

Growth of Naval Power in the Indian Ocean

Dynamics and Transformation

Dr. W. Lawrence Prabhakar

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Chapter I

India's Maritime Past: A Civilizational Legacy

This study examines the geographical, social, cultural linkages between the Indian Ocean, the adjoining regions and the Pacific; the historical contexts of the growth of Indian naval power and the patterns of its rise and fall; the spectrum of traditional and non-traditional threats that affect and impact the Indian Ocean region; the state of power play between the naval powers in the Indian Ocean region; the impact of the growth of naval powers in the Indian Ocean region; the recommended approaches to address strategic competition; and an assessment of future maritime and naval imperatives for India.

Introduction

Asia and the Indian Ocean are gaining prominence in the era of post-globalization and economic growth. The rise of India has witnessed the growing importance of the Indian Ocean, given the rising indices of India's maritime trade and growing naval power. India is the pivot state of the Indian Ocean region. Its historical-civilizational past, its geo-strategic location, its past maritime economic trade linkages with West Asia and East Asia have resulted in the prominence of the Indian Ocean as an ancient civilizational legacy. Ancient history features the Sri Vijaya and Chola kingdoms expanding their maritime presence and domain in the Indian Ocean, and spreading across it to Southeast Asia. Naval power was the mainstay of the region for several centuries

even as Indian and Chinese naval presence and maritime voyages left a strong cultural and civilizational impact of the Indian and Chinese civilizations in Southeast and East Asia and into South Asia, West Asia and East Africa.

Colonialism and the European mercantile expansion elevated the Indian Ocean to its maritime importance even as trade and naval fleets followed into the region. It was, typically, the beginnings of the Operational Manoeuvre from the Sea (OMFTS) that saw the continental wars in the region ably supported and influenced by sea power. South Asia and Southeast Asia were the two theatres that saw the colonial naval power of the Portuguese, Dutch, French, and the British— influencing their mercantile trade on the one hand and supporting the expansion of colonial interests in the littoral and hinterland regions of these geographical regions.

Naval Power and maritime trade determined the destinies of East and Southern Africa that hemmed the Indian Ocean, West Asia and Persian Gulf, South Asia and Southeast Asia for nearly three centuries.

The Indian Ocean region was also the theatre of major allied and Japanese naval expeditions—resulting in attacks and counterattacks—during World War II. The Indian Ocean was also a decisive theatre for the post-war maritime balance of power for colonial powers like Britain and France as also for rising superpowers such as the USA and the Soviet Union.

The Indian Ocean Region has emerged as a vital maritime domain in the beginning of the twenty first century, witnessing the redrawing of the maritime and economic cartography of security and economics of the Asia-Pacific region and the Eurasian hinterland. Thus, it is a blend of an ancient and immense civilizational past, current economic and cultural importance, and contemporary geopolitical, geo-economic and geo-strategic issues pivot the region, making it an important maritime hub that determines Asia's geopolitics.

The Indian Ocean has emerged as an important maritime theatre between the Euro-Atlantic and the Pacific-Asia regions. The dawn of the twenty-first century saw the rise of Asia in global geopolitics that came along with the emergence of the Indian Ocean as a pivotal maritime basin of trade, interdependence, and economic growth. The emergence of Indian Ocean as a pivotal maritime theatre was in fact a reflection and re-visitation of the ancient period of Asian economic growth, maritime trade and dominance.¹

The Indian Ocean featured significant economic trade, maritime voyages and mercantile driven-imperial expansion of China and India using the Indian Ocean spreading their influence and domain to East Africa, and India to Southeast Asia. The Chola maritime expeditions led imperial conquests of Southeast Asia were through the Indian Ocean. China's emergence and resurgence as a maritime trading state was between the ninth and the fourteenth centuries, it expanded its domain and influence into the Indian Ocean from the initial confines of the South China Sea, with trading settlements in Southeast Asia².

China was part of the Mongol Empire by the thirteenth century, with Kublai Khan attempting to use sea power to expand his empire to Japan and Southeast Asia. China began its Indian Ocean tryst with the Ming Dynasty. The Ming Navy Admiral Zheng He led convoys of the Chinese fleet of 62 treasure ships that consisted of 28,000 men with 500 armed troops to trade China's silk and porcelain in exchange for spices and tropical wood. China's naval expeditions gained significance with several voyages in the region. It also emerged as an important naval diplomacy strategy as well as mercantile statecraft of eliciting political loyalty, enrolling more states as tributaries to the Chinese Emperor³.

India's engagement with the Indian Ocean started during the Chola King Rajendra Choladeva I. The Cholas began their external maritime expansion from 1025 AD to Southeast Asia with the objective to conduct probes against the Srivijaya Kingdom. The Chola naval expeditions was

an expeditionary force of naval infantry on troop carriers that were to project power and combat the Sri Vijaya Kingdom's various obstacles that were interrupting trade between the Chola Kingdom and China. The Chola naval taskforces had conducted frequent voyages in the the Bay of Bengal and the Southern Indian Ocean, given their maritime domain awareness of these voyages, the Cholas were able to develop a sound understanding of the meteorology, winds and the navigational pathways of the fifty-six stars seen in the lower latitudes of the northern hemisphere for the east-west voyages in the Indian Ocean.⁴

Thus the Indian Ocean's ancient geopolitics was predominantly one of economic interdependence shorn of bipolar rivalry. The Indian Ocean was largely dominated by India and China that were more benign in their trading practices, and saw the incremental expansion of overseas trading settlements. The Indian-Pacific Oceans featured the India-China maritime corridor of trade of the Indian and Chinese maritime shipping and fleets with littoral access points of Southeast Asia and East Africa.

Yet another distinct feature of the ancient geopolitics of the Indian Ocean has been that the competitive geopolitics of India and China. India and China moved beyond the realm of trade and voyages in the Indian Ocean region to the setting up of overseas trading posts in Southeast Asia and East Africa. However there has been little evidence to point out that the economic superpowers of the ancient and Middle Ages resorted to military competition and aggressive wars against each other. But the fact remains that the two maritime powers did engage in wars and military expeditions using naval infantry against their respective local rivals for securing sea-lanes for trade.

The colonial phase of Indian Ocean geopolitics saw three significant trends. The first was the littoral dominance from the sea. Naval power and technology was pivotal and was the fulcrum of the European imperial-colonial expansion of the region. It featured a very aggressive

mercantile geo-economics of the European colonial companies vying with each other for economic and trading advantages indulging in the ruthless competition for sea-control and littoral dominance.

The second trend was the decline and retreat of the Asian economies—and along with Asian naval power—shrinking back into the hinterland from the littoral, with the slow relegation of maritime trade and naval power. This catalysed the aggressive European imperial-colonial colonization of the littorals by the European navies and the emergence of the colonial-imperial empires. The colonial-imperial system in Asia and the Indian Ocean saw the infusion of new technology, new markets, and the new wave of industrial-technological revolution. The social and political consequences of this industrial revolution triggered a new wave of nationalism and the steady rise of the littoral ports of the Indian Ocean into pre-eminent centres of modernization, and technological hubs of development. This commenced the post-colonial wave of economic and social development by radiating its influence into the hinterland⁵.

