

Operation Nightwatch

Operational briefing note

From search-based patrols to risk-based, intelligence-driven MCS in the Marshall Islands EEZ



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Operational summary

- **Operation name:** Nightwatch
- **Lead authority:** Marshall Islands Marine Resources Authority (MIMRA)
- **Area of operation:** Republic of the Marshall Islands EEZ (~2 million km²) and adjacent high-seas boundary
- **Objective:** Detect and identify vessels operating without authorisation in the area of operation
- **Operational model:** Wide-area satellite dark vessel detection → high resolution satellite verification → intelligence prioritisation → airborne identification
- **Assets:** Satellite SAR/optical/radio frequency, AIS, VMS, FFA surveillance aircraft, Starboard Maritime Intelligence
- **Key result:** Detection-to-verification timelines reduced from days to approximately four hours

Overview

Operation Nightwatch was a maritime surveillance campaign conducted by the Marshall Islands Marine Resources Authority (MIMRA) and Starboard Maritime Intelligence with support from the Forum Fisheries Agency (FFA). Its objective was to detect vessels operating without authorisation in and near the Republic of the Marshall Islands' two-million-square-kilometre Exclusive Economic Zone (EEZ).

The operation orchestrated satellite tasking, maritime intelligence, and airborne verification to compress the time from initial detection to on-scene verification from days to hours. Nightwatch provides a practical example of risk-based, intelligence-driven MCS in a large-ocean EEZ, aligned with the [FFA Regional Monitoring, Control and Surveillance Strategy 2024–2029](#).

Key operational results

- Intelligence-based satellite and airborne surveillance within approximately 2 million km² of ocean
- 43 vessels validated in the area of interest during the operation period
- 6 high-priority targets selected for airborne verification based on risk indicators
- Average detection-to-verification timeline reduced from days to around four hours.

Despite intensive scanning, no dark vessels were confirmed in the operational area. This established a highly valuable intelligence baseline demonstrating strong compliance within the licensed fleet.

The core challenge and solution

The Republic of the Marshall Islands' (RMI) EEZ covers roughly 2 million km², approximately the size of Greenland. Patrolling this area to control its globally significant tuna fishery is a formidable challenge.

Dark vessels fishing in national waters undermine licence revenue, national sovereignty and regional conservation objectives.

For MCS agencies responsible for large-ocean EEZs with constrained patrol capacity, the core challenge is not simply “seeing more”, but turning available data into timely operational tasking decisions under national control.

Nightwatch demonstrates how multi-source intelligence and an integrated workflow can focus patrol effort where the risk is highest, rather than relying on broad search patterns.



The orchestration of activities during a typical day during Nightwatch provides a scalable template that integrates satellite imagery, vessel tracking data, and patrol assets into a single intelligence-to-action workflow.

Operational model: tip-and-cue to action

Operation Nightwatch refined a tip-and-cue model orchestrating wide-to-fine satellite acquisition, intelligence analysis, and patrol aircraft.

1. Wide-to-fine area detection

- Synthetic aperture radar (SAR) satellite scans provided wide-area vessel detections across the EEZ and a buffer along the high-seas boundary.
- AIS and VMS data were used to identify known vessels and highlight potential “dark” targets.
- High-resolution electro-optical (EO) imagery was cued on potential dark vessels detected in wide-area SAR.

