



**COMMISSION
TWELFTH REGULAR SESSION**
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UPDATE ON STATUS OF COMMISSION VMS

**WCPFC12-2015-29
6 December 2015**

Purpose

1. This paper provides an update on the status of the Commission VMS. CCMs are advised that changes are expected to Commission VMS services during 2016 as a result of the Pacific Island Forum Fisheries Agency (FFA) undertaking a change of VMS service provider. An indication of the anticipated 2016 budgetary implications are also outlined for consideration of FAC9.

Background

2. The Commission VMS was established pursuant to Article 24 of the Convention, specifically paragraphs 8 – 10.

8. Each member of the Commission shall require its fishing vessels that fish for highly migratory fish stocks on the high seas in the Convention Area to use near real-time satellite position-fixing transmitters while in such areas. The standards, specifications and procedures for the use of such transmitters shall be established by the Commission, which shall operate a vessel monitoring system for all vessels that fish for highly migratory fish stocks on the high seas in the Convention Area. In establishing such standards, specifications and procedures, the Commission shall take into account the characteristics of traditional fishing vessels from developing States. The Commission, directly, and simultaneously with the flag State where the flag State so requires, or through such other organization designated by the Commission, shall receive information from the vessel monitoring system in accordance with the procedures adopted by the Commission. The procedures adopted by the Commission shall include appropriate measures to protect the confidentiality of information received through the vessel monitoring system. Any member of the Commission may request that waters under its national jurisdiction be included within the area covered by such vessel monitoring system.

9. Each member of the Commission shall require its fishing vessels that fish in the Convention Area in areas under the national jurisdiction of another member to operate near real-time satellite position-fixing transmitters in accordance with the standards, specification and procedures to be determined by the coastal State.

10. The members of the Commission shall cooperate to ensure compatibility between national and high seas vessel monitoring systems.

3. To establish the Commission VMS, the Commission agreed in 2007 to CMM 2007-02 *Conservation and Management Measure on the Commission VMS* that says:

6. Applicability

(a) The Commission VMS shall apply to all fishing vessels that fish for highly migratory fish stocks on the high seas within the Convention Area.

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(c) Any CCM may request, for the Commission's consideration and approval that waters under its national jurisdiction be included within the area covered by the Commission VMS. Necessary expenses incurred in the inclusion of such area into the Commission VMS shall be borne by the CCM which made the request.

7. Nature and specification of the Commission VMS

(a) The Commission VMS shall be a stand-alone system:

- developed in and administered by the Secretariat of WCPFC under the guidance of the Commission, which receives data directly from fishing vessels operating on the high seas in the Convention Area; and
- with the added capability that it can accept VMS data forwarded from the FFA VMS, so that the fishing vessels operating on the high seas in the Convention Area will have the option to report data via the FFA VMS.

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4. In implementing the Commission VMS, the *Standards, specifications and procedures (SSP) for the fishing vessel monitoring system (VMS) of the Western and Central Pacific Fisheries Commission (WCPFC)* were adopted:

1. Application

The SSPs shall apply to the Commission VMS that covers the high seas within the Convention Area. The SSP for the operation of VMS programs within waters under national jurisdiction shall be the exclusive responsibility of the Coastal State.

7.3 The WCPFC Secretariat

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3. To develop and manage a service level agreement (SLA) with the FFA for provision of VMS services. An additional SLA may be required for the provision of VMS software, support and the possible provision of out sourced VMS services between the WCPFC secretariat and a software provider.

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5. A Service Level Agreement was concluded in December, 2008 with the Pacific Island Forum Fisheries Agency (FFA) for provision of VMS services, and Commission VMS services commenced in April 2009.

6. The current operative CMM for the Commission VMS is CMM 2014-02 Conservation and Management Measure on the Commission VMS. This is the second revision of the CMM for the Commission VMS, but the agreed modifications since CMM 2007-02 did not modify the above listed provisions.