The third trend was that colonial geopolitics infused new maritime delimitations suiting imperial power expediency complicating the natural maritime boundaries of the littoral states of the Indian Ocean. Colonial geopolitics of the Indian Ocean also saw the aggressive wars for resources; the Indian Ocean became a theatre of naval deployments of the British, French, Dutch, and the Portuguese. Great power rivalries and wars of the early twentieth century saw the deployment of the Russian Second Pacific Squadron for the Russo-Japanese War of 1905. During the Second World War the Japanese Imperial Navy was deployed into the Indian Ocean against the Royal Navy.

Colonial geopolitics in the Indian Ocean displayed the aggressive quest for access of island territories as naval bases and coaling stations for the extended deployments of the colonial-imperial power navies in the region. Naval basing and access of the Royal Navy and the French

Navy included Mauritius, Seychelles, Reunion, Gan and Socotra islands. Besides, the littoral ports of Mombasa, Simonstown, Calcutta, Madras, Bombay, Trincomalee, Karachi, etc. The Second World War saw several naval engagements in the region for the contestation for sea control in the Indian Ocean. Naval access and basing were crucial anchors for imperial-colonial navies even as they battled for naval supremacy and littoral dominance. The British Royal Navy was the hegemonic navy with its uninterrupted 'Command of the Sea' until 1945.

The post-imperial colonial period saw the emergence of the Indian Ocean as an ocean of competitive rivalries between the superpowers with the exit of British naval power and forward presence and the "East of Suez+ exit in 1972. The United States Navy and the Soviet Navy stepped into the Indian Ocean with sea-control strategies to secure access to influence and control the geopolitics and geo-strategy of the Eurasian landmass. The naval strategy of the United States and NATO was for the containment of the Soviet Union and China through carrier based naval air power and nuclear attack and fleet ballistic submarines. The United States was supported by the United Kingdom and France who began to deploy their naval platforms to support the US naval and air operations in the region.

This study examines the geographical, social, and cultural linkages of the Indian Ocean with the adjoining regions as well as the Pacific Ocean; the historical contexts of the growth of naval power and the patterns of their rise and fall; the spectrum of traditional and non-traditional threats that affect and impact the Indian Ocean region; the state of power play between the naval powers in the Indian Ocean region; the impact of the growth of naval powers in the Indian Ocean region; recommended approaches for addressing strategic competition; and an assessment of the future maritime and naval imperatives for India.

NOTES

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5. *Op.cit Can Indian Ocean be a Zone of Peace p.39

Chapter II

The Historical, Social, Cultural and Economic Aspects of the Indian Ocean Region

The Indian Ocean Region features a total area of 73,556,000 square miles that link with the Atlantic and Pacific Oceans. The Indian Ocean is the third largest ocean in the world, occupying approximately 20 percent of the Earth's sea surface. It is bounded to the north by the rimland of the Indian subcontinent; to the west and northwest; by the east African coast and Arabian Peninsula, respectively; to the east the rimlands of Thailand, the Malay Peninsula, Indonesia, and Australia; and to the south by the oceanic margin with the Southern Ocean at latitude 60°S. The western extreme of the Indian Ocean is delineated from the Atlantic Ocean in two places—at the Suez Canal, and at the meridian running south from Cape Agulhas in South Africa. At its easternmost extremity, the Indian Ocean touches the Pacific Ocean at the 147°E meridian, running south from South East Cape on Tasmania to 60°S latitude. The northernmost extent of the Indian Ocean lies in the Iranian port of Bandar Imam Khomeini in the Persian Gulf.¹

In addition, the Indian Ocean encompasses several regional seas and sea areas: the Andaman Sea, the Arabian Sea, the Bay of Bengal, the Great Australian Bight, the Gulf of Aden, the Gulf of Mannar, the Gulf of Oman, the Laccadive Sea, the Mozambique Channel, the Persian Gulf, and the Red Sea. In its geographical contexts, the Indian Ocean is linked with the Pacific Ocean through the South China Sea and

East China Sea. This brings into context the Indo-Pacific geographical prism that ties the Asian landmass on both oceanic rimlands².

In the historical context, the Indian Ocean was the oceanic medium through which the values of Hinduism and Buddhism spread through to Southeast Asia and East Asia, it also brought in Christianity and Islam into the littoral regions of the Indian Ocean region and East Pacific. The Indian Ocean's cultural past is authenticated by numerous and diverse excavated materials ranging from Kushan coins, Roman pottery fragments, Chinese ceramic shards and even the depiction of African giraffe in the timeless sculptures of India³. Buddhist and Jain texts, Greek writings, Huen Tsang's accounts, and Arab writers' accounts authenticate that the Indian Ocean was the maritime basin for propagating ancient culture and ties⁴. The Western and Eastern coasts of India had active maritime trade, pilgrimages, and cross-cultural and cross-economic trade with various regions of the Indian Ocean region.

The Chola Kingdoms had competing historical, economic and strategic stakes in Southeast Asia with the Buddhist Sri Vijaya Kingdom of Sumatra. They had well established empire outposts in Southeast Asia. The Chola Empire was the rising power that had extensive trade contacts with China and East Asia, transiting through the Straits of Malacca into the South China Sea. The Sri Vijaya Kingdom saw the expanding Chola maritime power as a threat, and began to check maritime trade with the Far East. This ensued in confrontation with the Cholas. In 1025 A.D. the Chola King, Rajendra Choladeva I, dispatched an expeditionary naval task force to Southeast Asia to conduct naval operations against the Srivijaya Kingdom.⁵

Rajendra Choladeva I was an ambitious Tamil King who had grand naval ambitions of controlling the seas beyond the Bay of Bengal. It resulted in maritime trade between South India and Southeast Asia. It also saw the ascendancy of Chola maritime expansion and supremacy

that had been consolidated initially through a series of land expeditions in India in the north, deep into the Indo-Gangetic plains, and also a westward expansion defeating the Chera kings on the Malabar Coast. The Chola armies went on the offensive into the Deccan Plateau, defeating the Chalukyas and capturing their critical strongholds. In the west, the Cholas expanded their maritime supremacy towards the Arabian Sea, occupying the Lakshadweep-Maldives archipelagos; striding the ancient Indian Ocean trade routes, and made several successive southward surges into Ceylon, attacking various Sinhala kingdoms.

Besides the Indian civilizational empires, the Chinese began to dominate Southeast Asia in the Ming Dynasty period. This culminated in the Ming Navy Admiral Zheng He's Ming Navy, leading seven expeditions (from 1405 to 1433) which visited Southeast Asia, India, the Persian Gulf and East Africa, engaging in maritime diplomacy and starting trading hubs in the Indian Ocean region.

