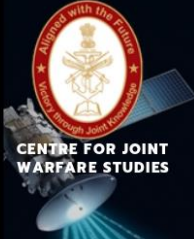


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SAMAGAMA THE SYNERGY OF SELF RELIANCE AND STRATEGIC ALLIANCE

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MONOGRAPH

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I. Executive Summary

Introduction frames India's journey toward strategic sovereignty through the Atmanirbhar Bharat initiative. It is a vital response to a world facing escalating geopolitical turbulence and supply chain vulnerabilities. It argues that achieving self-reliance does not mean to isolate ourselves. Rather, India is successfully employing a multi-alignment policy to secure high-end technology and enhance domain awareness through sophisticated global partnerships.

The Indigenisation Imperative attempts to detail the monumental shift in the nation's strategic DNA. It is moving away from a licensed production model where domestic entities merely assemble foreign designs. This chapter explores how the glass ceiling of Indian engineering is being shattered through structural reforms like positive indigenisation lists (PLI) and the creation of defence industrial corridors (DICs) which foster a domestic ecosystem capable of original design and high-end manufacturing.

Indian Navy and Indian Air Force provide visible evidence of India's maturing military industrial complex through the successful development of the aircraft carrier INS Vikrant and the LCA Tejas fighter jet. These platforms are like laboratories for indigenous avionics and flight control software, with the narrative extending into future elite projects like the fifth-generation AMCA stealth fighter and the unprecedented co-production agreement for GE-F414 jet engines. These are detailed under case studies.

The Economic Impact examines the transition of defence sector from being a drain on foreign exchange to a primary driver of industrial growth, with domestic production crossing the ₹1.5 lakh crore mark (appx USD 17 Billion). Moving from a buyer to a credible exporter with exports reaching a record ₹23,622 crore (nearly USD 3 Billion) India is using defence production as a powerful tool of foreign policy while supporting a vast supply chain of MSMEs and high-skilled employment.

The Force Multiplier: Integration and Interoperability the Samagama philosophy of working together with vigor, defining vertical depth as capabilities ranging from low-altitude drones to geostationary orbits. This chapter puts a focus on the fact that

modern warfare is algorithm-on-algorithm, making the indigenisation of software-intensive systems and AI-driven tools critical for maintaining sovereign digital foundations and preventing cyber espionage.

Balancing Indigenous Resilience with Global Interdependence defines autonomy as the ability to make independent decisions on national security and economic strategy without external influence. It argues that self-reliance is a meticulously calibrated strategy. It helps reduce risks in alliance formations, in fostering resilience against global instabilities like trade wars, pandemics, or territorial disputes.

Analysing Alliances through a Defence Lens is a review of how multilateral forums like the QUAD, BIMSTEC, SCO, and I2U2 enhances interoperability and intelligence sharing that do not require binding mutual defence pacts. These alliances further boost the Atmanirbhar Bharat initiative by providing access to advanced technologies that includes ones like the MQ-9B Reaper drones while also allowing India to project power as a net security provider.

Aerospace and Technology Transfer are an offshoot of the deep analysis of the deep-rooted partnerships with Russia, the US, and France. These highlight a shift from buyer-seller dynamics to an equitable collaboration. It covers a wide spectrum of cooperation, from the no strings attached French model and the Act East pivot toward ASEAN to the Link West framework in the Gulf and the SAGAR vision across the African Indo-Pacific Rim.

Strategic Partnerships brings out the details on the network of bilateral ties across the Indian Ocean Region. These involve the installation of coastal surveillance radars and joint EEZ patrolling. This chapter illustrates how India provides equipments such as the Dornier aircraft to island nations and conducts joint exercises like SLINEX and DOSTI to address shared threats like piracy and illegal fishing.

The chapter on Potential areas of Collaborations proposes future-leaning strategies. These include establishing a trilateral aerospace training academy with Mauritius and Madagascar or creating a permanent Joint Task Force in Djibouti. It also envisions a "Southern IOR Air-Maritime Corridor (SIORAMC)" with South Africa and

the co-development of air defense umbrellas in the Arabian Sea to safeguard aerial and maritime commons against evolving asymmetric threats.

The monograph provides a candid assessment of obstacles such as Chinese economic coercion, delivery delays due to semiconductor shortages, and debt diplomacy affecting island nations. It notes specific friction points, such as the incomplete Trilateral Highway and the failure of the Tejas pitch to Malaysia due to lifecycle affordability, highlighting the need for India's export ecosystem to further mature. It further suggests a multifaceted strategy, including the acceleration of the Defence Production and Export Promotion Policy and the establishment of a Defence Export Quality Assurance Board to certify products to international standards. It advocates for scaling Lines of Credit and evolving the QUAD into a geoeconomic bulwark to counter the influence of the Belt and Road Initiative.

Joint military exercises explain the strategic value of drills as physical manifestations of foreign policy that provide passive deterrence through capability and credibility. Beyond the strategy, it highlights the operational importance of standardising procedures and building the human element of trust.

Conclusion reaffirms the Samagama philosophy as a proactive move toward strategic sovereignty, where internal industrial resilience acts as a force multiplier for global alliances. It concludes that by maintaining sovereign data integrity while remaining interoperable with global standards, India is positioning itself to navigate a multipolar world order and ensure enduring peace through shielded strategic choices.

II. INTRODUCTION

India is on the path to being a self-reliant nation through the 'Atmanirbhar Bharat' initiative. The world today is witnessing escalating turbulence viewed from a geopolitical perspective. The sovereignty of nations is constantly being challenged by various factors. These include supply chain disruptions, unilateral attempts at territorial assertions, evolving war tactics and a rise in technology that complements them. From an aerospace and defence sector point of view, the 'Atmanirbhar Bharat' initiative is redefining the nation's approach to attain strategic sovereignty, with priority being given to the Indigenous innovation, manufacturing, and procurement. This policy, if implemented efficiently could mitigate the vulnerabilities that are associated with global instabilities that are shaping our international relations

However, being Atmanirbhar does not mean to practice 'Isolation'. Strategic alliances serve as important pieces in the complex chessboard that international relations tend to be. They enhance India's capabilities by enclosing it within a web of multilateral deterrence. They enable technology transfers, joint R&D, and co-production. This accelerates the indigenous programme without having to compromise autonomy. To name a few are the India-US defence partnership under the Quad framework, the BrahMos export deal with Indonesia that is very close to being inked, India-France collaboration in Rafale, ASEAN Defence Ministers' Meeting etc. These also ensure interoperability amongst the security forces. They offer collective responses to shared threats like maritime chokepoints in the Indo-Pacific, Indian Ocean region etc. They are providing access to state-of-the-art platforms like the S-400 systems and intelligence sharing. Thus, these alliances become an indispensable factor to ensure national security by attempting to address global instabilities.

These partnerships not only infuse capital (as evidenced by ₹86.87 Lakh crores i.e., USD 1 Trillion in FDI inflows since 2000)¹ but also elevate India's role as a net security provider. They complement India's efforts to achieve ₹3 lakh crore (USD 35.7 billion) in defence manufacturing and ₹ 50,000 crores in defence exports by 2029.² This symbiotic relationship between Atmanirbharta and Alliance strengthens India's evolving stand in international defence ties. While self-reliance fuels the ambition, the global collaborations secure its progress.

CHAPTER 1

THE INDIGENISATION IMPERATIVE

India is witnessing a monumental transition in its Defence sector. It is moving from being a nation of chronic import dependency to that of self-reliant innovation. This represents an unprecedented shift in the nation's strategic DNA. The country suffered from for decades from what few scholars term as the "licensed production" model. In this, the Indian military-industrial complex was characterised by a state where domestic entities were merely assembling the foreign designs. They were not able to attain the underlying intellectual property or the design depth. Thus there was a creation of a "glass ceiling" for Indian engineering. The critical components such as turbines of aero-engines, advanced sensors, and high-tensile alloys, remained under the control of external Original Equipment Manufacturers (OEMs).

Then came what can be called as a contemporary push for indigenisation. This was codified under the Atmanirbhar Bharat framework. It aimed to shatter the glass ceiling mentioned earlier, by establishing a domestic ecosystem. This was to be capable of original design, development, and high-end manufacturing. This shall not be seen merely as a policy of substitution. It is a holistic restructuring of the national security architecture to ensure that the key elements for India's frontline platforms remain firmly in Indian hands. This could help in insulating the nation's strategic choices from the vulnerabilities associated with the of shifting global alliances and external sanctions.

The PLI Factor. At the centre of this transformation is the structural reordering of the procurement process. It has moved from being that of a generic acquisition model to a highly targeted indigenisation strategy. The introduction of Positive Indigenisation Lists (PILs) is often seen as a masterstroke in regulatory engineering. It has created a protected market for domestic players to boost the indigenisation. There have been notified over five thousand items that can no longer be imported. By this the Ministry of Defence has provided the much needed commercial "moat" for private sector firms and Defence Public Sector Undertakings (DPSUs) to justify long-term capital expenditure in Research and Development. This regulation certainly is the bedrock upon which the current surge in domestic production is being built. It has brought transformative shift in the mind-set of the Indian private sector. They are now moving steadily from being mere sub-contractors to becoming Tier-1 system integrators.

This evolution is crucial for the "Samagama" philosophy. It further allows India to enter international alliances not as a customer seeking a finished product, but as a sophisticated partner capable of contributing significant value to the global supply chain explained in further sections. It thereby enhances the collective deterrence of its strategic partnerships.

The Defence Corridors. The manifestation of this indigenisation effort is evident in the Defence Industrial Corridors (DICs) of Uttar Pradesh (UP) and Tamil Nadu (TN). They act as clusters of advanced technology and excellence. These are designed in a way that they can effectively overcome the traditional fragmentation of the Indian manufacturing sector. They bring together large anchors, agile start-ups, and specialised MSMEs within a single spatial (geographic) and regulatory ecosystem. In Tamil Nadu, the focus has gravitated towards aerospace and precision engineering. It leverages the state's existing automotive and electronics base. Thus, it helps to create a world-class hub for drone components and naval electronics. Parallel to this, the Uttar Pradesh corridor is rapidly becoming a centre for land systems and advanced materials. It hosts facilities for small arms production and missile testing. These clusters become a necessity as they are essential for fostering "internal integration." They tend to facilitate the cross-pollination of ideas between academia, the military, and the industry. There is an effective concentration of resources and talent. These corridors reduce the logistical and bureaucratic friction that previously used to hamper the indigenous projects. Thus eventually allowing for a more streamlined transition from prototype to mass production.

iDEX. The innovations at the grassroots have found the much-needed acceleration by the Innovations for Defence Excellence (iDEX) scheme. This has effectively democratised the defence sector. Historically speaking, the defence research was considered to be an exclusive domain of state led organisations. This often led to long gestation periods. There was also a disconnect from the rapid cycles of technological change. iDEX has been effective in bypassing these traditional bottlenecks. It helps engage the vibrant Indian start-up ecosystem. They are provided with the financial runway and the trial facilities required developing niche technologies. This "bottom-up" innovation has led to several breakthroughs in areas such as that of autonomous underwater vehicles (AUVV), loitering munitions, and AI-powered electronic warfare (EW) suites and many more. These are tailored to the

unique topographical challenges offered by the sensitive Indian borders. The success of iDEX shows that the indigenisation is most effective when it is able to harness the agility of the private sector. This is possible with the strategic guidance of the Indian military. Thus, this synergy ensures that the technology being developed is not just indigenous in name. It is as well operationally superior to the foreign systems that it seeks to develop in house.

CHAPTER 2

CASE STUDIES: IN AND IAF

The indigenisation of India's defence finds its most brilliant expression through the successful realisation of high end platforms like the INS Vikrant and the LCA Tejas., The country has transitioned from being a net importer to a significant global maritime and aerospace power by mastering the "float, move, and fight" categories. This chapter attempts to examine as to how the strategic self-reliance and international co-production alliances are effectively bridging critical technology gaps. Ultimately, these advancements secure India's role as a net security provider while maintaining sovereign control over its most vital defence assets

In the naval domain, the indigenisation story has achieved one of its most sophisticated expressions. It is very evident in the construction of the INS Vikrant. The ability of designing and building an indigenous aircraft carrier is achieved by only a handful of nations. This feat marks India's arrival as a global maritime power.



Image 1: INS Vikrant, Source: Baratkarnad³

Category	Details
Physical	Length: 262.5 metres
Dimensions	Width: 61.6 metres

	Displacement: ~45,000 tonnes
Propulsion & Power	Engines: 4 Gas Turbines Total Power: 88 Megawatts (MW) Electrical Capacity: Enough to power nearly 5,000 households
Performance	Top Speed: 28 Knots
Aviation System	STOBAR (Short Take-Off But Arrested Recovery) Uses a ski-jump for takeoff and arrester wires for landing.
Air Wing Capacity	Up to 30 Aircraft: Fighters: MiG-29K, MiG-29KUB Helicopters: MH-60R, Kamov-31, Chetak, ALH
Capacity & Layout	Personnel: ~1,600 Compartments: ~2,200

Table 1: Technical Specifications of INS Vikrant, Source: PIB⁴

The naval indigenisation strategy has been successful as it in a way adopted a "modular" approach. It focused first on the "Float" and "Move" categories. Then they eventually sifted to the highly complex "Fight" category that includes integrated sensors and weapons systems. Today, Indian warships are nearly 90% indigenous in their structural and mechanical components.⁵ There is an evident increase in the share of domestic content in their combat management systems.

This maritime self-reliance is crucial for India's role as a net security provider in the Indian Ocean Region. It allows for the rapid repair and refit of vessels without having to rely on foreign yards. It also enhances the effective "Amalgamation" of Indian naval power with fleets of its allies. This is possible as indigenous data links can be designed for seamless interoperability with international standards. This is done while maintaining sovereign control over the underlying data.

The aerospace sector is often said to be presented with the most challenging aspects of indigenisation. However, it is here that some of the most strategic gains are being made. One great example is of The Light Combat Aircraft (LCA) Tejas programme. It was once criticised for its long development timeline. However, it has now matured into a robust platform which serves as the backbone of the Indian Air

Force's modernisation. The LCA Tejas is not just a fighter jet. It is the laboratory for Indian avionics, flight control software, and composite materials.



Image 2: LCA Tejas, Source: HAL⁶

Category	Specific Data & Characteristics
Class & Generation	4.5 Generation Multi-role Fighter (Supersonic, Light Combat Aircraft)
Operational Roles	Air Superiority, Offensive Air Support, Close Combat, Ground Attack, Ground Maritime Operations
Physical Dimensions	Length: 13.2 m
Weight Profiles	Empty: 9,800 kg
Power plant	1 x GE F404-IN20 Turbofan Engine
Engine Performance	Max Thrust: 85 kN / 5,618 kgf
Flight Performance	Speed: 1.6 Mach

Aviation Tech	Quadruplex-Redundant Digital Fly-By-Wire Flight Control System
Weaponry (Inter-Domain)	9 Hard points: Precision Bombs, BVR Missiles (Astra), WVR Missiles (Python-5, R-73)
Key Design Features	Compound Tail-Less Delta Wing to increase payload & Composite Airframe (lightest in class)
Endurance & Reach	In-Flight Refueling (IFR) Probe (Day/Night capable)
Mk1A Advanced Suite	Radar: AESA (Active Electronically Scanned Array) Electronic Warfare: Self-protection Jamming & EW Suite Interface: Smart Multi-function Displays (SMFD) & Digital Map Generator
Strategic Edge	Open Architecture Mission Computer: Indigenously designed for scalability and portability
Safety Record	Over 5,000+ test flights with a remarkable accident-free flying history

Table 2: Specifications of LCA Tejas, Source: HAL⁷

Building on this experience, the Advanced Medium Combat Aircraft (AMCA) project is aimed at taking India into the elite club of fifth-generation stealth fighter manufacturers. The most significant breakthrough in this journey is the co-production agreement for the GE-F414 jet engine. This includes a level of technology transfer that is unprecedented. By manufacturing these engines domestically, India would be able to address the most critical technology gap in its aerospace ecosystem. This partnership exemplifies the "Alliance" pillar of the Samagama framework. International cooperation is used to leapfrog decades of research. This would allow India to achieve the much needed "vertical depth" in its defence capabilities in a fraction of the time.

CHAPTER 3 THE ECONOMIC IMPACT

The economic impact of this indigenisation drive is huge and transformative. It moves the defence sector from draining of its foreign exchange to a driver of industrial growth. A remarkable milestone has been achieved. India's defence production has crossed the 1.5 lakh crores (USD 17 Billion) mark. A significant portion of this value has been generated by the indigenous designs. This growth has a powerful and a multiplier effect on the national economy. It supports a huge supply chain of MSMEs. It aids in creating high-skilled employment in Tier-2 and Tier-3 cities. This shift also ensures that the massive defence budget remains within the Indian economy. It helps foster a cycle of reinvestment in Research and Development along with manufacturing infrastructure.

Additionally, as the domestic productions scale up, the per unit cost of equipment decrease. This eventually makes Indian defence platforms more competitive on the global market. This resilience is a vital economic component of strategic autonomy. It provides the fiscal space for India that helps it to sustain a long-term military modernisation programme even when there is volatility in the global market or amidst inflationary pressures.

The transitioning from being a buyer to becoming an exporter can be considered as the ultimate validation of India's indigenisation efforts. There has been a surge in defence exports to over ₹23,000 crore (appx USD 2.5 Billion). It is not just an economic achievement but, a powerful tool of Indian foreign policy. India is now exporting advanced systems like the BrahMos supersonic missile and the Akash air defence system. By this, India is building deep, long-term strategic contact as well as contracts with its partners especially in Southeast Asia, the Middle East, and Africa.

The table below presents Indian defence exports to various countries.

