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Addressing Climate Security Challenges in the Indo-Pacific Region through India-Australia Partnership

by

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Abstract

The security, economy and social stability of the large and vital Indo-Pacific area are all significantly impacted by the impending dangers posed by climate change. The growing threat to climate security in the Indo-Pacific region is posing challenges for Australia and India. As highlighted in the 2023 2+2 India Australia Ministerial dialogue, Canberra and New Delhi reaffirmed their commitment to a free, open, and rules-based Indo-Pacific through various institutional mechanisms, such as maritime domain awareness, to increase their naval presence and find strategies to address maritime concerns in the region. This report looks into the pivotal climate security challenges in the region that act as national security concerns to Canberra and New Delhi, including: (i) the threat of illegal, unreported, and unregulated (IUU) fishing; (ii) climate-induced displacement; and (iii) humanitarian disasters. The study outlines the urgency of the need for collaborative efforts from both countries to strengthen maritime security, ensure economic prosperity, and bridge gaps by combining resources.

Introduction

The geoeconomic and geostrategic significance of the Indo-Pacific is exponentially growing as the world economy's growth engine moves eastward. The region is home to 60% of the world's population and acts as a centre for global trade and a hub for critical global supply chains. It contributes significantly to global trade, with half of all trade travelling across the enormous waters of these connected oceans. It accounts for almost 65 percent of the world GDP, and approximately 50% of all merchandise traded worldwide travels through its waters (Dr. Pankaj, 2023). As the geostrategic stakes of the region are high due to the economic and political significance of the region, the various great and regional players in the region have been actively designing and polishing their Indo-Pacific strategies, focusing on their national interests.

Despite the region's strategic importance and promising economic prospects, the hovering threat of climate change has had a substantial influence on security strategies and policy frameworks in the Indo-Pacific region.

The Indo-Pacific region is confronting unparalleled climate security issues that jeopardise the safety, financial stability, and social harmony of the countries in the region. The littoral states of the Indo-Pacific region face various climate challenges, from sea level rise to ocean acidification to cyclones. It is estimated that the GDP of the region could decline by as much as 3.3% by 2050 and 10% by 2100 if climate action is not taken (UNESCAP, 2016).

The littoral states are becoming more worried about climate security because the Indo-Pacific region is vulnerable to natural disasters that can threaten people's lives, cause them to lose their jobs, force them to move, and have other negative effects on the economy. The multiple facets of climate security, such as IUU fishing, climate-induced displacement, and humanitarian disasters, continue to be persistent challenges in the region. This necessitates the need for collaborative strategies by the key players in the region, including India and Australia.

Challenges: Climate Security Threats in Indo-Pacific

Climate security encompasses many types of security concerns, such as environmental security, people's security, and national security. It is becoming more and more important in the Indo-Pacific strategies of the major powers in the area. These Indo-Pacific strategies look into various security implications of climate change in terms of biodiversity loss, forced migration and displacement, the food-water-energy security nexus, disasters, and others (Jayaram and Mundra, 2023). As defined by UNDP, climate security refers to the impacts of the climate crisis on peace and security, particularly in fragile and conflict-affected settings (UNDP, 2023).

1. IUU Fishing Threats

IUU fishing is one of the biggest problems in the world because it threatens legal fishing businesses and livelihoods, threatens food and financial security, supports international crime, skews markets, supports human trafficking, and stops efforts to use sustainable fishery management methods. The Food and Agriculture

Organisation of the United Nations (FAO) defines IUU fishing as fishing without permission in foreign waters, fishing that has not been reported to the right authorities, fishing that is not regulated, and fishing that happens in places that do not have the right management measures to control the catch (Camilleri, 2023). According to FAO, the economic loss caused by IUU fishing is estimated to be around US $23 billion annually. This staggering figure represents approximately 20% of the global catch, underscoring the magnitude of the economic impact.

In 2009, the approximate estimates showed that illegal and unrestricted fishing can bring in anywhere from 11,000,000 to 26,000,000 metric tonnes annually (Agnew et al., 2009). By 2018, the current marine captured annual catch was estimated at 96,400,000 metric tonnes, with significant illegal catch with no sufficient data (Fujii, Okochi, and Kawamura, 2021).

