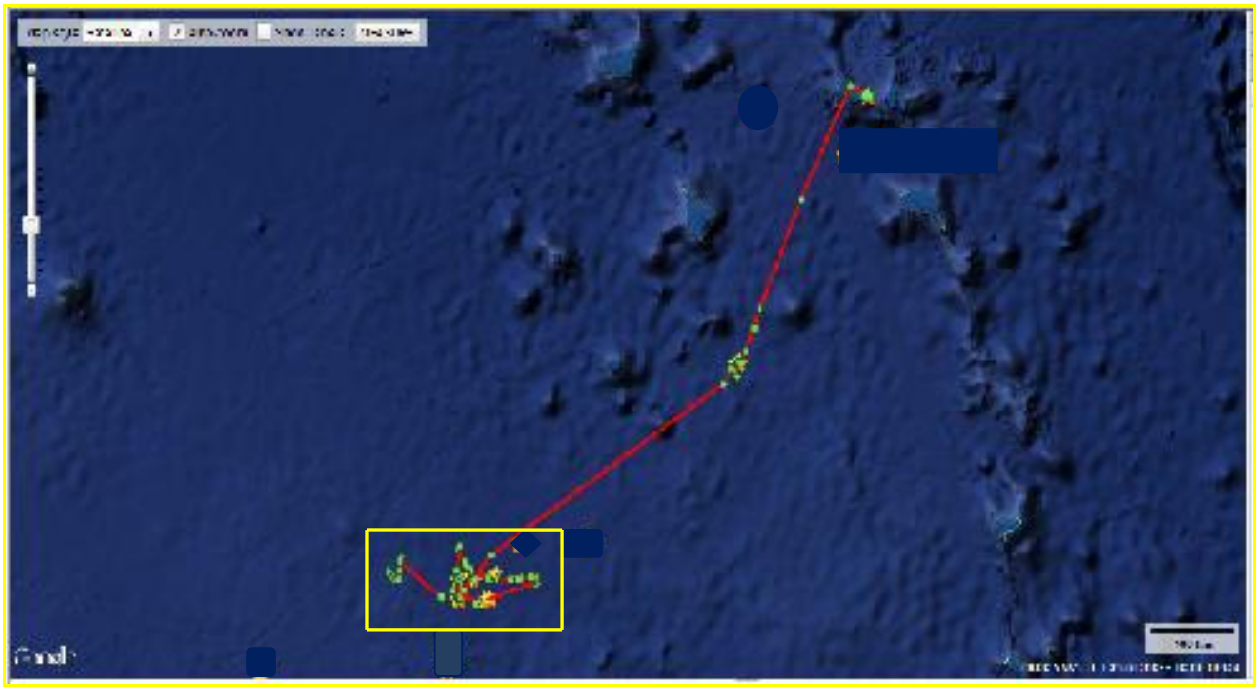
Code	Activity
1	Set
2	Searching
3	Transit
4	No fishing – Breakdown
5	No fishing - Bad weather
6	In port
7	Net cleaning set
8	Investigate free school
9	Investigate floating object
10D	Deploy Raft, Fad, Payao
10R	Retrieve Raft, FAD, Payao
11	No fishing – Drifting at day's end
12	No fishing – Drifting with floating object
13	No fishing – Other reason
14	Drifting with fish aggregating lights
15R	Retrieve – Radio or Satellite Beacon
15D	Deploy – Radio or Satellite Beacon
16	Transhipping or Bunkering