Recipient	Qty	Weapon designation	Weapon description
Afghanistan	4	Mi-24D/Mi-25	Combat helicopter
Afghanistan	3	SA-315B Lama	Light helicopter
Armenia	15	Akash	SAM system
Armenia	24	Pinaka 214mm	Multiple rocket launcher

Armenia	400	Akash-1	SAM
Armenia	4	Swathi	Artillery locating radar
Bangladesh	18	OFB E1 120mm	Mortar
Bhutan	1	Aditya	Armoured personnel carrier
Ecuador	6	Dhruv	Helicopter
Guyana	2	Do-228	Light transport aircraft
Maldives	1	Do-228MP	Maritime patrol aircraft
Maldives	1	SDB Mk-5	Patrol boat
Maldives	1	Dhruv	Helicopter
Maldives	1	Dhruv	Helicopter
Maldives	1	Dhruv	Helicopter
Maldives	1	Dhruv	Helicopter
Mauritius	1	Do-228	Light transport aircraft
Mauritius	2	Naidu	Patrol boat
Mauritius	1	Do-228	Light transport aircraft
Mauritius	1	Dhruv	Helicopter
Mauritius	1	Do-228MP	Maritime patrol aircraft
Mauritius	1	Do-228MP	Maritime patrol aircraft
Mauritius	1	Barracuda	Patrol ship
Mozambique	2	L&T Fast Interceptor	Patrol boat
Myanmar	1	Revathi	Air-search radar
Myanmar	10	Aditya	Armoured personnel carrier
Myanmar	2	Mi-8T	Transport helicopter
Myanmar	2	BN-2 Islander	Light transport aircraft
Myanmar	1	Project-877E	Submarine
Myanmar	10	T-55	Tank
Myanmar	3	LW-04	Air-search radar
Myanmar	1	LW-04	Air-search radar
Myanmar	1	LW-04	Air-search radar
Myanmar	20	Shyena	Anti-submarine torpedo
Myanmar	10	Light Gun 105mm	Towed gun
Myanmar	3	HMS-X	Anti-submarine sonar

Myanmar	5	BN-2 Maritime	Maritime patrol aircraft
Namibia	1	SA-315B Lama	Light helicopter
Namibia	2	SA-316B Alouette-3	Light helicopter
Nepal	1	Dhruv	Helicopter
Nepal	10	SA-315B Lama	Light helicopter
Nepal	2	SA-315B Lama	Light helicopter
Nepal	3	Casspir	Armoured personnel carrier
Nepal	2	Dhruv	Helicopter
Nepal	2	SA-316B Alouette-3	Light helicopter
Nepal	100	Aditya	Armoured personnel carrier
Nepal	1	Dhruv	Helicopter
Nepal	24	Aditya	Armoured personnel carrier
Seychelles	1	Do-228MP	Maritime patrol aircraft
Seychelles	1	EL/M-2022	Maritime patrol aircraft radar
Seychelles	1	SDB Mk-5	Patrol boat
Seychelles	1	L&T Fast Interceptor	Patrol boat
Seychelles	1	FPV-300	Patrol boat
Seychelles	1	SDB Mk-5	Patrol boat
Seychelles	1	Do-228MP	Maritime patrol aircraft
Sri Lanka	2	Samarth	Patrol ship
Sri Lanka	2	Indra	Air-search radar
Sri Lanka	2	Indra	Air-search radar
Sri Lanka	1	Vikram	Patrol ship
Sri Lanka	1	Vikram	Patrol ship
Sri Lanka	150	vehicle engine	Vehicle engine
Sri Lanka	1	Sukanya	Patrol ship
Sri Lanka	1	Do-228MP	Maritime patrol aircraft
Suriname	3	SA-316B Alouette-3	Light helicopter
Viet Nam	1	Khukri	Corvette

Table 3: Indian Weapons Export, Source: SIPRI Arms transfer database

These exports are many a times accompanied by training programmes and maintenance contracts. This arrangement helps create a security architecture that

binds India to its allies. This kind of export-oriented approach becomes essential for the sustainability of the domestic defence industry. This is especially when the Indian armed forces' requirements alone may not always provide the scale needed to keep production lines viable and profitable as well. India is thus, positioning itself as a credible alternative to traditional arms exporters. This is in many ways increasing its influence in the Global South and shaping a more multipolar world order.

The financial backbone of this surge is a significant expansion of India's defence budget. It has grown from 2.53 lakh crore (appx USD 26 Billion) in 2013-14 to 7.85 lakh crore (USD 93 Billion) in 2026-27.⁸ This threefold increase in government funding has enabled the modernisation of the Armed Forces. It also aids in the procurement of advanced military platforms such as fighter jets, warships, and artillery systems that are built entirely within the country. In the 2024-2025 financial year alone, the Ministry of Defence signed a record 193 contracts worth more than two lakh crores. More amazing is the fact that over 90% of these contracts i.e., 177 were awarded to the domestic industry. This also represents over 80% of the total contract value.⁹ This level of prioritisation would ensure that the vast majority of government spending shall stay within the Indian ecosystem. Through this, it fosters local industrial growth and creates substantial employment opportunities across the sector.

The government has also implemented several strategic policies that leads to lowering the barriers for private participation. This is also to ensure and improve the ease of doing business in the defence sector. Included is the liberalised Foreign Direct Investment (FDI) policy. It is now allowing up to 74% FDI through the automatic route. It has resulted in attracting over 5000 crores (USD 6 Billion) in investments since April 2000. Furthermore, the licensing process has been streamlined. The validity of defence manufacturing licenses extended from three years to 15 years.¹⁰ De-licensing of many parts and components have encourage smaller players to enter the supply chain. The establishment of two major Defence Industrial Corridors in Uttar Pradesh and Tamil Nadu as mentioned earlier has also provided a dedicated infrastructure for growth. It has resulted in over 250 Memorandums of Understandings (MoUs) being signed and a potential investment of over 50,000 crore¹¹ in these regional hubs. India's defence landscape has now reached a pivotal turning point. It is steadily transitioning from the initial phases of

contracting and planning into an era of active delivery and of doctrinal evolution. The core philosophy of national security has matured from a focus on Made in India to a more profound Owned by India. This ensures that the intellectual property (IP), design data, and source codes of crucial military hardware remains under domestic control. This is most evident in the physical presence of advanced indigenous platforms that are now entering active service across the various branches of the Armed Forces.

One prime example is the Light Combat Helicopter (LCH) Prachand.¹² It serves as a testimony of this operational maturity. It has established a formidable presence in strategic high-altitude regions. These helicopters are being integrated with advanced offensive suites. These include domestically manufactured air-to-ground missiles, laser-guided rockets etc., The massive scale of the project is reflected in the 156 additional units currently under production.¹³ This will involve a network of over 250 local companies. This project in a way highlights the successful combination of advanced technology with a robust domestic supply chain. The indigenous content is expected to cross 65% by value mark in the coming few years.

Artillery and Aerospace segments are also witnessing similar breakthroughs. This is visible in the induction of the Advanced Towed Artillery Gun System (ATAGS) and the progress in the C-295 transport aircraft program. The first 18 units of the ATAGS will be delivered to the Indian Army as soon. The first two regiments that are currently being raised are expected to meet the completion target in coming months.¹⁴ The Tata-Airbus partnership in Vadodara is reaching a milestone as the first "Made in India" C-295 aircraft is confirmed to be rolled out by September 2026.¹⁵ These projects represent a powerful and an effective collaboration between the public and private sectors. They prove that Indian industry can manufacture complex detail parts and manage large-scale assembly lines for the state-of-the-art military platforms.

In order to sustain this momentum in growth, the Ministry of Defence has introduced the draft Defence Acquisition Procedure (DAP) 2026. This would implement transformative reforms to the procurement process. One key highlight of this new framework is the increase in compulsory indigenous content for the premier "Buy (Indian-IDDM)" category.¹⁶ It has been raised from current 50% to 60%, in order to

further deepen the domestic industrial base. These kinds of policy shifts will ensure that the acquisition cycle remains agile enough to counter modern threats. It also ensures that retention of sovereign technology is prioritised for long-term industrial growth.

The role of digitalisation and Artificial Intelligence (AI) in indigenisation cannot be ignored. The modern warfare is shifting towards an "algorithm-on-algorithm" combat. India thus is leveraging its world class IT sector to build indigenous software defined radios, cyber-defence tools, and AI-driven predictive analytics that would help in effective and efficient battlefield management. The indigenisation of "software-intensive" systems is equally, if not more critical than the hardware itself. It prevents the risk of backdoors or cyber espionage that can be integrated in foreign-coded systems. By developing one's own C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance) protocols, a country like India can ensure that its multi-domain operations across land, sea, subsea, air, and space are conducted on a secure and sovereign digital foundation.

The human capital aspect of indigenisation is perhaps the most enduring legacy of the current policy shift. By fostering a culture of innovation and entrepreneurship in the defence sector, India is training a new generation of scientists, engineers, and strategists who are capable of thinking beyond the constraints of imported technology. The collaboration between the DRDO, the Indian Institutes of Technology (IITs), and the private sector is creating a Knowledge-Industrial Complex that will drive Indian innovation for decades to come. This focus on Intellectual Atmanirbharata is essential for ensuring that India does not just catch up with global standards but eventually begins to set them. The development of indigenous Centre of Excellence (CoE) hubs for quantum computing, hypersonic flight, and Directed Energy Weapons (DEWs) is a clear indication that India is preparing for the wars of the future, where superiority will be defined not by the size of the arsenal, but by the sophistication of the underlying intellectual property and the speed of its deployment.

CHAPTER 4

THE FORCE MULTIPLIER: INTEGRATION AND INTEROPERABILITY

The shanti mantra “saha viryam karavavahe” advocates working together with energy and vigour.¹⁷ This is very well applicable in countries working together to address the mutual issues. These may vary from economic ones related to trade to ones that could compromise the national security. The contemporary geopolitical scenario is being shaped by evolving military strategy that is interconnected to the advancements in the Aerospace sector. A nation’s capacity to project power through sustainable operations along with its ability to absorb shocks across multidimensional battlefields influences the strategic depth. Air superiority coupled with dominance in space-based assets along with unmanned aerial systems are redefining the battle field dynamics. They provide depth as they enable quick responses, offer intelligence dominance and can effectively block data access to the adversaries. Having control in aerospace domain will allow strikes with precision. A disruption in enemy supply lines while maintaining situational awareness through satellites and drones can extend a nation’s defensive perimeter beyond the physical borders. Without such capabilities there is a high chance of ground and naval forces facing vulnerabilities. These arise from asymmetric threats such as that of hypersonic missiles, Cyber Warfare, Electro Magnetic disruptions etc.

Interoperability refers to the integration of systems and forces amongst friendly nations. This kind of synergy of security forces also can complement to the cause. This becomes critical in aerospace that gets amplified by virtue of its cross-domain nature. Shared technological advancements are important to address the blurring battlefield. In order to achieve this, one needs to ensure a cohesive operation of allied forces. Thus, aerospace becomes a definitive measure as it quantifies the strategic depth. The term ‘vertical depth’ can be used to denote those ranging from low altitude drones to geostationary orbits. While the allied data-sharing, technology transfer and strategic alliances to mitigate risks from global instabilities can be clubbed under ‘horizontal one’.

The present era is of threats that span across land, sea, air, and space. The current isolated service operations can lead to inefficiencies and vulnerabilities. The synergy amongst the forces can lead to a ‘force multiplier’. This integration can effectively counter multitude of threats. This kind of interoperability can allow distributed

operation while maintaining command coherence. This can help encompass technical standards, create a procedural alignment and help develop trust among services. Examples, like the 'Gulf War', where in the US force integration enabled rapid victory, the 'Russia-Ukraine conflict' in which such coordination efforts involve drone swarms, naval blockades, and ground manoeuvres highlight the importance of such synergy. Thus, the security forces measure the strategic depth by enhancing military resilience in extended engagements. The interoperability is boosted as well through modes of joint training and technology sharing and transfers. Emerging technologies like swarm drones integrated with AI, satellite constellations can further escalate this. A sustained operation amidst disruptions like GPS jamming, redundant aerospace networks can factor in to measure the strategic depth.

CHAPTER 5

ALLIANCES IN DEFENCE AS STRATEGIC AUTONOMY BOOSTERS

India's bilateral defence alliances serve to maximise strategic autonomy. They prioritise technology transfer, mutual development and promote cohesion of security force capabilities. This ultimately helps to assert power dominance in regions like that of the Indo-Pacific, and the Indian Ocean etc. These while reducing India's reliance on imports, also could help integrate advanced technologies into the domestic ecosystems.

Such mutually benefitting efforts can range from artificial intelligence, quantum computing to unmanned aerial systems to the undersea domain awareness and so on. The joint projects enhance interoperability across multiple platforms like land, sea, air and space. Agreements like these complement the service cooperation as they would enable secure communications and geospatial intelligence sharing etc. These are crucial for joint exercises and in real time operations amid rising geopolitical tensions. These co-operations also promote co-development in emerging technologies like robotics, semiconductors, and cyber defence and Electronic Warfare (EW). Opportunities in co-production of autonomous underwater vehicles, quantum systems, and advanced maritime surveillance by leveraging India's manufacturing scale with its ally's niche expertise helps build resilient supply chains. These alliances can potentially reduce vulnerabilities from disruptions in global supply chains. Diversifying procurements beyond traditional suppliers can position India as a net security provider as it helps project influence through enhanced deterrence.

The multilateral dialogues amplify these bilateral gains as they create a framework co-develop technologies. They also promote force integration that would safeguard strategic autonomy. Joint innovation in critical technologies and initiatives in Maritime Domain Awareness (MDA) enhances shared intelligence and surveillance capabilities. India's efforts in maritime security through 'Joint Exercises' to incorporate tri service elements would foster interoperability focusing on area like anti-submarine warfare, cyber resilience, and space situational awareness. These efforts also extend to pandemic response, natural disaster management, and emerging tech domains. India's strategy to escalate such groupings from dialogue to action-oriented mechanisms without formal alliances could compromise autonomy.

Ultimately, these alliances solidify India's strategic depth and can transform it from an importer to a co-creator. This helps ensure a sustained autonomy and stability in an otherwise volatile world.

CHAPTER 6

STRATEGIC AUTONOMY: BALANCING INDIGENOUS RESILIENCE WITH GLOBAL INTERDEPENDENCE

Strategic autonomy is often seen as a pivotal concept for nations that seek to navigate complex geopolitics. In the present era power is scattered among multiple actors rather than being dominated by hegemony or a bipolar rivalry. Strategic autonomy can be referred to as the ability of a nation to make independent decisions. These areas include matters related to national security, foreign policy, and economic strategy. There shall not be external factors of any kind to influence these but an engagement in alliances that could enhance this independence is welcome. The imperatives of building indigenous capabilities in defence, technology, and diplomacy are balanced efficiently with this pursuit. The formation of alliances helps address the shared threats and opportunities in these areas. The present era is marked by the rise of powers like China, India, and other such regional entities like the European Union (EU) and more. This necessitates the countries to contend with alliances, interdependencies, and to address hybrid threats. These might be ranging from Non-Kinetic, EW, Cyber Attacks to Climate Induced Instabilities.

Through initiatives like Atmanirbhar Bharat, India targets domestic innovation in aerospace, defence, and critical infrastructure. This could potentially reduce vulnerabilities that come attached with supply chain disruptions and constantly changing diplomatic relations. However, India also engages in bilateral and multilateral ties as mentioned earlier to access advanced technologies. One can say that strategic autonomy is not isolationism but rather a calibrated strategy. It efficiently leverages self-reliance to reduce risks in alliance formation. Also it fosters resilience against global instabilities resulting in trade wars, ones caused due to pandemics, and those arising out of territorial disputes.

The Impact and Influence on the Economy

The nations aim to protect their economies from external shocks. This pursuit of their self-reliance is intertwined with their strategic economy. To harness alliances for mutual growth is equally relevant. Self-reliance manifests through such policies that boosts domestic production. This can be achieved through diversification of supply

chains and investing in innovation ecosystems. This can generate jobs, stimulate GDP growth and thus enhance 'fiscal sovereignty'.

The Atmanirbhar initiative has catalysed an increase in defence manufacturing. India recorded its highest-ever defence production of ₹1.54 lakh crore in FY 2024-25, with indigenous defence production hitting ₹1,27,434 crore in FY 2023-24. It is a staggering 174% surge from ₹46,429 crore in 2014-15. This growth is driven by incentives provided for local procurement and R&D. This has also reduced import dependencies, wherein they have dropped from 11% to a mere 4% in the last 14 years. Along with this we have also witnessed impressive growth in exports. India's defence export has reached a record ₹23,622 crore in FY 2024 – 25. This was less than ₹1,000 crore in 2014. This has led to an increase in foreign exchange reserves.

Table 4: India's Defence Economy, Source: PIB¹⁸

Autonomy of this nature offers a safeguard against disruptions. These may be the ones related to 'economic warfare' such as 'sanctions' or 'tariffs'. One example of this would be the US-China trade tensions. These have prompted other countries to find an alternative or to reshape on their own, the critical industries. These include semiconductors, Rare Earth Elements (REEs) and other such critical minerals etc. This is where an 'Alliance' comes into play. They complement these efforts as they can enable technology transfers and joint ventures. These eventually accelerate the economic maturity while simultaneously making sure the autonomy is not compromised.

Bilateral agreements enable co-production of advanced systems which injects capital and the necessary expertise into domestic firms. They aid in creation of ecosystems for small and medium enterprises (SMEs). These have seen investments worth thousands of crores. Multilateral groupings promote resilient supply chains. Through initiatives in quantum computing and clean energy, they can potentially mitigate risks associated with single suppliers. Through this they foster economic interdependence that can deter aggression.

Alliances provide access to shared intelligence, joint training, and co-developed technologies. These fill the gaps in indigenous efforts and allow countries to project power without the need of large solo investments. This is of crucial importance in

defence and security realms. For emerging powers like India, engaging in cooperation among security forces through various exercises like Malabar, SLINEX, SIMBEX, VARUNA, GARUDA and so on, enhances its readiness for regional contingencies. These range from anti-submarine warfare or humanitarian missions.

In broader terms the multipolar world in a way encourages flexible, need based alliances. This is evident in temporary coalitions formed to address climate action, to counter terrorist activities. In these scenarios the self-reliant states often opt in or out based on priorities that exist at that point of time.

Nations are moving away from the rigid, ideologically driven blocs towards. They are showing more interest in flexible and issue-specific groupings. These are tailored to the multipolar world. This multilateralism is characterised by forums that prioritise cooperation in various domains. These include maritime security, counter terrorism, knowledge sharing, and joint military exercises. These forums preserve strategic autonomy which is a critical asset in navigating through regional instabilities.

CHAPTER 7

ANALYSING ALLIANCES THROUGH A DEFENCE LENS

This chapter explores how India's strategic depth has evolved through a new multilateralism which balances self-reliance with high-end technological parity. By navigating diverse frameworks like the Quad to that of BIMSTEC and the regional focus of the SCO, India has seen a transition towards a networked regional power. These alliances serve as vital conduits that allow indigenous innovations to integrate seamlessly into a global ecosystem.

Viewing from a defence lens these entities offer enhanced interoperability, intelligence sharing, and capability-building. They do not have binding commitments or formal mutual defence pacts. This ensures that the autonomy is not compromised.

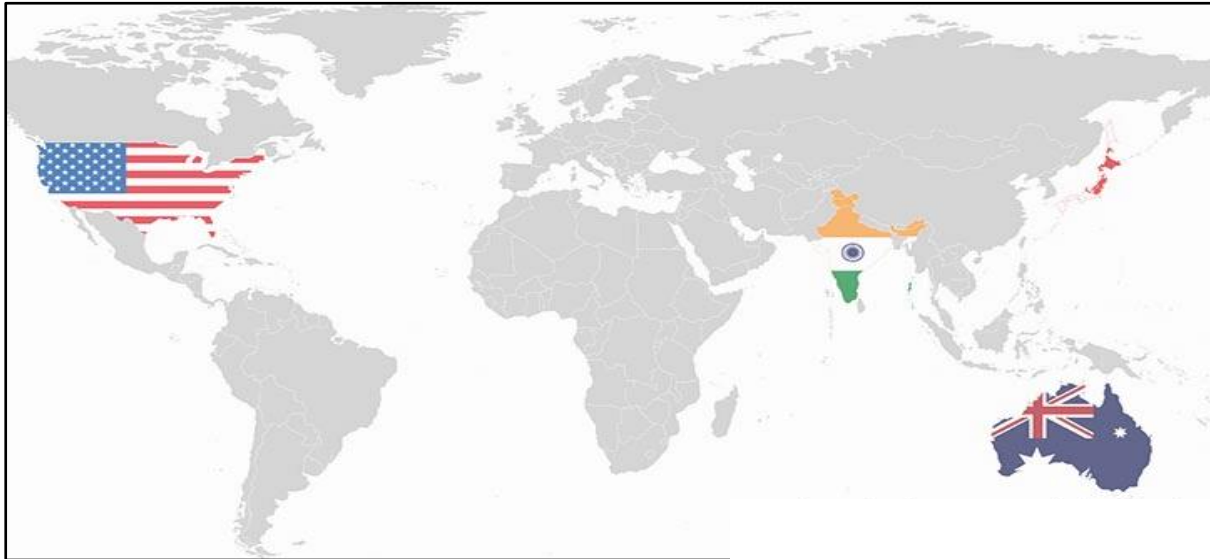


Image 3: QUAD, Source: Sutterstock.com

The Quad serves complementary roles in enhancing Indo-Pacific security. India's defence partnerships within the Quad comprise Australia, Japan, and the United States. It provides a robust network that enhances its strategic position in the Indo-Pacific. It complements the Atmanirbhar Bharat initiative for self-reliance. There is an emphasis on coordinating diplomacy and technology that aims at enhancing the shared surveillance and interoperability across different forces.