IUU fishing is a major threat in the Indo-Pacific region, and it has potential impacts on the food insecurity of the region and increases the vulnerability of coastal communities in less developed countries, where they depend principally on the ocean for their livelihood. The Nature Conservancy's projection that many Pacific Island nations will struggle to meet local food needs due to population growth and continued IUU fishing highlights the direct impact on vulnerable regions, which is further aggravated by climate security concerns (Jai Singh, 2023). Indian Ocean fisheries account for 14% of the global capture harvest and more than 30% of the Indian Ocean assessed stocks are fished at biologically unsustainable levels, which impact the ecology region negatively (National Security College, n.d). As sea temperatures, salinity, and weather patterns shift, IUU fishing activities may be adapted by the affected people, complicating detection and prevention efforts. The impact of climate change on fish stocks could jeopardise legal fishing livelihoods, potentially driving fishers towards IUU activities and further accelerating IUU activities in the region (Global Seafood Alliance, 2023) Bottom trawling, a common practice in IUU fishing, damages corals and sea grasses. The loss of sea grasses, in particular, is highlighted as having a significant impact on climate change, with

implications for carbon sequestration and emissions.

IUU fishing is also interlinked with various transnational crimes, including forgery, fraud, corruption, human rights abuses, illegal transshipments, smuggling, and money laundering. The interconnected nature of IUU fishing with criminal activities further amplifies its threat to regional security in the Indo-Pacific and accelerates the geopolitical tensions in the region.

The biggest reason for the rise in IUU fishing in the Indian Ocean is that the current monitoring, control, and surveillance (MCS) systems are not strong enough. This includes the laws, the way data is collected and analysed, and the people who watch over the water. Canberra and New Delhi, as key Indian Ocean states, are well placed to assist countries and organisations in the region in developing MCS capabilities against IUU fishing (National Security College, n.d.).

2. Climate-Induced Displacement

Climate-induced displacement poses a pressing climate security threat due to various factors and the substantial impact it has on human populations and security. The Global Report of Internal Displacements (GRID) of 2022 reveals a staggering global figure of 38 million instances of displacement in 2021, with more than one-third (37.6%) originating from the East Asia and Pacific region. The Republic of Kiribati, whose highest point is less than 2.5 metres above sea level, is particularly susceptible; the Maldives are in a similar scenario. By 2100, rising sea levels might see smaller island republics in the Pacific and Indian oceans mostly or completely inundated, which will force people to migrate to other parts of the world (Ahluwalia, 2023). The Asia Pacific region witnessed 225.3 million internal displacements from 2010 to 2021, underscoring the scale of the issue. A significant majority (95%) of the displacements in the East Asia and Pacific region were due to weather-related disasters, emphasising the direct link between climate events and population movements (Soo-Chen & McCoy, 2023). Floods and storms emerge as the primary causes,

accounting for over 80% of disaster-related displacements in the region between 2008 and 2020.

The coastal states of the Indian Ocean, such as India, Pakistan, Sri Lanka, and Bangladesh, are all at risk of flooding and rising sea levels, along with the island states in the region. These nations' large and dense urban coastal populations compound the threat that climate change effects pose to their residents (Kugelman, 2020). Afghanistan, Bhutan, and Nepal, which are landlocked, are facing rising temperatures, drought, and the melting of glaciers. At the same time, island states like the Maldives, which is the world's lowest-lying country, are facing the real possibility of being completely submerged in the near future. South Asia's most populous country, India, will become much drier and hotter over the next few decades, according to a study by India's Ministry of Earth Sciences. By the end of the century, average temperatures are expected to rise by nearly 4 degrees Celsius (Krishnan et al., 2020). The monsoons will last longer, and more glaciers will melt. The Indian Ocean will warm up, and the sea level is expected to rise by up to almost a foot. In 2009, Cyclone Aila forced 2.3 million people to leave their homes in India and almost a million in Bangladesh (Bhattacharyya and Werz, 2012). The 2010 floods in Pakistan damaged or destroyed 1.1 million homes and forced about 11 million people to leave their homes. Many of them moved to big cities instead of going back home. In 2012, 1.5 million people had to leave their homes in the Indian state of Assam because of floods (Bhattacharyya and Werz, 2012).