Table 2 information from observer 1 received at WCPFC

Snapshot of Data collected by Observer using Osprey Personal Tracking Devices					
Sent	**Message**	**Activity Codes (Refer Table 1**		**Position[2]**	**Date & Time**
Ok	Message: Activity,	3	transit		
Ok	Message: Activity,	2	search	1°xx'05"N 1xx°14'31"E	9/06/2011 2:41
Ok	Message: Activity,	2	search	0°xx'25"N 1xx°22'05"E	9/06/2011 3:35
Ok	Message: Activity,	2	search	0°xx'50"N 1xx°22'34"E	9/06/2011 3:36
Ok	Message: Activity,	2	search	0°xx'42"N 1xx°22'40"E	9/06/2011 3:38
Ok	Message: Activity,	2	search	0°xx'06"N 1xx°30'47"E	9/06/2011 5:55
Ok	Message: Activity,	2	search	0°xx'26"N 1xx°31'34"E	9/06/2011 5:56
Ok	Message: Activity,	9	Investigate floating object	0°xx'57"N 1xx°36'11"E	9/06/2011 5:58
Ok	Message: Activity,	8	Investigate school	0°xx'41"N 1xx°36'18"E	9/06/2011 6:03
Ok	Message: Activity,	2	search	0°xx'19"N 1xx°36'58"E	9/06/2011 6:10
Ok	Message: Activity,	9	Investigate floating object	0°xx'47"N 1xx°45'34"E	9/06/2011 6:11
Ok	Message: Activity,	2	search	0°xx'20"N 1xx°46'00"E	9/06/2011 6:12
Ok	Message: Activity,	2	search	0°xx'27"S 1xx°15'24"E	9/06/2011 19:19
Ok	Message: Activity,	9	Investigate floating object	0°xx'49"S 1xx°12'00"E	9/06/2011 19:21
Ok	Message: Start SET	1	Set	0°xx'08"S 1xx°11'19"E	9/06/2011 19:24
Ok	Message: End SET	1	Set	0°xx'32"S 1xx°09'53"E	9/06/2011 23:17
Ok	Message: Activity,	2	search	0°xx'32"S 1xx°09'53"E	9/06/2011 23:19
Ok	Message: Retained Catch: 25-49MT			0°xx'32"S 1xx°09'53"E	9/06/2011 23:20
Ok	Message: Weight Skipjack,: 25-49MT			0°xx'40"S 1xx°10'35"E	9/06/2011 23:22
Ok	Message: Activity	2	search	0°xx'13"S 1x°16'33"E	9/06/2011 23:17
Ok	Message: Activity	8	Investigate school	0°xx'52"S 1xx°36'12"E	10/06/2011 1:09
Ok	Message: Activity	2	search	0°xx'43"S 1xx°35'49"E	10/06/2011 1:14
Ok	Message: Activity	2	search	0°xx'08"S 1xx°05'06"E	10/06/2011 4:01
Ok	Message: Activity	2	search	0°xx'03"S 1xx°05'27"E	10/06/2011 19:11
Ok	Message: Activity	2	search	0°xx'19"S 1xx°31'34"E	10/06/2011 19:13
Ok	Message: Activity	9	Investigate floating object	0°xx'10"S 1xx°34'56"E	10/06/2011 19:15
Ok	Message: Start SET	1	Set	0°xx'16"S 1xx°34'50"E	10/06/2011 19:16
Ok	Message: End SET	1	Set	0°xx'03"S 1xx°33'58"E	10/06/2011 21:57
Ok	Message: Retained Catch SKJ 25-49MT			0°xx'02"S 1xx°33'54"E	10/06/2011 21:58
Ok	Message: Activity	2	search	0°xx'17"S 1xx°19'29"E	10/06/2011 23:21
Ok	Message: Fuel Point	16	Bunkering	0°xx'17"S 1xx°19'29"E	10/06/2011 23:21
Ok	Message: Activity,	2	search	0°xx'11"S 1xx°19'29"E	10/06/2011 23:32
Ok	Message: Activity,	2	search	0°xx'52"S 1xx°18'49"E	11/06/2011 4:37
Ok	Message: Activity,	2	search	0°xx'52"S 1xx°18'49"E	11/06/2011 4:39
Ok	Message: Activity,	2	search	0°xx'37"S 1xx°19'16"E	11/06/2011 4:42
Ok	Message: Activity,	9	Investigate floating object	0°xx'37"S 1xx°19'16"E	11/06/2011 4:22
Ok	Message: Activity,	2	search	0°xx'10"N 1xx°44'39"E	11/06/2011 4:34
Ok	Message: Activity,	14	Drifting at end of day with aggregating lights	0°xx'03"N 1xx°47'30"E	11/06/2011 18:58

