



FFA
PACIFIC ISLANDS
FORUM FISHERIES
AGENCY

Understanding and Responding to IUU Risk in the Pacific Tuna Fisheries

Theme: Risk Assessment and Analysis

7GFETW:

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Pacific Islands Forum Fisheries Agency

Overview:

1. RFSC Background & Framework - Core Functions.
2. Pacific Regional IUU Risks and FFA Response.
3. IUU risk assessment processes in support of Regional Surveillance Operations.
 - FFA Regional Surveillance Operations.
 - RSP CI and RIMF.
4. Case Studies.
5. Challenges.
6. Regional Focus Areas.



FFA Regional Fisheries Surveillance Centre (RFSC):

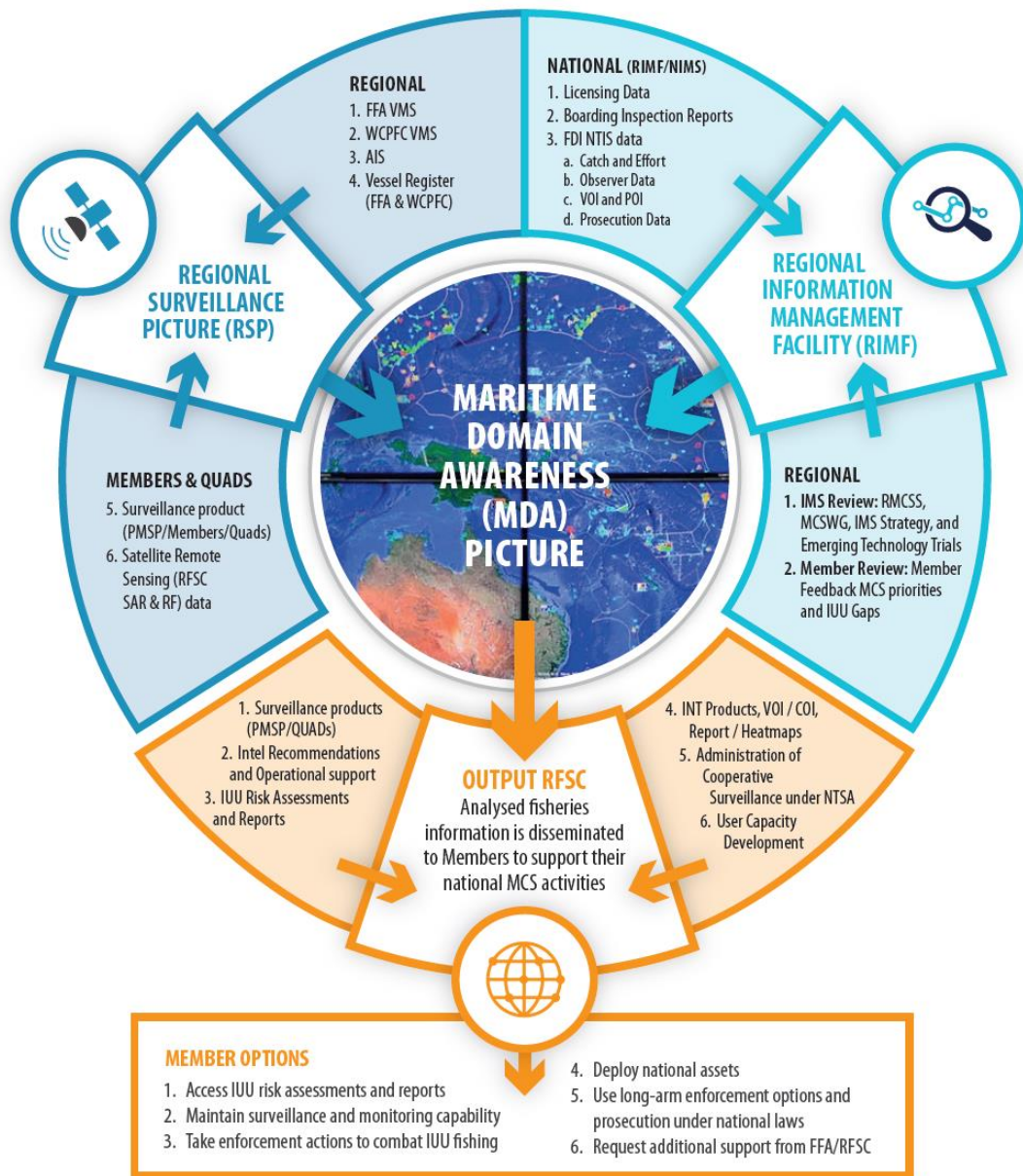
- The Pacific Islands Forum Fisheries Agency (FFA) traces its origins to meetings in Nauru in 1976 and Port Moresby in 1977
- Serving 17 member countries
 - Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu & Vanuatu
- Regional Fisheries Surveillance Centre - Honiara, Solomon Islands.
 - 9 staff serving 17 members operational need.