The drivers of climate induced displacement are both chronic and acute. Acute impacts include direct destruction by severe weather events, while chronic impacts encompass sea level rise, soil erosion, erratic weather patterns, and degradation affecting water supply, agriculture, and livelihoods. This dual nature of climate impacts implies a multi-dimensional challenge, requiring adaptive strategies for both sudden disasters and long-term environmental changes (Salem & Rosencranz 2020).

Most weather-related displacements globally and in the East Asia and Pacific region were concentrated in Low and

Middle-Income countries (LMICs), indicating that vulnerable populations are disproportionately affected. This concentration underscores the social and economic challenges faced by countries with limited resources when managing large-scale displacements. Southeast Asian countries such as the Philippines, Indonesia, Vietnam, and Myanmar experienced high numbers of displacements in 2021, with millions of people affected. This regional concentration underscores the localised impact of climate-induced displacement, requiring targeted strategies for specific geographical areas. Every year, more than 16,000 Pacific Islanders relocate to developed nations, leaving places like Tuvalu, Niue, and the Cook Islands with declining populations (Salem & Rosencranz 2020). The Pacific identity, culture, and way of life face extinction with sinking islands. State-led planned relocation further risks diluting traditions, as observed in such island nations, where relocation to elevated islands has led to overpopulation, violence, resource scarcity, and heightened socio-economic challenges, including unemployment and poverty.

Hence, re-affirming that climate-induced displacement is a pressing climate security threat due to its magnitude, concentration in vulnerable regions, and the complex interplay of environmental, economic, and political factors. The data emphasises the urgent need for adaptive measures, international collaboration, and a holistic approach to address the multifaceted challenges posed by climate-security threats in the region.

3. Humanitarian Disasters and Security Risks

Humanitarian disasters with security risks encompass a broader range of challenges resulting from climate change, including natural disasters, disease outbreaks, and their subsequent impact on communities. The Indo-Pacific is identified as the most climate-affected region globally, with notable instances such as Jakarta (the world's fastest-sinking city) and Kiribati (the world's fastest-sinking country). Projections by the World Bank estimate up to 90 million climate refugees in the Indo-Pacific by 2050, highlighting the severe impact on populations and the potential for mass displacements.

The escalating impact of climate change and environmental degradation is intricately linked to heightened security risks, particularly in regions prone to fragility. Approximately 3.5 billion people reside in climate hot spots, as per the Intergovernmental Panel on Climate Change's estimates, indicating the widespread nature of climate-related challenges. The consequences of climate change extend beyond environmental concerns, diminishing natural resources, disrupting social cohesion, and fueling conflicts. Recent instances highlight the impact on traditional mobility routes, such as transhumance, where altered paths due to changing seasonal weather patterns contribute to tensions and conflicts between farmers and cattle herders. As seen in Somalia, the current drought exacerbates vulnerabilities, leading to displacement, hunger, and grievances. The cascading effects of climate change significantly shape the United Nations' initiatives in conflict prevention, peacemaking, and peacebuilding, emphasising the urgent need to address the complex interplay between climate change and security dynamics. (UN Press, 2023)

Climate security is recognised as the biggest threat facing the region, acting as a "threat multiplier" that exacerbates existing challenges, including food security, economic security, political instability, and energy and resource access. The anticipated rise in global temperatures by 1.5 degrees Celsius by 2033 is expected to intensify climate-related disasters, leading to increased frequency and severity of droughts, floods, fires, and other natural disasters, highlighting the potential for a regional humanitarian crisis resulting from the increased frequency and severity of extreme weather events. Disasters such as droughts, floods, and fires could create a regional humanitarian crisis, necessitating a comprehensive and coordinated response. Existing initiatives like the Quad Partnership on HADR and the ASEAN Coordinating Centre for HADR are acknowledged, but it is noted that they fall short of delivering outcomes for the entire region (Clayton, 2023).

India-Australia Maritime Partnership on Climate Security

India's Role in Addressing Climate Security Concerns in the Indo-Pacific

India's strategic interest in the Indo-Pacific is extremely crucial. India's approach to the Indo-Pacific is intricately tied to its strategic stakes in maintaining a power equilibrium in the Western Pacific and the Indian Ocean. Prime Minister Modi's 'Security and Growth for All in the Region' (SAGAR) speech in 2015 outlines a vision that positions India as a responsible actor in the Indian Ocean region, emphasising the security responsibilities of littoral countries and recognising the legitimate interests of non-littoral nations. This geopolitical construct underscores India's commitment to transparency, mutual trust, and a rules-based international order in the region.