India's benefits through the Quad channel. For example, technology transfers for jet engines like the GE F-414 for its indigenous Tejas Mk-2 and Advanced Medium Combat Aircraft (AMCA) programs. These forums align with India's multi alignment

policy and enable access to advanced technologies. With formal alliances there is always a risk of provoking its traditional partners or escalate tensions with other powerful nations. The Quad's focus on maritime security creates a layered defence posture, ensuring rapid response mechanisms in contested maritime domains. Sustaining efficacy requires ongoing coordination, joint training, and alignment of strategic objectives to prevent fragmentation, particularly in a region where economic and military power dynamics are rapidly shifting.

One key area of this cooperation is the 'Malabar Naval Exercise', initiated in 1992. It was expanded to include all Quad nations in 2020. This focuses on advanced anti-submarine warfare, maritime interdiction, and air & sea integration, utilising platforms like India's P-8I Poseidon aircraft and Japan's Kongo-class destroyers equipped with Aegis systems. The Indo-Pacific Maritime Domain Awareness (IPMDA) initiative was launched in 2022. It leverages satellite-based tracking and fusion centres that are in India in order to monitor illegal fishing and territorial incursions.¹⁹ There are also efforts to integrate commercial data with military grade sensors to have a real time maritime intelligence. The 2025 Quad-at-Sea Ship Observer Mission²⁰ strengthens this as it aims to train Coast Guards on a US vessel for humanitarian and maritime security operations.

Bilateral agreements like the US-India Communications Compatibility and Security Agreement (COMCASA) of 2018 enables encrypted data sharing, granting India access to secure communication systems like Link 16 for tactical interoperability.²¹ Similarly, the Logistics Exchange Memorandum of Agreement (LEMOA, 2016)²² with the United States and Mutual Logistics Support Agreements (MLSA, 2020) with Australia²³ and Japan's Acquisition and Cross-Servicing Agreement (ACSA, 2020)²⁴ facilitate mutual base access, refuelling, and logistics support. This enhances operational sustainment during exercises like AUSINDEX, where India's naval vessels integrate with Australian ones. These partnerships, underpinned by technical standardisation, enhance India's service coordination capabilities. Hence seamless integration of its domestically developed systems, such as the Tejas fighter jet, into multinational operations could be ensured. Along with these exercises and logistics, Quad collaborations also drive state of the art defence technology transfers and joint production. This well aligns with India's self-reliance goals.

The 2024 US-India deal for 31 MQ-9B Reaper drones,²⁵ has provisions for co-production. It also aims to integrate these armed UAVs with India's indigenous ISR (Intelligence, Surveillance, and Reconnaissance) platforms. This would ensure that the border surveillance is further strengthened. The India-US has a joint production of fighter jet engines under a 2023 collaboration. It aims to power indigenous aircraft like the Advanced Medium Combat Aircraft (AMCA)²⁶ by incorporating advanced metallurgy and 'thrust vectoring' technologies.

There are trilateral frameworks, such as the India-US-Japan since 2015 and India-Australia-Japan dialogues since 2020. These focus on developing AI-driven systems and hypersonic munitions jointly. These are critical technologies that come in handy to counter adversary's anti-ship missiles. The Quad Critical and Emerging Technology Working Group was established in 2021. It advances military applications of quantum computing and autonomous systems.²⁷ India's DRDO contribute to swarm drone technologies. These were tested in various joint exercises. The 2024 Regional Maritime Initiative focuses on capacity building in 'big ocean nations'. This could be done through integration of India's naval assets like INS Sahyadri with Quad partners for joint patrols. These alliances, reinforced by 2+2 ministerial dialogues, ensure technical interoperability. These also boost India's defence exports. The blend of indigenous innovations with allied cooperation helps India strengthen its strategic depth. This ensures resilience against global threats and project power. India's ambition of becoming a net security provider in the Indo-Pacific is complemented through such alliances.

Through the Quad channel, India could effectively bridge the gap between its multi-alignment policy and the necessity for high-end technological parity. These collaborative frameworks and bilateral pacts could transform India's defence architecture from a standalone posture into a networked regional power capable of seamless interoperability. By fusing indigenous innovations like the Tejas and DRDO swarm drones with allied systems and intelligence-sharing hubs, the nation could secure a definitive edge in maritime domain awareness and frontier surveillance. Ultimately, this integration of advanced metallurgy, joint production, and strategic logistics solidifies India's trajectory toward becoming a self-reliant net security provider in the Indo-Pacific.



Image 4: BIMSTEC Countries, Source: CESCUBE²⁸

BIMSTEC’s evolution as a defence-oriented forum highlights its growing importance. It fosters regional security cooperation in the Bay of Bengal. By bridging South and Southeast Asia amid rising threats and power encroachments it prioritises security. Its charter emphasises on countering terrorism, dealing with transnational crime and providing assistance during natural disasters. The 2025 summit marked a pivotal “security turn,” where commitments to conduct joint military exercises was stressed upon.²⁹ MDA is a cornerstone, enabling threat assessment across oceanic spaces vital for economic security, given the Bay’s role in global trade lanes susceptible to disruptions from cyclones, insurgencies, or illicit activities. By fostering a stable littoral environment the energy security, trade which are critical for member states’ economic and defence resilience is ensured. It offers a platform for India to project leadership in a region that is increasingly contested by external powers. BIMSTEC comprises Bangladesh, Bhutan, India, Myanmar, Nepal, Sri Lanka, and Thailand. It aligns with the Atmanirbhar Bharat initiative's focus on boosting indigenous capabilities and coordinated resilience.

The BIMSTEC Disaster Management Exercise (BIMSTEC DMEx) was first held in 2017.³⁰ Then onwards it has been iterating annually. The latest edition that took place virtually in 2025 was hosted by India.³¹ It simulates multiple hazard responses. Advanced tools like drone-based surveillance and satellite-linked command systems are used. These are integrated with India's naval assets for coastal rescue

operations. Along with this the other participant nation's naval assets that are equipped with radar for search-and-rescue coordination were also in play. The inaugural BIMSTEC Military Exercise (Milex-2018) in Pune focused on counter-terrorism tactics, including urban warfare simulations with small arms interoperability and joint C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance) protocols.³²

At the 6th BIMSTEC Summit in April 2025 in Bangkok, the security cooperation was elevated through the adoption of the BIMSTEC Convention on Counter-Terrorism.³³ These established frameworks for real time intelligence sharing. This enhances radar integration for anti-piracy operations. These initiatives could allow India's domestically produced systems to be integrated into joint air defence drills. These can be interoperated with allied assets. This would mitigate the vulnerabilities from regional instabilities. BIMSTEC partnerships help catalyse technology transfers and capacity-building. This reiterates India's self-reliance while addressing shared threats like climatic disasters and transnational crime in the Bay of Bengal.

In 2025, BIMSTEC Athletics Meet and Youth Visitor Programs were announced at the Bangkok Summit.³⁴ This in some ways extends to defence-oriented hackathons on AI-driven threat detection. DRDO could collaborate with Thai and Nepalese counterparts to develop low-cost UAV swarms for border monitoring. Incorporation of open-source algorithms for real-time image processing that are compatible with Bhutan's nascent drone fleet could be prioritised as well. There are trilateral engagements such as India-Bangladesh-Myanmar maritime dialogues under BIMSTEC's blue economy pillar. The advanced hydrographic surveys using multi-beam echo sounders for nautical charting deployed, would ensure safe navigation amid rising sea levels and illegal fishing incursions. There was a Memorandum of Understanding with the UN Office on Drugs and Crime (UNODC), signed in 2025. This aims to integrate BIMSTEC's counter-narcotics efforts with joint operations.³⁵ India's submarines for underwater sensor networks could as well be leveraged to detect smuggling routes.

Economically noting, these ties have helped propel India's regional defence exports to BIMSTEC partners. It had crossed USD 44 Billion in FY 2023-24. BIMSTEC's collaborative ethos, India positions itself as the security anchor, enhancing strategic

depth through interoperable networks. These deter external influences and promote a stable, prosperous Bay of Bengal region.



Image 5: SCO Countries, Source: Edge IAS³⁶

The SCO encompasses China, Russia, India, Pakistan, Iran, and other Central Asian states. It conducts regular military exercises like the Peace Mission. These are focused on counter-terror scenarios and on border stability. They aim to address threats from non-state actors and regional insurgencies. Since India is a member it has taken part in the SCO exercises. Though the organisation's charter avoids collective defence commitments there is a focus on measures like arms control dialogues and regional security frameworks. These are crucial to address challenges that arise due to border disputes.

India engages primarily through the Regional Anti-Terrorist Structure (RATS) in Tashkent.³⁷ This helps coordinate intelligence sharing and joint operations to counter the three evils of terrorism, separatism, and extremism. Key multilateral exercises include the Peace Mission series in which India debuted in 2018.³⁸ This involved thousands of troops from eight nations. Using platforms like tanks, fighters, and helicopters counter counter-terrorism scenarios were simulated. The 2021 iteration

at Russia's Donguz range also featured thousands of personnel from eight countries.³⁹

Bilateral engagements further complement this framework. The India-Russia ties include the INDRA exercises alternating between land and the naval variants.⁴⁰ With Kazakhstan India has the Khanjar exercise.⁴¹ These help enhance interoperability via shared protocols like encrypted data links for real-time intelligence. This aligns with SCO also has an agreement on joint military exercises⁴² that legalises troop deployments across borders for drills.

SCO mechanisms facilitate technical exchanges supporting India's Atmanirbhar Bharat. They foster indigenous adaptations without the need for deep defence industrial ties. The SCO Defence Ministers' Meeting promotes joint planning that includes anti-terror drills. Bilateral pact, such as the 2020 India-Russia Reciprocal Logistics Support Agreement, enables refuelling and repairs for SCO-linked operations. There can be aimed for demilitarisation of the borders through various confidence building measures. Overall, India's SCO engagements prioritise non-conventional security. This is achieved by blending multilateral exercises with bilateral depth.



Image 6: SAARC Countries, Source: The diplomat⁴³

The South Asian Association for Regional Cooperation (SAARC) includes Afghanistan, Bangladesh, Bhutan, Maldives, Nepal, Pakistan, and Sri Lanka. India's relation with these countries prioritises regional stability, counterterrorism, and disaster response. In order to build trust and interoperability India leverages the

bilateral exercises. This aligns with the Atmanirbhar Bharat initiative as it integrates indigenous platforms into joint drills.

The biennial Ekuverin exercise with Maldives had its most recent edition conducted, at Maafilaafushi. It focuses on counterinsurgency and Humanitarian Assistance and Disaster Relief (HADR).⁴⁴ Bilateral ties with Nepal traces its roots to the 1950 Treaty of Peace and Friendship. They feature Hand-in-Hand exercises that focus on disaster management. Sri Lanka's SLINEX involved INS vessels and Sri Lankan SLNS ones in harbor-sea phases for anti-submarine warfare using advanced aircrafts and sonar buoys. Bhutan receives training support which includes joint patrols along the Chumbi Valley.⁴⁵ These engagements enhance technical interoperability.

These bilateral efforts are further complemented by SAARC wide mechanisms like the SAARC Disaster Management Framework. It provides support to defence cooperation via joint exercises during natural calamities. Economically, these ties could enhance India's defence exports. Overall, India's SAARC engagements run on Neighborhood First diplomacy. It blends self-reliant tech with allied training to counter hybrid threats from non-state actors. It also offers resiliency in border management amidst climate-induced volatilities in the Indian Ocean Region.

Emerging multilateral defence alliances in 2025, such as I2U2 and the Pakistan-Saudi Defence Pact⁴⁶ indicate the richness of the transactional nature of new multilateralism. These are adaptive to regional flashpoints as they integrate economic and security imperatives. I2U2, linking India, Israel, UAE, and the US, primarily focuses on economic cooperation but carries significant defence undertones. It attempts to redefine West Asian security through technology partnerships like that of quantum computing, maritime surveillance, and cyber defence. This mini-lateral format supports the bigger picture by offering effective responses to threats, including supply chain resilience and countering adversarial regional influence. It aligns with broader peace-building efforts like the Abraham Accords.



Image 7: I2U2 Countries, Source: Al bawaba⁴⁷

For India, I2U2 offers opportunities to integrate advanced technologies into its defence ecosystem. It further complements Quad and AUKUS efforts. This is crucial keeping in mind the Pakistan-Saudi pact that could potentially pose challenges to India. The I2U2 could empower states to navigate such uncertainties through a flexible and overlapping partnership. The proliferation of alliances highlights the need for balanced engagements to ensure global stability, as nations leverage defence cooperation to address immediate threats. This is done while simultaneously preserving long-term strategic autonomy in an increasingly complex geopolitical landscape.

The Acquisition and Cross-Servicing Agreement (ACSA) is one such example that has transitioned from a diplomatic milestone to a functional operational tool. This is evidenced by an increasing frequency of reciprocal port calls and logistical support during joint bi-lateral or multi-lateral. The agreement has moved beyond theory. This is visible in the Indian Navy and the Japan Maritime Self-Defence Force (JMSDF) being able to routinely utilise each other's bases for refueling and provisioning. This in turn effectively extends the operational reach of Indian assets like and Japanese vessels in the Indian Ocean and Indo-Pacific.

However, the real world challenges lie in the digital handshake i.e., to ensure that the administrative and accounting systems for these exchanges are seamless enough to handle emergency or high-tempo combat scenarios without facing bureaucratic lag. While the framework is active, its true test remains the scaling of these services from occasional training events to a persistent and continuous shared logistics network that can sustain long-term missions in contested waters.

In conclusion, the new multilateralism, through forums like Quad, BIMSTEC, SCO, I2U2, and others, redefines defence cooperation, enabling nations to build resilience, project power, and shape a multipolar world order through pragmatic, adaptable partnerships.

CHAPTER 8

THE CORNERSTONE BILATERAL ALLIANCES

AEROSPACE AND TECHNOLOGY TRANSFER

The modern geopolitical landscape is witnessing a shift from simple arm procurements to a sophisticated, multi-domain strategic alliance. These alliances integrate military-industrial networks to co-develop critical technologies. These partnerships are not just transactional but are foundational to securing national interests. They enhance operational interoperability, and allow allied forces to project power seamlessly across land, sea, air, and space. They act as a vital buffer against global supply chain disruptions and unilateral territorial assertions. By doing so, they also offer strategic networks required to achieve vertical depth through the combination of domestic innovation and shared global intelligence. This chapter explores the balance between self-reliance and global interdependence. It attempts to illustrate how partnerships form the empirical backbone of a resilient national security architecture in this increasingly multipolar world.

8.1 THE INDO-RUSSIAN PARTNERSHIP.

The Russia-India partnership in aerospace and defence is undoubtedly one of a strong one. It is rooted in decades of strategic alignment that dates back to the Cold War era. Russia has been a significant contributor of the equipment for the Indian Armed forces. These include fighter jets, tanks, submarines, and air defence systems. This has fostered a deep interdependence that has shaped India's military capabilities. This alliance has Evolving from simple arms sales to licensed production and joint ventures this relation is in constant alignment with India's push for self-reliance.

The world is witnessing an unstable geopolitical scenario in recent years. Yet, Russia has not compromised to prioritise India as a key partner. It continues to offer advanced technology transfers and co-production opportunities. This partnership is not just focused on the hardware aspects. It aims to encompass energy, space cooperation as well. Recent example is that of Russian cooperation in India's **Gaganyaan** program, wherein Russia will train Indian astronauts and also will be building life support systems in the crew capsule.⁴⁸

Trade volumes have surged. This is mainly driven by the discounted Russian oil imports. They now account for a significant portion of India's energy needs. It has helped to offset imbalances through increased Indian exports of agricultural products and pharmaceuticals. Despite external pressures Prime Minister Narendra Modi and President Vladimir Putin have reaffirmed their "special and privileged strategic partnership" through high-level summits.⁴⁹ This emphasises mutual trust and long-term vision. This bond could also serve as a stabilising force in global affairs by promoting multipolarity through forums like BRICS and SCO.

Russia's contribution to the Indian Air Force (IAF) is crucial as it enhances India's aerospace capabilities. This includes systems like the Su-30MKI, MiG-29K, and S-400. They provide critical depth in air warfare, naval movements, and overall defence. There are also talks to acquiring the advanced S-500 system from the same.⁵⁰

The Su-30MKI is a twin-engine multirole fighter and its numerous units are produced under license by Hindustan Aeronautics Limited (HAL).⁵¹ It constitutes a significant portion of the IAF's fleet. Modernising these by integrating advanced AESA radars, enhanced electronic warfare suites, and improved engines for better detection, jamming resistance, and supercruise capabilities could give India an edge. Discussions between Indian and Russian defence ministers could emphasise that these upgrades would be in alignment with "Make in India". Deploying the MiG-29K on carriers like INS Vikramaditya and INS Vikrant has for sure enhanced naval operations.

The S-400 system complements these efforts. When deployed at key bases, it provides a layered defence against aerial threats. It enables India to counter missiles. These systems become pivotal in operations where Su-30MKIs can provide air cover, and S-400s could deter escalations. Sustaining this relationship involves ongoing contracts for spares and upgrades. This also needs to be compatible with indigenous advancements.

The co-development models further exemplify the maturing Russia-India partnership. The BrahMos supersonic cruise missile stands as a flagship of such success stories. It has paved the way for next-generation systems integration. Launched in 1998, it was a joint venture between India's DRDO and Russia's NPO Mashinostroyeniya.⁵²

It has evolved into one of the world's fastest supersonic missiles. It is capable of high speeds and extended ranges. Numerous units are being produced and deployed across land, sea, air, and submarine platforms. Its "fire-and-forget" precision was demonstrated in operations. It strikes targets precisely and is a lethal weapon against air defences.

Upgrades include domestic fuel development by DRDO. It prevents freezing at extreme temperatures.⁵³ There is also ongoing research for extended-range variants through software tweaks. BrahMos-NG, is a lighter version that is set for autonomous testing in the coming years. It would enable integration with lighter fighters like MiG-29 and LCA Tejas. This shall attract interest from multiple countries. BrahMos-II is a hypersonic variant that aims for higher speeds and longer ranges using scramjet engines. Combustor tests that have accelerating progress will surely complement these advancement goals. Exports to countries like the Philippines and interest from others highlight its global appeal.

The Su-57 proposal intends to extend this model. Technology transfer, source code access can be leveraged in Russia. The local production at HAL Nashik for the Su-57E should be prioritised. Focus also needs to be on areas like that of stealth coatings, advanced engines, and avionics integration. Collectively this shall aid India's AMCA program. It can well address IAF squadron shortfalls. This co-development paradigm shifts from the typical buyer-seller dynamics to equitable collaboration. Thus, it enhances India's technological sovereignty and export potential in advanced weaponry.