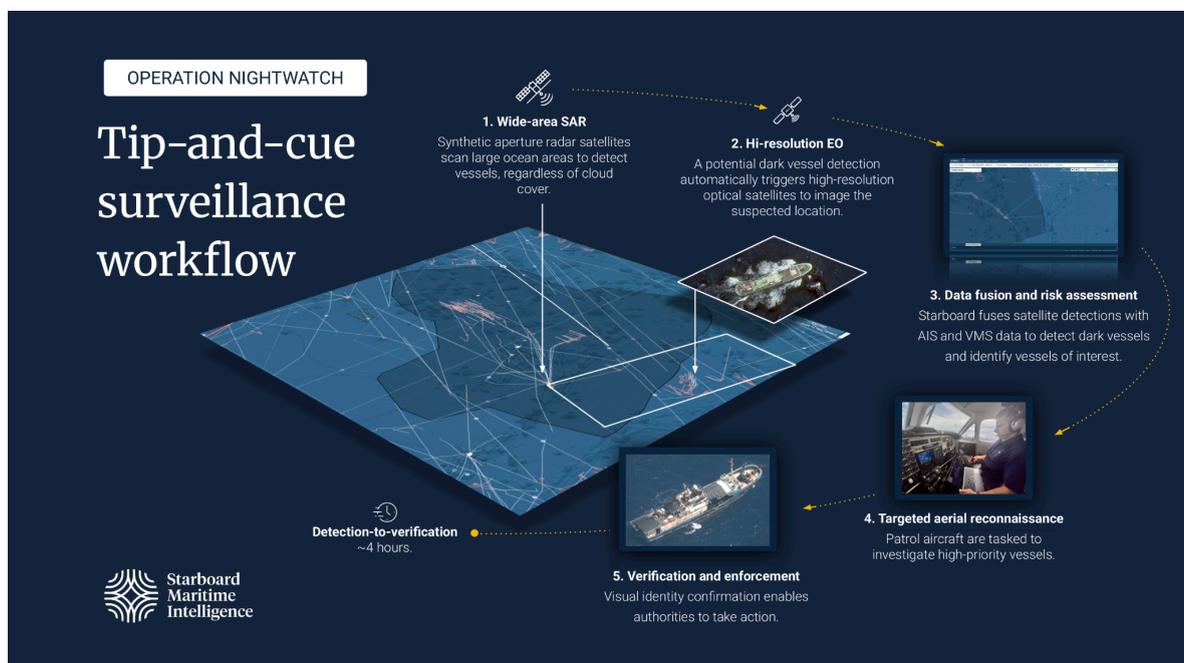
2. Intelligence fusion and prioritisation

- The Starboard maritime intelligence platform fused SAR and EO detections, AIS, VMS, and other maritime information into a single operational picture under MIMRA's control.
- Analysts used this picture to distinguish normal from suspicious behaviour and prioritise high-risk vessels for further investigation.

3. Airborne verification and deterrence

- Patrol flights with the FFA surveillance aircraft were tasked to satellite coverage areas and high-risk vessels, with updated coordinates provided before and during missions.
- Aircraft sensors were used to confirm vessel identity, document activity on deck, and provide visible deterrence along the EEZ high-seas boundary.

This workflow shifted patrols from largely search-based operations to risk-based targeting of patrol assets through intelligence-led reconnaissance.



The tip-and-cue workflow used in Operation Nightwatch reduced the detection-to-verification time to approximately four hours.

Alignment with MCS strategy principles

Operation Nightwatch demonstrates several core elements of the many MCS strategies.

Risk-based, intelligence-driven MCS

Patrols were directed using combined satellite, AIS, VMS and historical risk indicators rather than fixed patrol patterns.

Efficient allocation of limited MCS resources

Aircraft time and operating costs were focused on specific high-risk areas and vessels, improving the operational value of each patrol hour.

Integration of tools and skills

Data sharing agreements and a unified platform allowed MIMRA analysts to work with SAR, optical imagery, radio frequency detections, AIS, VMS and operational reporting in one place, supporting faster and more confident tasking decisions.

Sovereign control with regional cooperation

MIMRA led the operational decisions and tasking, while regional partners and commercial providers contributed sensing, analysis tools, and aircraft support within that sovereign framework.

Operation Nightwatch provides a practical operational example of how the Regional MCS Strategy can be implemented in large-ocean EEZs through risk-based targeting of patrol assets supported by satellite intelligence.

Operational implications for other coastal states

For other large-ocean states, the Nightwatch model demonstrates how MCS agencies can:

- Use satellite sensing and existing AIS and VMS data to identify areas and vessels of highest operational risk
- Introduce a repeatable detect–prioritise–verify workflow tailored to local priorities and available patrol assets
- Strengthen MCS outcomes without significantly increasing patrol hours by making each hour more targeted and intelligence-driven.

Nightwatch is not tied to a single sensor or platform. It represents a scalable operational workflow that can be adapted to different EEZ sizes, patrol capabilities, and risk environments.

About Starboard Maritime Intelligence

Starboard is a maritime intelligence platform used by the FFA and all FFA member states to integrate satellite detections, AIS, VMS, and other maritime data into a single operational picture supporting intelligence-led maritime surveillance.

During Operation Nightwatch, Starboard staff supported MIMRA and regional partners in planning satellite collections, fusing multi-source data, prioritising targets and briefing patrol aircraft, while operational decisions remained under Marshall Islands' sovereign authority.

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