India's maritime diplomacy, calibrated to different sub-regions within the Indo-Pacific, reflects a holistic perspective. The establishment of the Indo-Pacific division in the Ministry of External Affairs in 2018 highlights the government's intention to align India's maritime diplomacy with the strategic scenarios in the region. The region that USINDOPACOM covers significantly aligns with Indian goals, fostering strategic convergence with the U.S., Japan, and Australia. Initiatives like the Malabar exercises and the quadrilateral dialogue demonstrate India's commitment to regional security, addressing challenges ranging from infrastructure connectivity to counter-terrorism.

The Indo-Pacific strategy extends beyond geopolitical considerations to include a focus on climate security. India's strategic positioning recognises the interconnectedness of security challenges, including climate change, which poses threats to the maritime domain. The growing stakes in maintaining a stable equilibrium in the region, amidst challenges like Chinese naval activities and climate change, make climate security a priority for India (Kumar & Ghosh, 2019).

India actively participates in multilateral efforts through organisations like the Indian Ocean Rim Association (IORA) and the Indian Ocean Naval Symposium (IONS), emphasising maritime safety,

security, and humanitarian assistance. Bilateral and multilateral initiatives involve extensive cooperation with littoral and island nations, ranging from naval patrols and coordinated patrols to capacity-building programmes for operational oceanography and climate change resilience.

The political leadership recognises the strategic importance of islands in its maritime strategy and is especially concerned with China's close relations with the Maldives, Sri Lanka, Mauritius, and the Seychelles. China's Belt and Road Initiative (BRI) has heightened India's concern over China's increasing role in India's neighbourhood, as seen in the handover of Sri Lanka's Hambantota Port to China in 2017. India's control over the Arabian Sea, Bay of Bengal, and the Andaman Sea provides it with a strategic edge. The network of alliances that the Indian government is weaving represents an advantage for the country both commercially and militarily, along with a crucial element of deterrence against Chinese influence in the region. Moreover, India’s Indo-Pacific strategy walks on two legs:

i) Strengthening national engagement with the region: It elevates India’s salience in the Indo-Pacific and raises Delhi’s value for its partners.

ii) Stronger partnerships with like-minded nations: It helps boost India’s national capabilities and enhance its reach and impact.

This strategic positioning aligns with the collaborative efforts required to address climate security challenges, particularly in the face of growing threats posed by climate change in the Indo-Pacific (Jochheim & Lobo, 2023).

In the Indo-Pacific context, climate security is integral to India's strategic objectives. The region's vulnerability to climate change impacts aligns with India's commitment to promoting a stable, holistic maritime system. Economic implications, the strategic role of India in climate resilience, and specific instances of addressing climate security challenges showcase the multifaceted approach within India's broader Indo-Pacific strategy.

With the establishment of the Indo-Pacific Ocean Initiative (IPOI) in 2021, India made significant progress

towards advancing its Indo-Pacific strategy. IPOI highlights "marine ecology" as a key pillar of regional security architecture, incorporating climate change issues into more general security agendas such as maritime security. India's Vision SAGAR (Security and Growth for All in the Region) initiative, launched by Prime Minister Narendra Modi in 2015, prioritises the Indian Ocean region for peace, stability, and prosperity. With an emphasis on the transshipment of High Availability Disaster Recovery (HADR) relief materials, COVID supplies, and food assistance, India's Vision SAGAR initiative has successfully completed eight missions to 15 friendly foreign countries as of 2022. One such mission was in Beira, Mozambique, post Cyclone IDAI, with deployments spanning 215 days at sea, where India provided critical assistance to 15 friendly foreign countries, delivering over 3,000 MT of food aid, 300 MT of liquid medical oxygen, 900 oxygen concentrators, and 20 ISO containers, showcasing its maritime prowess in delivering relief on a significant scale (Indian Navy, 2022). India's commitment to improving maritime cooperation is demonstrated by this initiative, which encompasses training, technical support, hydrography, and maritime security operations. In keeping with its commitment to regional stability, India seeks to be a net security provider in the Indian Ocean Region (IOR) through its 2007 Maritime Military Strategy (Press Information Bureau, 2022).