Mission: “To support and assist FFA members Monitoring, Control and Surveillance (MCS) activities to counter Illegal, Unreported and Unregulated (IUU) fishing in the region”.



- Core Functions.
 - 1. IUU Risk Analysis;**
 - 2. Surveillance Planning and Coordination in support of the FFA Operation 365 (OP365) Plan; and**
 - 3. Capability Development.**
- High Level Strategies (FFA Strategic and Business Plan)
- Maritime Domain Awareness (MDA) Picture (RIMS and RSP)
- RFSC Framework
- Organisational Structure
- RFSC Annual key Activities
 - **Strategy 3.2 Reduce IUU Fishing by implementing the RMCSS at the *regional and national level.***
 - **Strategy 3.3: Improve MCS on the *high seas.***

RFSC Framework: MCS Information Cycle



RFSC Organisational Structure:



- ❑ **Misreporting (Unreported)- 89%**
- ❑ Unlicensed (Illegal)- 5%
- ❑ Non - Compliance (Illegal)- 3%
- ❑ Post - harvest offences (Illegal)- 3%.

Regional IUU Workplan: 26MCSWG (LL and PS)

1. **Redeploy observers** and explore options to increase the coverage level to meet the 5% benchmark.
2. Greater use of **analytical tools** to cross-verify log sheet reporting.
3. Improve and enhance **Boarding Inspection capability (PSMA, DSBI, EEZ, HSBI)**.
4. Increase implementation of **electronic reporting (ER)**.
5. Strengthen at sea **Transshipment verification** and control measures.
6. Develop and implement a **Catch Documentation Scheme (CDS)**

Intelligence Driven Operations:

1. **Vessel (VOIs) , EEZ and High Seas assessments (AOIs).**
2. **Catch and Effort Intelligence:**
 - a. Access to real-time and historic catch log sheets and correlation to VMS.
 - b. Use of TUFMAN 2 catch & effort data for compliance risk assessment.
3. **Transshipment Analysis:** at Sea declaration correlation to VMS and summary of location, catch composition Intel to inform inspection.
4. **Prioritize IUU risks** in technology & partner engagements.

HS TRANSHIPMENT ANALYSIS

1. 50 Transshipment declared to WCFFC in the OPRB23 AO High Seas from 28/Feb to 3/Mar 2023. All are located at HS north CK, east KI EEZ. Note some TS declared for WCPFC/IATTC Overlap Area and High Seas.
2. Fish Carriers receiving vessels are TAIHO MARU (PA), SEI SHIN (KR), SHUN TIAN FA NO.168 (CT), DONG HORNG NO.899 (CT), TAIHO MARU (PA), FULL KIU SHIN (PA), OCEANUS (KR)
3. Weight declared transhipped. BET - 707mt, YFT - 374mt, ALB - 221 mt, SKP - 40 mt, MAR - 28mt, SWD & Others - 79mt.