8.2 THE INDO-US PARTNERSHIPS

The strategic rise in India-US ties over the years as technological partners has transformed the bilateral relations. They both have shared interests in the Indo-Pacific and are committed to countering emerging threats. The partnership has grown from a buyer-seller dynamic to one with an emphasis on co-development, interoperability, and innovation in critical technologies.

The defence cooperation has remained robust and is exemplified by defence trade. This well aligns with India's Atmanirbhar Bharat initiative. The rising geopolitical challenges have brought in a convergence of interests that aids the growth. It thus

promotes foundational agreements for seamless military collaborations. It includes procurements of high-tech aerospace equipment that helps modernise India's forces. These efforts are complemented by frameworks like the Defence Technology and Trade Initiative (DTTI) and the India-United States Defence Acceleration Ecosystem (INDUS – X). While enhancing India's defence posture they also position US as a preferred partner. These help move beyond transactions towards a strategic alignment. In 2025, INDUS-X's has expanded into clean energy and semiconductor through the INDUS Innovation fosters dual use innovations. Joint challenges in undersea and space domain awareness demand for an enhanced interoperability. These initiatives institutionalise processes that helps meet India's sovereignty demands while advancing US interests in diversified supply chains. With the expansion in the iCET's, the DTTI and the INDUS-X drive R&D investments. This potentially positions both nations as front-runners and global leaders in emerging defence applications.

The resilience of such a partnership is evident in joint exercises and negotiations that happen from time to time. It reflects a shared vision for a “rules-based” order. The foundational agreements like the LEMOA, COMCASA, BECA, and ISA, have significantly enabled interoperability. This has provided enhanced military coordination.

The LEMOA, signed in 2016, allows access to each other's military facilities for refueling and logistical support.⁵⁴ The joint operations and humanitarian missions are hence streamlined. The pact, while reducing operational timelines also enhances MDA in the Indian Ocean. The COMCASA of 2018 facilitate secure communication equipment and encrypted data sharing.⁵⁵ This enables real-time intelligence exchange and the seamless data links improve tactical coordination. The BECA, signed in 2020, provide India with US geospatial intelligence.⁵⁶ This includes maps and satellite imagery which are crucial for precision targeting and border surveillance. The Industrial Security Annex (ISA), signed in 2019, safeguards classified information shared with private industries.⁵⁷ This enables deeper industrial ties. These initiatives address the barriers that arise in technology sharing. They further enable joint patrols and intelligence fusion along with initiatives like the Security of Supply Arrangement (SOSA)⁵⁸. This has ensured priority access to

defence supplies. Apart from building mutual trust, these pacts also allow integrated operations that deter aggression and support multilateral frameworks.

In aerospace high-tech collaborations include the GE F414 engine deal, procurements of P-8I Poseidon, C-17 Globemaster, Chinook, and Apache helicopters. These exemplify deepening coordination that eventually would boost India's air and maritime capabilities. The GE F414 deal is valued at over \$1 billion with 80% technology transfer.⁵⁹ It aims powers the LCA Tejas Mk2 and the upcoming Advanced Medium Combat Aircraft (AMCA). This potentially could address the engine manufacturing bottlenecks. This deal also enhances thrust and performance for multi-role fighters. India's procurement of 12, P-8I Poseidon aircraft id valued at \$4 billion.⁶⁰ This could strengthen anti-submarine warfare capabilities by monitoring activities in the Indian Ocean region. The C-17 Globemaster III could revolutionise logistical airlift for disaster relief and troop deployments. The CH-47F Chinook helicopters enhance high-altitude operations. These become vital for border infrastructure. The AH-64E Apache helicopters could provide lethal strike capabilities with their Hellfire missiles. Amid evolving threats in recent times, these assets highlight the partnership's role in enhancing deterrence.

However, while these deals look great on paper, turning them into reality is a major challenge. The GE F414 engine deal is a huge win, but India's domestic industry need to still prove that it can handle the critical technologies, like advanced heat-resistant coatings that are incredibly difficult to manufacture. Further, mixing US platforms like the Apache or Chinook with India's existing Russian and local gear could create complexities that would make maintenance more expensive and complex. There is also the constant hurdle of strict US export laws (ITAR), which can slow down how much sensitive tech is actually shared. Ultimately, the success of these programs depends on whether India can upgrade its factories fast enough to meet the urgent needs of its military.

8.3 THE INDO-FRANCE PARTNERSHIPS

The France-India strategic partnership was established in 1998. It marked its 25th anniversary in 2023. The Horizon 2047 roadmap that was adopted has exemplified a model of trust-based collaboration. This in a way transcends traditional alliances.⁶¹

Amidst a contested global landscape, an emphasis was laid on mutual respect for strategic autonomy and non-interference.

As of late, this bond has evolved into a multifaceted alliance. The bilateral trade has crossed over 1.36 lakh Crore (€12 billion) in 2024.⁶² The defence cooperation has also surpassed billions in cumulative deals. Thus, France has become one of the leading arms suppliers to India. The relationship is rooted in shared democratic values. The partnership has weathered geopolitical storms. The reliability is evident particularly in defence. France's "no-strings attached" approach that is free from end-use monitoring or political preconditions has enabled seamless technology transfers and joint ventures. This has fostered India's Atmanirbhar Bharat initiative.

Key pillars include aviation milestones like the Rafale program, naval synergies through Scorpène submarines, and potential collaborations in jet engines and helicopters under Horizon 2047.⁶³ All these are aimed at enhancing interoperability in the Indo-Pacific. Joint exercises such as VARUNA and the Shakti, underscore operational alignment while expansions into AI, quantum computing, and small modular reactors (SMRs) signal a holistic vision for the centenary of India's independence. This partnership enhances India's military modernisation but also has reinforced France's strategic footprint in the region. Thus a resilient framework for shared security and prosperity is created.

Rafale deal is central to the aviation consistency in the France-India partnership. It has redefined India's air combat capabilities and has set a benchmark for government-to-government (G2G) procurement. Complementing this is the recent Rafale-M acquisition for naval aviation. In September 2016, a deal was signed at ₹58,000 crores (USD 6.5 Billion) for 36 Rafale multirole fighters.⁶⁴ These jets feature enhancements like helmet-mounted displays and integration of indigenous Astra missiles. They have achieved impressive availability rates and are reported to have participated in many high-profile operations. The program's success which has promoted local maintenance facilities has generated thousands of jobs. Building on this, the April 2025 Inter-Governmental Agreement (IGA) is for 26 Rafale-M carrier based variants 22 single seaters and four twin seaters.⁶⁵ This is valued at over 60,000 crores (USD 7.5 billion). This potentially enhances the Indian Navy's carrier strike group that could be centered on vessels like the INS Vikrant. This procurement

could effectively address the obsolescence of MiG-29K jets, with modifications for STOBAR operations on Indian carriers. It shall foster commonality that optimises logistics and reduces lifecycle costs by a significant amount.

The naval and aerospace cooperation between France and India goes beyond the immediate acquisitions to long-term co-development. It is evident in the Scorpène submarines under Project 75 (P-75) and ambitious Horizon 2047 initiatives for jet engines and the Indian Multi-Role Helicopter (IMRH). This could position both nations as leaders in underwater warfare domains. France's "no-strings attached" model in defence dealings with India makes it a reliable partner. This is particularly crucial during sanction periods when other suppliers impose certain restrictions. This allows uninterrupted access to critical technologies and underscores a relationship built on trust rather than that of a conditional aid.

8.4 THE EXPANDING EAST

India's strategic pivot towards Southeast Asia is encapsulated in the Look East to the Act East Policy. This represents a multidimensional expansion of its foreign policy. It enhances regional security, economic ties, and geopolitical influence in the Indo-Pacific. The Look East Policy was initiated in the early 1990s under Prime Minister P.V. Narasimha Rao.⁶⁶ It sought to reconnect India with its eastern neighbours. The economic and cultural linkages were to be leveraged. This was to be drawn from the historical influences that India in the Southeast Asian civilisations for centuries. Under Prime Minister Narendra Modi, this transformed into the 'Act East Policy'. Robust defence diplomacy is being emphasised. This is to ensure that the emerging threats like maritime disputes in the South China Sea and the growing assertiveness of external powers could be effectively countered. In alignment with India's vision of itself as a net security provider in the region this shift boosts partnerships with the Association of Southeast Asian Nations (ASEAN). This could ensure freedom of navigation and secure sea lines of communication (SLOCs). Thus, it promotes cooperative security frameworks.

Defence cooperation has become a cornerstone. This involves bilateral agreements with nine out of ten ASEAN countries and strategic partnerships with four i.e., Vietnam, Indonesia, Singapore, and the Philippines. These ties encompass training programs, joint military exercises, arms exports, and capacity-building initiatives.

There is a reflection on the shared concerns over piracy, terrorism, humanitarian disasters, and non-traditional security challenges. India's participation in multilateral forums like the ASEAN Defence Ministers' Meeting-Plus (ADMM-Plus) and the Indian Ocean Naval Symposium (IONS) highlights its commitment to regional stability. The expansion from engagements in economic aid and cultural domain to that of defence one enhances India's strategic depth. It also aid in positioning it within groupings. The growing defence exports shows the success of the policy. They have crossed USD 2.5 billion out of which Southeast Asia accounts for a significant portion. Integrating economic incentives like the India-ASEAN Free Trade Agreement with security collaborations has ensured mutual benefits in an increasingly contested maritime domain. India's defence cooperation manifests through tailored bilateral engagements with individual Southeast Asian nations. It features joint exercises, technology transfers, and arms sales. They enhance interoperability and regional deterrence.

Vietnam is a comprehensive strategic partner since 2016. India has conducted annual exercises like VINBAX and naval drills, including joint air force exercise. These focus on humanitarian assistance and disaster relief (HADR) as well. Key deals include the sale of BrahMos supersonic cruise missiles, Akash surface-to-air missiles, and P-8I maritime patrol aircraft. India has also trained over 3000 Vietnamese personnel at Indian institutions.⁶⁷

Indonesia participates in Garuda Shakti and Samudra Shakti exercises. Singapore benefits from access to Indian training facilities under 2003 and 2007 pacts.⁶⁸ It has been hosting SIMBEX naval exercises Kurukshetra army drills. The Philippines emerged as a key partner with a 2006 agreement and 2022 MoU.⁶⁹ Through this deal it will receive three BrahMos missile batteries worth \$375 million.⁷⁰ Malaysia's 1993 MoU facilitates MIDCOM meetings and setting up of a Sukhoi forum.⁷¹ Joint naval exercises like SAMUDERA (since 2022) focus on maritime awareness. Thailand's MoU enables coordinated patrols against piracy and smuggling, alongside officer exchanges. Myanmar receives hardware like helicopters and participates in Milan naval exercises with joint border operations against insurgents. The biennial Milan exercise is hosted by India which includes nearly 50 countries. These initiatives are supported by the Indo-Pacific Oceans Initiative. They promote information sharing on illegal fishing and cybersecurity. These co operations build

military capabilities and also foster trust. Thus India is positioned as a reliable partner amid regional power shifts.

8.5 THE INDO-PACIFIC RIM NATIONS OF AFRICA

India's expansion into the African nations of the Indo-Pacific rim, has evolved into a crucial pillar of its strategic foreign policy. There is an effective blend of historical ties that are rooted in anti-colonial solidarity with current imperatives of maritime security. The engagement finds its roots in the Non-Aligned Movement era. It has gained momentum through Security and Growth for All in the Region (SAGAR).⁷² It was articulated in 2015 during Prime Minister's visit to Mauritius. This positions India as a net security provider in the Indian Ocean. This has been expanded under the MAHASAGAR vision.⁷³ It emphasises mutual advancement in security, trade, and sustainable development across the Indo-Pacific. Africa's eastern littoral nations from Seychelles and Mauritius to Mozambique, Tanzania, Kenya, and South Africa, serve as a critical gateway for India's imports and export routes.

India's defence cooperation demands a rules-based order that effectively counterbalances the power competitions in the region. This aims to promote South-South collaboration. This is of great importance as rising threats like that of piracy resurgence off the coast Somalia, illegal fishing, Houthi disruptions in the Red Sea, China's expanding naval footprint to name a few pose concerns. This is evident in multiple bilateral defence pacts, capacity-building programs that train thousands of African personnel annually in Indian institutions. There has been a surge in arms exports with Africa accounting for a fair share too. India engages through the Indian Ocean Rim Association (IORA), the IONS. The Africa India Key Maritime Engagement (AIKEYME) 2025⁷⁴ is a landmark exercise co-hosted with Tanzania that involves eight nations to enhance interoperability in anti-piracy and humanitarian assistance. These ties align with the G20 inclusion of the African Union (AU) as a permanent member. This helps to effectively elevate Africa's voice in global forums. It is also seen as a reflection of India's broader Indo-Pacific strategy.

Historically India's role has been limited to soft power like peacekeeping contributions. India has deployed thousands of troops to UN missions, many in Africa. But the new global developments demand it to encompass hard power element. These include joint exercises and technology transfers. This could

effectively address the non-traditional threats like climate-induced disasters and of cyber vulnerabilities. This pivot secures vital SLOCs that carry a significant portion of India's oil imports. It also taps into Africa's blue economy potential which is projected to reach \$405 billion by 2030.⁷⁵ These frameworks have underscored shared stakes in MDA and disaster relief.

In operational terms, India's defence cooperation with African states in the Indo Pacific region is characterised by bilateral initiatives and high impact multilateral drills that are tailored to the needs. These build trust, interoperability, and mutual deterrence against regional as well as global instabilities. South Africa has been a strategic partner for decades. The biennial India-Brazil-South Africa Maritime Exercise (IBSAMAR) focuses on blue water naval warfare, surface and anti-air warfare.⁷⁶ This is further complemented by Joint Defence Committee meetings that take place regularly. The pacts on submarine rescue, technology transfer, and joint R&D for armoured vehicles get inked during these meetings.

Nigeria which is India's largest sub-Saharan defence partner has inked a \$1 billion economic and defence deal.⁷⁷ Kenya's 2022 defence pact facilitates coordinated patrols against counter-insurgency. It also includes UN peacekeeping and enhances maritime security. Mauritius and Seychelles the key island nations are being benefitted from bilateral naval engagements since December 2024. These include the port calls and hydrographic surveys, an MoU that facilitates joint surveillance against illegal, unreported, and unregulated (IUU) fishing.

Prospect for India's defence ties with Indo-Pacific African nations has a promising future. India's Act East complements this westward thrust with the potential to redefine alliances through collaborative deterrence. Sustained investments in people-to-people ties will cement this partnership. This shall ensure a stable maritime region for mutual prosperity in an era of uncertainties.

8.6 INDIA AND THE GULF

India's strategic expansion into the Gulf region has transformed from one that was linked to historical commonalities to that of a robust defence partnership. This is driven by shared maritime security needs and geopolitical realignments. The "Look West" Policy initiated is often considered to be a foundational stone for the same. It

has now evolved into a 'Link West' framework. This engagement puts a special emphasis on defence. The energy and economic ties with the Gulf Cooperation Council (GCC) nations i.e., Saudi Arabia, UAE, Oman, Qatar, Bahrain, and Kuwait are also an integral part of this relationship.

The strategic chokepoints such as the Strait of Hormuz and Bab el-Mandeb collectively handle massive portions of global oil transit. They are vulnerable to various threats such as those of Houthi attacks, piracy etcetra. China's expanding naval presence via the Belt and Road Initiative is also one of the main concerns for India's ambitions.

India's SAGAR positions India as a net security provider. It fosters collaborations to ensure freedom of navigation and counter challenges like illegal fishing and cyber threats. It has also led to a surge in arms exports to the Gulf. India engages with multiple nations through the IONS and the Indian IORA. These help host the Gulf navies in exercises like Milan 2024. The cooperation also aligns with India's Indo-Pacific strategy, synergising with Quad partners like the US, which shares bases in Bahrain, and France for joint patrols in the Arabian Sea.⁷⁸ India's neutral stance has positioned it as a reliable partner. Amidst the escalating Red Sea disruptions, India's defence footprint helps enhance regional stability. It helps secure the vital SLOCs that carry major portion of its total trade.

India's defence engagements with Gulf countries are seen through bilateral mechanisms, joint military exercises, technology transfers, and capacity-building initiatives. There is a shared vision to enhance MDA and to counter terrorism. Oman is one of India's oldest Gulf defence partners. Oman hosted Army to Army Staff Talks in New Delhi from October 22 to 23 in 2025.⁷⁹ It focused on expanded joint exercises, exchange of expertise in niche areas like cyber security. Saudi Arabia's ties were elevated through the 2019 Strategic Partnership Council and the seventh Joint Committee on Defence Cooperation (JCDC) in August 2025. It encompassed naval exercises and land force drills. These offer training slots, joint production of armoured vehicles, and maritime security collaborations with an aim to safeguard IOR energy routes. The UAE is a comprehensive strategic partner since 2017. There were advancing air force exercises like Desert Eagle, naval patrols, and FDI inflows. India has a defence pact with Qatar's since which facilitates annual maritime

exercises and counter terrorism training. The GCC India Joint Action Plan 2024-2028 was adopted in September 2024.⁸⁰ It aims to integrate defence with trade. It features collaborations that target maritime domain awareness. These initiatives are further supported by India's anti-piracy operations. This helps build interoperability with the Gulf navies. It also helps to access Indian facilities such as Duqm port in Oman for logistics.

India's defence cooperation with Gulf countries in the IOR seems to promise an exponential growth. This can be propelled by co-development opportunities and shared visions. The Joint R&D funds for co-owned products in areas like counter-drones, cybersecurity, and naval shipbuilding can complement these efforts. India's non-aligned approach often offer an edge that complements the GCC's defence enhancements. As geopolitical shifts are rapidly reshaping, the westward expansion secures India's energy lifelines. It also contributes to a multipolar IOR order complemented by collaborative deterrence, economic interdependence, and technological synergy. These efforts can potentially reshape alliances in the years to come.

8.7 SOUTH AMERICAN NATIONS

India's strategic expansion into the South America is framed under initiatives like the Voice of Global South Summit. It marks a well planned reach out of its defence diplomacy into the western hemisphere. This leverages historical ties from the Non-Aligned Movement to contemporary similarities in terms of resource security, counter-terrorism, and maritime stability. These position India as a reliable partner amid its adversaries deepening their presence and dominance. India's observer status in the Organisation of American States (OAS) and that of dialogue partner role in the Community of Latin American and Caribbean states (CELAC) offer multilateral engagements. One of the key drivers is the critical mineral lithium'. India has a deal valued in millions of USD with Argentina.⁸¹

Brazil is India's premier partner. It hosted the 8th Joint Defence Committee in Brasília on 30 July 2025.⁸² This involved officials chartering the expanded military training, industrial collaboration, and counter-terrorism. Annual IBSA exercises, like the 2025 maritime drill IBSAMAR off Rio involved anti-submarine warfare.

Argentina's elevation to a strategic partnership has witnessed a rise in momentum. It has resulted in MoUs on defence technology sharing and nuclear cooperation.

The prospects for India's defence expansions in the South American region brighten with the recent diplomatic surge. It sure hinges on navigating geopolitical frictions alongside scaling of industrial synergies. This region is crucial for global supply chains of EVs and renewables. Thus, India's model of trust based collaboration positions it as a frontrunner to ensure a balance in the Western Hemisphere. It has the potential to foster mutual deterrence and economic interdependence in an otherwise volatile era.