China also has a rich legacy of maritime links with the region. The Ming Dynasty's Admiral Zheng He conducted the famous seven voyages in the region, spreading to East Africa which he referred to as the "West Oceans." The convoy in the voyages typically featured over 300 vessels, including a number of "treasure ships" each over 400 feet long, accompanied by a legion of supply ships, water tankers, warships with canons, and multi-oared patrol boats; the total personnel on the fleet numbered over 28,000⁶. The 1405 maiden voyage of the fleet consisted of 317 ships, and over 27,000 men. The fleet assembled at Liujiagang, a port on the Yangzi River near Suzhou. The ships carried a large cargo to be traded abroad, including thousands of bolts of fine silks, embroideries, cotton cloth, gold, iron, salt, hemp, tea, wine, oil, porcelain, and candles. The fleet sailed along China's southeast coast to Champa, Java, Malacca, Semudera, and Lambri in northern Sumatra, and then crossed the Indian Ocean to the major trading ports on the southwest coast of India, including Ceylon, Quilon, and Calicut.⁷

The ancient period of Asian maritime power of China and India reigned until the 16th century; subsequently it began fading even as internal turbulence and declining maritime trade resulted in the two countries concentrating on the hinterland. It also saw a period of political transition in the two countries that resulted in a series of wars. This period also coincided with the rise of the European colonial powers with strong maritime interests which were spurred by geographical discoveries and the zest for trade with the affluent Asia as important priorities.

Dominant Powers in the Indian Ocean Region: A Historical Perspective

The Indian Ocean Region has seen the rise and fall of maritime powers. Maritime and naval power in the Indian Ocean has been conditioned by several factors which resulted in the rise and decline of various empires and their navies. Either naval power was built on maritime trade and the conquest of adjoining regions and empires or on the basis of trade voyages and the long endurance of warships and merchant marines on the high seas.

The ancient naval powers in the Indian Ocean region can be divided as either Littoral Powers or Extra-regional powers. The history of the ancient period shows that naval powers in the Indian subcontinent—like the Cholas, Chalukyas, Mughals and the Marathas—held sway in the Indian Ocean region through maritime trade with the adjoining regions of Southeast Asia and West Asia. On the other hand, the Chinese being an extra-regional power commenced their maritime presence in the Indian Ocean region in the 15th Century when the Ming Navy began its maritime trade voyages in the region under Admiral Zheng He. Apart from China, the extra-regional navies belonged mainly to the European colonial powers. Those that held sway in the region were the Portuguese in the 16th century, followed by the Dutch in the 17th

Century, and subsequently the French and the British followed in the 18th century onwards.

The naval strategy Littoral navies had two orientations: the Mughals had a littoral view of naval defence that could be known as the “Command of the Coast”. The Mughals focused on points instead of lines, controlling ports, fortresses, and other strategic locations instead of patrolling the open sea-lanes. Their operations involved close cooperation between ships, land forces and fortifications.⁸ The Cholas and Marathas had a command of the sea orientation. The medieval period saw the domination of the South Indian naval powers, namely the Chola Empire based in Tamil Nadu and the Buddhist kingdom of Sri Vijaya from Sumatra. The medieval Asian states achieved the command of the ocean. Their naval fleets controlled commerce and suppressed piracy throughout South and Southeast Asia, raiding and trading from India and Sri Lanka to as far away as Arabia and Vietnam.

The coming of the colonial navies saw dense maritime shipping from Europe to the Indian Ocean and to South and Southeast Asia. With the constant flow of trade, the navies of the colonial powers of Portugal, Holland, France and Britain dominated the high seas in the Indian Ocean and the littoral regions.

Portuguese Maritime Power in the Indian Ocean

The Indian Ocean region did not have a single regional power dominating the sea-lanes prior to the arrival of European colonial power. In 1498, the Portuguese arrived with Vasco da Gama and with him commenced the Portuguese maritime domination in the region. His ships monopolized the sea lanes that connected the ports of the Indian sub-continent with the Middle East and East Africa on the West, and the ports of South East Asia and China to the East.⁹ However, there were periods when the coastal rulers of the Malabar

Coast and Southern India were powerful local rulers who demanded toll taxes from passing ships; there were also Arab rulers who attempted to control the shipping lanes through the Red Sea.

The Portuguese dominated the sea lanes to the Indian Ocean and to India. They were also able to use their naval power and their troops to seize the profitable trading ports of East Africa, the Persian Gulf, as well as the Saurashtra, Konkan and Malabar regions in India. The Portuguese soon established a chain of fortified coastal settlements, backed by regular naval patrols and deploying superior arms and firepower. They gradually eliminated their rivals, enforcing a semi-monopoly in the spice trade by the middle of the 16th century.¹⁰ The Portuguese monopoly attempt was challenged by the maritime powers of North Sumatra based in Aceh, as well as by the Omanis, and by Gujarati traders. The Portuguese had extended their domain well into the Far East, thus straining their domain in the Indian Ocean region.

The Portuguese regarded the entire Indian Ocean region and India as their theatre. Their imperial strategist, Alfonso de Albuquerque, defined the Indian Ocean as a *mare clausum* (closed sea) and deployed their naval power to interdict Arab and other European colonial powers from confiscating any ship without Portuguese permits. By the mid-16th century¹¹, the Portuguese controlled the ports of Malacca (access to Pacific Ocean), Mozambique (access to Atlantic and trading to Indian Oceans), and Hormuz (controlling access to the Persian Gulf). Perhaps, only the British and present day US naval access and domination has achieved this feat. The Portuguese had strategic posts in Goa in India, Colombo in Sri Lanka and Mombasa in East Africa, thus establishing Portuguese economic and strategic domination of the Indian Ocean for a considerable period of time.

Portuguese domination was gradually probed and challenged initially by the Dutch, and later by the English. The Dutch and the British began to establish their forts in the littorals long the chief

trading routes, emerging as alternatives to Portuguese trading posts.¹² The Dutch took the lead and were more successful than their British and French colonial rivals. The Dutch succeeded in establishing their pre-eminence in the East Indies (Indonesia), out-maneuvring the Portuguese. Subsequently, the Dutch also were successful in dominating shipping out of Gujarat and Sind. This commenced the period of Dutch domination on most Indian shippers. The Dutch continued to collect the taxes already levied by the Portuguese.

Dutch Maritime Power in the Indian Ocean

The United Dutch East India Company was formed in 1602 with stock capital of approximately seven million florins. The Royal Dutch Government granted it the monopoly charter. The company emerged as the greatest commercial company in the world. Until 1648, the company operated as the right arm of the Royal Dutch State in its wars against the Iberian powers of Spain and Portugal. The Royal Dutch Navy began its voyages and expeditions into the Indian Ocean region and, by 1605, the Company had factories in Java, Sumatra, Borneo, the Spice Islands, the Malay Peninsula, and the mainland of India.¹³

The United Dutch East India Company was able to win its first sovereign rights on Amboina in 1605, and on Ternate two years later. The Dutch East India Company was equipped with large capital ships from five hundred to a thousand tons burden, designed and equipped with endurance for naval warfare as well as trade.¹⁴ The Royal Dutch Naval power was able to take on the combined naval forces of the Spanish at Manila and the Portuguese at Malacca and Goa, resulting in the gradual elimination of the Iberian colonial powers.