1. REGIONAL SURVEILLANCE PICTURE (RSP):

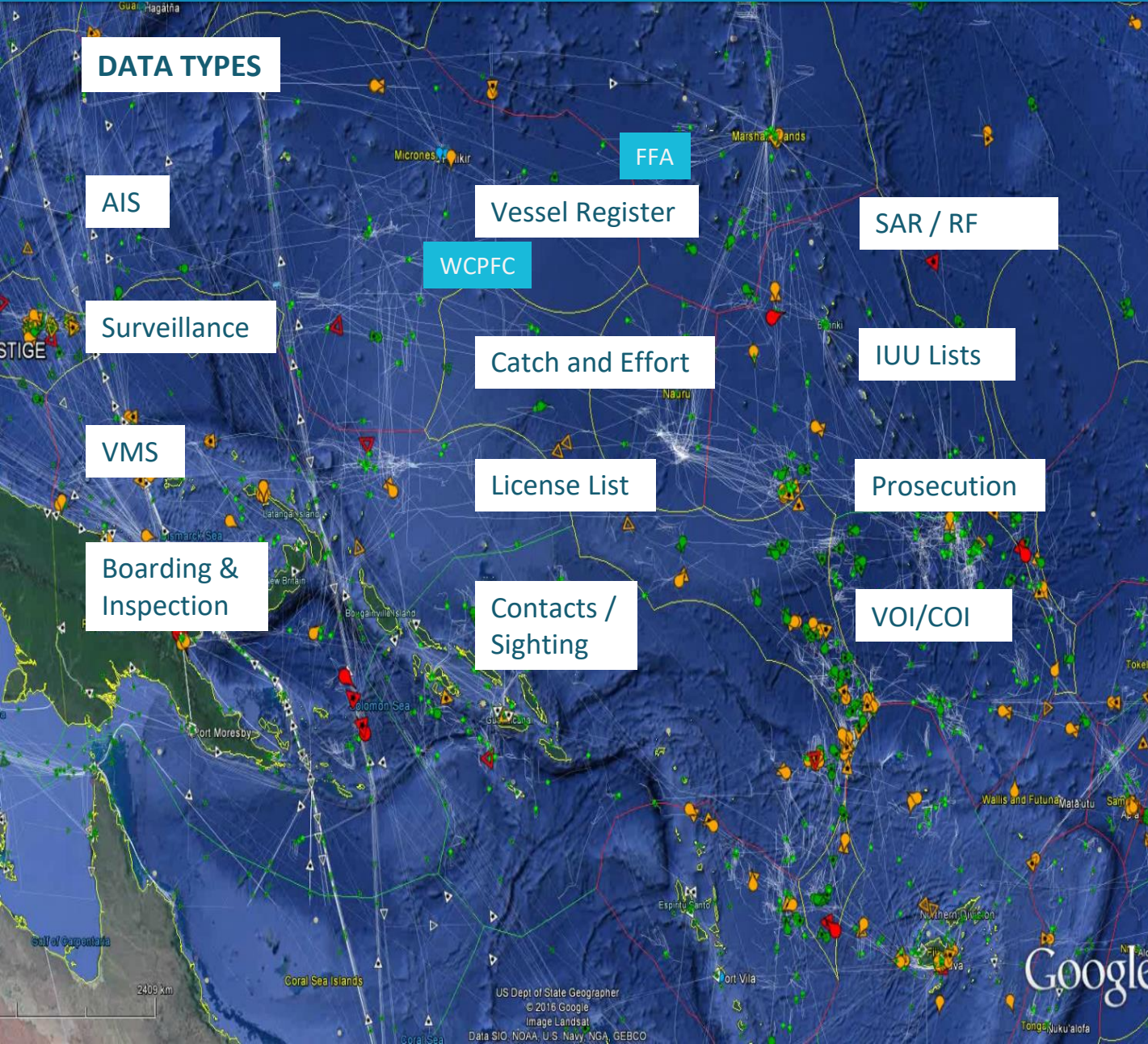
- The RSP displays three primary datasets – **FFA VMS, WCPFC VMS, AIS** on one common operating picture for 17 EEZs in 365 days, and WCPFC VMS high seas data during Regional Operation windows.
- All datasets including **licence data, registration data** and available national data validated against each other for each vessel.
- The RSP uses a **Compliance Index (CI)** criteria; **Traffic Lights**
 - **GREEN** – low risk, (vessel is registered and licensed);
 - **AMBER** – medium risk, (vessel transiting); and
 - **RED** – high risk of conducting IUU fishing.