There is more pressure on the militaries in the region, especially India's, to do more disaster relief and humanitarian aid (HADR) operations. In this way, climate change is now a part of India's policies on defence and security. India has made a lot of progress in the last ten years or so in taking action on climate change, but the effects of climate change on national security have not yet been talked about. It is hard to figure out how important this issue is in terms of national security in India because the country does not have a formalised national security strategy. Some countries, like Bangladesh and the Maldives, see climate change as a threat to their security because it is happening right now and affects people's lives. But India has been hesitant to talk about climate change in terms of security (Jayaram, 2021).

The existing infrastructure for information sharing and maintaining maritime domain awareness (MDA) in the Indian Ocean reveals a complex yet evolving landscape. While the current framework primarily supports force-projection missions and coastal security, its inadequacy to meet the emerging requirements for maritime system defence is evident. This gap becomes especially crucial concerning the challenges posed by climate change in the Indo-Pacific.

India, recognising the limitations, has taken proactive steps to enhance MDA capabilities. Additional radar installations in strategic locations such as the Maldives, Mauritius, the Seychelles, and Madagascar, along with maritime information-sharing centres and communication links in the western Indian Ocean, underscore India's commitment to expanding its reach. The Indian Navy's efforts in aggregating information through the Indian Information Management and Analysis Centre and collaborating with the Singapore-based Information Sharing Centre demonstrate a concerted approach to achieving comprehensive domain awareness over the vast Indian Ocean.

In the context of climate security, this enhanced maritime domain awareness becomes integral to India's strategic interests in the Indo-Pacific. Climate-induced challenges, including the rise of transnational crimes such as illegal, unreported, and unregulated (IUU) fishing, demand a sophisticated defence mechanism. The interconnected nature of maritime security and climate change impacts necessitates a robust infrastructure that goes beyond traditional force-projection missions.

As India actively participates in multilateral initiatives and strives to interlink various capabilities for a comprehensive domain picture, the focus extends to addressing climate security challenges. The experiences in interoperability shared among regional and extra regional navies become crucial not only for specific missions but also for broader system-defence functions, aligning with India's commitment to fostering stability and security in the Indo-Pacific region amidst climate security threats (Kumar, Yogendra and Ghosh, Probal K, 2020).

Australia's Role in Addressing Climate Security Concerns in the Indo-Pacific

Climate change is identified as a security threat in Australia's 2023 National Defence Review, demonstrating a growing awareness of regional issues. Recognising concerns such as wildfires, floods, extreme heat waves, and coral degradation, Australia has strategically incorporated discussions on climate change into its national security framework. From 2024-25, at least half of all new country and regional investments valued over $3 million will have a climate security objective, rising to 80% in 2028-29 (Dr. Keen, 2023).

Australia is actively engaged in several key climate change initiatives, demonstrating its commitment to addressing environmental challenges in the Indo-Pacific region. The Australian Infrastructure Financing Facility for the Pacific (AIFFP) plays a crucial role by providing grant and loan financing for transformative projects in areas such as energy, water, transport, and telecommunications in Pacific nations and Timor-Leste (AIFFP News, 2023). The Climate and Oceans Support Programme in the Pacific (COSPPac) by the Australian Government focuses on enhancing the resilience of Pacific islands by managing and mitigating the impacts of climate variability and tidal events, utilising forecasting and reporting on climate, tides, and ocean conditions. The Australian Climate Finance Partnership (ACFP), managed by the Asian Development Bank (ADB), offers concessional finance to support climate action in Southeast Asia and the Pacific. Additionally, Australia's Science and Technology for Climate Partnerships (SciTech4Climate) initiative brings together leading Australian scientists and climate specialists to collaborate with Indo-Pacific development partners, ensuring the region's response to climate change is informed by cutting-edge science and technology. The Climate Resilient by Nature programme is a new initiative working directly with local communities in the Pacific to conserve and rehabilitate ecosystems, contributing to broader efforts to address climate change. (Australian Government, n.d)

Signed on November 10, 2023, the Australia–Tuvalu Falepili Union is a prime example of Australia's proactive approach to climate security. The treaty

represents Australia's strategic commitment to addressing the climate crisis and bolstering its influence in the Pacific by providing residency, climate collaboration and a security guarantee to Tuvalu, the nation of nine low-lying islands in the central Pacific (Paik, 2023).