By 1604, the English East India Company was rising, and was consolidating its gains against the Portuguese and the French; they began threatening the Dutch East India Company. Though the English were limited in naval power at that time when compared with

the Dutch, they had aligned with the Dutch to fight the Spanish and Portuguese naval powers in the region. With English contending the French in South Asia, the Dutch went on to neutralize Portuguese colonial and economic power in the Asiatic mainland. In 1633, the Dutch East India Company fleets were cruising in the Strait of Malacca annually, attacking Portuguese shareholdings and ruining Malacca as a transit market; eventually began to establish settlements, factories and fortresses along the coast line of the subcontinent of India from Surat to Bengal¹⁵. With the Dutch settling in the East Indies (Indonesia), the French entered the Indian Ocean with their maritime and commercial interests. The French were mainly in rivalry with the English as they carried over their global rivalries in Europe, America and Canada into the Indian Ocean and India.

French Maritime Power in the Indian Ocean

The formation of La Compagnie d'Inde (French East India Company) was in 1642. They began with a charter to trade obtained from the French Government, and established the trading post of Fort Dauphin on the island of Madagascar. This was the strategic midway point between France, Africa, and was astride the lucrative Asian trade route. The establishment of La Compagnie des Indes Orientales in 1664 was by Jean-Baptiste Colbert was envisaged in the context of the rapidly emerging importance of colonies such as the Ile de France (Mauritius) and the Ile de Bourbon (Reunion). French outposts in the Indian Ocean were strategic in location and they were also trading outposts.¹⁶ This resulted in their direct competition with the Dutch and the English for the South Asian trade.

Initially the French had difficulty of establishing a base in Madagascar. This resulted in their moving away from the East Africa coast to further afield in India. At this time, India and the littoral waters of the Arabian Sea and Bay of Bengal were then the main objects of high

intensity European colonial ambition and competition. The French initially settled in Surat in 1666, and eventually moved to Pondicherry in 1673. The French were the last European power to compete for Indian trade on the subcontinent, and were in direct competition with the English and the Dutch who were already established there. French colonial Governors Benoit Dumas and Jean Francois Dupleix in the 1730s to 1750s, enlarged and stabilized the French Company. They developed the largely successful policy of forming subsidiary alliances with local rulers to gain commercial advantages, and sought corporate control of Indian territory. The French East India Company was liquidated in 1770, with the transfer of all assets and trading stations to the French government who took direct control of colonial affairs under the Marine Ministry.¹⁷

With the domination of the high seas by Britain's Royal Navy, the French maritime presence was constrained. The outcomes of the Seven Years War resulted in the retaining of French overseas colonial possessions in Djibouti, Reunion, and in India in Mahe, Pondicherry, and Karaikal. However, the French had been able to sustain their Indian Ocean presence even after the British exited in the East of Suez exit in 1972, through the Cold War, and to the present day with bases in the French overseas territories of La Reunion and Mayotte in the Southwest Indian Ocean. There is strong French military focus on the Northwest Indian Ocean, with two inter-services bases located in Djibouti and in the United Arab Emirates (UAE) respectively. Besides, the French do have their extensive Southern and Antarctic territories, featuring a vast maritime expanse that is hardly inhabited, but which is of important economic, scientific and strategic significance. Thus, French overseas territories account for a vast Exclusive Economic Zone (EEZ) of more than 2.6 million square kilometres, requiring the maintenance of two military bases: one in La Reunion and the other in Mayotte, with about 1,900 troops and a few maritime standing forces.¹⁸ The French are a very credible power in the Indian Ocean region, along with the United Kingdom, besides the huge presence of the United States.

British Maritime Power and Command of the Seas in the Indian Ocean

The British Royal Navy was able to seize the naval dominance in the Indian Ocean in the early 1800s in the Indian Ocean, and established an enduring “Command of the Seas” staving off Dutch and French colonial maritime ambitions. Over the next 150 years, Britain maintained control of India and the Indian Ocean, containing Russian advances to the South and Russian attempts to gain access to the warm waters of the Indian Ocean. In the twentieth century, with oil emerging in the Middle East, British strategic interests were to secure oil as well as the sea lanes of trade to Britain. British strategy was to seize access points in Malacca, Singapore, and Aden as they were the choke points of trade and international shipping lanes.¹⁹ Subsequently, the British established bases in Bombay, Trincomalee, Mombasa and Mauritius, and eventually controlled Diego Garcia and the Chagos archipelago. With this strategic enclosure, the British Royal Navy monopolized control of the Indian Ocean, extending their dominion and suzerainty over Southern Asia, East Africa, West Asia, Persian Gulf, Southeast Asia and Australia, with strategic pivotal control of the Indian Ocean.

The British Strategy in the Indian Ocean was to evolve ‘joint operations’ of the Royal Navy along with the British Indian Army in expeditionary mode of control and operations throughout the region. With the total commitment of 70,000 British troops, backed by 150,000 Indian Army troops, the British deployed them throughout the region. Backed by the Royal Navy’s Indian Ocean fleet of 12 major warships, along with other auxiliaries and support ships, they conducted Major Operational Manoeuvres from the Sea (OMFTS). This is in comparison with their 43 warships in the Pacific.²⁰ British expeditionary deployments supported by the Royal Navy in the littoral regions of the Indian Ocean region, along with the Indian Army, saw action in various places: Persia/Iran (1856–57; 1914–1918, 1941–47);

Mesopotamia/Iraq (1914–18,1941–43); Egypt (1882,1940–43); Somaliland (1901–10); Kenya (1896–1900); Abyssinia/Ethiopia (1896, 1940–41); Uganda (1897–90); Tanganyika (1914–15); Burma (1885–87;1942–45); and China (1856–60,1900). Besides supporting these operations, the Royal Navy provided firepower and support in logistics.

During World War I, and later World War II, British control of the Indian Ocean was briefly challenged by the Germans and the Japanese by the dispatch of their capital battle ships into the theatre. But they were successfully repulsed by the Royal Navy. However, the onslaught of the Japanese Imperial Navy post-1941 seriously undermined the Royal Navy's deterrent and war fighting capabilities with the sinking of British warships as well as the loss of Singapore and parts of Southeast Asia to the Japanese. Similarly, Japanese land advances into Burma seriously threatened India on the Eastern sector, with British scrambling to protect the Andaman and Nicobar Islands archipelago from being overrun by the Japanese.