2. REGIONAL INFORMATION MANAGEMENT FACILITY (RIMF):

- **Operation Module** (<https://rimf.ffa.int/ops>) Coordinate Member/QUAD assets and communicate situational and intelligence updates in support of the FFA OP365 and four Regional Surveillance Operations.
- **Aerial Surveillance Program Module (ASP)** (<https://rimf.ffa.int/mcs/airrequest>) Platform for Aerial Surveillance Planning, submission and review of Member Air Task Request (ATR).
- **Niue Treaty Information System (NTIS)** (<https://rimf.ffa.int/ntis>) Fisheries Data and Intelligence and electronic notification process for requesting MCS assistance between Parties.
- **Vessel Boarding Inspection (VBI/BOJAK)** (<https://rimf.ffa.int/vbi>)

Users: MCS Practitioners (Fisheries, Police, Navy, QUADs) as per FFA ISMS Policy process.

FFA Regional Fisheries Surveillance Centre (RFSC)



IUU Risk Assessment: VMS/AIS/Contacts

Table 1: VMS (FFA and WCPFC) and AIS data Compliance Index & Criteria:







COMPLIANCE INDEX (CI SCORE)	IUU RISK LEVEL	SYMBOL ON RSP/RIMF	CRITERIA
-4	Very High Risk of conducting IUU		<p>Analysis of WCPFC/FFA VMS and AIS</p> <ol style="list-style-type: none"> Vessel is not on WCPFC RFV and/or FFA Vessel Register; or Vessel is visually observed fishing in an EEZ or high seas without licence and authorisation; or Vessel is reported as VOI under OP365 to be in contravention of Member legislation, conditions of licence or any WCPFC Conservation Management Measure (CMM). Vessel is a fishing vessel and not reporting on VMS; or Vessel is visually is observed fishing but not licensed in EEZ or not on WCPFC RFV and/or, FFA Register; Vessel visually located within the WCPO HS or EEZ by contact reports, not reporting on VMS.
-3	High Risk of Conducting IUU		<p>Analysis of WCPFC/FFA VMS and AIS</p> <ol style="list-style-type: none"> Vessel not on FFA Register, WCPFC RFV; or Vessel transiting inside EEZ to which it is not licensed.
-1	Low Risk of conduct IUU		<p>Analysis of WCPFC/FFA VMS and AIS</p> <ol style="list-style-type: none"> Vessel is on WCPFC RFV and/or FFA Register; or Vessel licensed for current EEZ in which it is operating; Vessel is a domestic Fishing vessel.

Table 2: Contact Reports (Sighting, Boarding At Sea and In Port) Compliance Index & Criteria:

COMPLIANCE INDEX (CI SCORE)	IUU RISK LEVEL	SYMBOL ON RSP/RIMF	CRITERIA
-4	Very High Risk of conducting IUU		<p>Analysis of Reported CONTACTS</p> <p>Vessel contact is:</p> <ol style="list-style-type: none"> Not on WCPFC RFV and/or, FFA Register; or Visually observed fishing but not licensed in EEZ or High seas; or Not correlated to FFA/WCPFC VMS; or Visually observed to be in contravention of Member legislation, conditions of licence or WCPFC CMM.
-3	High Risk of Conducting IUU		<p>Analysis of Reported CONTACTS</p> <p>Vessel contact is:</p> <ol style="list-style-type: none"> On the WCPFC RFV and/or, FFA Register; or Not correlated to FFA/WCPFC VMS; or Reported fishing but not licensed in current EEZ; or Visually observed to be in contravention of Member legislation, conditions of licence or WCPFC CMM.
-1	Low Risk		<p>Analysis of Reported CONTACTS</p> <p>Vessel Contact is:</p> <ol style="list-style-type: none"> Correlated with WCPFC or FFA VMS. On WCPFC RFV, FFA Vessel Register and licensed in EEZ/High Seas. Vessel is a non-fishing vessel and is reporting on AIS.