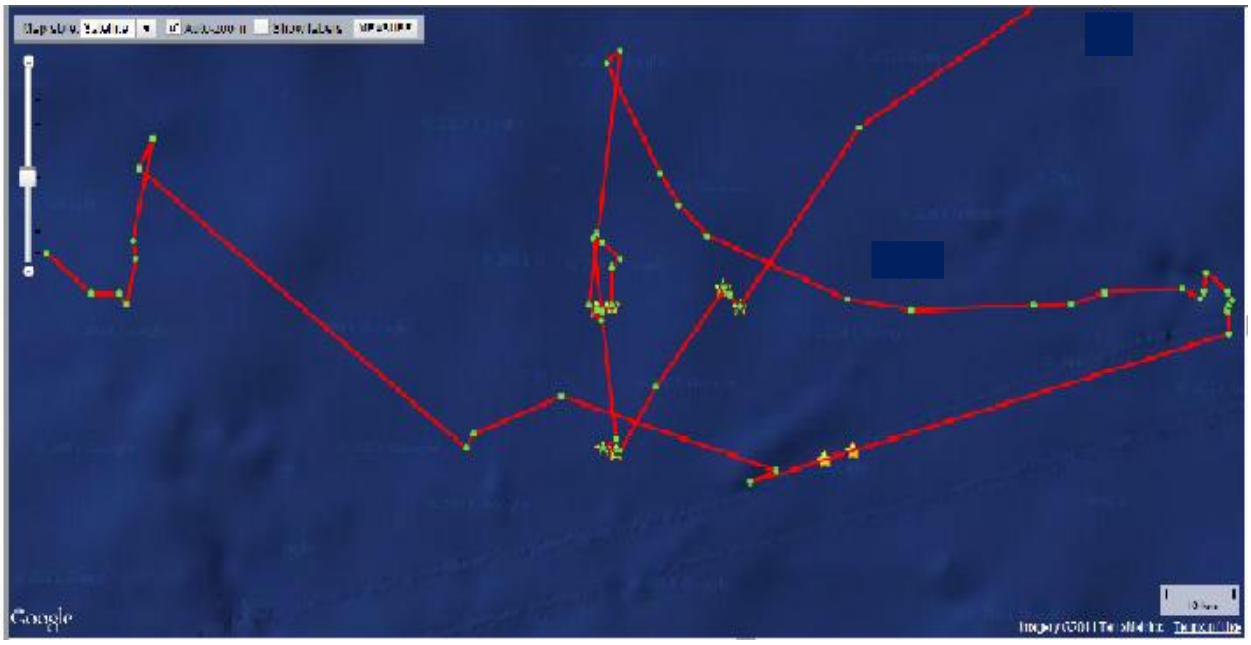
[1] Positions blocked out for display purposes

Figure 1- Observer Track



Track of observer (Red) trialing the osprey units,
Green dots represent reports made by the observer yellow marks are sets made.

Figure 2- Expanded view of bottom of track in figure 1



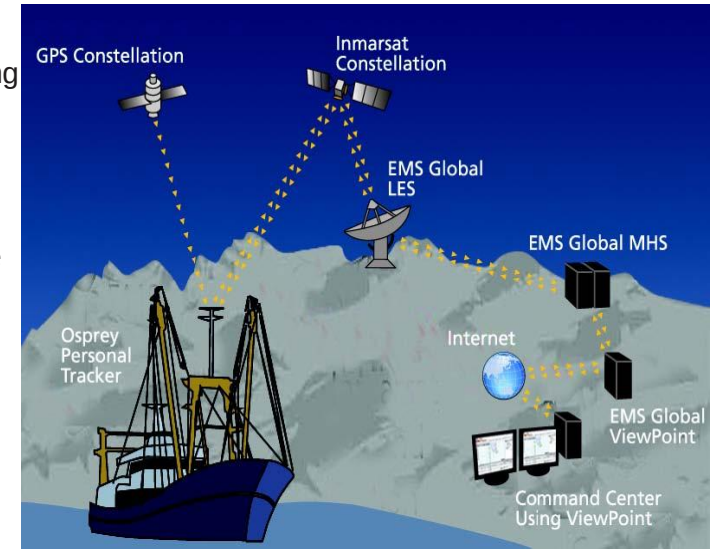
Green dots represent reports that activity occurred and reports made by the observer, yellow marks are sets made.

Osprey Personal Tracker

World Wide Vessel Tracking and Messaging System

Track your fleet and communicate.

The *Osprey* personal GPS tracker is an integrated, portable and cost-effective terminal for tracking and communicating with your vessels fleet or remote personnel anywhere in the world. *Osprey* features a two-way messaging and emergency alerting system that allows organizations to track, communicate with and effectively manage their resources.