7. The Statement of Purpose and Principles for the Commission VMS also includes the following related requirements:

Purpose: The purpose of the Commission Vessel Monitoring System (VMS) is to cost-effectively monitor the activities of fishing vessels authorized by flag States to fish for highly migratory fish species in the Convention Area in areas beyond jurisdiction of the Flag State. Data collected by the Commission VMS will be securely stored and used by the Commission and its Members, Cooperating Non-Members, and Participating Territories (CCMs) to achieve compliance with Conservation and Management Measures (CMMs), fisheries scientific analysis and sound fisheries management decision-making in the Convention Area.

8. The current Commission VMS services supplied by FFA, is through the Pacific VMS which is based on a system supported by Polestar (ex-Absolute) and hosted in the Macquarie data Centre in Sydney. This system currently operates as two separate and distinct entities to protect the integrity of the Commission VMS data.

9. The cost to the Commission of this system has remained stable in recent years at around \$400,000 per annum, and currently there are almost 3500 vessels reporting to the Commission VMS. Other costs include: VMS contracts for airtime services for positions from WCPFC-VMS direct reporting vessels which have been stable at around \$95,000 per annum; a modest budget of \$40,000 for staff/CCM training and costs of support to VMS redundancy provision which has been maintained at \$18,700 per annum.

FFA VMS Tender Process

10. In late 2012 the FFA initiated a VMS Tender Process. The key dates of this process are listed below:

- i. **October 2012:** the Pacific Island Forum Fisheries Agency issued a Request for Proposal for the provision of Vessel Monitoring System (VMS) Services. The stated purpose of the request for proposal was “FFA wishes to identify the available methods of determining the position and other attributes of vessels on the FFA Register of Vessels and the Western and Central Pacific Fisheries Commission (WCPFC) Record of Vessels operating in the Western and Central Pacific Region.”
- ii. **November 2012:** FFA invited the WCPFC Secretariat to nominate a staff member for the FFA VMS Tender Panel established to review and provide a recommendation on the responses to the Request for Proposal. The Compliance Manager was the official WCPFC Secretariat representative on the VMS Tender Panel, and she was supported by the WCPFC VMS Manager and WCPFC IT Manager.
- iii. **2013-2014:** The FFA VMS Tender panel met on three occasions:
 - 11-12 February 2013: in Rarotonga, Cook Islands
 - 14-18 April 2013: in Honolulu, Hawaii
 - 2 April 2014: Honiara, Solomon Islands

A final report of the FFA VMS Tender Panel was provided to FFA Executive, to assist its consideration of a decision on the Request for Proposal.

- iv. **May 2015:** FFA took a decision to change FFA’s VMS service provider in support of the FFA VMS Tender Panel recommendation. The WCPFC Secretariat was an observer to the FFA meeting when this decision was taken, and expressed support to the Tender Panel’s recommendation. Following that meeting, FFA notified the VMS service provider TrackWell that it had been awarded the FFA VMS Tender.
- v. **September - October 2015:** WCPFC Secretariat received a briefing on the proposed process of implementation for the transition of VMS services, and preliminary discussions occurred between FFA/TrackWell and WCPFC Secretariat to clarify the functionality of the Commission VMS.
- vi. **November 4 2015:** WCPFC received formal advice from FFA which provides prior notification of planned changes to the Pacific VMS stemming from the change of FFA’s VMS service provider.

This advice was received in advance of the minimum 90-day prior notification requirement in the SLA (clause 3.2(x)).

- vii. **November 28 2015:** The FFA and WCPFC Secretariats held a SLA meeting to clarify some of the specific details of the arrangements for the transition of Commission VMS services from the current VMS service provider to the new VMS service provider TrackWell.

Next steps for ensuring maintenance of Commission VMS services during the transition period

11. Implementation arrangements for FFA and Commission VMS have commenced with new VMS service provider Trackwell. At the time of writing this paper, FFA VMS and Commission VMS were at different stages of progress in the arrangements for implementation towards readiness for the transition: FFA VMS is further advanced in the arrangements than is WCPFC.