CHAPTER 9

INDIA'S IOR WEB: STRATEGIC PARTNERSHIPS

The Indian ocean region has an area of about 21.45 Sq Nautical Miles (1 Sq Nautical Mile = 3.43 Sq Km).⁸³ It has vital sea lanes that carry that carry more than 80% of the world's seaborne oil trade⁸⁴ and nearly 75% of global maritime trade.⁸⁵ India is positioned at its geographic heart. IOR for India is a lifeline for energy security as it imports over most of its crude oil through these waters. This is primarily done via the Strait of Hormuz (appx. 36% of the total).⁸⁶ The region is also very rich in fisheries, minerals, and renewable energy potential. This includes offshore wind and blue economy resources as well which are valued at billions. The IOR also consist of the 2.37 million square kilometres of India's Exclusive Economic Zone (EEZ).⁸⁷ In defence and aerospace, it promotes and enables power projection. The Indian Navy assets ensure MDA that is complemented by Airforce providing an effective air defence. These are further strengthened via space domain awareness provided through advanced satellites. India's SAGAR vision advocates inclusive cooperation to counter extra-regional influences. It fosters alliances in defence, surveillance, and aerospace. As the Indo-Pacific framework evolves, India's IOR engagements in naval exercises, radar networks, and port developments are pivotal to maintaining a free, open, and rules-based order, blending economic interdependence with strategic autonomy.

The Indian approach towards the IOR can be seen as a web of strategic bilateral and multilateral partnerships. They operationalise the Indian defence and aerospace priorities. These range from the island nations to that of littorals. There is a focus on joint exercises, technology transfers, infrastructure development, and information-sharing mechanisms. These aid building interoperable capabilities. A good example would be that of a coastal surveillance radar systems (CSRS) installed in multiple partner countries. These enhance real time MDA. Another would be the assets that are gifted like the Dornier aircraft and such others that boost the patrolling capacities. Joint exercises such as SLINEX, EKUVERIN, and DOSTI promote tactical synergy. These also address shared threats like piracy, illegal fishing and other such threats arising in the region. Agreements on white shipping, EEZ surveillance, and port access extend India's logistical reach. This enables sustained aerospace deployments. These initiatives along with frameworks like the Colombo Security

Conclave and IORA prioritise maritime safety, disaster response, and hydrographic surveys. The following section details the country specific collaborations that form the empirical backbone of India's IOR network. It further illustrates how the granular engagements enhance the regional resilience.

Alliance in Indian Ocean Region

Sri Lanka	<ul style="list-style-type: none"> • Both engage in a Bilateral naval exercise called SLINEX to deepen mutual understanding, promote maritime diplomacy, and strengthen connections between them. • A Tripartite exercise DOSTI involving India, Srilanka and Maldievs is conducted that aims to strengthen the bonds of friendship and enhance the mutual operational capability and cooperation between the forces of the three participating countries focusing on maritime Search and Rescue, marine Pollution Response and boarding operations.⁸⁸ • A tripartite maritime security arrangement between India, Sri Lanka and Maldives, was signed in 2013 is an important framework for MDA within the Indo-Pacific Region which has been established for the purpose of joint cooperation in EEZ surveillance, Maritime Search and Rescue (SAR).⁸⁹ • India has installed coastal surveillance radar systems network across Sri Lanka.⁹⁰ • Both signed a defence cooperation agreement in April 2025 that is expected to lead to joint maritime exercises, surveillance and equipment support.⁹¹ • An Indian Ocean Division has been created to priorities the relationship with island nations that include Sri Lanka.⁹² • India signed a pact with Sri Lanka to set up MRCCsⁱ in their ports to improve maritime disaster management capabilities during crisis.⁹³ • India has white shipping agreements with Sri Lanka to enhance
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ⁱ Maritime Rescue Coordination Centres

maritime domain awareness.⁹⁴

- National Security Advisors (NSA) on maritime security cooperation between India, Sri Lanka and Maldives has been set up that would strengthen the joint capacity and capability of the grouping in dealing with common challenges to maritime security.⁹⁵

Maldives

- India has contributed \$220 million to the Addu City Reclamation and Shore Protection Project and provided grants to expand ferry services and maritime connectivity across islands.⁹⁶
- There has been a steady progress in the implementation of the India-Maldives Joint Vision for a 'Comprehensive Economic and Maritime Security Partnership'⁹⁷
- Both engage in annual naval exercise EKTHA⁹⁸ and multilateral exercises like Malabar and DOSTI⁹⁹ to enhance interoperability between forces.
- Both are also members of Colombo Security Conclave which focuses on Maritime Safety and Security.¹⁰⁰

Seychelles

- India helps in patrolling the Seychelles waters and gifts several equipments to the Seychelles People's Defence Forces such as the Dornier aircraft.¹⁰¹
- Indian Navy has deployed P-8I maritime reconnaissance aircraft to Seychelles for surveillance in the EEZ of Seychelles.¹⁰²
- India has installed coastal surveillance radar systems (CSRS) network across Seychelles.¹⁰³
- The Assumption Island in Seychelles is leased to India for the operation of a naval base and air strip by the Indian navy.¹⁰⁴

Mauritius

- Two nations jointly inaugurated an India funded new Airstrip and the St. James Jetty on Agalega Island with an aim to improve connectivity between mainland Mauritius and Agalega, and enhance maritime security.¹⁰⁵

- There is an ongoing cooperation between ISRO and MRICⁱⁱ on ISRO Telemetry and Tracking Centre in Mauritius.¹⁰⁶
- India has installed coastal surveillance radar systems (CSRS) network across Mauritius.¹⁰⁷

Kenya

- Both countries have issued a Joint Vision Statement “BAHARI”, which observes that security and prosperity of both countries is linked to the Ocean and that both share ‘commonality of views on issues of mutual concern’ and one of its six pillars is to enhance maritime security.¹⁰⁸
- Have agreed to co-operate in co-production of defence equipment such as maritime surveillance equipment, offshore patrol vessels, and fast attack crafts that would boost maritime security capabilities.¹⁰⁹
- Have engaged in maritime exercises like PASSESX and Bright Star.¹¹⁰
- Both countries also are members of IORAⁱⁱⁱ and IOLC^{iv}.¹¹¹

Tanzania

- Africa India Key Maritime Engagement (AIKEYME) in 2025¹¹²
- India’s involvement in the strategically located Dar es Salaam Port will enhance trade and also pave way for effective maritime security.¹¹³
- Participated in an exclusive India-Tanzania Joint Exclusive Economic Zone (EEZ) surveillance exercise.¹¹⁴
- India has done hydrographic survey of Tanzanian ports.¹¹⁵
- Both countries have a Technical Agreement shared on White Shipping Information.¹¹⁶

Mozambique

- Africa India Key Maritime Engagement (AIKEYME).¹¹⁷

ⁱⁱ Mauritius Research and Innovation Council

ⁱⁱⁱ Indian Ocean Rim Association

^{iv} Indian Ocean Littoral Countries

- India gifted two water-jet propelled Fast Interceptor Craft (FIC) to Mozambique¹¹⁸
- India has signed an agreement with Mozambique to patrol against piracy in its territorial water.¹¹⁹

Oman

- A MoU has been signed relating to Duqm port which facilitates the Indian Navy in extending their anti-piracy operations in the Gulf of Aden for longer durations by providing operational turn around and logistical facilities to the naval ships docked therein.¹²⁰
- Indo and Oman bilateral naval exercises have been successfully carried out and have met the aims of the operations.
- Signed a military protocol agreement in 1972, functioning of Indian Defence Advisor in Muscat in 1989 and eventually signed a MoU on Defence Cooperation in 2005.¹²¹
- Indian Navy has been launching its P-8I long-range maritime surveillance aircraft from Salalah port to carry out anti-piracy sorties.¹²²
- India-Oman Joint Maritime Committee was set up to work towards ensuring maritime security in the Indian Ocean Region.¹²³

Yemen

- Indian Navy and Yemen Coast Guard have collaborated to undertake Anti-Piracy patrols in the Indian Ocean.¹²⁴
- As part of Operation SANKALP, 20 Indian Naval ships have been operationally deployed in the vicinity of this region for anti-piracy missions and protecting the sea lanes of communication.¹²⁵

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| Iran | <ul style="list-style-type: none"> • Chabahar Port Complex, is a strategic hub for connectivity and continental security of India and offers a more efficient and cost effective alternative to the traditional overland routes that pass through Pakistan, avoiding the use of Pakistan's Gwadar harbour and its associated trade channels.¹²⁶ • Coordinated in multiple naval exercises like MILAN, MPX^v to enhance maritime security and exchange of best practices.¹²⁷ |
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| Indonesia | <ul style="list-style-type: none"> • Engaged in regular Coordinated Patrols (IND-INDO-CORPAT) and bilateral naval exercise called Samudra Shakti.¹²⁸ • India has offered its Coastal Surveillance Radar Systems to Indonesia.¹²⁹ • Both navies have shaped regional Standard Operating Procedures for Humanitarian Assistance and Disaster Relief (HADR) under the Indian Ocean Naval Symposium (IONS).¹³⁰ • Ratified the Defence Cooperation Agreement (DCA) in 2025 that was signed in 2018.¹³¹ • An MoU enabling ICG and Indonesian BAKAMLA augment information sharing, facilitating quick and effective responses to maritime crimes such as piracy, smuggling, trafficking and illegal fishing, among others was renewed recently.¹³² • An agreement to post an International Liaison Officer (ILO) at the Information Fusion Centre-Indian Ocean Region (IFC-IOR) is in play.¹³³ • Inter-Governmental Framework Agreement on Cooperation in the Exploration and Uses of Outer Space for Peaceful Purposes was reached in 2018. • Implementation Agreement for the Transfer of Title of Integrated Biak Telemetry, Tracking and Command (TTC) Facilities, and Implementing Arrangement on Operation, Maintenance and |
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^v Maritime Partnership Exercise

Utilisation of Integrated Biak Telemetry, Tracking and Command (TTC) Facilities for Satellites and Launch Vehicles between ISRO^{vi} and BRIN^{vii} was signed.¹³⁴

- Indonesia has agreed to give India military access to the strategic island of Sabang at the northern tip of Sumatra and close to the Malacca Strait¹³⁵

Australia

- At the “Joint Declaration on a Shared Vision for Maritime Cooperation in the Indo-Pacific” both countries pledged to promote maritime security and safety by deepening navy-to-navy cooperation and strengthen maritime domain awareness in the Indo-Pacific region through enhanced exchange of information.¹³⁶
- In July, 2021 the first round of grants of the Australia-India Indo-Pacific Oceans Initiative Partnership (AIPOIP) program was announced by Australian Ministry of Foreign Affairs with strong commitment to working with close regional partners in delivering an open, inclusive, resilient, prosperous and rules-based maritime order.¹³⁷
- Both countries also have agreed to collaborate in Australia’s ‘Pacific Step Up’ policy for small islands in the Southern Pacific.¹³⁸
- The AIPOIP includes Marine safety, Security and Ecology along with Trade, Connectivity and Maritime support.¹³⁹
- India’s SSA firm Digantara has joined forces with an Australian Space Machines Company on the Space MAITRI^{viii} to integrate its advanced optical sensor technology onto the latter’s orbital servicing vehicle to enhance the ways in which Resident Space Objects (RSOs) in Low Earth Orbit (LEO) are monitored.¹⁴⁰

^{vi} Indian Space Research Organisation

^{vii} National Research and Innovation Agency

^{viii} Mission for Australia-India's Technology Research and Innovation

Mutual Growth Opportunities

- India's defence and aerospace collaboration with countries such as Madagascar and Comoros has the potential evolve into layered island defence architecture. It could leverage the strategic depth of the Mozambique Channel. Joint coastal surveillance radar chains that are built on India's proven CSRS model could be installed across key vantage points in Comoros. This would offer a real time link to the Information Fusion Centre-Indian Ocean Region (IFC-IOR).
- Indian Navy P-8I aircraft is already familiar with Seychelles operations. It could further conduct rotational deployments from Nosy Be (Madagascar) and Moroni (Comoros) airfields. This can provide persistent maritime domain awareness. It can result in an effective training of local aircrews in anti-submarine warfare and long range patrol tactics.
- A trilateral aerospace training academy that includes India, Mauritius and Madagascar under the Colombo Security Conclave can be a welcome move. It can train and certify Comorian and Malagasy pilots on India's advanced aircrafts. This would enable rapid medical evacuation and rehabilitation during disasters across the archipelagic waters.
- Hybrid threats could be effectively countered with joint special force exercises that are focused on island seizure prevention. Counter infiltration drills could be conducted annually. These can be mentored using India's Marine Commando units for local rapid response.
- In the Horn of Africa, India should try and forge strategic pacts with Somalia and Djibouti. This would prioritise air maritime integration with a strong presence in the region. The Indian Navy has on going anti-piracy patrols in the Gulf of Aden. These could be transitioned into a permanent Joint Task Force that could be headquartered in Djibouti. There could be a rotational shift of chair between Indian Marine Commandos embedded alongside Somali and Djiboutian counterparts.
- India's surface-to-air missile systems that are tailored for coastal defence could be co-produced in Djibouti. This can be done under a licensed assembly. It could ensure that a layered air defence shield gets created over the Bab-el-Mandeb Strait. Complementing this, ISRO's satellite

ground stations would enable real-time space-based maritime surveillance. They can feed encrypted imagery to a fused operations centre. These can be staffed by mixed crews that would further ensure exchange of best practices.

- Annual aerospace symposia focused on advanced technologies would facilitate technology transfer. India's TAPAS-BH201 medium-altitude long-endurance drones can be adapted for Somali EEZ patrols. A dedicated joint patrol exercise series solely focused on "Horn of Africa area" would simulate multi-domain scenarios. This can include submarine tracking, air defence intercepts, and cyber intrusions. They would enable seamless interoperability.
- With South Africa, India could conceptualise and eventually operationalise a southern IOR air-maritime corridor. A reciprocal basing can be proposed with the counterparts. Indian Su-30MKI squadrons can exercise from Waterkloof Air Force Base while South African Gripen fighters could train at western command under bilateral protocols. Joint development of IOR-specific anti-submarine warfare variants supersonic cruise missiles would tie Indian propulsion expertise with South African seeker technology.
- Malaysia presents scope for trilateral aerospace R&D with India and Singapore. This could be focusing on swarm-drone countermeasures and satellite-based electronic warfare. Singapore has advanced simulation centres. These could host India-led table top exercises for carrier battle group operations. In the Arabian Sea, there can be a proposal put for a co-developed network of air defence umbrella. India's QRSAM and Saudi PAC-3 and other such systems could be a part of such a system.

Across these partnerships a standardised secure communication protocols could enhance interoperability. This can be further complemented by cross-posting of defence personnel with expertise in aerospace. An annual multi domain exercise series would institutionalise trust. This eventually could position India as the pivotal node in a defence aerospace domain. It ensures that the IOR's maritime and aerial commons are safeguarded against the conventional, asymmetric, and threats evolving in an unprecedented way aided by technology and material science and manufacturing advancements.

Chapter 11

THE STRATEGIC TOUGH SPOTS

India's defence engagements with Southeast Asian countries under the Act East Policy face several constraints. There exist complex webs of geopolitical, economic, and operational challenges that prevent it from fully realising its ambition. These hinder its quest to become a trusted security partner and a net security provider in the Indo-Pacific.

- The foremost obstacle is of China's overwhelming and a dominating influence. It was able to achieve this through economic coercion. The unilateral military assertiveness in the South China Sea using the so called “nine-dash line” is another claim that it tries to impose on other countries. It directly clashes with the maritime sovereignty of Vietnam, the Philippines, Malaysia, and Brunei. India has a landmark BrahMos missile sale deal with the Philippines. It also participates in and joint exercises like VINBAX with Vietnam. However, many ASEAN nations adapt to hedging strategies. They do so as they worry about potential provocation they might cause of China.
- The dragon as many term it, hold significant trade leverage. The trade between China and ASEAN trade exceeded USD 900 billion in 2024. This is of a mammoth level in comparison to India's USD 120 billion. It is this dynamic that eventually forces countries like Indonesia and Malaysia to balance defence cooperation with India against infrastructure dependencies on Chinese BRI projects.
- Operational delays seen in Indian defence deliveries erode confidence. There were postponements in Vietnam's order for Akash surface-to-air missiles arising due to component shortages. This can be attributed to the global semiconductor disruptions. It eventually pushed Vietnam to diversify back toward Russian systems despite their political alignment with India.
- Although the 2022 BrahMos deal with Philippines was hailed as a milestone. But the Integration challenges with existing US-supplied platforms and training gaps seem to have slowed operationalisation. This was evident during 2025 standoffs at Scarborough Shoal.

- Singapore restricts full integration of Indian-supplied radars into its national network over concerns of data leakage in a region rife with cyber espionage.
- India-Myanmar-Thailand Trilateral Highway remains incomplete. This is mainly due to the insurgencies in Myanmar's border regions and funding shortfalls. This in turn limits the rapid military mobility and logistics for joint HADR or counter-terrorism operations. Post-2021 coup instability and India's border security concerns over illegal immigration and arms smuggling clash with defence training programs. This leads to suspended exchanges and strained bilateral ties.
- Cyber vulnerabilities add another set of impediments. ASEAN nations report a significant rise in state-sponsored attacks in 2025. Yet the joint cyber drills under ADMM-Plus remain inefficient due to differing legal frameworks on data sovereignty.
- India's defence export ecosystem is still maturing under Atmanirbhar Bharat. This usually results in high costs and limited scalability. An example for this is the Tejas fighter jet pitch to Malaysia that faltered against cheaper South Korean FA-50s. This was in no way due to performance but lifecycle affordability.

India's defence cooperation with East Asian nations faces structural and persistent barriers that put limitations on the strategic convergence despite shared concerns over China's regional dominance.

- The Taiwan Strait remains the most volatile flashpoint. China's naval incursions are a well-known issue, and yet India's stand on Taiwan's defence openly constrains the potential trilateral military planning.
- Japan-India 2+2 dialogue although has expanded to include AI and space technologies but the live fire exercises simulating A2/AD scenarios are off the table
- South Korea signed a MoU for defence industry collaboration in 2023. However, progress on co-developing missile systems or naval sensors has not advanced much due to intellectual property disputes and differing export control regimes.

- South Korean firms have dominance in global memory chip supply, but the export licenses for dual-use items to India often face delays under US-aligned controls. This potentially hampers the indigenous development of advanced radars and EW systems.
- Cyber defence presents another fault line. China's sophisticated hacking campaigns are reported to have targeted many critical infrastructures across the globe. India still operates under substandard encryption modules. This could potentially hamper the real-time threat intelligence sharing during joint operations and exercises.
- North Korea's advancing missile capabilities, including hypersonic glide vehicles tested in early 2025, underscore mismatched threat perceptions: while Tokyo prioritizes BMD integration, India views Pyongyang as a secondary concern compared to Pakistan and China, leading to lukewarm participation in multilateral missile warning networks.
- Space domain cooperation, a potential growth area, is undermined by India's reliance on foreign systems for navigation. This creates interoperability issues for joint operations that depend on satellite-based MDA and SDA.
- Climatic instabilities and disasters add another set of operational complexities. The Cyclone seasons disturb the naval deployments in the Sea. They also disrupt India's logistics during exercises like Malabar.

These challenges have confined India's defence trade with the region to under \$300 million annually, mostly in spares and training, far below that of its contemporaries. Without a reconciliation of non-alignment with alliance expectations any heavy investments in semiconductor self-reliance, and aiming and developing high-tech exports, India's East Asian defence footprint shall remain peripheral rather than central in a theatre that is of critical importance to the global technology and energy supply chains.