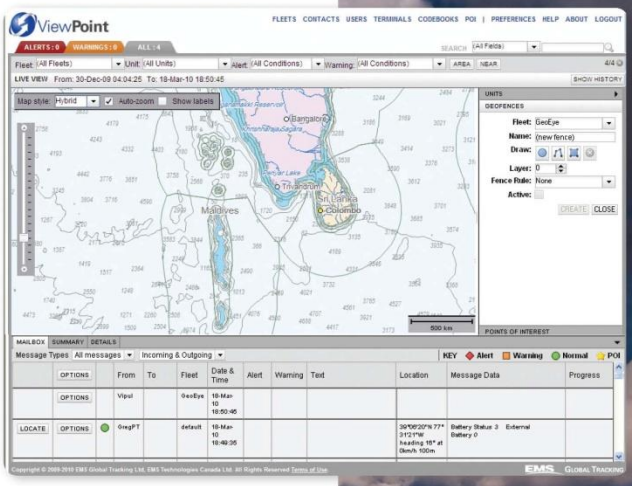
Key Benefits

- robust and lightweight device suitable for long-term use in virtually any environment
- automated GPS reporting intervals
- 2-way messaging and remote unit configuration
- near global coverage via *Inmarsat* satellites
- emergency panic button
- intuitive menu navigation
- Self-contained unit with integrated battery
- geofence areas easily designated
- Over-the-air system upgrades
- Terminal-to-terminal communication
- Handheld or vessel mounted options
- Web-based tracking control center
- audible alarm

Continu

Osprey uses the global Inmarsat Isatm2m network to locate and communicate with your assets worldwide.

The *Osprey* personal tracker can be managed with *Viewpoint*, a web-based management application that provides detailed mapping and allows remote configuration and management of the tracking devices. *ViewPoint* is an advanced, easy-to-use, web-based application that provides control centers with visibility and communication to remote individuals or fleets from any desktop location.



Specifications

CAPABILITIES

- Worldwide two-way tracking and messaging
- 50 channel GPS
- Dedicated panic button

SATELLITE COMMUNICATIONS

- Antennas: GPS and RF
- Accuracy: ±2.5m
- Alert Acknowledge Latency: ~60 seconds
- Data Format: Encrypted

DEVICE INTERFACES

- External power
- Remote antenna and mounting kit (Optional)

OPERATIONAL

- Activation: One-hand gloved operation, left or right
- Controls: Power, Menu, Point of Interest and Panic buttons
- Displays: Location and status information

ENVIRONMENTAL

- Depth: Waterproof to 1m (3.28 feet)
- Operating Temperature Range: -20°C to +55°C (-4F to +131F)
- Built-in Test: Functional test with pass/fail indicators
- Storage Temperature: -40°C to +70°C (-40F to +158F)

CONSTRUCTION

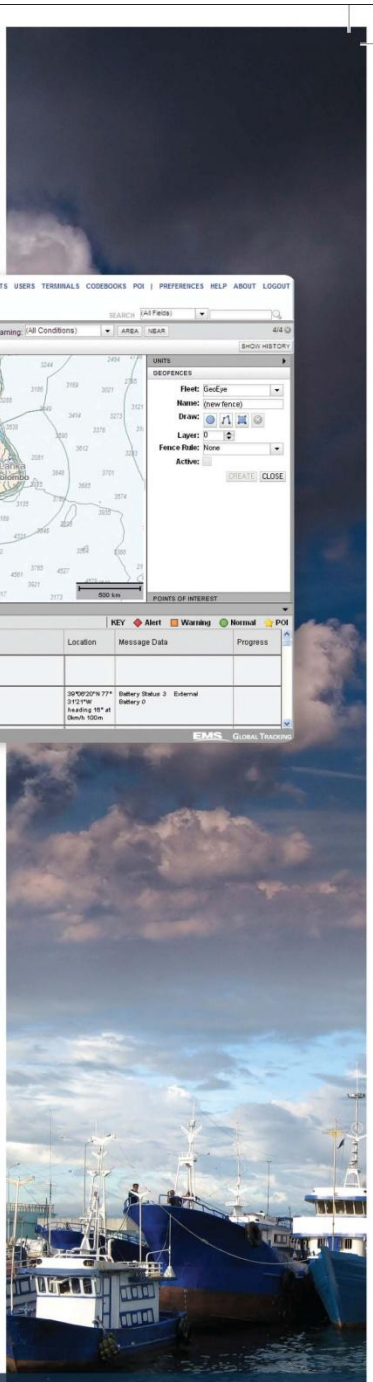
- Material: Aluminum and PVC
- Color: High-visibility Yellow
- Weight: 350g (12.34 oz.) including batteries
- Dimensions: 180 x 85 x 40mm (7.0" x 3.3" x 1.6")

BATTERIES

- Type: Rechargeable Li-ion battery pack
- Battery Life: 10 days (reporting every 60 minutes)

Further Information

For further information about the *Osprey Personal Tracker*, contact SeaStar Marketing & Sales at +1.703.480.7538, email seastar@geoeye.com or visit our website at www.geoeye.com/seastar.



Osprey PERSONAL TRACKER

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