PROTECTED ZONE JOINT AUTHORITY

**GUIDELINES FOR THE INSTALLATION OF VESSEL MONITORING SYSTEMS (VMS) WITHIN THE TORRES STRAIT PRAWN FISHERY**

 **June 2016**

Prepared by the Australian Fisheries Management Authority (AFMA) on behalf of the Protected Zone Joint Authority (PZJA)

These VMS guidelines are published on 5 May 2016 by the PZJA and apply to the Torres Strait Prawn Fishery from that date until 28 days after new VMS guidelines are published.

These Guidelines are in force under paragraph 5.6(1)(a) of the *Torres Strait Prawn Fishery Management Plan 2009.*

Contents

[PROTECTED ZONE JOINT AUTHORITY 1](#_Toc447280240)

[1. Acronyms/Definitions 3](#_Toc447280241)

[2. Purpose 3](#_Toc447280242)

[3. Introduction 3](#_Toc447280243)

[4. PZJA VMS installation and maintenance standards 4](#_Toc447280244)

[4.1. Installation 4](#_Toc447280245)

[4.2. Approved Satellite Transceivers 4](#_Toc447280246)

[4.3. Continuous Operation 6](#_Toc447280247)

[4.4. Malfunctioning or Broken Units 6](#_Toc447280248)

[4.5. Applying for an Exemption from reporting via the VMS 6](#_Toc447280249)

[4.6. How to manually report and give notices to PZJA 7](#_Toc447280250)

[4.7. VMS equipment malfunctions and other matters regarding manual reporting 7](#_Toc447280251)

[4.8. VMS Manual Reporting 8](#_Toc447280252)

[5. Additional Information 8](#_Toc447280253)

[5.1. Commissioning and Installation Procedure 8](#_Toc447280254)

[5.2. VMS transfer 9](#_Toc447280255)

[5.3. Maintenance Standards and Requirements 10](#_Toc447280256)

[5.4. Transceiver integrity 10](#_Toc447280257)

[5.5. VMS distress capabilities 11](#_Toc447280258)

[5.6. Allocated fishing days and VMS detection 12](#_Toc447280259)

# Acronyms/Definitions

For the purposes of this document:

AFMA Australian Fisheries Management Authority

ALC Automatic Location Communicator

DoA Commonwealth Department of Agriculture and Water Resources

FMP Fisheries Management Paper

PZJA Protected Zone Joint Authority

QDAF Queensland Department of Agriculture and Fisheries

the Plan *Torres Strait Prawn Fishery Management Plan 2009*

TSPF Torres Strait Prawn Fishery

TSPMAC Torres Strait Prawn Management Advisory Committee

TSPZ Torres Strait Protected Zone

VMS Vessel Monitoring System - A satellite based, near real time, positional tracking system for monitoring the location of vessels equipped with the appropriate technology

# Purpose

These guidelines set out the PZJA policy on the installation and maintenance standards for the operation of Vessel Monitoring System (VMS) equipment and reporting requirements for the Torres Strait Prawn Fishery (TSPF).

# Introduction

The primary use of VMS in the TSPF is to provide an efficient automated mechanism for monitoring (counting) fishing days held by each TSPF licence holder, and to improve the effectiveness and efficiency of the compliance program through monitoring and assessing the position of trawl vessels in the Torres Strait. VMS also provides up-to-date effort data, which PZJA agencies can use, along with other data sets such as catch reports, to assess trends in fishing activity.

The VMS function for the TSPF is administered by the Australian Fisheries Management Authority (AFMA) on behalf of the PZJA. Licence holders are sent a “Torres Strait Prawn Fishery Use of Fishing Days” statement by AFMA on behalf of the PZJA each month to assist operators in monitoring the number of fishing days which remain for a given season.

# PZJA VMS installation and maintenance standards

## Installation

The licence holder and/or vessel operator must ensure the VMS unit is correctly installed, configured and maintained by a certified marine technician suitably qualified to carry out installation in accordance with the recommended manufacturer guidelines.

The PZJA requires qualified marine technicians to maintain the integrity of the VMS unit and ensuring its ongoing viability as an effective tool for managing the TSPF resources. A marine technician may be removed as an approved supplier for installing and maintaining VMS units if the above conditions are not met.

In summary, the responsibilities of the marine technician are to:

1. install, maintain and ensure operational effectiveness of VMS equipment in accordance with manufacturer’s instructions;
2. ensure VMS units are installed and maintained at all times, as approved by PZJA;
3. cooperate with PZJA, AFMA and the equipment manufacturer/VMS supplier in resolving technical faults or incidents;
4. assist PZJA and AFMA in order to maintain the system integrity by reporting instances of suspected tampering with equipment to PZJA.