Summary:

- Compliance Index - Updated - RFSC Guideline for Compliance Index Criteria. (Updated)**
- Primary datasets – FFA VMS, WCPFC VMS and AIS. (Updated).**
- Secondary data sets - Contact Reports (Sighting, Boarding At Sea and In Port)**
- Addition of Satellite Remote Sensing from RADARSAT, Radio Frequency and Aircraft detections Compliance Index & Criteria.**
- Ongoing developments in automated process.**

RIMF Operation Module:

- ❑ Communicate, Coordinate, Intel.
- ❑ Used to upload (Contacts / SITREPs / RFIs).
- ❑ Used by RFSC to consolidate asset employment and compile briefs.
- ❑ Intelligence-driven Ops
 - Good in-depth analysis.
 - Vessel, EEZ and High Seas assessments (provided through daily brief).
 - RSP (IUU CI Risk Assessment).
- ❑ Remote Sensing & Intel Analysis.
- ❑ Boarding and Contact Reports.



VANUATU

Comments:

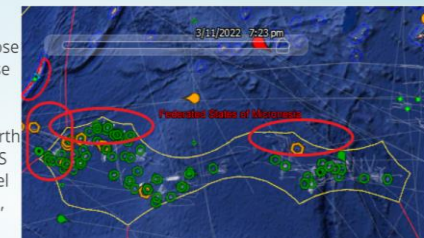
1. Four CI-3 amber vessels (Chinese flagged longline FV) currently within the VU EEZ, ZHONG SHUI 787, ZHONG SHUI 710, LU YUAN 24 & LU RONG YUAN YU 206 . Four vessels are not licensed to fish in VU EEZ and based on vessels current course speed they are likely transiting NW of EEZ.
2. CN flag LL vessels, LU RONG YUAN YU 559 which was one of the FV on the COI report for alleged forced labour is still located within VU EEZ exhibiting normal fishing behaviour.
3. Currently 24 FV are actively fishing with VU EEZ with concentrations of high fishing activity mostly within the southern half of the VU EEZ (see orange circles).
4. The general trend over the past 2 weeks is that fishing activity has moved from northern parts of the VU EEZ down to southern parts of the EEZ.



