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**TERMS OF REFERENCE TO DETERMINE EXTRA COSTS RELATED TO INFRASTRUCTURE,  
STAFFING, AND DATA SECURITY REQUIRED FOR THE IOTC VESSEL MONITORING SYSTEM**Date: 27 September 2022

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The document has been produced in response to agreed discussion of the [VMSWG03](#) and the request made at the [VMSWG04](#):

Para 27: VMSWG03 **AGREED** that an analysis be carried out to determine the staffing, infrastructure, extra costs and data security that would be required.

Para 16: VMSWG04 **AGREED** that the IOTC Secretariat draft Terms of Reference to be circulated intersessionally.

<b>Assignment title</b>	TO DETERMINE EXTRA COSTS RELATED TO INFRASTRUCTURE, STAFFING, AND DATA SECURITY REQUIRED FOR THE IOTC VESSEL MONITORING SYSTEM
<b>Contract duration</b>	Maximum 30 working days.
<b>Assignment location</b>	Home based
<b>Financed by</b>	[Australia]

September 2022

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**GENERAL DESCRIPTION OF TASKS AND OBJECTIVES TO BE ACHIEVED**

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**Rationale**

The Twentieth Session of the Commission tasked the IOTC Secretariat with contracting an independent consultant to prepare a report identifying possible options to strengthen the IOTC vessel monitoring system (VMS). The results of this consultancy are enshrined in an [Options Paper for Strengthening the IOTC Vessel Monitoring System](#) (Options Paper). The VMS Working Group has since convened four times as detailed in the Reports of its [Meetings](#) and as summarised in [IOTC-2022-WPICMM05-08](#) has agreed on (i) the objectives of the VMS, (ii) a hybrid system in which CPCs may report data to the Secretariat using the Shared Decentralised or Partially Centralised options outlined in pages 13 to 15 of the Options Paper, (iii) the scope and application of VMS, and (iv) the methods for ensuring real time or near real time position reporting. Work on developing possible funding models is ongoing. To provide further clarity on the financial implications at the level of the IOTC Secretariat, the VMS Working Group agreed that an analysis to determine extra costs related to infrastructure, staffing, and data security is required.

**Objective**

To provide the Commission with the requirements and associated costs of a hybrid system IOTC VMS, in terms of infrastructure, staffing and data security. Such a VMS shall provide an effective platform for the monitoring of IOTC fisheries, consistent with the IOTC Agreement and the Commission's management regime.

**Report Guidelines**

The consultant(s) shall produce a report on his/her analyses, which makes specific reference to the elements agreed by the VMS Working Group in its various meetings, including and not limited to the agreed objectives, the scope and application of VMS, the two agreed methods of reporting (Partially Centralised and Shared Decentralised) and the VMS requirements described.

The Report shall comprise eight sections:

1. Introduction and objectives of the study
2. Background - a summary presentation of the objectives, options, the scope and application and methods already agreed by the VMS Working Group (and the proposed changes to Resolution 15/03).
3. Analysis – existing VMS in tuna RFMOs, considering:
  - a. Summary of each tuna RFMOs' VMS ; and
  - b. summarized analysis of infrastructure, staffing, extra costs and data security elements of other RFMOs.
4. Capital costs for the IOTC Secretariat, including:
  - a. infrastructure and hardware required at the IOTC Secretariat;
  - b. VMS software: including cost comparisons between different VMS solutions, service providers and possible arrangements, inter alia, in-house or externally hosted VMS system; and
  - c. training of the IOTC Secretariat and CPCs' personnel in charge of the monitoring centres.

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5. Recurrent costs for the IOTC Secretariat, including:
    - a. Additional staff required at the IOTC Secretariat (salaries and emoluments); and
    - b. IT costs: inter alia software maintenance, upgrades and operation; maintaining a secure database and IT hardware; managing, storing and processing the data;
  6. Data security and confidentiality requirements, including legal, physical and procedural safeguards. Additionally, an information sharing agreement describing the protocols for sharing VMS data with the IOTC Secretariat and among CPCs (flag State, port State, market State and coastal State) is required.
  7. Other considerations, including:
    - a. implications for Resolution 15/03
    - b. extra costs, including any additional costs not considered above
    - c. existing data rules/requirements in IOTC and whether any additional data rules or specifications may be required
    - d. financing models and potential for outsourcing.
  8. Conclusions and recommendations.