## Approved Satellite Transceivers

The PZJA in collaboration with AFMA, has adopted the standards as outlined by the “FFA Type approval process and Responsibilities for Automatic location Communicators and Certification requirements for ALC” as the minimum for the installation and maintenance of VMS equipment. The basis for these requirements is outlined via the Pacific Islands Forum Fisheries Agency (FFA) website:

 <https://www.ffa.int/node/40>

Currently the types of units that can be installed are

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type** | **Model Name** | **Model N°** | **Software Version** | **E-MTU****terminal** |
| E-MTU | Thrane and Thrane (Sailor) Capsat Transceiver | TT-3026D Mini-C | 2.21 using FFA 3026 configurationguide Version 3026-1.0 | Thrane andThrane 3036XPTerminal |
| E-MTU | Faria Watchdog(Iridium) | 750VMS |  | V-TERMTerminal |
| MTU | Thrane and Thrane(Sailor) Capsat Transceiver | TT-3022D | 3.32 using FFA 3022 configurationguide Version 3022-1.0 | N/A |
| MTU | Thrane and Thrane(Sailor) Capsat Transceiver | TT-3026S Mini-C | 2.26, 2.21 using FFA 3026configuration guide Version 3026- 1.0 | N/A |
| MTU | Thrane and Thrane(Sailor) Capsat Transceiver | TT-3026D Mini-C | 2.26, 2.21 using FFA 3026configuration guide Version 3026- 1.0 | N/A |
| MTU | Thrane & Thrane Sailor 6140 (with6194 TCU) | TT-6140 Mini-C | TT3027D Mini-C Non-SOLAS -1.03/1.06.TT6194 Terminal Control Unit - 1.03/1.05.Using FFA/Thrane configuration guide version 1.0 | N/AN/A |
| MTU | Thrane & Thrane Sailor 6150 | TT-6150 Mini-C | TT3027D Mini-C Non-SOLAS –1.03/1.06.TT6194 Terminal Control Unit – 1.03/1.05.Using FFA/Thrane configuration guide version 1.0 | N/AN/A |
| MTU | Japan RadioCompany Limited Inmarsat-C Transceiver | JUE-95VM | 10.50, 3.0, 1.0 | N/A |
| MTU | Furuno Inmarsat-CMES Transceiver (includes the Nera Mini-C model) | Felcom 16 | DCE F16 V02+FFA DCE F16 V03+FFA DCE F16 V03.1+FFA | N/A |
| MTU | Furuno Felcom 19 | Felcom 19 | DCE F19 V01+FFA | N/A |
| MTU | Faria Watchdog(Iridium) | 750VMS |  | N/A |
| MTU | CLS Thorium | TST-100+FFA |  | N/A |
| MTU | CLS LEO | LEO+FFA |  | N/A |
| MTU | Satlink ELB2014 | ELB2014 |  | N/A |
| MTU | CLS TRITON ADV | TRITON ADV | Dome: 10.02.39 or laterJunction Box: 1.0.2.04 or later Configuration: CLS TRITON ADV+FFA Config | N/A |

AFMA maintains a list of compatible VMS units which is routinely updated via its website:

<http://www.afma.gov.au/fisheries-services/vessel-monitoring/>

Concession holders should reference this list when selecting a VMS unit for installation.

Depending on experience or specific requirements for a particular fishery, the requirements outlined in this document may be changed by the PZJA in order to accommodate the future integration of new and emerging VMS technology.

\****No new trimble units will be approved for use, however any existing units can continue to be used if functioning in accordance with the requirements.***

## Continuous Operation

The holder of a TSPF boat licence or a TSPF treaty endorsement must ensure that a VMS unit is fitted to the boat that is installed and maintained in accordance with methods set out within these Guidelines.

The VMS unit, also known as the ALC must be operational at all times unless arrangements have been entered into with the PZJA in writing or manual position reporting is authorised as a result of a unit failure.

## Malfunctioning or Broken Units

If the boat is in port and the ALC is not operating or malfunctioning the boat must not leave port until the ALC is functioning in accordance with the PZJA specifications. Further, the VMS unit, including the antenna and cabling, must not be altered, damaged, disabled or tampered with.

If a unit malfunctions while at sea, the master or operator may be granted permission to report their position manually by the PZJA.

## Applying for an Exemption from reporting via the VMS

As outlined in sections nine to 14 of PZJA Fisheries Management Instrument No. 10 (FM 10), there are a number of circumstances under which the holder of a TSPF boat licence may apply to the PZJA for an exemption from reporting via the VMS. These include:

* maintenance exemption;
* non-fishing exemption;
* non-trawl exemption;
* steaming exemption; and
* gear trial exemption.