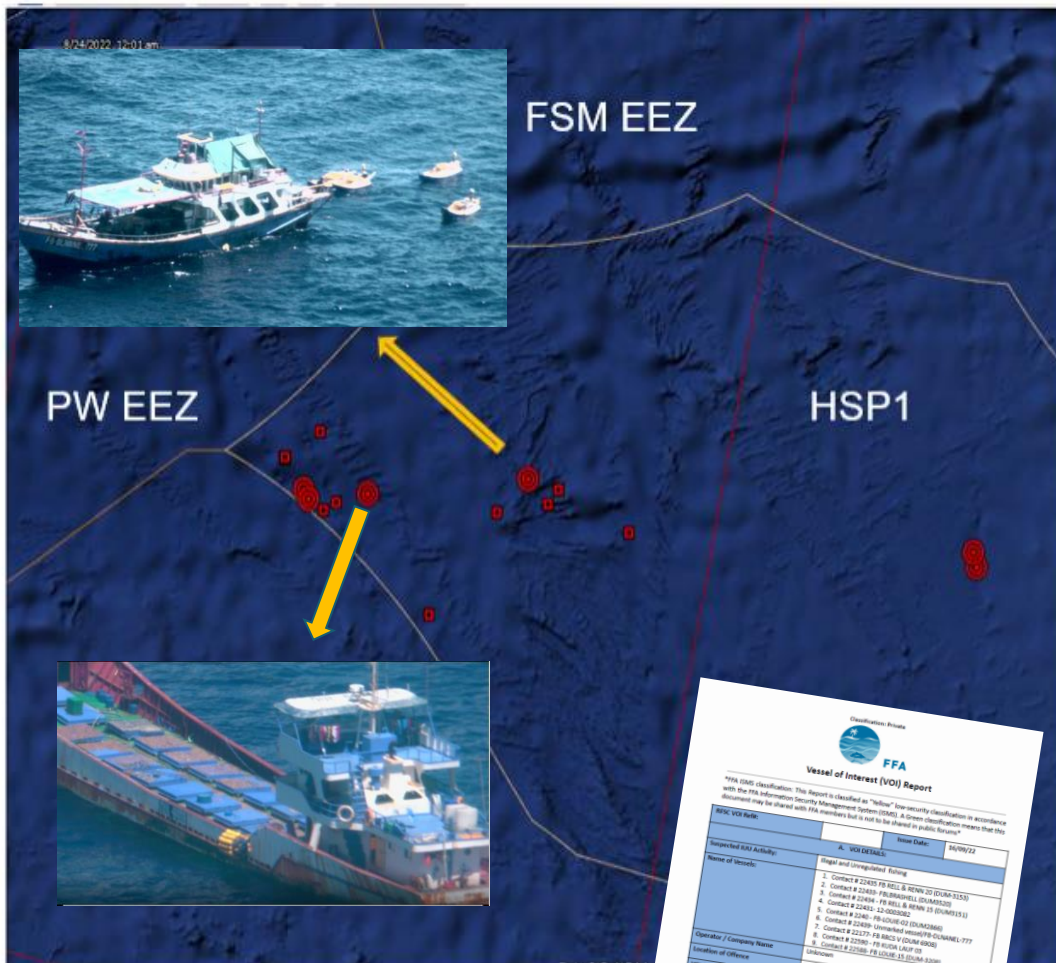
HIGH SEA AREAS

Comments:

1. HSP1- PH Flag vessels fishing on HSP1 within close proximity of PW and FSM EEZ are likely to incur into their EEZs. Request aerial coverage of the HSP 1 area adjacent to PW and FSM EEZ.
2. HSP 2- YONG FA YUN 10 (BLBM9) loitering in north western HSP2. Only began reporting on FFA VMS on 11 March 04:03 UTC. Assessed as a risk vessel and will be monitored. BU Vessels Prosperity 12, New Harmony, and Angel No.1 operating in SE HSP2.
3. HSP 4 NSTR low activity.



Case Study 1: IUU Risks using Remote Sensing/Surveillance Data.



Legend:
Red squares - Uncorrelated detections
Red circles – Aerial asset sightings.
Image – dark vessel sighting by Aerial Asset.

Synthetic Aperture Radar (SAR)

- ❑ OPIC22 Regional Intelligence of **high-risk IUU fishing on WCPFC HSP1.**
- ❑ Canada DVD provided **SAR** scan on HSP1 on 22 Aug 2022 to support OPIC22.
- ❑ RFSC received DVD scan results,
- ❑ RFSC tasked **Aerial surveillance** for AOI the uncorrelated detection area.
- ❑ **7 dark fishing vessels** sighted by aerial asset USCG130 within HSP1.
- ❑ **Contact Images & Videos** on vessel identity and activity were analysed by **RFSC, US, FSM and Palau.**
- ❑ **7 VOI reports** to flag state and WCPFC for investigation on IUU violation **RFV and VMS CMMs.**
- ❑ **9 potential Non-compliance cases** under WCPFC Art 25(2) for flag State investigation.
- ❑ Integration of Remote Sensing to Surveillance taskings and Intelligence gathering.

