

Maritime Domain Awareness in Pacific Islands: India–Australia Surveillance Initiatives

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Introduction

Pacific Island states such as Fiji, Papua New Guinea, and the Solomon Islands administer Exclusive Economic Zones (EEZs) up to 1,000 times larger than their land area.¹ Kiribati alone governs over 3.5 million sq kms of ocean.² This asymmetry between maritime responsibility and enforcement capacity has made Maritime Domain Awareness (MDA) central to regional security. Collectively, Pacific Island countries govern over 30 million sq kms of ocean, yet remain acutely vulnerable to illegal, unreported, and unregulated fishing, transnational crime, and geopolitical competition—costing the region an estimated USD 600 mn annually in fisheries revenue. The region is increasingly affected by trafficking networks and strategic competition, sharpened by China's 2022 security pact with the Solomon Islands³, prompting both Australia and India to deepen their maritime surveillance engagement.^{4,5}

Geography and Challenges

The Pacific Islands span three sub-region—Melanesia, Micronesia, and Polynesia—controlling EEZs that supply over 50 per cent of the global tuna catch.⁶ Yet surveillance remains severely constrained by remoteness, limited infrastructure, financial shortfalls, and climate vulnerability.⁷ Many states operate fewer than five patrol vessels across millions of square kilometres of ocean.⁸ Donated vessels often go underutilised due to maintenance shortfalls and crew limitations.⁹ Gradual improvement has come through Australia's Pacific Maritime Security Program (PMSP), New Zealand's assistance, Japanese coast guard support, and increasing Indian engagement¹⁰, shifting focus toward satellite monitoring, radar systems, and sustainable training alongside physical patrol assets.¹¹

Australia's Role: Institutionalised Maritime Surveillance

Australia's engagement is longstanding and operationally intensive. The PMSP, built on the 1987 Pacific Patrol Boat Program¹², has delivered 24 Guardian-class patrol boats to Pacific Island nations and the Maldives, completing its final delivery in Apr 2026. These 39.5-metre vessels, with a 3,000-nautical-mile range, have substantially improved fisheries protection, search-and-rescue, and sovereignty patrol capacity.¹³ Operation Solania provides aerial surveillance over millions of square kilometres annually, regularly detecting dark vessels, while Operation Kurukuru, one of the world's largest maritime surveillance exercises, involves over a dozen countries and has generated hundreds of fisheries violation detections each year.¹⁴ Australia also sustains patrol boat bases, training programmes, and institutional support for the Forum Fisheries Agency (FFA) and the Regional Fisheries Surveillance Centre.

Sustainability remains a concern, with vessel operating costs reaching USD 1-2 mn annually per unit.¹⁵

India's Expanding Strategic Investment in the Pacific Region

India's engagement has accelerated since the launch of Forum for India–Pacific Islands Cooperation in 2014¹⁶, driven by China's growing regional influence¹⁷ and India's broader aspiration to act as a net security provider across the Indo-Pacific.¹⁸ Unlike Australia, India's approach is through capacity-enabling rather than being operationally direct. It has provided hydrographic survey assistance, information technology, and maritime training through the Indian Technical and Economic Cooperation (ITEC) programme¹⁹, and coastal surveillance radar systems to Indian Ocean partner states, a model extendable to the Pacific.²⁰ India's most distinctive asset is its space-based capability—Indian Space Research Organisation's (ISRO) satellites and Navigation with Indian Constellation's (NavIC) support vessel tracking and ocean monitoring²¹—while the Information Fusion Centre–Indian Ocean Region (IFC-IOR), connecting over 25 partner nations, offers a proven template for extending real-time maritime awareness into the Pacific.²² India's absence of a permanent operational presence, however, limits its impact to project-based and developmental engagement rather than continuous enforcement.