With the imperial overstretch in the post-war period and the decolonization that gathered momentum, the Royal Navy began its exit from the Indian Ocean to be quickly replaced by the US Navy. The British power transition in the Indian Ocean region was smooth as they created the Diego Garcia naval air support facility from the colonial administrations of Mauritius and Seychelles, who permitted the deportation of plantation workers and enabled the construction of naval and air support facilities on the island. The carving of the British Indian Ocean Territory (BIOT) saw the British Ministry of Defence stationing around 40 military personnel to ensure the territorial integrity and physical security of the islands. Even today, the Commander, British Forces, and the personnel provide policing (as Royal Overseas Police Officers), and carry out customs and immigration duty roles, as well as support the BIOT patrol vessel in enforcing the marine protected area. This is complimented by 2,500 US military personnel

and contractors stationed on the US base in Diego Garcia. It remains a vital part of the US-UK defence relationship. The Exchanges of Notes between the UK and the US governments govern the use of the military base under which British acquiescence is required for its use in any US combat operations.²²

Currently, the Royal Navy regularly contributes to two multinational coalitions: the Combined Task Force 150 and the Combined Task Force 151. The Combined Task Force 150 is focused on maritime security and counter-terrorism; the Combined Task Force 151 is charged with anti-piracy missions. The Royal Navy maintains a warship in Combined Task Force 150.

The USA preferred that British naval and air presence in the Indian Ocean should remain in the region as long as possible. However, by 1965, the British began to transition its operational commitments in West Asia-Persian Gulf, East Africa and Southeast Asia to the USA, while it retained its interests in Southeast Asia with the Five Powers Defence Agreement (FPDA) that it created in 1971 with Australia, Singapore, Malaysia and New Zealand. The FPDA is a strong commitment that brings in British naval operations into the region,²³ and still continues as Britain has now renewed its interest in the Indian Ocean region.

The Naval Hegemony of the USA in the Indian Ocean

The USA followed Britain with the power transition in 1965 and its consolidation in the 1970s. The USA began to consolidate its geo-economic interests of oil and trade with the West Asia-Persian Gulf region, and also began to build its Cold War regional alliances architecture with the states in the region. These included the Central Treaty Organization (CENTO) featuring Turkey, Iran, Iraq and Pakistan; the Southeast Asia Treaty Organization (SEATO) featuring Thailand, Pakistan and Australia; as well as the Australia, New Zealand and United States (ANZUS) Organization. These alliances eventually

eroded, and were replaced by bilateral strategic ties that the USA forged with these countries in the “Hub and Spokes” arrangement.²⁴ In the 1980s, the USA established the US CENTCOM as an independent unified command of the geographical area of the Middle East Persian Gulf throughout the Western Indian Ocean, including the US Fifth Fleet based in Bahrain. The USA created the greatest bases network throughout the Persian Gulf in Iraq, Kuwait, Saudi Arabia, Bahrain, Oman, UAE, Qatar and Djibouti. In South Asia, it has bases in Pakistan and Afghanistan; and in Indian Ocean, in the islands of Diego Garcia and Seychelles; in Southeast Asia, they feature in Thailand, Singapore and Australia.

The US naval and air support facility and logistics base in Diego Garcia features a most intensive and substantial deployment. During the Cold War, it was the US Strategic Air Command’s hub for deploying nuclear armed B-52 Strategic bombers against the Soviet Union. The enormous basing potential in terms of its natural harbour and anchorage facilities allows it to bring in US naval carrier task forces within its vicinity, and has been staging area for US aerial attacks against the Taliban in Afghanistan 2001 onwards, as well as in the Iraq theatre of operations 2003 onwards. Diego Garcia has a very significant basing and logistical array of operational capabilities, with semi-permanent anchorage of US warships and fast attack nuclear submarines, a fleet of logistical ships to deliver pre-positioned equipment sufficient for the US Army and Marine Corps brigades. Diego Garcia supports the US Conventional Global Prompt Strike and a regional hub for Signals Intelligence (SIGINT), and Electronic Intelligence (ELINT).²⁵

Soviet Naval “Symbolic” Presence in the Indian Ocean

The Soviet Union followed the United States with its naval presence in the region. The Soviet Pacific Fleet did attempt to gain access and basing in Gan Island, as also in Socotra. However, the Pacific fleet deployments saw the height of deployment of several warships

during the 1971 India-Pakistan War that was meant to counter the US deployment of the Task Force 74 of the nuclear Carrier Battle Group of the *USS Enterprise*.

Soviet naval deployments were also on all time high during the 1973 October Yom Kippur War between Israel and Egypt. Soviet deployments featured the usual destroyers, frigates, destroyer escorts, amphibious ships, accompanied with fleet oilers. In the aftermath of the India-Pakistan War of 1971, Soviet minesweepers cleared the Chittagong port in 1972-74 and subsequently moved to the Gulf of Gubal in the Red Sea for mine clearing operations.²⁶

Soviet naval deployments were mainly purposed to monitor and conduct the surveillance of US led naval operations with CENTO countries.

The Soviet Navy used the Indian Ocean as a “Southern Sea route” for the inter-fleet transfer of warships: the warships and submarines operating in the Western Fleet would transfer to the Pacific Fleet. This transfer also resulted in the “Show the Flag” exercises and port calls with several countries in the Indian Ocean region. Berbera in Somalia and Aden in Yemen were frequent ports where Soviet warships had port calls for logistics and supplies. At the height of the Cold War, Soviet naval patrols were in the Straits of Hormuz, with frequent visits to the Iraqi port of Basra; they also had visits to Umm Qasr port which the Soviets helped build for Iraq.²⁷

The Soviet Navy also maintained ‘floating bases’ fleets of auxiliary ships to support warships at sea. Besides, they developed and deployed ‘ocean anchorages’ closer to Aden and Socotra and implanted mooring buoys near the Chagos archipelago. Soviet Naval Diplomacy was symbolic when compared to the colossal substantive US naval deployment. Soviet Naval diplomacy aimed at political-diplomatic influence, military aid, economic aid and technical assistance, humanitarian rescue and relief.²⁸

In the post-Cold War period, Russia had renewed interest in the Indian Ocean region. Many Russian naval bases have closed since the early 1990s because of a lack of stable financing. Since July 2012, there has been speculation about new Russian overseas naval bases, the first, since the collapse of the Soviet Union. Further, as part of its emerging role in the Indian Ocean, Russian warships are operating in co-operation with those of other states around the Seychelles and in the Arabian Sea to counter the threat of piracy. Russian activities in the Indian Ocean have been exemplified by Moscow's participation in five combined exercises with India since 2003, known as the *Indra* Exercises with warships coming from the Pacific and Western Fleets arriving into the Indian Ocean.²⁹

China's Indian Ocean Forays: The Cold War Period

The China's People's Liberation Army-Navy (PLA-N) was the secondary service in the PLA during the Cold War. The PLA-N never ventured beyond its coastal waters. However, China did engage in naval diplomacy with South Asia and East Africa during the Cold War years by deploying warships and submarines. Often PLA-N warships visited Colombo and ports in Burma as a good will visits, and also engaged in benign naval exercises with Pakistan, Sri Lanka and Burma. China supplied fast attack naval craft of the Shanghai class to Pakistan and Sri Lanka, and engaged in deploying their Romeo class submarines in the Bay of Bengal. There was never a grandiose display of Chinese naval power as the PLA-N lacked capital warships capable of longer endurance and deployment.³⁰ China's limited naval capability was deployed nearer to home due to threats from the US Navy, the Soviet Navy, and the Japanese Maritime Self Defence Force, forcing it to focus on the 'First Island Chain' of operations.