To start with, in Australia's case, discussions on the direct and indirect impacts of climate change, such as coral degradation, intense heat waves, wildfires, and floods, have been gradually integrated into national security discourses (Jayaram and Mundra, 2023). Besides national territory, Australia's Indo-Pacific approach involves supporting the Climate Change Action Strategy and the Australia Pacific Climate Partnership (APCP), whose scope extends to assisting partner countries in the region to adapt to climate change, lower emissions, and develop innovative solutions. Australia has pledged climate finance of A$700 million over 2020-25, to the Pacific region (Kemish, 2023).

In a significant move reaffirming its commitment to addressing climate security challenges, the Australian government announced a groundbreaking initiative during COP28 on December 8, 2023. Australia pledged $100 million to establish the Pacific Resilience Facility (PRF), marking the first-ever Pacific-led, owned, and managed community resilience financing facility. The PRF will focus on providing crucial grants for climate adaptation, disaster preparedness, nature-based solutions, and projects addressing loss and damage. Additionally, Australia expressed its dedication to global climate action by rejoining the Green Climate Fund (GCF) and contributing $50 million. As the world's largest climate fund, the GCF, established in 2015 under the Paris Agreement on Climate Change, plays a pivotal role in financing projects across 128 countries. Australia's renewed participation not only underscores its commitment to advocating for Pacific-specific needs but also highlights its recognition of climate change as the single greatest threat to the livelihoods, security, and wellbeing of climate-vulnerable countries and regions, particularly those in the Pacific. This initiative reflects Australia's proactive role in actively supporting and financing solutions to climate security issues in the Indo-Pacific region.

Role of India-Australia Partnership in the Indo-Pacific

As two key Indo-Pacific countries, India and Australia have an enduring interest in a free, open, inclusive and rules based Indo-Pacific region. Their shared commitment extends to ensuring stability by safeguarding existing territorial and maritime arrangements, prioritising security to maintain the freedom of sea lanes and support small island states, and promoting sustainability by addressing resource overexploitation challenges. This collaborative approach underscores their dedication to mitigating the impact of climate change on both human populations and the ecosystem in the region.

Evolution of their Joint Indo-Pacific strategies

India and Australia's joint Indo-Pacific strategies have undergone a significant evolution in recent years. Historically, the two nations maintained strong diplomatic ties, but their defence relations were relatively limited. The changing geopolitical landscape, marked by growing concerns over China's naval expansion and the imperative to secure crucial supply chains, prompted both countries to reassess their strategic relations. This reevaluation culminated in a pivotal development in 2020, when bilateral relations were elevated to the status of a Comprehensive Strategic Partnership (CSP).

The Comprehensive Strategic Partnership ushered in a new era of collaboration between India and Australia. One of the immediate outcomes was the expansion of their participation in joint-military exercises, a move aimed at enhancing defence cooperation and interoperability. Additionally, the CSP led to the establishment of mechanisms for information sharing, reflecting a commitment to bolstering intelligence cooperation. The two nations also embarked on identifying potential collaborations in science and technology, showcasing a broader vision for strategic partnership beyond traditional defence realms.

Importantly, the CSP played a foundational role in shaping converging visions of the Indo-Pacific between India and Australia. This shift represented a shared commitment to addressing

regional challenges and maintaining a free, open, and rules-based Indo-Pacific. The establishment of the 2+2 Ministerial Dialogue, as a direct outcome of the CSP, further solidified the strategic framework. This forum, dedicated to discussing strategic issues, became instrumental in shaping and refining joint Indo-Pacific strategies (Singh Sevea, 2023)

The Strategic Convergence of India and Australia

The converging strategic interests of New Delhi and Canberra are evident in their shared apprehension about China's rise, even though their concerns are nuanced. India's border dispute with China and China's increased military presence in the Indian Ocean contribute to New Delhi's anxiety. Canberra, on the other hand, seeks to balance its security alliance with the U.S. and its economic ties with China. The Indo-Pacific Partnership for Maritime Domain Awareness initiative, highlighted during the Australia-India Maritime Dialogue, signifies the mutual recognition of shared interests and challenges. The convergence of strategic interests, concerns about China's assertiveness, and the necessity to address climate-related security threats create a compelling case for India and Australia to deepen their cooperation. (Grare, 2014)