12. During the November 28 2015 meeting, the FFA confirmed that:

- i. arrangements are in place for both FFA VMS and Commission VMS services to continue as normal with VMS services provided by Polestar (ex-Absolute) until 31 March 2016;
- ii. FFA intends to cease VMS services provided by Pole Star/Absolute for the FFA VMS on or before 1 April 2016;
- iii. arrangements are in place for Commission VMS services with Pole Star/Absolute to continue through the second quarter of 2016 (up to 30 June 2016);
- iv. FFA has indicated that some cost-savings should be anticipated under the SLA during the 2016 period, once both FFA and Commission VMS services are being provided by TrackWell;
- v. the necessary technical work with TrackWell/WCPFC/Pole Star has commenced to establish no later than 4 February 2016, a mechanism that will ensure continuation of FFA Position Transfer Service from the new FFA VMS within the TrackWell system to the Commission VMS within the Pole Star/Absolute system during the period 31-Mar-2016 to 30-Jun-2016; and
- vi. the reasons for a high level of confidentiality being maintained during the VMS Tender process and subsequent contract negotiations were no longer a concern, and it was timely to provide all WCPFC members with an update on the Commission VMS status.

13. Some supporting information provided by the FFA Secretariat for this paper is attached as **Attachment A**.

14. A date of June 30 2016 is in the Secretariats technical estimation the minimum period of time that we expect will be adequate for the transition and to conduct acceptance testing for the Commission VMS through the new VMS services with Trackwell. At the core of the Secretariats main concerns during the transition period will be to ensure:

- a) the current functionality of the Commission VMS provided to CCMs is maintained, including support for WCPFC data requests and high seas VMS monitoring; and
- b) that WCPFC Secretariat is able to fully use the new Commission VMS to continue to support our integrated MCS data warehouse initiatives that underpin our more recent IT tools and compliance monitoring analytical tools which are at the heart of present WCPFC MCS and Compliance Monitoring work for all WCPFC members.

15. The Secretariat has identified the following next steps for ensuring continuation of the current functionality of Commission VMS services as follows:

- i. **WCPFC12:** Informal dialogue between WCPFC Secretariat and FFA Secretariat in the margins of WCPFC12 on Commission VMS transition matters, and provide CCMs with an update on the status of Commission VMS;
- ii. **18 – 20 December 2015:** WCPFC Secretariat, FFA and TrackWell have arranged to meet from 18 – 20 December, 2015, at WCPFC Headquarters in Pohnpei, to clarify the functional specifications of the Commission VMS. It is expected that the December 2015 meeting will also provide an opportunity to further develop the technical and project documentation for the transition of the Commission VMS to TrackWell to be finalised;
- iii. **4 February 2016:** Complete work to establish no later than 4 February 2016, a mechanism that will ensure continuation of FFA Position Transfer Service from the new FFA VMS within the TrackWell system to the Commission VMS within the Pole Star/Absolute system during the period 31 March 2016 to 30 June 2016;
- iv. **4 February – 30 June 2016:** Undertake technical work towards the transition, user testing and maintenance of current functionality of the Commission VMS within the TrackWell system;
- v. **During 2016:** and once the implementation work for the Commission VMS has further progressed, FFA and WCPFC have agreed to review the FFA/WCPFC VMS SLA in 2016 to take into account necessary changes for Pacific VMS services provided by TrackWell, including reviewing the fee schedule to take into account that there are some expected cost-savings for the Commission VMS. FFA has advised that some cost-savings should be anticipated under the SLA during the 2016 period, once both FFA and Commission VMS services are being fully provided by TrackWell; and
- vi. **During 2016:** Regular updates on progress are provided by the Secretariat to CCMs via Circular.

Implications including anticipated costs

16. At this stage in the implementation process, it is difficult to be certain about the anticipated cost implications for Commission VMS in 2016 and in future years. Based on informal discussions with FFA and airtime service providers the Secretariat anticipates that there are likely to be some modest additional costs that should be budgeted for in the 2016 budget.

17. *VMS SLA Costs:* FFA has indicated that some cost-savings can be anticipated under the SLA during the 2016 period, once both FFA VMS and Commission VMS services are being provided by TrackWell. However, until the SLA fee schedule is formally revised, it is prudent to assume that the costs to the Commission for VMS SLA services would at least be maintained. In addition, some charges should also be anticipated through the present SLA, for the necessary technical work to establish a mechanism that will ensure continuation of FFA Position Transfer Service from the new FFA VMS within the TrackWell system to the Commission VMS within the Pole Star/Absolute system.