China, however, maintained maritime trade and commerce with South Asia, trading with Pakistan, Bangladesh, Sri Lanka, and Burma.

The PLA-N's occasional deployment of warships was buttressed by auxiliaries and supply vessels. The elevation of the PLA-N as the senior service in the PLA (since 2003) as well as naval modernization resulted in the buildup of new classes of destroyers, frigates and submarines. Thus, the Cold War saw the miniscule Chinese naval footprint in the Indian Ocean limited to occasional warship visits to South Asian and East African ports. China focused mainly on supplying low technology naval patrol craft and naval missiles to its friendly states in South Asia.

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Chapter III

The Current Security Situation: Traditional and Non-traditional Threats in the Region

Having reviewed the evolution and history of littoral and extra-regional naval power and in the region, an analysis of the entire spectrum of current traditional and non-traditional security threats in the region now follows. Post-Cold War debates have been between the Traditionalist school and the Non-traditional security school. They differ somewhat over the nature, scope and range of the theory of the “new security challenges” associated with the scope of security and its implications for policy in the context of the national, regional, and global security policy.¹ The Traditionalist school asserts that the scope—and the referent frames of security—is solely restricted to state actor-based regional and global orders, and the primacy of inter-state security issues as the dominant factor. The Traditionalists assert that regional security complexes like the Indian Ocean could be better elucidated with the state-centric issues. The Non-traditional school, on the other hand, believe and affirm the concept and theoretical frame of ‘security’ as including the entire gamut of the social, civic, political, economic, environmental, and human dimensions of security—that is, with multiple referents besides the state.²

The spectrum of the Traditional security and the Non-traditional security debate is based on three overall trends: a) the emergence of globalised networks which have exponentially increased state

vulnerability to non-state actors and to a range of transnational threats; b) new technological developments in weaponry which have generated new threats, and have brought states closer together, integrating them regionally and globally; and c) globalised information networks which have contributed to increased demands for action, and have had an associated impact on international law. Consequently, the search for solutions to the new threats requires regional—and even global—mechanisms for cooperation and coordination.³ In the context of the Indian Ocean Region, the region is inherently insecure owing to its highly diverse sub-systems and the perennial proclivity to a series of crises that constantly affect the region. In terms of security and stability, the Indian Ocean region is unstable, and has often been referred as the “arc of crisis”. The high intensity of state competition, increasing incidence and assertion of non-state actors and their corrosive impact has aggravated the state, inter-state and regional concerns of insecurity.⁴ Traditional security threats and challenges as well as non-traditional threats and challenges in the Indian Ocean region are marked by an interplay of causes, factors and consequences. Thus, certain threats—like terrorism using the maritime medium with state support—could be classified as traditional security threats since they pose direct perils to the state and its armed forces.

Inter-state conflicts and naval competition

Inter-state conflicts in the Indian Ocean region have increased in their intensity, with several limited wars as well as short conflicts that have been going on for years.⁵ Conventional wars have become rare; but the provocations for conventional wars have come from Low Intensity Conflict triggers that have endangered the security and stability of the region. Pakistan’s provocative Kargil War in 1999 and the cross-border terrorist attacks that followed with the attack on India’s Parliament in December 2001 as well as the armed standoff between India and Pakistan that followed the attacks have been strong indicators that

inter-state wars and conflicts have not faded away, but have their causal triggers in Low Intensity Conflicts. Hence to categorize terrorism and its variants into nontraditional threats would not be adequate since asymmetric conflict has all the salience of the traditional security threats.

Secondly, inter-state conflicts have resulted in a perennial conventional arms buildup that has resulted in increasing militarization and high military expenditure. India, Pakistan, Iran and Israel are now Nuclear Weapon states, featuring high military expenditures for conventional arms procurement as well as expenditure for R&D for in nuclear weapons as well as ballistic and cruise missiles.

Thirdly, inter-state conflicts in the Indian Ocean region have a strong incidence of naval arms buildup in terms of attack submarines (conventional and nuclear in the case of India); naval anti-ship missiles, and land attack cruise missiles. Besides, surface warships of all categories have featured in the naval buildup. The India-Pakistan naval buildup has seen phenomenal growth. Pakistan has been heavily aided by China in terms of various classes of frigates and destroyers as well as naval craft. The Indian naval buildup has been impressive, with new aircraft carriers, guided missile destroyers, and stealth frigates. Air Independent Propulsion (AIP) submarines have also featured in its buildup. New Antisubmarine warfare aircraft of the Boeing P-8I Poseidon class and Unmanned Aerial Vehicles (UAVs) have featured in the Indian naval buildup.⁶

Fourthly, the new classes of assorted naval fixed and rotary aircraft that have entered the naval services of India, Pakistan, and China are impressive. MiG-29Ks, Kamov class rotary aircraft, and the ASW P8I Poseidon armed with Harpoon missiles are the state of the art.

Fifthly, the new classes of naval attack missiles of the anti-ship and land attack variants are being deployed by China, India, and Pakistan. These are in the supersonic to the hypersonic classes as for example,

Brahmos, DH-10, C-602/YJ-62, Kh-35 Uran, SM-39 Exocets, 3M54E Club, YJ-18, DF-21D, etc.

Thus, inter-state conflicts, conventional arms buildup, and the escalating nuclear arms race between India and Pakistan, abetted by China's strategic modernization, are catalyzing inter-state competitive rivalries at a very high pace in the Indian Ocean littorals

Maritime Asymmetric Threats

Maritime Asymmetric Threats reflect include traditional security threats although they also show the involvement of violent non-state actors such as terrorists, pirates and insurgents. The reason to classify them as traditional threats is that there is the direct engagement of the State's armed forces in combatting them, given their thorough military orientation in terms of training and tactics and their clear political and military objectives. The terrorists have used the maritime medium to attack land targets—as was amply demonstrated in the Mumbai attacks of 26/11 and the earlier bomb blasts of 1993. Of the three threats, terrorism using the maritime medium predominates as a traditional security threat, while the other two have lesser significance as a traditional threat. Three of the most successful acts of maritime terrorism have been conducted in the Indian Ocean Region. Three terrorist groups—the Al Qaeda, the Liberation Tigers of Tamil Elam (LTTE) and the Lashkar-e-Taiba (LeT)—have been most active. It should be noted that while the attacks conducted by these groups have ultimately failed, they gained tactical success. The LTTE's naval arm known as the Sea Tigers was thoroughly trained, and equipped with submersibles and ships that had logistical and operational capabilities which challenged and dented the Sri Lankan Navy. The use of the kamikaze style attacks destroyed many naval craft of the Sri Lankan navy.