In the 2021 2+2 ministerial dialogue between India and Australia, they committed to strengthening the cooperation outlined in the Joint Declaration on Maritime Cooperation, emphasising a free, open, and rules-based region. Both countries reaffirmed their commitment to maritime security and regional stability during the second 2+2 ministerial dialogue conducted in November 2023. The joint statement emphasised collaboration via the Indian Ocean Rim Association, the Pacific Islands Forum, and ASEAN. Both nations committed to strengthening defence and security cooperation, opposing IUU fishing, and increasing participation in maritime domain awareness(MEA GOI, 2023).

The two nations signed a joint security declaration on a "Shared Vision for Maritime Cooperation in the Indo-Pacific" during their virtual summit in June 2020 that identified eight possible areas of cooperation, of which maritime security is a key component.

The Indian Ocean Rim Association (IORA, formerly the Indian Ocean Rim Association for Regional Cooperation) was considered a more promising organisation that was expected to emerge as the go-to venue for India-Australian cooperation. Given their shared interests, they could and should increase their degree of maritime cooperation, particularly in the Indo-Pacific. A step in that direction was taken in 2012 with the formation of the Australia-India-Indonesia troika in the IORA.

In the context of collaborative efforts to address climate security challenges, the Quad countries (India, Australia, Japan and the USA) have taken significant steps to bolster their commitment to climate action. The leaders have launched the "Quad Climate Change Adaptation and Mitigation Package (Q-CHAMP)" to address both "mitigation" and "adaptation" themes. This comprehensive package encompasses various ongoing activities under the Quad Climate Working Group, including initiatives such as green shipping and ports, clean energy cooperation in hydrogen and methane emissions, and the development of climate-resilient infrastructure. These efforts align with the Quad Partnership on Humanitarian Assistance and Disaster Relief (HADR) in the Indo-Pacific, emphasising the importance of climate-smart agriculture, knowledge sharing on subnational climate actions, and ecosystem-based adaptation.

Furthermore, the leaders of the QUAD countries welcome the Australian government's commitment to stronger action on climate change, including legislative measures to achieve net-zero emissions by 2050. The progress of the Indo-Pacific Partnership for Maritime Domain Awareness, with ongoing data sharing in the Southeast and Pacific regions, underlines the collective efforts to enhance maritime security and domain awareness in the Indo-Pacific (PIB, 2023).

Several factors highlight the need for active cooperation between India and Australia on climate security issues within the Indo-Pacific region. Firstly, the acknowledgment of shared hardships and the exchange of lessons between India and Australia in dealing with Pacific island nations facing similar

climate challenges highlight the potential for mutual learning and support. Second, as both countries actively participate in initiatives such as the Coalition for Disaster Resilient Infrastructure Initiative (CDRI) and host forums like the Quad, there is an opportunity to leverage these platforms to address climate security. The specific mention of how Australia can assist India's greater involvement in the South Pacific and work with Indian Ocean island countries indicates a recognition that a collective effort is essential to tackle climate-related security threats effectively. Collaborative endeavours in Southeast Asia, ASEAN-led mechanisms, and the marine resources pillar of India's Indo-Pacific Initiative further emphasise the comprehensive approach needed to address climate security concerns in the region. In essence, the active collaboration between India and Australia is crucial to pool resources, share expertise, and contribute meaningfully to initiatives that enhance climate resilience and security in the Indo-Pacific (Saha, 2023).

Existing Gaps in Current Policies: Strengthening the Need for Collaboration

Even though Australia and India have each presented strong individual policies that show a genuine commitment to tackling climate security in the Indo-Pacific, problems with the current frameworks still exist, highlighting the drawbacks of unilateral strategies.

A major hurdle to India's maritime policy is the alleged inadequacy of law enforcement capabilities. Constant vigilance is required in light of issues like drug trafficking, armed robbery, and illegal migration; however, effective policing of vulnerable sea spaces is hampered by neighbouring countries with limited naval and coast guard capabilities (ORF Report, 2023).