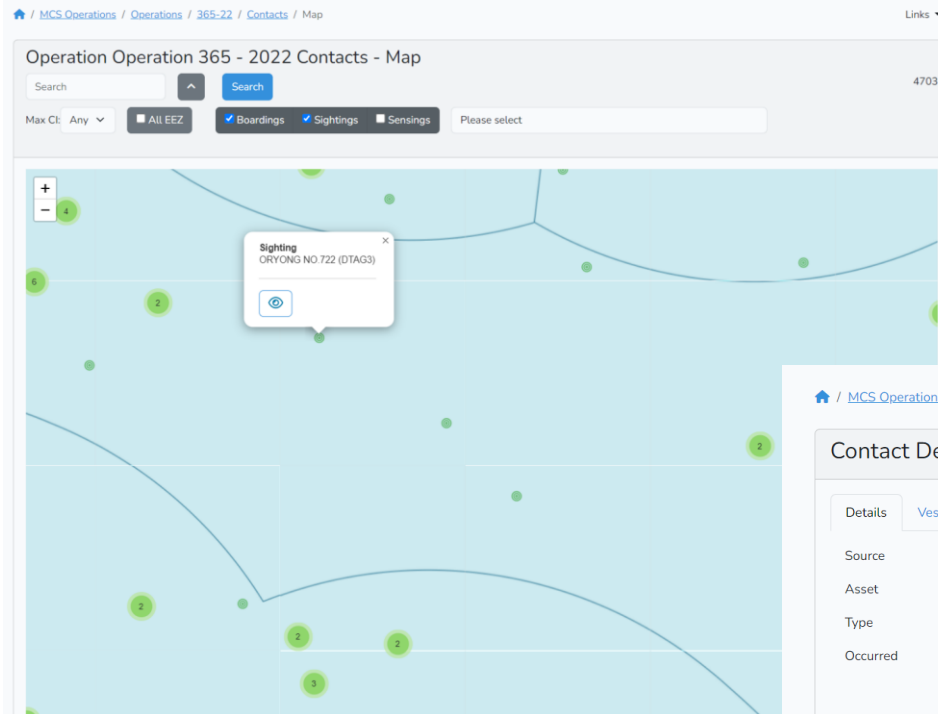
Classification: Private
FFA
Vessel of Interest (VOI) Report

FFA (SAR) Classification: This Report is classified as "Public" (low security classification in accordance with the FFA Information Security Management System (ISMS)). A lower classification means that this document may be shared with FFA members but is not to be shared in public forums

RFV VOI Rule	Issue Date:	06/09/22
Suspected RAV Activity	Illegal and Unpermitted Fishing	
Name of vessels	1. Contact # 22403: FE 002L & RENW 20 (LOAN 1152) 2. Contact # 22409: FE 0040 & RENW 20 (LOAN 1152) 3. Contact # 22409: FE 0040 & RENW 20 (LOAN 1152) 4. Contact # 22409: FE 0040 & RENW 20 (LOAN 1152) 5. Contact # 22409: FE 0040 & RENW 20 (LOAN 1152) 6. Contact # 22409: FE 0040 & RENW 20 (LOAN 1152) 7. Contact # 22409: FE 0040 & RENW 20 (LOAN 1152) 8. Contact # 22409: FE 0040 & RENW 20 (LOAN 1152)	
Operator / Company Name	Unknown	
Location of Offence	Unknown	
VMS Status	WCPFC High Seas Product 1 (HSP1)	
Area of the Vessel	Oceania	
Dark Sensor	USCG 130	
Operator	RFSC	
Dark Operator	RFSC	
RFV/RFSC Members	FSM, PALAU, AUSTRALIA, US (INDIA)	

Subclassification of Data:
 1. RFV Reported WCPFC HSP1 in an area of interest in Surveillance and SAR/MSAT. Radio Frequency Remote Sensing for OPIC22. RFSC collaborated with USCG 130 aerial surveillance and provided remote sensing potential dark targets and ongoing VMS data for HSP1 as well as selected FFA Member RFV/RFSC and FSM SAR.