India's westward defence outreach faces obstacles of sectarian rivalries, energy insecurities, proxy wars etc.... This creates a volatile environment where strategic autonomy comes face to face with with operational dependencies.

- The Iran-Saudi cold war is often reignited by Houthi attacks on Emirati and Saudi assets. This does place India in a diplomatic bind. The Chabahar port

development is crucial for accessing Central Asia. It might face sabotage threats from Iran-backed militias. On the other hand the Saudi might pressure India to scale back engagement in order to preserve the Sunni alliances.

- Though Oman's neutral stance facilitates some cooperation like that of Duqm port access for Indian naval resupply, its role in mediating Yemen limits the joint combat exercises. This confines India-Oman drills to non-lethal domains, such as mine countermeasures.
- The Strait of Hormuz, through which a significant portion of global oil transits, remains a chokepoint. India's Operation Sankalp escorts merchant vessels, but GCC navies, equipped with US systems, operate under CENTCOM command. This might potentially marginalise Indian contributions in integrated task forces.
- Economic volatilities further exacerbate the tensions. The OPEC+ production cuts in response to the Red Sea Crisis had spiked oil prices, which eventually increased India's import bill substantially. This in a way, could have forced defence budget reallocations away from intended export promotion.
- Climate change introduces new problems. The extreme heat in the Persian Gulf reduces naval operational windows, and the desalination plant attacks by non-state actors often threaten freshwater security. This in a way impacts basing agreements.

These multifaceted challenges have capped India's Gulf defence trade at \$1.2 billion. The vulnerabilities of the Strait of Hormuz could increase shipping insurance by multi fold. Without an efficient energy diversification, neutral mediation in proxy conflicts, and accelerated indigenisation to compete on price and reliability, India's Gulf defence partnerships will be limited to transactional rather than strategic.

- India's defence cooperation with Indo-Pacific African countries is often undermined by debt distress, insurgent violence, governance instability, and competition from other global powers. This severely limits the maritime security collaboration and the potential export growth.

India's defence ties with island nations across the Indian Ocean and Pacific are in some cases, restricted by geographic isolation. Chinese debt diplomacy, climate

vulnerability, and sovereignty issues undermine the basing rights, interoperability, and long-term strategic presence.

- In the IOR, China's "String of Pearls" strategy manifests in aggressive port investments of Hambantota in Srilanka, the Victoria Port, in Seychelles, has seen Chinese-funded upgrades as well. This raises concerns about potential future Chinese naval access that could erode India's SAGAR framework.
- Seychelles' Assumption Island project is considered almost 'dead' due to the political opposition, environmental concerns and fears of militarisation.
- 80% of Pacific populations live within 100 km of coastlines, and rising seas threaten submersion of key bases.

Collectively, these challenges limit India to ad hoc disaster relief while risking the loss of strategic depth in critical maritime corridors. Sustained engagement demands climate resilient infrastructure, micro financing models, and sovereignty sensitive partnerships.

CHAPTER 12

WHAT CAN BE DONE TO ADDRESS THE CHALLENGES?

India's ascent as a defence powerhouse is propelled by the Atmanirbhar Bharat initiative. It is visible in the exports that has surged to ₹23,622 crore in FY25, up by 12% year-on-year. Yet, persistent challenges like Chinese economic coercion in Southeast Asia, delivery delays eroding trust, debt traps in Africa and islands, sectarian volatilities in the Gulf, and logistical strains in the Pacific slows this momentum. Addressing these demands requires a multifaceted, forward-leaning strategy. Boosting indigenous innovation, recalibrating multilateral engagements, and fostering resilient partnerships are a few of the potential solutions. By 2030, India must aim for ₹50,000 crore in exports. It should also aim for seamless interoperability across the Indo-Pacific. This can help transform vulnerabilities into levers of influence. It requires policy agility, technological leaps, and diplomatic finesse to navigate in the right direction.

- **Enhancing Export Reliability and Industrial Depth:** Central to India's challenges are delivery delays and quality perceptions, which have stalled deals like Akash missiles to Vietnam and Tejas pitches to Malaysia. To deal with issues like these, India must accelerate the Defence Production and Export Promotion Policy (DPEPP). Efforts should be taken to make sure that it embeds export incentives in the next iteration for 2030. Innovations for Defence Excellence (iDEX) scheme, which has already signed 430 contracts with startups worth ₹1,000 crore can be expanded to include mandatory export clauses for prototypes in high-demand areas like UAVs and electronic warfare systems. This could indigenise a significant portion of critical components by 2028, thus reducing import dependencies causing bottlenecks.
- **Addressing the underinvestment in R&D:** currently <4% of the ₹6.81 lakh crore FY26 budget has been allocated for R&D. Expanding partnerships with private giants to co-fund semiconductor infrastructure would be a welcome move. For quality assurance, India should aim to establish a Defence Export Quality Assurance Board (DEQAB) to certify products against NATO STANAG standards. This could build buyer confidence and counter perceptions of inferiority.

- Lines of Credit (LoCs) should be scaled further to at least \$12 billion by 2028, which are tailored for SMEs in partner nations. This "defence for development" model that blends exports with capacity-building could elevate the partner country's contribution to foster mutual reliance.
- Countering Chinese Hedging in Southeast and East Asia: China's \$900 billion ASEAN trade dominance dilutes India's Act East gains. To tilt the balance, India should evolve the Quad into a geoeconomic bulwark. A \$10 billion Indo-Pacific Infrastructure Partnership (IPIP) can be launched by 2027 for resilient supply chains in semiconductors and rare earths. This could help counter the BRI's opacity.
- Efforts should be made to integrate iCET with Japan and South Korea for co-developing hypersonic munitions. Also, the IP disputes that stalled Korea's 2023 MoU need to be addressed. In the South China Sea, ADMM-Plus should be deepened with annual live-fire drills that would simulate A2/AD scenarios. Care should be taken to respect ASEAN centrality to avoid alienating friendly nations. For Taiwan Strait volatility, India can expand informal training exchanges. To do so, it can leverage US BECA-derived geospatial intel. Fast-track FTAs with Indonesia and Vietnam with an aim of \$200 billion trade by 2030, coupled with tech transfers like NETRA AEW&C systems can enhance MDA.
- Navigating Gulf Volatilities and Energy Insecurities: The sectarian rifts and CAATSA risks hobble Gulf ties. This caps the exports at a mere \$1.2 billion USD. India needs to pursue a "Link West 2.0" that helps formalise a GCC-India Defence Compact by 2028 for joint R&D in counter-drone tech.
- Energy-wise India needs to diversify imports via Chabahar by 2028. It should ink green hydrogen pacts with Saudi Vision by the same. To diplomatically counter Pakistan's Saudi pact by amplifying I2U2 for cyber resilience. It can offer "no-strings" training to gulf personnel annually. This can frame India as a balanced partner amid the Abraham Accords. This could potentially unlock more than 3 billion USD in annual exports while securing SLOCs carrying 40% of India's trade.

Chapter 13

Joint military exercises

Among one of the highest levels of state strategy the joint military exercises remain a primary mechanism for shaping the country's security environment. They can be termed as the **physical manifestations of alliances and foreign policy influences.**

One of the most immediate strategic values of joint exercises is of providing passive but an effective deterrence. In terms of international relations, the deterrence relies on two pillars: i) Capability and ii) Credibility. A nation may possess advanced weaponry but if the adversary has opportunities to believe that the nation lacks in terms of the will or the organisational competence to use it then the deterrence might not reach its fullest potential.

- **Deterrence by Denial:** Joint exercises have often demonstrated the ability to defend territory and oppose the aggression. They have showcased a unified front. For example, the NATO forces, by conducting large-scale manoeuvres in Eastern Europe have sent signals to the potential aggressors that an attack would be met with an immediate, coordinated, and competitive defence. This would deter the adversary as their calculations of achieving objectives might get disrupted.
- **Deterrence by Punishment:** Offensive exercises, such as long-range strike drills or carrier battle group integrations, signal the ability to inflict severe costs on an adversary. They demonstrate that the participating nations have the logistical reach and firepower to retaliate overwhelmingly.

Defence Diplomacy and Alliance Cohesion

Military exercises are considered to be a potent form of "Defence Diplomacy." Formal treaties are sometimes politically difficult to ratify. Hence, recurring military exercises serve as a functional alternative creating effective and efficient alliances. For smaller nations that live in the shadow of a hegemon, joint exercises with powerful nations could provide a psychological and strategic security cover. The presence of foreign troops on one's own soil during exercises gives out an indication

that an attack on the host nation would inevitably involve the participating partner nation.

While exercises are like a language, the timing, location, and scale of the same are carefully curated and calibrated messages. Exercises can be often used to lower the tension. A routine exercise scheduled during a crisis can signal resolve. This happens without provoking any immediate conflicts. Also, holding a large-scale naval drill in disputed waters, serves as a direct challenge to any illegal or unlawful opposing claims. This leads to enforcing a freedom of navigation while asserting sovereignty without a direct conflict.

The Operational Significance of Interoperability

The "why" part of the question is answered with strategy. But to answer the "how" part the Operational level comes into play. The greatest operational advantage of joint exercises is the interoperability. It is the ability of different military forces to work together effectively and efficiently. It is very evident that the modern warfare is moving towards being that of a network-centric one. It depends on how seamlessly the data flows between sensors and shooters.

One of the most problematic elements in the coalition warfare is that of incompatible radio frequencies and encryption standards. Joint exercises thus motivate engineers and signal officers to try and bridge these gaps in a controlled environment. They test data links to ensure that a radar track from one Country's destroyer can be seen and engaged by another's fighter jet.

Joint exercises also, reveal the mundane but critical disruptions caused due to logistics. There arises questions such as, can a tanker from one air force refuel the jets of another? are the refuelling nozzles compatible? do the artillery units use the same calibre of ammunition? Identification of these incompatibilities during joint exercises help design elements to address the same to ensure elimination of catastrophic supply failures in wartime.

Procedural Standardisation

Every military has its own culture, language, and Standard Operating Procedures (SOPs).

- Who is the one in charge? In a joint task force, lines of authority often can be blurred. Exercises test the C2 architecture, They establish clear rules of engagement (ROE) and delegation of authority. There is thus ironing out of the language barrier. This is not about just the linguistic differences. But also, of the specific military specifications and acronyms that can lead to unwanted casualties if misunderstood.
- Different countries also have different philosophies for fighting wars. While some of them emphasise centralised control, others prefer the mission command i.e., giving subordinates the freedom for carrying out crucial actions. Joint exercises in this way help commanders to understand the limitations of their own approach and strengths of their partners. This allows them to assign missions that fit the specific capabilities.

The "Human Element" and Trust

Technology, no doubt, facilitates cooperation. But it is humans that execute it. The personal relationships that take shape between officers during exercises are invaluable. Officers those who have trained together can understand each other's decision-making processes. This also helps them evaluate their levels in tolerating risks.

Understanding the cultural nuances of a partner force that range from dietary restrictions to religious observances is also vital for unit cohesion. Exercises provide a safe environment to help navigate these differences. This ensures that they do not become points of friction during combat.

Tactical Significance

Joint exercises provide the closest similarity to actual combat. They help soldiers, sailors, and airmen execute specific missions. While classroom instruction or simulations can be effective, they cannot completely replicate the chaos of the field.

A military force that trains only in its home territory its often limited exposure and thus limited experience. Joint exercises allow forces to train in diverse environments. They may not possess such variations domestically. For example, a jungle warfare nation might host allies and teach them survival and navigation in dense canopy, a

desert nation might host armour exercises etc., This kind of cross-training ensures that forces develop global deployment capability.

These exercises also allow conventional forces to train with partner that specialises in counter-insurgency or irregular warfare. This helps broaden the tactical reach of all the participants.

Technological and Industrial Significance

Joint exercise also offers i.e., serve as a laboratory for defence innovation and industrial cooperation.

- A new drone or communication or guidance system might work perfectly in a lab. But there is a chance for their failure in the dust, heat, and electromagnetic interference of a large-scale exercise. These events ultimately provide data for engineers who can use to refine and fine tune the hardware before it enters mass production.
- Joint exercises also act as showcases or exhibitions for defence hardware. When one country witnesses others say, air defence system performing exceptionally well during an exercise it sows interest in procurement. This leads to procurement deals. It is not just about profit. It is also about standardisation. If an ally buys the same equipment the logistics burdens are shared. This ultimately enhances the interoperability.

Challenges and Risks

Joint exercises come with overwhelming benefits. But are not without risks and costs.

- **The Security Dilemma.** In the international relations arena, "Security Dilemma" occurs when one the efforts of one nation to increase its security are perceived as threatening by another state. This further leads to the second nation to respond in kind. Thus there is a creation of spiral of escalation. Exercises that are intended to deter aggression by enhancing capabilities, can sometimes be misinterpreted as preparation for an invasion. This eventually might increase tension rather than reducing it.

- **Espionage and Intelligence Vulnerability.** Inviting foreign militaries to observe or participate in exercises opens the door to intelligence gathering. Although sometimes seen as a great opportunity, there is a fear of adversaries often deploying surveillance ships or aircraft near exercise zones to record the electronic signatures of radars and communication systems.
- **Tactics Exposure:** To participating in a joint exercise is to reveal one's Tactics, Techniques, and Procedures (TTPs). Thus, there is always a risk that a partner nation might have lax security. This would allow the sensitive information to leak to adversaries.
- **Economic Cost** Large-scale exercises are very expensive. They tend to consume vast amounts of fuel, munitions, and spare parts. For developing nations, the cost of participating in high-end exercises might turn out to be prohibitive. They could potentially divert funds from other critical areas like personnel welfare or infrastructure.

Conclusion

The "Samagama" philosophy uncovers a historic transformation in India's national security architecture. It is moving from a reactive posture of depending on imports to a proactive stance of strategic sovereignty. This transcendental shift finds its roots in the "Indigenisation Imperative." This has effectively shattered the "glass ceiling" of Indian engineering through various structural reforms like Positive Indigenisation Lists (PILs) and the creation of specialised and dedicated Defence Industrial Corridors (DICs) in Uttar Pradesh and Tamil Nadu. By prioritising indigenous innovation and "Intellectual Atmanirbharta," India has witnessed movement beyond the "licensed production" model to secure sovereign control over critical design depth and intellectual property (IP). This is physically manifested in the deployment of high-value platforms such as the INS Vikrant and LCA Tejas. These serve as operational proof of India's maturing military-industrial complex.

Economically, this drive has transformed the defence sector into a growth engine, with production exceeding ₹1.5 lakh crore and exports surging to record levels. Thus, it has provided the fiscal resilience necessary to sustain long-term modernisation amidst global market volatilities.

Ultimately, the monograph defines India's path not as one of isolation, but as a calibrated and coordinated "multi-alignment" strategy. Here, the internal industrial resilience acts as a force multiplier for strategic alliances. Through "alliances without binding pacts" like the QUAD, I2U2, and bilateral ventures such as the Indo-Russian BrahMos co-development and the Indo-US jet engine technology transfer, India achieves the much needed "vertical depth" for modern multi-domain warfare. These collaborations ensure that while India maintains sovereign data integrity, its systems remain interoperable with global standards.

By positioning itself as a "net security provider" through the SAGAR and MAHASAGAR visions, India leverages its indigenous capabilities to foster stability across the Indian Ocean Region (IOR) and the Global South. Despite persistent challenges like Chinese economic coercion and technological bottlenecks in AI and cyber warfare, the "Samagama" framework equips India to navigate a multipolar world order with shielded strategic choices. This in turn would ensure enduring peace and power projection in an era of ever evolving threats.

¹ “Foreign Direct Investment (FDI).” n.d. India Brand Equity Foundation.
<https://www.ibef.org/economy/foreign-direct-investment#:~:text=India's%20Service%20sector%2C%20Computer%20software,environment%2C%20and%20enhanced%20international%20competitiveness.>

² Ministry of Defence, Government of India. 2025. “Defence Atmanirbharta: Record Production and Exports.” Press release, November 20, 2025. Press Information Bureau.
<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2191937@=3&lang=2>.

³ Karnad, View All Posts by Bharat. 2021. “INS Vikrant — a Naval Liability.” Security Wise.
 August 16, 2021. <https://bharatkarnad.com/2021/08/09/ins-vikrant-a-naval-liability/>.

⁴ “PIB Headquarters.” n.d.

<https://www.pib.gov.in/PressNoteDetails.aspx?id=155692&NotelId=155692&ModuleId=3@=3&lang=2>.

⁵ “Sailing towards Self-Reliance: The Indian Navy’s Aatmanirbhar Bharat Journey.”

Pib.gov.in, 2025, www.pib.gov.in/PressReleasePage.aspx?PRID=2198298@=3&lang=1.

Accessed 21 Apr. 2026

⁶ HAL – Hindustan Aeronautics Limited. (n.d.-b). <https://hal-india.co.in/product/lca>

⁷ “HAL – Hindustan Aeronautics Limited.” n.d. <https://hal-india.co.in/product/lca>.

⁸ PIB. “Defence in Union Budget 2026–27.” *Pib.gov.in*, 2026,

www.pib.gov.in/PressReleasePage.aspx?PRID=2222601@=3&lang=2.

⁹ ---. “MINISTRY of DEFENCE; YEAR END REVIEW - 2025.” *Pib.gov.in*, 2026,

www.pib.gov.in/PressReleasePage.aspx?PRID=2210154@=3&lang=2.

¹⁰ ---. “Make in India Powers Defence Growth.” *Pib.gov.in*, 29 Mar. 2025,

www.pib.gov.in/PressReleasePage.aspx?PRID=2116612@=3&lang=2. Accessed 21 Apr. 2026.

¹¹ ---. “Make in India Powers Defence Growth.” *Pib.gov.in*, 29 Mar. 2025,

www.pib.gov.in/PressReleasePage.aspx?PRID=2116612@=3&lang=2. Accessed 21

Apr. 2026.

¹² TOI News Desk. (2025, March 28). Centre approves record defence deal for 156

indigenous LCH Prachand helicopters. *The Times of India*.

<https://timesofindia.indiatimes.com/india/centre-approves-record-defence-deal-for->

[156-indigenous-lch-prachand-helicopters/articleshow/119656383.cms#:~:text=Centre%20approves%20record%20defence%20deal%20for%20156%20indigenous%20LCH%20Prachand%20helicopters,=TOI%20News%20Desk&text=NEW%20DELHI:%20The%20central%20government.and%20Tumkur%20plants%20in%20Karnataka.](#)

¹³ ---. “MoD Inks Two Contracts Worth Rs 62,700 Crore with HAL for Supply of 156 LCH, Prachand to the Armed Forces.” *Pib.gov.in*, 28 Mar. 2025, www.pib.gov.in/PressReleasePage.aspx?PRID=2116411@=3&lang=2. Accessed 21 Apr. 2026.

¹⁴ Mayank Singh. (2025, July 7). Army’s first regiment of long-range ATAGS artillery guns to be ready by February 2027. *The New Indian Express*. <https://www.newindianexpress.com/nation/2025/Jul/07/armys-first-regiment-of-long-range-atags-artillery-guns-to-be-ready-by-february-2027>

¹⁵ Desi Chronicles . “The Desi Chronicles.” *Facebook.com*, 23 Jan. 2026, www.facebook.com/TDChronicles/posts/indias-first-made-in-india-c-295-aircraft-to-roll-out-soon-india-is-set-to-achieve/1186436733659460/. Accessed 21 Apr. 2026.