Australia, while cautious in balancing relations with the U.S. and China, struggles with "sea-blindness" in its strategic outlook and faces hurdles in turning Quad discussions into actionable steps. The limited scope of regional forums like IONS and IORA hinders meaningful progress, and recent ministerial talks underscore challenges

in translating commitments into tangible outcomes, especially regarding the South China Sea. As climate change and security intricately intertwine, the policy brief emphasises the imperative for a cooperative, international approach between Australia and India to address the interconnected challenges effectively. The inadequacies of current policies necessitate a more comprehensive and coordinated response to combat climate-induced threats in the Indo-Pacific.

Recommended Solutions

The India-Australia partnership, particularly in the context of climate security and climate security-induced security challenges in the Indo-Pacific region, can take shape through several collaborative initiatives and actions. They can leverage their respective strengths, resources, and expertise to address the unique challenges posed by climate security in the Indo-Pacific.

1. Combating IUU Fishing

- The first step towards evidence-based policymaking will be to commission thorough baseline reports on IUU fishing that include evaluations of the monitoring, control, and surveillance systems currently in place. By addressing the negative effects of unregulated fishing practices on marine ecosystems and guaranteeing the sustainability of important fisheries in the area, this cooperative effort directly contributes to climate security.
- In order to remove regulatory gaps in national jurisdictions, interacting with the Indian Ocean Rim Association (IORA) becomes essential. By encouraging coordinated action against IUU fishing, strengthening regional cooperation within the IORA framework contributes to climate security goals by reducing the negative environmental effects of overfishing and protecting marine biodiversity.
- An independent scientific organisation for the Indo-Pacific area has been established, which is a testament to the region's commitment to sustainable fishing methods, which are essential to climate resilience. This initiative encourages informed decision-making to address the

interconnected challenges of IUU fishing and climate change by separating science from political influences.

- Moreover, cooperative public awareness campaigns will increase domestic support for forceful diplomatic measures while also advancing a wider comprehension of the implications of IUU fishing for climate security.

2. Tackling Climate Induced Displacement Issues

- India and Australia can benefit from the creative strategies used by Fiji and Bangladesh to address climate-related displacement by collaborating on initiatives that will lead to successful outcomes. The Asian Development Bank has backed Bangladesh's proactive efforts, which demonstrate the possibility of climate-resilient planning. The goal of turning Mongla into a centre for climate migrants entails a variety of tactics, such as projects aimed at generating income, improved public services, and job training. It is possible that India and Australia could work together on joint projects using this model, which places a strong emphasis on decentralised resettlement.
- Comparably, Fiji's relocation strategy provides a best-practice illustration that emphasises the value of community involvement and democratic decision-making procedures. Fiji guarantees that the concerns of individuals who are directly impacted by displacement are given priority, thereby building trust and enabling customised solutions for every community.
- By embracing a cooperative strategy guided by these effective models, Australia and India can help develop long-term solutions to the displacement caused by climate change in the Indo-Pacific area. This means including local communities in the decision-making process, giving decentralised resettlement top priority, and soliciting their opinions. These kinds of cooperative projects can be extremely helpful in reducing the negative effects of climate change on populations that are already at risk.

3. India's Andaman and Nicobar Islands, along with Lakshadweep, and Australia's Cocos Keeling Islands

serve as critical hubs for surveillance, offering a vantage point for comprehensive monitoring in the region. In keeping with the recommendations of Australia's Defence Strategy Review 2023, cooperative efforts might entail cooperative surveillance operations that capitalise on the US's wide-ranging influence, especially via its base in Diego Garcia, the Indian Ocean.

4. Climate Information Services

- Improve climate information services to give the area up-to-date, reliable climate data and forecasts. In order to minimise risks and adjust to shifting weather patterns, deep navy-to-navy cooperation and enhanced maritime domain awareness in the Indo-Pacific area are critical.
- In order to address the issue of insufficient law enforcement capabilities, both nations can also seek to improve civil maritime cooperation between law enforcement agencies and coast guard cooperation.

Climate finance is therefore one of the foremost concerns for the developing and least developed countries of the Indo-Pacific region. Most countries in the region lack the capacity and resources to cope with climate change. While mitigation still gets financial assistance, the huge demand for adaptation finance is hardly being met by either public or private sources.

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