Case Study 2: IUU Risks using Surveillance Contact data



Home / MCS.Operations / Operations / 365-22 / Contacts / View

Contact Details

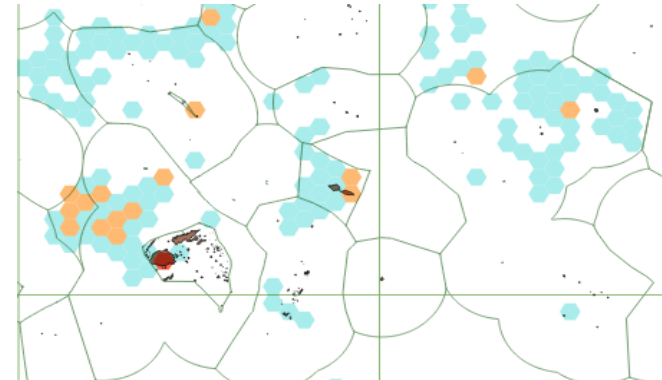
Details Vessel Comments Infringements Images History

Source	United States Navy
Asset	USS OAKLAND
Type	Sighting
Occurred	2022-Aug-12 01:00 UTC 2022-Aug-12 12:00 Local
DEBUG Details	
Officers	Fred Aleziru
Compliance Index	★ -1
Location	Lat: -4.63866666666667, Lon: 166.235666666667
Patrol	USS OAKLAND

Return Edit

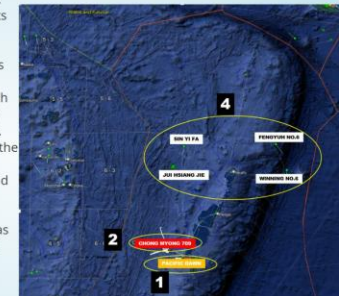
Case Study 3: IUU Risks using Catch and Effort data

- ❑ **OPTM23: Use of catch and effort data to inform intelligence recommendations, Port and EEZ boarding inspections.**
- ❑ Member authorised users utilise the SPC TUFMAN 2 to conduct **pre-boarding assessment** of fishing vessel; (72 hours prior to arrival).
 - with outstanding catch and effort reports;
 - unverified log sheets data
- ❑ Undertake **cross-verification of independent data** sources to identify discrepancies between log sheets, unloading, observer data and transshipment declaration.
- ❑ Support target to **key Ports in the Pacific.**
- ❑ **Strengthen measures to monitor and validate catch** of licensed vessels in Port and at Sea.



TONGA

1. TO Flag PACIFIC DAWN entered Nuku'alofa Port on 23 May. Recommend inspection of log sheets of the current trip, of suspected fishing in unauthorised areas on 6 - 7 May. Log Sheet analysis indicates catch and effort for 2023 trips are up to date and positions match to VMS.
2. TO Flag LL CHONG MYONG 709 continues to fish at W EEZ, and reports on AIS. No further action required, under investigation by TO authorities.
3. CN flag ZHONG SHUI 710 (CI-3) transiting SE of the EEZ to HS.
4. Four licensed FVs continue fishing operation and reporting on VMS.
5. MDA - 27 sailing crafts enter Nuku'alofa on 22 May from Minerva Reef. Vessels are operating as a group and likely to enter other Tonga Islands.



Challenges:

1. **Large** swath of areas to surveil.
2. **Latency/delay** in receiving and analysing MCS data.
3. Challenges in **verifying contacts and risks**. eg manual correlation to other MCS data.
4. **High cost** to acquire near real-time service.
5. **Planning and Communication** to assets, enhance Intelligence to support targeted Inspection.
6. **Enforcement and Compliance** capability and action.
7. **MCS data sharing**.
8. **FFA IUU Regional Priorities** - Catch Reporting.



Key focus for RFSC Operations!

- ❑ **Maritime Domain Awareness** through the Regional Surveillance Picture (RSP), RIMF and other technologies.
- ❑ Effective **use and sharing** of limited resources. **NTSA - Cooperative Activities.**
- ❑ Use of MCS data to conduct **Risk Assessment and Intelligence Analysis.**
- ❑ Assets available for wider **Maritime Security tasks.**
- ❑ Encourage **information sharing** between Members, Partners and RFSC.
- ❑ National and regional priorities from IUU Quantified deliverables and workplan.
 - Licensed vessels **misreporting and Non-compliance to Terms of access.**
- ❑ **Quality Inspections** - At sea and dockside.
- ❑ **Training and empowering Members** to conduct MCS and Compliance Inspections.



Thank you



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