- *Estimated financial implications for 2016:* + \$35,000

18. *VMS Airtime Costs:* The Secretariat is planning for there to be at least a period of 3 – 4 months during 2016 where the two Commission systems will be running in parallel, so as to allow for thorough testing of the implementation of the new system and ensure that prior to the switch-over the new Commission VMS system is able to deliver at least the current functionality to CCMs and Secretariat, and the VMS data for vessels reporting to both Commission VMS systems do match. The Secretariat has contacted the VMS airtime service providers to inquire as to the likely additional costs for provision of a duplicate-feed of Commission VMS data (from WCPFC-direct reporting vessels) to the two Commission VMS systems

during the implementation and testing phases and while the two Commission VMS systems would be running in parallel. At the time of writing, the Secretariat was yet to receive formal confirmation of likely charges.

- *Estimated financial implications for 2016:* + \$26,125

19. *CCM/Staff VMS Training:* CCMs should expect some level of change to Commission VMS services during 2016, and particularly once the Commission VMS formally switches to TrackWell VMS services. Training of staff in the use of the new system will be needed, and the Secretariat will also need to facilitate delivery of support in assisting new CCMs with their use of the new VMS. FFA has confirmed that they will be taking the lead in the delivery of training to their members.

- *Estimated financial implications for 2016:* + \$20,000

20. *VMS Capital Costs & VMS Redundancy Provision:* The 2016 Provisional budget presently includes amounts that the Secretariat expects would cater for any related costs during the transition to the new Commission VMS system.

- *Estimated financial implications for 2016:* + 0

21. *VMS testing:* The Secretariat intends to undertake testing of the new Commission VMS system, which will include *like-to-like* functionality matching to confirm that the new Commission VMS is accurately depicting complete VMS reporting as is shown in the current Commission VMS. At this stage the Secretariat intends to undertake the testing in-house, but may also look to seek in-kind assistance from CCMs with this relevant expertise. A draft of the plan that the Secretariat will further discuss with FFA Secretariat at the meeting in December 2015 is provided as **Attachment B**.

- *Estimated financial implications for 2016:* +0

Recommendation

22. The Commission is invited to note the update on Commission VMS services and FAC9 is requested to include provision in the 2016 budget that reflect the estimated financial costs noted above.

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Supporting information supplied by FFA Secretariat

Background and motivation for change

- FFA members expressed a desire to test the market for alternate VMS service providers as early as 2012.
- Key motivations for this included:
 - Dissatisfaction with the cost structure of the current provider, which was perceived to be very high, mainly due to its structure being transactional in nature (ie many specific and high fees for individual transactions such as registration of new users or vessels).
 - Concern about duplications in costs as a result of the way that high seas positions were transferred to the WCPFC VMS.
 - Dissatisfaction with service delivery, particularly in regards to enhanced GUI and information management. FFA members had expressed desire to progress the FFA VMS away from a simple geospatial tool to a more comprehensive fisheries information management system, but were disappointed with the speed of this development.
- Forum Fisheries Committee formed a tender panel of member representatives, FFA secretariat and WCPFC (see below).
- Request for tenders was released publicly.
- Tender panel met three times between February 2013 and May 2014. Five proposals were received, which was reduced to a shortlist of three, which were invited to provide further information and to make specific presentations.
- Decision to change service providers taken, based on tender panel final recommendation, in May 2015. Reasons for lengthy process include:
 - Need to adequately consider needs and requirements
 - Need to ensure that risks of changing providers were adequately mitigated and managed
 - The generally changing nature of regional fisheries information management systems and IT.

Result – Recruitment of Trackwell

Trackwell is an Icelandic company established in 1996, developing solutions for wireless communication networks and has been providing services to UK Fisheries, NEAFC, and Iceland Coast Guard (www.trackwell.com).

Consideration of WCPFC

- FFA members and Secretariat have been mindful of our obligations as the service provider to WCPFC throughout the process.
- Started with invitation to WCPFC to participate on the tender panel.
- Ability to ensure appropriate firewall and adequate security/permission management was given a very high weighting in the consideration of tenders.
- WCPFC Secretariat heavily involved in the customisation of their new system.
- Ensuring adequate “redundancy time” when new system comes on line to ensure that the new system is fully functional and adequately reflects WCPFC data rules before the existing system is deactivated.