¹⁶ Kumar, A., Dalal, A. S., Khetan, N., & HSIE Research. (2026). *Electronics powering India’s defence upcycle*. <https://www.hdfcsec.com/hsl.docs/Defence%20-%20Sector%20Thematic%20-%20HSIE-202603061206048441018.pdf>

¹⁷ “Mantra – Om Sahana Vavatu.” 2017. Jhula Yoga. January 2, 2017. <https://jhulayogayork.wordpress.com/teacher/mantra-om-sahana-vavatu/#:~:text=Meanings%20of%20the%20words,shantih=%20peace.>

¹⁸ *Defence atmanirbharta: record production and exports*. (n.d.).

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2191937&lang=2@=3>

¹⁹ Park, Captain James Jb. 2024. “Strengthening Maritime Domain Awareness in the Indo-Pacific: Indo-Pacific Partnership for Maritime Domain and Awareness — the Indo-Pacific

Studies Center.” The Indo-Pacific Studies Center. October 30, 2024. [https://www.indo-pacificstudiescenter.org/briefs/strengthening-maritime-domain-awareness-in-the-indo-pacific-indo-pacific-partnership-for-maritime-domain-and-awareness#:~:text=Furthermore%2C%20the%20initiative%20will%20make%20use%20of,with%20China%20in%20April%202022\)%20for%20information%2Dsharing](https://www.indo-pacificstudiescenter.org/briefs/strengthening-maritime-domain-awareness-in-the-indo-pacific-indo-pacific-partnership-for-maritime-domain-and-awareness#:~:text=Furthermore%2C%20the%20initiative%20will%20make%20use%20of,with%20China%20in%20April%202022)%20for%20information%2Dsharing).

²⁰ “QUAD Nations Launch First-Ever ‘At Sea Observer Mission’ to Boost Maritime Cooperation.” n.d. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2140932@=3&lang=2>.

²¹ “COMCASA Enabling Interoperability.” n.d. <https://www.sps-aviation.com/story/?id=2254&h=COMCASA-Enabling-Interoperability#:~:text=One%20example%20is%20the%20C,operate%20over%20CISMOA%2Dprotected%20links>.

²² “INDO-US Logistics Exchange Memorandum OF Agreement.” n.d. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1482026@=3&lang=2#:~:text=United%20States%20of%20America.%20LEMOA%20provides%20a,support%2C%20supplies%20and%20services%20for%20activities%20such>.

²³ “Strengthening Strategic Ties — India-Australia Defence Relations on the Rise.” n.d. <https://www.spslandforces.com/features/?id=259&h=Strengthening-Strategic-Ties-India-Australia-Defence-Relations-on-the-Rise#:~:text=Crucially%2C%20India%20and%20Australia%20are,actions%20in%20the%20Indo%2DPacific>.

²⁴ Siddiqui, Huma . 2020. “India and Japan Cement Defence Ties! Ink Landmark ACSA Pact, India to Get Access to Djibouti in Africa.” *Financial Express*. September 10, 2020. <https://www.financialexpress.com/business/defence-india-and-japan-cement-defence-ties-ink-landmark-acsa-pact-india-to-get-access-to-djibouti-in-africa-2079896/>.

²⁵ PRactice, Abhishek. 2024. “India, US to Finalise INR 34,500 Crore Deal for MQ-9B Drones - IndBiz | Economic Diplomacy Division.” *IndBiz | Economic Diplomacy Division*. October 18, 2024. <https://indbiz.gov.in/india-us-to-finalise-inr-34500-crore-deal-for-mq-9b-drones/>.

²⁶ MP-IDSA. (2025, March 7). *India–US jet engine deal: a major milestone - MP-IDSA*.

<https://idsa.in/publisher/comments/india-us-jet-engine-deal-a-major-milestone#:~:text=In%20June%202023%2C%20India%20and%20the%20US,strengthening%20defense%20cooperation%20between%20the%20two%20countries>.

²⁷ Chahal, Husanjot , Ngor Luong, Sara Abdulla, and Margarita Konaev. 2022. “QUAD AI.” *Georgetown.edu. georgetown* . May 2022. <https://cset.georgetown.edu/wp-content/uploads/Quad-AI.pdf>.

²⁸ *Time to reinvigorate BIMSTEC*. (n.d.). <https://www.cescube.com/vp-time-to-reinvigorate-bimstec>

- ²⁹ Banerjee, Sreeparna. 2025. "From Charter to Action: BIMSTEC's Security Turn." Orfonline.Org. April 19, 2025. <https://www.orfonline.org/expert-speak/from-charter-to-action-bimstec-s-security-turn#:~:text=The%20region's%20ability%20to%20counter,Bengal%20region%20will%20be%20crucial.>
- ³⁰ National Disaster Response Force. 2017. "BIMSTEC DISASTER MANAGEMENT EXERCISE -2017: CONCLUDES 13.10.2017new_blinking." Ndrf.gov..In. National Disaster Response Force. October 13, 2017. https://ndrf.gov.in/en/pressrelease/bimstec-disaster-management-exercise-2017-concludes-13102017new_blinking#:~:text=2017:%20CONCLUDES%2013.10.-,2017new_blinking,augment%20disaster%20response%20and%20coordination..
- ³¹ BIMSTEC. 2025. "Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation Press Release BIMSTEC Reaffirms Regional Disaster Preparedness at 4th Disaster Management Exercise (DMEx) 16 July 2025: BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) Conducted the 4th BIMSTEC Disaster Management Exercise (DMEx) in Virtual Mode." https://bimstec.org/images/content_page_pdf/1752727295_Press%20Release_16072025.pdf.
- ³² IPDForum. 2018. "BIMSTEC Nations Conduct First Military Exercise." Indo-Pacific Defence FORUM. October 18, 2018. <https://ipdefenceforum.com/2018/10/bimstec-nations-conduct-first-military-exercise/>.
- ³³ _____. 2025b. "Joint Declaration on the Establishment of India-Thailand Strategic Partnership." Pib.gov.in. April 4, 2025. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2118985@=3&lang=2>.
- ³⁴ *Prime Minister participates in the 6th BIMSTEC Summit, Thailand.* (n.d.). <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2118696@=3&lang=2>
- ³⁵ UNODC. n.d. "UNODC and BIMSTEC Sign Memorandum of Understanding for a Safer Bay of Bengal." United Nations : Office on Drugs and Crime. Accessed December 3, 2025. <https://www.unodc.org/unodc/en/news/2025/April/unodc-and-bimstec-sign-memorandum-of-understanding-for-a-safer-bay-of-bengal.html>.
- ³⁶ *21st SCO Summit – Everything you need to know for UPSC.* (n.d.). <https://iasedge.in/21st-sco-summit-everything-you-need-to-know-for-upsc/>
- ³⁷ Wani, Ayjaz. 2025. "India's Unaddressed Concerns From the SCO-RATS Summit." Orfonline.Org. January 4, 2025. <https://www.orfonline.org/expert-speak/indias-unaddressed-concerns-from-the-sco-rats-summit#:~:text=Published%20on%20May%2026%2C%202022&text=India%20has%20assumed%20the%20chairmanship,from%20the%20Afghanistan%E2%80%93Pakistan%20region>
- ³⁸ "Closing Ceremony Exercise SCO Peace Mission 2018." n.d. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1544387@=3&lang=2#:~:text=by%20PIB%20Delhi->

,The%20SCO%20Peace%20Mission%20Exercise%202018%20culminated%20on%2029%20August,training%20focused%20on%20combating%20terrorism.

³⁹ Jiayao, L. (n.d.). *SCO “Peace Mission 2021” counter-terrorism drill concludes in Russia -*

Ministry of National Defense.

http://eng.mod.gov.cn/xb/News_213114/TopStories/4895535_6.html

⁴⁰ “Exercise INDRA 2025: India-Russia’s 15-Day Effort to Bolster Ties; Joint Military Drills Start in Rajasthan.” n.d. RNA – Research, News & Analysis.

<https://rnamedia.in/army/exercise-indra-2025-india-russia-joint-military-drills-rajasthan-mutual-cooperation/9290#:~:text=Indra%202025:%20What%20does%20the,operational%20tactics%20and%20building%20interoperability.>

⁴¹ “INDIAN ARMY CONTINGENT DEPARTS FOR INDIA- KYRGYZSTAN JOINT SPECIAL FORCES EXERCISE KHANJAR-XII.” n.d.

<https://www.pib.gov.in/PressReleaseDetailm.aspx?PRID=2109604@=3&lang=2#:~:text=The%2012th%20edition%20of,friendship%20between%20the%20two%20nations.>

⁴² “Agreement of SCO on Conducting Joint Military Exercises.” n.d. [https://cis-](https://cis-legislation.com/document.fwx?rgn=22049#:~:text=The%20concepts%20used%20in%20this,forming%20of%20the%20sending%20party;)

[legislation.com/document.fwx?rgn=22049#:~:text=The%20concepts%20used%20in%20this,forming%20of%20the%20sending%20party;](https://cis-legislation.com/document.fwx?rgn=22049#:~:text=The%20concepts%20used%20in%20this,forming%20of%20the%20sending%20party;)

⁴³ Ramachandran, Sudha. “China and Pakistan Mull a Beijing-Led Alternative to SAARC.”

The Diplomat.com, The Diplomat, 2 July 2025, [thediplomat.com/2025/07/china-and-](https://thediplomat.com/2025/07/china-and-pakistan-mull-a-beijing-led-alternative-to-saarc/)

[pakistan-mull-a-beijing-led-alternative-to-saarc/.](https://thediplomat.com/2025/07/china-and-pakistan-mull-a-beijing-led-alternative-to-saarc/)

⁴⁴ DD NEWS. 2025. “INS Sharda Arrives at Maafilaafushi, Maldives for Joint Disaster Relief Exercise.” [Ddnews.gov.in](https://ddnews.gov.in/en/ins-sharda-arrives-at-maafilaafushi-maldives-for-joint-disaster-relief-exercise/). May 5, 2025.

[https://ddnews.gov.in/en/ins-sharda-arrives-at-maafilaafushi-maldives-for-joint-disaster-relief-exercise/.](https://ddnews.gov.in/en/ins-sharda-arrives-at-maafilaafushi-maldives-for-joint-disaster-relief-exercise/)

⁴⁵ <https://www.facebook.com/ar5184>. 2025. “India–Bhutan: Defence Infrastructure and Training Cooperation.” IMPRI Impact and Policy Research Institute. December 4, 2025.

[https://www.impriindia.com/insights/policy-update/india-bhutan-defence/.](https://www.impriindia.com/insights/policy-update/india-bhutan-defence/)

⁴⁶ Philip, S. A., & Philip, S. A. (2026, April 14). *Saudi Arabia invokes defence pact with*

Pakistan amid West Asia conflict. What it entails. ThePrint.

[https://theprint.in/defence/saudi-arabia-invokes-defence-pact-with-pakistan-amid-](https://theprint.in/defence/saudi-arabia-invokes-defence-pact-with-pakistan-amid-west-asia-conflict-what-it-entails/2904323/)

[west-asia-conflict-what-it-entails/2904323/](https://theprint.in/defence/saudi-arabia-invokes-defence-pact-with-pakistan-amid-west-asia-conflict-what-it-entails/2904323/)

⁴⁷ Riham. (2022, July 14). The I2U2 Summit: The UAE joins India, Israel, and the US. *Al Bawaba*. <https://www.albawaba.com/business/i2u2-summit-uae-joins-india-israel-and-us-1483838>

⁴⁸ Aniruddh. 2024. "Gaganyaan Gives a Boost to India-Russia Space Partnership - IndBiz | Economic Diplomacy Division." IndBiz | Economic Diplomacy Division. January 16, 2024. <https://indbiz.gov.in/gaganyaan-gives-a-boost-to-india-russia-space-partnership/#:~:text=Most%20recently%2C%20the%20Indo%2DRussian,19th%20Bilateral%20Summit%20in%202018.>

⁴⁹ FP News Desk. 2025. "PM Modi Hails 'Time-tested' India–Russia Friendship as He Hosts President Putin for Dinner." *Firstpost*, December 4, 2025. <https://www.firstpost.com/world/vladimir-putin-india-visit-live-updates-india-russia-annual-summit-2025-bilateral-talks-trade-deals-defence-russian-oil-liveblog-13956468.html>.

⁵⁰ Jayakumar, P B, and P B Jayakumar. 2025. "Putin's Visit to Boost Make in India Defence Production; Discussions on to Make Air Defence Systems and Next-gen Fighter Aircraft in India." *Fortune India*, December 3, 2025. <https://www.fortuneindia.com/amp/story/business-news/putins-visit-to-boost-make-in-india-defence-production-discussions-on-to-make-air-defence-systems-and-next-gen-fighter-aircraft-in-india/128511>

⁵¹ Bailey, C. (2024, December 18). India orders additional twelve locally-built Su-30MKIs. *AGN*. <https://aerospaceglobalnews.com/news/india-orders-additional-twelve-locally-built-su-30mkis/>

⁵² "About JV." n.d. <https://www.brahmos.com/about-jv>.

⁵³ "DRDO Developed Indigenous Fuel for BrahMos RAMJET Engine." 2024. Indian Defence Analysis. January 22, 2024. <https://indiandefenceanalysis.wordpress.com/2024/01/22/drdo-developed-indigenous-fuel-for-brahmos-ramjet-engine/#:~:text=No%20comments-DRDO%20Developed%20indigenous%20fuel%20For%20BrahMos%20RAMJET%20engine,BrahMos%20%E2%80%93%20Brahmastra%20of%20India.>

⁵⁴ PIB. 2016. "India and the United States Sign the Logistics Exchange Memorandum of Agreement (LEMOA)." Pib.gov.in. August 30, 2016. <https://archive.pib.gov.in/newsite/PrintRelease.aspx?relid=149322>.

⁵⁵ "Indo-US Pact on Communication Compatibility and Security Memorandum Agreement (COMCASA)." n.d. https://www.spsnavalforces.com/story/?id=523#:~:text=The%20COMCASA%20Pact%20is%20an%20advanced%20and,to%20India%20*%20Strengthens%20India-US%20military%20ties.

⁵⁶ Garg, Rachit. 2022. "All You Need to Know About the BECA Agreement - iPleaders." iPleaders. February 5, 2022. <https://blog.ipleaders.in/all-you-need-to-know-about-the-beca-agreement/#:~:text=The%20Basic%20Exchange%20and%20Cooperation%20Agreement%2C%20or%20BECA%2C%20will%20provide,India%20forming%20an%20alliance%20structure.>

⁵⁷ RAJA, A., VISHNU DAYAL RAM, JAGDAMBIKA PAL, GOVERNMENT OF INDIA, MINISTRY OF DEFENCE, DEPARTMENT OF DEFENCE, and AJAY BHATT. 2022. "DEFENCE CO-OPERATION BETWEEN INDIA AND USA." *LOK SABHA*, February. https://sansad.in/getFile/loksabhaquestions/annex/178/AU553.pdf?source=pqals#:~:text=US%20companies%20are%20prohibited%20by,****.

⁵⁸ Bhandari, K. (2024, September 6). *India Signs a Security of Supply Arrangement (SOSA) with the United States: What Can We Expect?* Carnegie Endowment for International Peace. <https://carnegieendowment.org/posts/2024/09/india-signs-a-security-of-supply-arrangement-sosa-with-the-united-states-what-can-we-expect>

⁵⁹ Singh, Rahul. 2025. "HAL Inks \$1-billion Fighter Engine Deal With GE | India News." *Hindustan Times*, November 8, 2025. <https://www.hindustantimes.com/india-news/hal-inks-1-billion-fighter-engine-deal-with-ge-101762541303367.html>.

⁶⁰ TOI Business Desk. 2025. "\$4 Billion P-8I Naval Aircraft Defence Deal: US Team May Come to India to Negotiate Sale; Talks Amid Fresh Trade Deal Push." *The Times of India*, September 12, 2025. <https://timesofindia.indiatimes.com/business/india-business/4-billion-p-8i-naval-aircraft-deal-us-team-may-come-to-india-to-negotiate-sale-talks-amid-fresh-trade-deal-push/articleshow/123827185.cms>.

⁶¹ "Horizon 2047: 25th Anniversary of the India-France Strategic Partnership, Towards a Century of India-France Relations." n.d. Ministry of External Affairs, Government of India. <https://www.mea.gov.in/bilateral-documents.htm?dtl/36806/Horizon+2047+25th+Anniversary+of+the+IndiaFrance+Strategic+Partnership+Towards+A+Century+of+IndiaFrance+Relations#:~:text=Bilateral/Multilateral%20Documents-.Horizon%202047:%2025th%20Anniversary%20of%20the%20India%2DFrance%20Strategi,c%20Partnership,they%20have%20done%20since%201998>.

⁶² Ministry of Commerce & Industry, Govt. of India. (2025). *India-France economic and commercial relations*. https://www.eoiparis.gov.in/content/India-France-Comprehensive-Economic-and-Commercial-Brief_1.pdf

⁶³ Dayal, Prabhu. "Rafale, AI and beyond — Macron's Visit Elevates Indo-French Ties to Special Global Strategic Partnership." *Www.ndtvprofit.com*, NDTV Profit, 21 Feb. 2026, www.ndtvprofit.com/economy/rafale-ai-and-beyond-macrons-visit-elevates-indo-french-ties-to-special-global-strategic-partnership-11117667. Accessed 3 May 2026.

⁶⁴ India Today. 2016. "India, France Ink Rafale Deal for 36 Fighter Jets Worth Rs 58,000 Crore." September 23, 2016. <https://www.indiatoday.in/india/story/rafale-fighter-jet-deal-modi-govt-france-medium-fighter-beyond-visual-range-missile-mig-cabinet-committee-on-security-342702-2016-09-23>.

⁶⁵ "Inter-Governmental Agreement Inked With France for 26 Rafale-Marine Aircraft for Indian Navy." n.d. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2124851@=3&lang=2>.

⁶⁶ *Distinguished lectures details*. (n.d.). Ministry of External Affairs, Government of India.

<https://www.mea.gov.in/distinguished-lectures-detail.htm?505>

⁶⁷ Vietnam+. 2022. "Vietnam a Premier Partner in Indian Technical-economic Programme: Indian Ambassador." *Vietnam+ (VietnamPlus)*, November 17, 2022. <https://en.vietnamplus.vn/vietnam-a-premier-partner-in-indian-technical-economic-programme-indian-ambassador-post237496.vnp>.

⁶⁸ Open Search Repository. n.d. "India's Security Partnership with Singapore." Anu.edu.au. Accessed December 5, 2025. <https://openresearch-repository.anu.edu.au/server/api/core/bitstreams/d61f5bfb-797f-4ff7-9c82-8e13cf551245/content>.

⁶⁹ Jaishankar, S., Embassy of the Republic of the Philippines, Ignacio, J. F., Marcos, F.,

Margherita, P., Lazaro, Ma. T. P., Manalo, E. A., Teodoro, G., Ano, E. M., Uy, I. J.,

Herbosa, T., Bautista, J. J., Mison, S., Rai, N., Singh, R. R., Locsin, S., Duterte, R.,

Kovind, S. R. N., Binay, J. C., . . . Arroyo, G. M. (2025). *Brief on India-Philippines*

bilateral relations. [https://www.mea.gov.in/Portal/ForeignRelation/India-Philippines-](https://www.mea.gov.in/Portal/ForeignRelation/India-Philippines-2025.pdf)

[2025.pdf](https://www.mea.gov.in/Portal/ForeignRelation/India-Philippines-2025.pdf)

⁷⁰ Reuters Staff. 2025. "Philippines to Receive Second Batch of BrahMos Missile System from India." *Reuters*, April 23, 2025. <https://www.reuters.com/business/aerospace-defence/philippines-receive-second-batch-brahmos-missile-system-india-2025-04-23/>.