#### KEY PERFORMANCE INDICATORS

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<b>Tasks:</b>	<b>Required Completion Date:</b>
Kick off meeting (virtual) with IOTC Secretariat	
Draft report to IOTC Secretariat for review	
Final report to VMSWG/IOTC Secretariat	
Presentation at VMS WG meeting and availability for questions from VMSWG Members	2022/2023

The implementation calendar will be agreed at the kick off meeting (virtual) with the IOTC Secretariat.

**Annex:****1.1. IOTC**

The IOTC is an intergovernmental organization established under Article XIV of the FAO Constitution. The IOTC agreement was concluded in 1993 and entered in force in March 1996. The IOTC is mandated to manage tuna and tuna-like species in the Indian Ocean and adjacent seas with primary objective the conservation and optimum utilization of the stocks for long term sustainability.

Since 1998, the members of the IOTC have dedicated most of their effort to the scientific component of fisheries management, to manage the tuna and tuna-like resources. Since the mid 2000's, more emphasis has been placed on the compliance component of this tuna RFMO. A Compliance Section has been created to assist the Compliance Committee in the task of assessing and reviewing all aspects related to the compliance with IOTC conservation and management measures and to provide support to Contracting and Cooperating non-Contracting Parties (CPCs) in the implementation of Monitoring, Control and Surveillance (MCS) tools adopted by the IOTC Members (e.g. IUU vessel lists, authorized & active vessels lists, documents on board, marking of fishing vessels and gears, Vessel Monitoring System, fishing logbooks, regional observers scheme, transhipments programme, catch certification/trade documentation schemes).

The objective of the proposed activities is to provide the Commission with requirements for implementing IOTC's strengthened VMS, such that the VMS provides an effective platform for the monitoring and controlling IOTC fisheries, consistent with the Commission's management regime specifically, in monitoring and controlling the activities of vessels authorised to operate in the IOTC Area of Competence.

**2. Scope of work**

One consultant is required to complete the VMS study. The consultant(s) is recruited to provide a report determining extra costs related to infrastructure, hardware, software, staffing, and data security required for the application of IOTC's VMS.

**3. Duration**

Maximum 30 working days (inclusive of 1 day for presentation at IOTC's VMS Working Group and/or the Working Party on the Implementation of CMMS).

The implementation calendar will be agreed at the kick off meeting (virtual) with the IOTC Secretariat.

<b>Activity</b>	<b>Timing / Deadline</b>
Start of contract	Fourth quarter of 2022 or upon signature of contract.
End of contract	2022/2023 session of the VMS Working Group in advance of the 2023 WPICMM

**4. Deliverable**

- Draft report on financial implications at the level of the IOTC Secretariat for the changes to IOTC's VMS agreed by the VMSWG;
- Final report on financial implications at the level of the IOTC Secretariat for the changes to IOTC's VMS agreed by the VMSWG; and
- Presentation of the study at the VMS Working Group and/or the Working Party on Implementation of Conservation and Management Measures (WPICMM) and/or the Compliance Committee meetings.

**5. Supervision responsibility**

The consultant(s) will work under the supervision of the IOTC Secretariat.

**6. Consultant(s) Qualifications**

Profile and specific qualifications of the Consultant:

- Degree or equivalent in a discipline related to science or fisheries management or living marine resources management or computer science or related field pertinent to the study; or a minimum of eight (8) years' experience related to VMS;
- Demonstrable experience working in the field of fisheries monitoring or VMS;
- Demonstrable experience in setting or designing or managing or operating of VMS at national level or regional level;
- Demonstrable experience working with/for RFMOs will be an added advantage;
- Strong report writing and analytical skills; and
- Proficiency in English.