An application for an exemption may be provided to the PZJA in the manner set out in this Section of these guidelines and in accordance with the specifications set out under FMI 10 or any Fisheries Management Instrument that replaces FMI 10. The VMS unit may only be switched off after if you have prior written approval from AFMA. After submission of application to AFMA, the holder of a TSPF boat licence will then require written approval from the PZJA before turning off the VMS unit for the period of a maintenance exemption and non-fishing exemption. It must remain on for all other exemptions.

If an operator is found to have not complied with the manual reporting requirements, the vessel will be ordered to return to port immediately and operator/concession holder may face further compliance action.

The person to whom the manual reporting obligation applies must also comply with the reporting requirements described in Section 5.6 of the Plan.

## How to manually report and give notices to PZJA

Notices including manual position reports or applying for VMS exemptions can be made to the PZJA in the following manner:

* by calling AFMA (02) 6225 5542, 0419 205 329 or 1300 723 621 (during business hours, AEST) or 02 6225 5369 (after hours AEST) or via Email: VMSreporting@afma.gov.au.

## VMS equipment malfunctions and other matters regarding manual reporting

As per section 5.6 of the Plan, if a VMS unit malfunctions when a vessel is not in port, the master must notify the PZJA immediately after the master becomes aware of the malfunction in a way described in item 4.6 of these Guidelines.  Instructions will be provided regarding the time period a vessel is to manually report before the vessel will be ordered back to port to have the VMS unit repaired.

Upon identifying or being notified by AFMA that a VMS unit has ceased reporting, the vessel operators/concession holder must take immediate steps to have the unit repaired or replaced upon returning to port.

Manual reports must be given to the PZJA at four hourly intervals as described in item 4.7 of these Guidelines and must include the following information:

* the boat name;
* the boat distinguishing symbol;
* the date and time;
* the current position of the boat in Latitude and Longitude (in degrees and decimal minutes); and
* whether the boat is fishing, steaming or anchored.

## VMS Manual Reporting

Please forward all correspondence and supporting documents to:

VMS Reporting Team

**Enquires** Phone: 02 6225 5542
 Email: VMSReporting@afma.gov.au
AFMA Direct: 1300 723 621
Office hours: 9am – 5pm EST

# Additional Information

## Commissioning and Installation Procedure

The commissioning, installation and programming of VMS units involves interaction between the boat operator, the equipment supplier/installer and AFMA. This can present coordination problems as a number of the steps may involve significant time delays.

**Vessel must be nominated to a PZJA concession before activation of a VMS unit will commence.**

1. Commission transceiver/VMS Unit – complete satellite service registration form with Inmarsat, Iridium etc. Contact the satellite service provider for activation of the unit.
2. Complete the approved AFMA Data Network Identifier Download (DNID) agreement form. Both PDF and Word Document versions are available from contacting AFMA (02) 6225 5542 or via the PZJA website [www.pzja.gov.au](http://www.pzja.gov.au).
3. Email or post the completed DNID form to AFMA VMS reporting team (contacts provided on application form) and advise the location of the VMS unit (fitted to vessel or with Marine Technician in workshop undergoing testing etc).
4. Power up VMS unit and perform manufacturer and verification tests. Ensure the device is logged into the appropriate satellite region. *Note: the default setting will be Pacific Ocean Region (POR).*
5. Wait for the AFMA VMS reporting team to confirm the VMS unit has been successfully programmed and is reporting to the AFMA VMS platform. This requires AFMA staff sending a remote activation command (via satellite) to the particular VMS unit in order to effectively establish two way communications.  Upon receipt of first positional report, AFMA will then contact either concession holder or marine technician to certify the unit as operational.

*Note: If testing of VMS device has occurred while the unit was not fitted to the assigned vessel, continue with following procedure.*

1. Physically install the VMS unit on the nominated vessel in accordance with manufacturer Installation standards. Power unit on and contact AFMA to confirm the VMS is operational.

Marine Technicians should ensure the vessel operator is familiar with the particular VMS device and any associated messaging and transmission procedures to be adopted, including basic fault finding and maintenance.

## VMS transfer

When transferring a licence or VMS unit to another vessel, the boat must not proceed to sea until AFMA has verified that the unit is functioning correctly. Contact with AFMA can only take place during office hours (9 am to 5 pm, Monday to Friday).

In order to complete the transfer you will require an authorised marine technician to do some of the work, so be prepared and organise this in advance.