⁷¹ RA Editorial Desk, and RA Editorial Desk. 2025. "India, Malaysia to Expand Bilateral Defence Ties, Exchange ToR for Setting up Sukhoi Forum." *Raksha-Anirveda.com*. February 20, 2025. <https://raksha-anirveda.com/india-malaysia-to-expand-bilateral-defence-ties-exchange-tor-for-setting-up-sukhoi-forum/>.

⁷² Icwa. (n.d.). *India reiterates its role in the Indian Ocean Region: deepening partnerships*

and elevating regional cooperation - Indian Council of World Affairs (Government of

India).

https://www.icwa.in/show_content.php?lang=1&level=3&ls_id=12852&lid=7850

⁷³ Ibid.

⁷⁴ ———. 2025c. “AFRICA INDIA KEY MARITIME ENGAGEMENT (AIKEYME) 2025 INAUGURATION.” Pib.gov.in. April 13, 2025.
<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2121521@=3&lang=2>.

⁷⁵ ———. 2025b. “Africa’s Blue Economy: The \$405 Billion Opportunity Hiding in Plain Sight.” Medium. Included VC. August 28, 2025. <https://medium.com/@ckibuna/africas-blue-economy-the-405-billion-opportunity-hiding-in-plain-sight-74b2720041ec>.

⁷⁶ India News Network. 2025. “INS Talwar Arrives in South Africa for Multinational Maritime Exercise IBSAMAR VIII.” Indianewsnetwork.com. IndiaNewsNetwork. July 18, 2025.
<https://www.indianewsnetwork.com/en/20241010/ins-talwar-arrives-in-south-africa-for-multinational-maritime-exercise-ibsamar-viii>.

⁷⁷ Yadav, Rao Narender. 2025. “Modi’s Diwali Aboard INS Vikrant: India’s Defence Aspirations.” The Secretariat. The Secretariat. October 22, 2025.
<https://thesecretariat.in/article/india-s-defence-diplomacy-in-africa>.

⁷⁸ Admin. (2026, February 15). *FRAGMENTATION AND NETWORKED SECURITY IN WEST ASIA — INDIA, THE UAE, AND EMERGING DEFENCE ALIGNMENTS*.

National Maritime Foundation. <https://maritimeindia.org/fragmentation-and-networked-security-in-west-asia-india-the-uae-and-emerging-defence-alignments/>

⁷⁹ Desk, RNA. 2025. “India, Oman Deepen Defence Ties with Push on Logistics Complex, Shipbuilding, Joint Training.” RNA – Research, News & Analysis. November 25, 2025.
<https://rnamedia.in/defence-industry/india-oman-deepen-defence-ties-with-push-on-logistics-complex-shipbuilding-joint-training/11002>.

⁸⁰ <https://www.facebook.com/ar5184>. 2024. “A Milestone in India’s West Asia Diplomacy: The India-GCC Strategic Dialogue, September 2024 - IMPRI Impact and Policy Research Institute.” IMPRI Impact and Policy Research Institute. September 19, 2024.
<https://www.impriindia.com/insights/india-gcc-strategic-dialogue-2024/>.

⁸¹ *India and Argentina Strengthen Cooperation in Lithium Exploration and Mining with a MoU*. (n.d.).

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2104761@=3&lang=2>

⁸² India's World. (2025, July 31). *India, Brazil hold 8th Joint Defence Committee Meeting in Brasilia* | India’s World. India'S World. <https://indiasworld.in/current-affair/india-brazil-hold-8th-joint-defence-committee-meeting-in-brasil>

⁸³ Ahmad, Talmiz. 2024. “By The Numbers | Indian Ocean Region: Vital Hub for Global Commerce, With Strategic Chokepoints and Vast Oil Reserves.” Frontline. March 15, 2024.
<https://frontline.thehindu.com/world-affairs/indian-ocean-region-by-the-numbers-vital-hub-for-global-commerce-strategic-chokepoints-vast-oil-reserves/article67891133.ece>.

-
- ⁸⁴ “China Faces Barriers in the Indian Ocean.” 2025. Hudson Institute. October 7, 2025. <https://www.hudson.org/foreign-policy/china-faces-barriers-in-the-indian-ocean>.
- ⁸⁵ “Raksha Mantri Inaugurates Information Fusion Centre – Indian Ocean Region (IFC-IOR).” n.d. <https://www.pib.gov.in/newsite/PrintRelease.aspx?relid=186757#:~:text=The%20Indian%20Ocean%20Region%20is,consumption%20passes%20through%20the%20IOR>.
- ⁸⁶ Business Today. 2025. “Strait of Hormuz Tension Spikes: How Much Does India Rely on It, and Where Else Can It Turn?” Business Today, June 23, 2025. <https://www.businesstoday.in/latest/economy/story/strait-of-hormuz-tension-spikes-how-much-does-india-rely-on-it-and-where-else-can-it-turn-481461-2025-06-23>.
- ⁸⁷ Saha, Subrata. n.d. “NATIONAL CENTRE FOR POLAR AND OCEAN RESEARCH (NCPOR), GOA.” <https://ncpor.res.in/pages/researchview/7#:~:text=India%2C%20a%20traditionally%20maritime%20country,of%20the%20EEZ%20of%20India>.
- ⁸⁸ “Trilateral Joint Coast Guard Exercises – DOSTI XI.” n.d. Ministry of External Affairs, Government of India. <https://www.mea.gov.in/press-releases.htm?dtl/19436/Trilateral+Joint+#:~:text=The%20bi%2Dannual%20India%2DMaldives,from%20the%20Sri%20Lankan%20Navy>.
- ⁸⁹ Agarwala, Captain (Dr) Nitin , Dr Ram Erez, and Suriya Narayanan. 2021. “ENHANCING MARITIME DOMAIN AWARENESS in the INDO-PACIFIC and the EASTERN MEDITERRANEAN REGIONS: INDIAN and ISRAELI PERSPECTIVE.” Maritimeindia.org. August 2, 2021. <https://maritimeindia.org/enhancing-maritime-domain-awareness-in-the-indo-pacific-and-the-eastern-mediterranean-regions-indian-and-israeli-perspective/>.
- ⁹⁰ Ibid.
- ⁹¹ Mukherji, Biman, and Biman Mukherji. 2025. “India Eyes ‘Strategic Foothold’ in Indo-Pacific With Stake in Colombo Dockyard.” South China Morning Post, July 3, 2025. <https://www.scmp.com/week-asia/economics/article/3316792/india-eyes-strategic-foothold-indo-pacific-stake-colombo-dockyard>.
- ⁹² India’s Maritime Engagement. 2022. “India’s Maritime Engagement in the Indo-Pacific.” Briefing Paper. India’s Maritime Engagement in the Indo-Pacific. https://cuts-global.org/pdf/briefing_paper-india-maritime-engagement-in-the-indo-pacific.pdf.
- ⁹³ Ibid
- ⁹⁴ Bose, Sohini. 2024. “India and a Stable Indo-Pacific: Managing Maritime Security Challenges in the Bay of Bengal.” Orfonline.Org. March 27, 2024. <https://www.orfonline.org/research/india-and-a-stable-indo-pacific-managing-maritime-security-challenges-in-the-bay-of-bengal>.
- ⁹⁵ _____. n.d. “India’s Outreach to Indian Ocean Islands Amidst Dynamic Strategic Environment - Indian Council of World Affairs (Government of India).” https://icwa.in/show_content.php?lang=1&level=3&ls_id=11196&lid=4740#:~:text=%5Bii%5D%20After%20his%20re%2D,in%20pursuance%20of%20this%20initiative.

- ⁹⁶ ———. 2025b. “Maldives and Strategic Competition in the Indian Ocean.” July 17, 2025. <https://indopacificinsight.com/2025/07/17/maldives-and-strategic-competition-in-the-indian-ocean/>.
- ⁹⁷ “Prime Minister Meets the President of Maldives.” n.d. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2148655>.
- ⁹⁸ “Exercise Ekatha 2023 Strengthens Maldives-India Partnership for Greater Maritime Security.” n.d. India News Network. <https://www.indianewsnetwork.com/20230704/exercise-ekatha-2023-strengthens-maldives-india-partnership-for-greater-maritime-security#:~:text=Contact%20Us-,Exercise%20Ekatha%202023%20strengthens%20Maldives%20India%20partnership%20for%20greater%20maritime,Commandant%20Brigadier%20General%20Ibrahim%20Hilmy>.
- ⁹⁹ “———.” n.d. Ministry of External Affairs, Government of India. <https://www.mea.gov.in/press-releases.htm?dtl/19436/Trilateral+Joint+#:~:text=Media%20Center,Pollution%20Response%20and%20Boarding%20Operations>.
- ¹⁰⁰ GOI, Ministry of External Affairs. 2023. “7th Deputy NSA Meeting of the Colombo Security Conclave.” Mea.gov.in. July 12, 2023. <https://www.mea.gov.in/press-releases.htm?dtl/36783/7th+Deputy+NSA+Meeting+of+the+Colombo+Security+Conclave>.
- ¹⁰¹ Ibid.
- ¹⁰² “Geo-strategic Boost: Indian Navy Deploys P 8I Aircraft to Seychelles for Surveillance.” 2018. The Economic Times. July 12, 2018. <https://economictimes.indiatimes.com/news/defence/geo-strategic-boost-indian-navy-deploys-p-8i-aircraft-to-seychelles-for-surveillance/articleshow/51495899.cms?from=mdr>.
- ¹⁰³ Agarwala, Captain (Dr) Nitin , Dr Ram Erez, and Suriya Narayanan. 2021. “ENHANCING MARITIME DOMAIN AWARENESS in the INDO-PACIFIC and the EASTERN MEDITERRANEAN REGIONS: INDIAN and ISRAELI PERSPECTIVE.” Maritimeindia.org. August 2, 2021. <https://maritimeindia.org/enhancing-maritime-domain-awareness-in-the-indo-pacific-and-the-eastern-mediterranean-regions-indian-and-israeli-perspective/>.
- ¹⁰⁴ “India Signs Crucial Deal With Seychelles on Indo-Pacific Cooperation - ICSF.” n.d. ICSF. <https://icsf.net/newss/india-signs-crucial-deal-with-seychelles-on-indo-pacific-cooperation/>.
- ¹⁰⁵ Ahmed, Sarafaraj. 2025. “India’s Backing of Mauritius’ Sovereignty Over Chagos: Strategic Implications for the Indo-Pacific.” The Geopolitics. March 17, 2025. <https://thegeopolitics.com/indias-backing-of-mauritius-sovereignty-over-chagos-strategic-implications-for-the-indo-pacific/>.
- ¹⁰⁶ “India-Mauritius Joint Vision for an Enhanced Strategic Partnership.” n.d. <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2110718>.
- ¹⁰⁷ Agarwala, Captain (Dr) Nitin , Dr Ram Erez, and Suriya Narayanan. 2021. “ENHANCING MARITIME DOMAIN AWARENESS in the INDO-PACIFIC and the EASTERN MEDITERRANEAN REGIONS: INDIAN and ISRAELI PERSPECTIVE.” Maritimeindia.org. August 2, 2021. <https://maritimeindia.org/enhancing-maritime-domain-awareness-in-the-indo-pacific-and-the-eastern-mediterranean-regions-indian-and-israeli-perspective/>.

¹⁰⁸ _____. n.d. “India, Kenya, and Security in the Western Indian Ocean’ - Indian Council of World Affairs (Government of India).”
https://www.icwa.in/show_content.php?lang=1&level=3&ls_id=10317&lid=6580.

¹⁰⁹ Ibid.

¹¹⁰ “India- Kenya Joint Vision Statement: Opportunities Ahead – CENJOWS.” 2024. January 29, 2024. <https://cenjows.in/india-kenya-joint-vision-statement-opportunities-ahead/#:~:text=The%20event%20occurred%20in%20May,besides%20promoting%20Indian%20defence%20industries>.

¹¹¹ Ibid.

¹¹² “INDIAN NAVY’S MAIDEN INITIATIVES OF INDIAN OCEAN SHIP SAGAR (IOS SAGAR) AND AFRICA INDIA KEY MARITIME ENGAGEMENT (AIKEYME).” n.d.
<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2114491#:~:text=A%20large%20scale%20multilateral%20maritime,Arms%20firing%20and%20Helicopter%20Operations>.

¹¹³ “India Looks to the World Stage for Its Port Industry.” n.d.
<https://www.sagarsandesh.in/news/37770#:~:text=Tanzania's%20principal%20ports%20are%20situated,also%20revitalizes%20maritime%20passenger%20connection>.

¹¹⁴ “Joint Statement During the State Visit of the President of Tanzania to India and Launch of Strategic Partnership Between India and Tanzania (8-10 October 2023).” n.d. Ministry of External Affairs, Government of India. https://www.mea.gov.in/bilateral-documents.htm?dtl/37174/Joint_Statement_during_the_State_Visit_of_the_President_of_Tanzania_to_India_and_launch_of_Strategic_Partnership_between_India_and_Tanzania_810.

¹¹⁵ Ibid.

¹¹⁶ Ibid.

¹¹⁷ “INDIAN NAVY’S MAIDEN INITIATIVES OF INDIAN OCEAN SHIP SAGAR (IOS SAGAR) AND AFRICA INDIA KEY MARITIME ENGAGEMENT (AIKEYME).” n.d.
<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2114491#:~:text=A%20large%20scale%20multilateral%20maritime,Arms%20firing%20and%20Helicopter%20Operations>.

¹¹⁸ “HANDING OVER TWO INTERCEPTORS TO MOZAMBIQUE AT NACALA.” n.d.
<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2072061#:~:text=Manhica%2C%20near%20Maputo.-,On%2Djob%20training%20on%20operating%20and%20maintaining%20the%20Indian%2Dgifted,Prime%20Minister%20Shri%20Narendra%20Modi>.

¹¹⁹ Singh, Arushi. 2023. “India-Africa Maritime Security and Strategic Cooperation in the Twenty-First Century.” India–Africa Maritime Security and Strategic Cooperation in the Twenty-First Century 17 (3). https://www.idsa.in/wp-content/uploads/2024/04/jds-17-3_Arushi-Singh.pdf.

¹²⁰ MP-IDSA. 2025a. “The Multi-Faceted Trajectory of the India–Oman Strategic Partnership - MP-IDSA.” February 27, 2025. <https://www.idsa.in/publisher/backgrounder/the-multi-faceted-trajectory-of-the-india-oman-strategic-partnership>.

¹²¹ Ibid.

¹²² Ibid.

¹²³ Ibid.

¹²⁴ Government of India. 2023. "India - Yemen Bilateral Relations." https://www.mea.gov.in/Portal/ForeignRelation/Yemen_Website.pdf.

¹²⁵ Ibid.

¹²⁶ Athreya, Rishi and Asia Centre Bangalore. 2021. "India- Iran Relations: Implications for Maritime Security in the Western Indian Ocean." Journal-article. Indic Journal of International Law. Vol. 60. https://indusresearch.in/wp-content/uploads/2022/09/India-Iran-Relations_-_Implications-for-Maritime-Security-in-the-Western-Indian-Ocean.pdf.

¹²⁷ "_____" n.d.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2060748#:~:text=Posted%20On:%2001%20OCT%202024,MILAN%2024%20in%20Feb%2024.>

¹²⁸ Siddiqui, Huma. 2024. "India and Indonesia: Deepening Maritime Ties in a Transforming Indo-Pacific." Financial Express, December 14, 2024. <https://www.financialexpress.com/business/defence-india-and-indonesia-deepening-maritime-ties-in-a-transforming-indo-pacific-3691732/>.

¹²⁹ Agarwala, Captain (Dr) Nitin , Dr Ram Erez, and Suriya Narayanan. 2021. "ENHANCING MARITIME DOMAIN AWARENESS in the INDO-PACIFIC and the EASTERN MEDITERRANEAN REGIONS: INDIAN and ISRAELI PERSPECTIVE." Maritimeindia.org. August 2, 2021. <https://maritimeindia.org/enhancing-maritime-domain-awareness-in-the-indo-pacific-and-the-eastern-mediterranean-regions-indian-and-israeli-perspective/>.

¹³⁰ Siddiqui, Huma. 2024. "India and Indonesia: Deepening Maritime Ties in a Transforming Indo-Pacific." Financial Express, December 14, 2024. <https://www.financialexpress.com/business/defence-india-and-indonesia-deepening-maritime-ties-in-a-transforming-indo-pacific-3691732/>.

¹³¹ MP-IDSA. 2025a. "India–Indonesia Defence Ties: Potential Areas of Cooperation - MP-IDSA." March 6, 2025. <https://www.idsa.in/publisher/comments/india-indonesia-defence-ties-potential-areas-of-cooperation#:~:text=In%20the%20maritime%20domain%2C%20New.and%20illegal%20fishing%2C%20among%20others.>

¹³² Ibid.

¹³³ Ibid.

¹³⁴ Ibid.

¹³⁵ Chaudhuri, Pramit Pal. 2018. "Indonesia Gives India Access to Strategic Port of Sabang." Hindustan Times. May 17, 2018. <https://www.hindustantimes.com/india-news/indonesia-gives-india-access-to-strategic-port-of-sabang/story-KPXWKy7PGAHFUi0jCL26yJ.html>.

¹³⁶ "Joint Declaration on a Shared Vision for Maritime Cooperation in the Indo-Pacific Between the Republic of India and the Government of Australia." n.d. Ministry of External Affairs, Government of India. https://www.mea.gov.in/bilateral-documents.htm?dtl/32730/Joint_Declaration_on_a_Shared_Vision_for_Maritime_Cooperation_in_the_IndoPacific_Between_the_Republic_of_India_and_the_Government_of_Australia#:~:text=Recognising%20that%20India%20and%20Australia,agencies%20and%20coast%20guard%20cooperation.

¹³⁷ Icwa. n.d. "Defence and Security Cooperation: Key Pillars of the India-Australia Partnership - Indian Council of World Affairs (Government of India)."

https://icwa.in/show_content.php?lang=1&level=3&ls_id=11166&lid=5099#:~:text=In%20April%202021%2C%20Australia%20announced,islands%20in%20the%20South%20Pacific.&text=A%20case%20in%20point%20is,between%20Solomon%20Islands%20and%20China.

¹³⁸ Ibid.

¹³⁹ corporateName= Department of Foreign Affairs and Trade. n.d. "Australia-India Indo-Pacific Oceans Initiative Partnership: Grant Round 2."

[https://india.highcommission.gov.au/ndli/AIIP1.html#:~:text=In%202020%2D21%2C%20the%20AIIP, and%20Guidelines%20\(CGRGs\)1.](https://india.highcommission.gov.au/ndli/AIIP1.html#:~:text=In%202020%2D21%2C%20the%20AIIP, and%20Guidelines%20(CGRGs)1.)

¹⁴⁰ Tnn. 2024. "Digantara, Oz Consortium Strike Deal on Space Domain Awareness, In-orbit Servicing Mission." The Times of India, May 1, 2024.

[https://timesofindia.indiatimes.com/science/digantara-oz-consortium-strike-deal-on-space-domain-awareness-in-orbit-servicing-mission/articleshow/109751592.cms.](https://timesofindia.indiatimes.com/science/digantara-oz-consortium-strike-deal-on-space-domain-awareness-in-orbit-servicing-mission/articleshow/109751592.cms)

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