Australia, the United Kingdom, and the United States (AUKUS) and its Role in Pacific Maritime Domain Awareness

AUKUS, established in Sep 2021 between Australia, the United Kingdom, and the United States, centres on nuclear-powered submarines under Pillar I, while its Pillar II encompasses Artificial Intelligence (AI), quantum technologies, cyber capabilities, undersea systems, and electronic warfare, all directly relevant to Pacific MDA.²³ Autonomous Underwater Vehicles (AUVs), AI-enabled vessel traffic analysis, over-the-horizon radar and cyber tools to counter Automatic Identification System (AIS) spoofing represent a technology pipeline that could significantly strengthen surveillance across Pacific EEZs. The Collective Maritime Situational Awareness framework, under discussion within AUKUS, aims to create seamless data exchange that, if extended to Pacific Island agencies, would address the region's chronic data fragmentation problem.

India is not a formal AUKUS member, but Pillar II creates meaningful space for associating external partners in specific technology domains. India's participation in select workstreams, namely AI-enabled surveillance, space-based monitoring through ISRO and NavIC, and undersea domain awareness would enhance the collective surveillance and architecture while positioning India's IFC-IOR model as a bridge between the Indian Ocean and Pacific surveillance networks.

The Quadrilateral Security Dialogue (QUAD) and India's Strategic Role in Pacific Surveillance

The QUAD, comprising India, Australia, Japan and the United States (US), offers New Delhi its most structured multilateral pathway for contributing to Pacific MDA. The Indo-

Pacific Partnership for Maritime Domain Awareness (IPMDA), launched at the 2022 QUAD Leaders' Summit²⁴, aims to deliver real-time integrated surveillance across the Pacific Islands, Southeast Asia, and the Indian Ocean through commercial satellite data, radar technologies, and information fusion. The Pacific Islands Information Fusion Centre in Vanuatu and the IFC-IOR in Gurugram are intended as interlinked nodes, with the US providing satellite partnerships, Australia contributing institutional depth, Japan delivering coast guard and radar expertise, and India bringing its space and IFC-IOR capabilities.

India's ISRO earth observation satellites, the Radar Imaging Satellite (RISAT) series and RESOURCESAT platforms can monitor vessel movements and detect illegal fishing across Pacific EEZs, with NavIC adding positioning accuracy in potentially contested environments. Coordinating with Japan on co-funding Coastal Surveillance Radar networks in Pacific Island nations and expanding ITEC training programmes into a joint QUAD capacity-building initiative would address the region's most persistent structural weakness, i.e., the shortage of indigenous technical expertise.

Strategic Pathways for Strengthening Maritime Domain Awareness

Surveillance Mechanisms. Australia's MDA system integrates patrol boats, aircraft, regional coordination centres, and the FFA's Vessel Monitoring System. India's contributions like satellite imagery, digital infrastructure, and training compensate for limited patrol coverage but remain poorly interoperable within Pacific surveillance networks, creating coordination gaps that reduce overall effectiveness.

EEZ Monitoring Effectiveness. Operation Kurukuru and the Guardian-class fleet have demonstrably improved enforcement capacity, yet fuel costs, crew shortages, and maintenance constraints persist. India's information-layer contributions are vital given that over 80 per cent of illegal fishing vessels use AIS spoofing or shutdown tactics to evade detection.

Pacific Island Perspectives. Fisheries protection accounting for up to 80 per cent of government's revenue in countries like Kiribati and Tuvalu is the paramount concern. Pacific Island states welcome external assistance but insist on national command of surveillance assets. Their multi-partner engagement strategy balances Australia, India, China, Japan and the US, maximising resources while guarding against over-dependence on any single actor.

Conclusion

India–Australia cooperation in Pacific MDA reflects a complementary but asymmetrical partnership. Australia provides operational depth through patrol assets and institutional integration, while India contributes the informational and technological layer through space-based surveillance, data fusion, and capacity-building. Both frameworks are amplified by multilateral architecture. The QUAD's IPMDA offers India a structured mechanism to operationalise its Indo-Pacific commitments, linking IFC-IOR's proven data-sharing model to Pacific surveillance networks, and co-developing

radar and training infrastructure alongside Japan and Australia. AUKUS offers a parallel pathway for engaging with advanced surveillance technologies like AI, AUV, and cyber as an associated Pillar II partner, enhancing India's technological visibility without formal membership. Together, these frameworks can transform a currently fragmented architecture into an integrated, sustainable MDA system, one that strengthens both regional sovereignty and stability as geopolitical competition in the Pacific intensifies.

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