To transfer a VMS unit from one vessel to another, you must complete the following:

1. Contact AFMA to advise of your intention to transfer a VMS unit and request a DNID download agreement form.

2. The previous owner of the VMS unit will need to complete the deactivation paperwork and send it to the satellite service provider (Inmarsat, Iridium etc.)

NOTE: If some of the details required to complete the paperwork are unavailable, you will require an authorised marine technician to capture these details as they may only be obtained from the internal workings of the VMS unit.

1. The new owner must then register the VMS unit with the satellite service provider and await confirmation/notification of registration details.
2. Complete and return the DNID form to AFMA to include new credentials provided by satellite service provider such as IMN number, Mobile Transceiver Unit (MTU) particulars etc.

**NOTE:** The activation and deactivation of a unit will take time to be processed and registered with the satellite service provider. Please allow enough time and factor this into the process. Once the VMS unit has been installed on the vessel, contact AFMA to test functionality of the unit and request AFMA staff to commence activation of the device.

***Do not expect this to happen immediately as the process can take considerable time. Therefore it is advised to factor in several hours before receiving notification from AFMA in order to proceed on any fishing trip or departure from port. The vessel must not proceed to sea until AFMA has confirmed the unit is operational and reporting correctly.***

**NOTE FOR MARINE TECHNICIANS:** PZJA's DNID and the assigned member numbers of each mobile VMS unit are to be treated as confidential and must not be divulged to any party other than AFMA. Failure to observe this requirement and to take reasonable steps to secure this information may result in the withdrawal of PZJA approval as a PZJA installation agent.

## Maintenance Standards and Requirements

All VMS equipment **must** be maintained by qualified marine technicians. In all cases, it will be the responsibility of the marine technician to ensure that any VMS equipment maintenance has been completed in accordance with detailed manufacturer requirements.

It is recognised that genuine equipment failures will be experienced. Authorised marine technicians are to deal with maintenance issues as per normal best practice for this type of equipment. The maintenance of the equipment should be conducted in a manner to reduce boat downtime and such that it does not unduly interfere with the normal fishing activities of a boat.

Upon completion of maintenance work, the marine technician must inform AFMA by completing and submitting the DNID form to include the vessel name, Inmarsat Mobile Number or Mobile Transceiver Unit Number, Manufacturer & Model of ALC including installed software version. The marine technician must confirm with AFMA that the VMS unit is reporting correctly and responding to commands sent via satellite service. This part of the process **must** be performed during office hours (0900hrs – 1700hrs) and the VMS section **must** verify the operational status of the unit before the vessel returns to sea.

The following standards **must** be observed by authorised agents in maintaining AFMA type approved VMS unit to ensure they comply with fishing conditions associated with an Authority.

## Transceiver integrity

Marine technicians performing maintenance on boats equipped with AFMA approved VMS units **must** inspect the ALC for indications of tampering. Any indications of tampering **must** be reported **immediately** to AFMA.

VMS units can be opened in the field with the evaluation of the ALC left to the discretion of the marine technician in order to determine whether the unit is maintained, repaired or replaced. At all times there should be minimal inconvenience to the boat operator.

## VMS distress capabilities

Some of the Inmarsat-C terminals used for VMS (the Trimble Galaxy (TNL-7005), Thrane & Thrane Capsat (TT-3022D) and Thrane & Thrane Mini-C (TT-3026D)) when configured correctly, have the added benefit of providing a distress messaging capability. While this feature enhances the safety of fishers, VMS units are not a compulsory safety requirement for commercial fishing vessels. It is the fishers decision whether to have the distress messaging feature on the VMS unit enabled and the most appropriate time to test the unit is when it is being configured by the supplier. Any fisher who is concerned about the distress messaging feature of VMS should immediately contact their supplier or refer to the Imarsat-C manual.

**NOTE: The Primary purpose of VMS is for the monitoring of fishing activity to ensure compliance with Fishery Management arrangements. It is not to be relied upon as the primary safety communication.**

## Allocated fishing days and VMS detection

Licence holders are sent a ‘Torres Strait Prawn Fishery Use of Fishing Days’ statement by the PZJA each month. The statement lists the fishing days recorded as “fished” for that month. If a licence holder considers that a fishing day should not have been recorded as “fished” for their boat for any of the days listed, they should submit evidence to demonstrate that the boat was not fishing on that particular day.

To avoid delays in processing such applications, they should be lodged as soon as possible after receiving the notice. These applications are subject to the decision of the PZJA delegate. Licence holders should not use a trawl fishing day on the presumption that such an application will be successful. A day remains “fished” until the Delegate has made a decision.

If a licence holder uses fishing days in excess of those held, compliance action may be taken. It is the operators’ responsibility to monitor daily usage.