Implications of change

- Operationally, those CCMs that receive WCPFC VMS data directly (Text, NAF, CSV etc) will see no difference.
- Those who use the front end application software (SmarTrack) will need to use the Trackwell’s web-based front end application software.
- There will be some additional costs for training on the use of the new system
- The redundancy period (having two systems running) will ensure no loss of service during changeover.
- Operational costs for the WCPFC will be substantially lower. Exact nature of the financial elements in the SLA between FFA and WCPFC are yet to be negotiated because they are not as clearly separated as under existing arrangements. Difficult to determine the outcome, but it will definitely be substantially lower than current costs, and may be as low as 50%.
- In the meantime though redundancy plans (running both systems at once) in at least the first half of 2016 will increase costs – expected to even out with reduced costs throughout the rest of the year.
- In terms of design – there will be no change to the separation of WCPFC and FFA VMS data as both will operate as two separate systems. Nothing will change in terms of the ability of any individual or organisation to access data compared to the current system. All WCPFC data rules will be respected and maintained. This is the reason for the caution in design and final roll-out.

DRAFT OUTLINE OF VMS GENERAL SPECIFICATIONS – WHICH WILL BE REVIEWED AND FURTHER DEVELOPED DURING THE DECEMBER 2015 MEETING BETWEEN WCPFC AND FFA SECRETARIATS, POHNPEI.

1. Introduction

This document references the expectations of WCPFC secretariat on key areas in which it require collaborative work with the VMS providers and FFA in order to deliver a working VMS, and to minimize the known risks.

2. Project goals

The primary objective is to deliver a new WCPFC VMS application by FFA and Trackwell that

- At a minimum, delivers a like-to-like functionality as the existing WCPFC VMS application provided by FFA and PoleStar
- Delivery timeline within the period allowed for continued operations of the existing WCPFC VMS as provided by FFA and PoleStar until 30 June 2016
- Complete technical testing of the new system (FFA + Trackwell) with live data in two areas from 15 March to 30 April 2016, and the nominated would be EHSP for the high seas and FSM EEZ for Article 24/8
- Complete parallel testing of the new system (FFA + Trackwell) compared against the existing system (FFA + PoleStar) with live data in two areas from 1 – 31 May and the nominated would be EHSP for the high seas and FSM EEZ for Article 24/8
- Complete system and data migration and acceptance to new system (FFA + Trackwell) from 1 – 15 June 2016
- Complete system acceptance and sign-off on 22 June 2016. A fully operational WCPFC VMS application is in place 22 June 2016. By 30 June 2016, the existing system (FFA + PoleStar) will be retired and terminated.

3. System architecture/infrastructure

This will be a topic for discussion during the FFA / WCPFC / Trackwell face-to-face meeting scheduled for 18-20 December 2015

4. System and data inputs

This will be a topic for discussion during the FFA / WCPFC / Trackwell face-to-face meeting scheduled for 18-20 December 2015.



There are three black box components involved:

- INPUTS – Data from MTUs on vessels to VMS and checks that they are received and processed
- INTERFACES – how data is handled and flow control as required
- OUTPUTS – reference is a checklist of current reports / data streams as delivered by existing VMS (FFA + PoleStar)

5. Requirements of FFA, WCPFC, Trackwell, Polestar and other essential Partners

This will be a topic for discussion during the FFA / WCPFC / Trackwell face-to-face meeting scheduled for 18-20 December 2015.

6. Data models and database requirements

This will be a topic for discussion during the FFA / WCPFC / Trackwell face-to-face meeting scheduled for 18-20 December 2015.

7. Interfaces to other systems

This will be a topic for discussion during the FFA / WCPFC / Trackwell face-to-face meeting scheduled for 18-20 December 2015. Of importance for WCPFC at present are input data streams for DWH and similar systems

8. System and data security requirements

This will be a topic for discussion during the FFA / WCPFC / Trackwell face-to-face meeting scheduled for 18-20 December 2015.

9. Documentation (system and user manuals), training and data dictionary requirements

This will be a topic for discussion during the FFA / WCPFC / Trackwell face-to-face meeting scheduled for 18-20 December 2015.