Maritime Asymmetric threats emanating from terrorism supported by piracy and arms smuggling pose direct traditional threat to states.

This implies that navies in their traditional high seas roles have to adapt to contend asymmetric threats at sea and, with the aid of the Coast Guard, would have to adapt to combined operational doctrines and tactics to contend with these threats.

Maritime Asymmetric threats of terrorism and piracy would continue to grow since the operational capabilities of the terrorists have been increasing, and their exploitation of technological capabilities—like the Global Positioning System (GPS)—and improved high speed inflatable craft pose serious threats to the state. Such enhanced threats imply that the state has to respond with enhanced Maritime Domain Awareness and maritime intelligence that would coordinate land and sea assets with surveillance, identification, interdiction and elimination.

Failing/Failed States

Failing and failed states are also emerging as traditional security threats in the Indian Ocean region. Despite the enormous wealth and the human capital in the region, it is now marked by the rising prospect of states that have failing governance and frequently resort to the Praetorian custodianship of governments, given their inability to tackle a host of social, civic, political, sectarian, secessionist, and grave economic problems and challenges that wreck the governance of the states. Afghanistan (a hinterland state), Pakistan, Somalia, and Yemen in the Indian Ocean littoral are prominent countries that face and contend with these serious challenges and perils.⁷

Four serious challenges are faced by these states: a) they feature relatively larger populations that are underdeveloped, with low levels of literacy, low health and hygiene conditions, and low economic development and growth. Human security, human development, and human rights are non-existent in these countries, although they claim to have elected governments. The result is they encounter colossal problems

of religious sectarianism, ethnic conflict, poverty, deprivation—thus catalysing endemic civic and political conflicts with the state which is unable to effect proper governance; b) terrorism and radicalism has galvanized the prevalent situation, resulting in the aggravation of civil war conditions as evident in Pakistan, Yemen, Somalia and Afghanistan. These are aggravated by narcotics smuggling, human smuggling, and arms smuggling, all of which aid conflicts, involves heavy military intervention, thus resulting a perennial state of insurgency in these countries. The conflation of traditional security challenges and non-traditional causal factors intersect here to aggravate the situation in the respective countries; c) piracy, insurgency, terrorism, and protracted civil war results in the weakening of the fabric of governance, and the highly fractured social and political order jeopardizes any reasonable operations of governance; d) all these countries feature militaries and paramilitaries that have large repositories of conventional arms, small arms, and light weapons, thus providing for the perennial source of conflicts in their countries.

The Yemeni conflict, the Somali piracy situation (which of course has predominant environmental factors cited in the discourse of the conflict), the Afghan internal conflict with Pakistani interference—all have arms as the main catalyst in the conflict. Pakistan is a basket case of a failing state that has a heavily armed military capable of conventional war operations; it also has built a significant nuclear arsenal. The Pakistan Military is the first respondent in any case of the collapse of the government or of the political and civic order in the state. However, it is perilous to note that with the colossal amount of conventional and military power at its disposal, Pakistan has not been able to avert being a failing/failed state. The prospect of Pakistan as a failed state with nuclear weapons has enormous ramifications for India and the entire Indian Ocean region. Failing and Failed States have direct consequences in traditional threats that are contended by the states in the Indian Ocean region. The conflation of non-traditional causes and such consequences converging on traditional state-centric threats is a significant fact that cannot be ignored.

Proliferation of Nuclear weapons, Ballistic and Cruise Missiles

The proliferation of nuclear weapons as well as Ballistic and cruise missiles is a prominent traditional security challenge and threat that is now enveloping the region. India and Pakistan are the foremost Indian Ocean littoral states that are states with nuclear weapons. The interesting dimension is that both states are now developing the nuclear triad, and the preference is now more towards sea-based nuclear deterrence. India has deployed its fleet ballistic missile submarine the *INS Arihant*, and is now building a 4–6 boat squadron that would deploy Submarine Launched Ballistic Missiles. India's present K-15 SLBM is a short range SLBM, with a range of 800 KM. India is also developing the longer range K-5 5000 KM SLBM for its fleet ballistic missile submarine. India's Strategic Forces Command integrates and directs the operation of its strategic forces.⁸ In the interim, India has also been conducting a series of test firings of the Dhanush-class short-range ballistic missile from offshore patrol vessels. The Dhanush program could, perhaps, be a stopgap measure until the full Arihant class SSBN fleet comes into operation.

On the other hand, Pakistan is deploying low-yield nuclear weapons across a variety of naval platforms that would enable Islamabad to acquire escalation dominance and greater strategic depth, and also reduce the incentives for a pre-emptive strike on its nuclear assets.

Pakistan inaugurated its Naval Strategic Force Command headquarters in 2012, and has declared its intent to develop its own sea-based deterrent. Pakistan has preferred an unconventional naval nuclear force structure, strongly emphasizing dual-use platforms and strategic ambiguity. China is also likely to provide assistance to Pakistan to develop the Babur naval cruise missile to be adapted to its Agosta-90B class submarines, which are to be launched from its 533 mm tubes. Modifying the missile, interfacing with Chinese guidance, and integrating it with the submarine's fire control system is also a real

possibility.⁹ While Pakistan attempts to nuclearize its naval fleet, China may provide assistance to overcome its difficulties. However, Beijing would also be calculative and cautious not to provide all the assistance, given the potential future risks that could pose, and thus maintain, a distance from this enterprise.

China's deployment of its Fleet Ballistic Missile Submarines in the Sanya Naval Base in Hainan Island, and its deployment of nuclear fleet ballistic submarines of the Type-094 with the JL-2 SLBM could target the entire Indian homeland from the South China Sea, while its nuclear attack class submarines (with nuclear tipped land attack cruise missiles) deployment in the waters of Bay of Bengal and the Indian Ocean is very real.¹⁰ The PLA-Navy could also deploy its Type 093 attack submarines in the region, along with its C-802, 801 anti-ship cruise missiles and the DH-10, YJ-63 and Kh-55sm LACMs (Land Attack Cruise Missile) inventory in the Indian Ocean region.

Beijing is likely to have regular submarine deployments of its nuclear attack submarines and its conventional submarines (featuring land attack cruise missiles) into the Indian Ocean, the Bay of Bengal, and Arabian Sea. This could, perhaps, lead to the coordination of submarine operations with the Pakistan Navy. PLA-N submarines could also have port calls in Gwadar

Besides the state-centric development of nuclear capable naval ballistic and cruise missiles, the second trend of proliferation has been the sea-based transit of Weapons of Mass Destruction—particularly ballistic and cruise missiles—on merchant ships by North Korea in the 1990s. Although there has not been any recent news about such movements, the sea-transit of ballistic and cruise missiles indicates the trend of missile proliferation in the region.

The proliferation of nuclear weapons as well as ballistic and cruise missiles are indicative of the persistence of traditional state-centric conflicts, and the continuing relevance of the primacy of deterrence.

However, the lessons of the Cold War in terms of the US-Soviet style of deterrence, and the imperatives of strategic stability are yet to be imputed into the India-Pakistan-China nuclear deterrence order.

Non-traditional maritime security threats in the IOR

Non-traditional maritime security threats in the IOR have a wide ambit that range from various transnational crimes in the region, the causal factors and threats of piracy and terrorism, and various other challenges such as illicit trafficking of drugs and weapons, human trafficking, climate change, natural disasters, illegal migration, and food shortages. These challenges are primarily intra-state and trans-state in scope, and are non-military in nature. The causal factors and threats of terrorism in the maritime domain, and the exploitation of the maritime domain to conduct land attacks and piracy are both in the traditional category of threats as well as in the category of non-traditional threats. The non-traditional challenges are also transnational.¹¹ The nature and scope of the non-traditional challenges are not in the category of being preventive or mitigated; hence, the only redress is the coping mechanisms that require collective and cooperative regional and multilateral approaches to address them.

Non-traditional security challenges and threats could be divided as human-induced (such as Organized Crime, Piracy, Terrorism, Human trafficking, Narcotics trafficking, Small Arms and Light Weapons trafficking), or nature-induced (such as climate change) Piracy is defined as a low risk criminal activity having good returns. Piracy has been in the Indian Ocean from the beginning of the colonial period when the lucrative spice trade was plying between Asia and Europe. As the East India Companies of the Dutch and the British strengthened their naval presence in Southeast Asia and South Asia, the Royal Navy began to assert its command of the sea, and was able to control piracy to a greater extent. In the post-colonial period, the rising incidence of

piracy in the Indian Ocean region has been primarily due to poverty and stagnant economic growth.

In the Somali case, it has been endemic conflicts in the country, a collapsed state, economic stagnation, and climate factors like prolonged drought. All these turned the Somali fishermen into pirates. In Southeast Asia, primarily in Indonesia, the aftermath of the Asian Financial Crisis of 1997 resulted in abject poverty of many, and made for a strong pull factor for piracy, drawing more people into maritime crime due to falling wages, higher food prices, and job losses. Indonesia suffered in this economic crisis and it catalysed into in the increasing incidence of maritime piracy in the region.¹²

Piracy gained momentum by taking opportunities of maritime globalization into account—the phenomenal increase in maritime traffic of merchandise, raw materials, oil and natural gas shipping, and container traffic in the region. The maritime traffic transiting through congested and narrow chokepoints—such as the Straits of Malacca, the Strait of Bab el-Mandeb, the Hormuz Strait—created ideal locations of piracy in the region. The slow moving traffic in these maritime choke points (to ensure safety in traffic) resulted in the vulnerabilities of the shipping lanes to increasing piracy attacks and thus the nightmares for shipping.

Controlling piracy cannot be solely addressed at sea as long as the social and economic discontent, political chaos, mal-governance, institutional and structural deficits on land have not been addressed. However, the inevitability of the stunted social and economic development in various parts of the world, the collapse of governance, and the persistent challenges of the maritime commons have catalyzed piracy as the single dominant transnational threat. Therefore, maritime asymmetric threats could be better handled if the sources of the perils in the littorals are addressed viably.

India's approach to counter-piracy is presently in the realm of the operational deployment of either a destroyer or a frigate on constant

patrol stations. India has engaged in capacity building in the form of gifting naval vessels and naval aircraft, enabling smaller Indian Ocean island states (like Maldives, Mauritius and Seychelles) to boost their maritime and air surveillance capabilities. India has also dispatched its Navy and Coast Guard vessels and aircraft to patrol in Maldivian, Mauritius and Seychelles territorial waters.

The formation of the Combined Maritime Forces in the formations of Combined Task Force 150, 151 with US and NATO involvement and the EU Naval Task Force (EUNAVFOR) has enabled in the forging of maritime multilateralism in the region. The EU Naval Task Force has also been able to expand the out-of-area operations into the Indian Ocean region with the support of Japanese Maritime Self Defence Force, the Royal Australian Navy, and the Republic of Korean Navy. One of the clear benefits of the platforms of the EU Naval Task Force has been the interoperability exercises. The various bilateral exercises with the Indian Navy, Pakistani Navy, and the other littoral navies have been providing them with immense value addition in terms of maritime domain awareness, enhanced maritime surveillance, reconnaissance capabilities, and the greater resilience of operation in the warmer waters of the Indian Ocean-Arabian Sea.

Indian naval operations have been present in the Gulf of Aden since October 2008. It deployed a stealth frigate earlier, followed by a guided missile destroyer. They have assisted Indian-flagged merchant vessels, and Indian warships have also provided escort protection to ships of other countries. Indian naval escort operations have been thorough, with the physical escort of the vessels from the commencing point to the end of the Gulf of Aden. India is also evolving its own means on the SHADE (Shared Awareness and Deconfliction), although it is not part of the multinational Combined Task Force 150, 151. Indian operations and the seamless sharing of intelligence and surveillance have been robust. They have resulted in closer coordination between the Indian Navy and the NATO (Operation Ocean Shield), the European Union

(Operation Atalanta), Coalition Maritime Forces that are in operation in the region.

China has been deploying naval warships of its South China Sea Fleet in “out of area deployments in the Northern Arabian Sea and off the coast of Aden with rendezvous to Gwadar.

Maritime terrorism

Maritime terrorism has been on the rise in the Indian Ocean region, both in terms of terror attacks at sea as well as by using the maritime medium to launch terror attacks on land. The maritime threat picture shows an increase in the growing conflation between piracy and terrorism. Piracy could serve as leads to maritime terrorist attacks given the possibilities of shared information and domain awareness. While pirates are motivated for financial gains with little or no political and ideological motives, terrorists aim at the mass spectacular that signals the governments through violence at sea and targeting a variety of soft targets. Pirates and maritime terrorists’ could collaborate, and provide assistance to each other through money, arms and supplies. Terrorists lack the skills and experience needed to conduct maritime attacks; pirates could provide them with the required insight. Pirates and maritime terrorist groups do have common advantages as evident in the key vulnerabilities of inadequate coastal surveillance, lax port security, and the overwhelming dependence of trade on passage through chokepoints. In the Indian context, the attacks of Mumbai 26/11 have become a typology of state-sponsored mass spectacular terrorist attack, employing crafts of opportunity to hit soft land targets.¹³

There is increasing sophistication of maritime asymmetric threats in terms of the capabilities-operations of maritime asymmetric non-state actors. Their reliance on lethal light weapons and the use of GPS (Global Positioning System) devices for communication opens new templates in the asymmetric sophistication of their operations.

The attackers of the 26/11 Mumbai terror attacks skilfully exploited the spectrum of GPS communication for navigation, using crafts of opportunity (COOP) and effortlessly transported the entire contraband cargo of light weapons and explosives that sustained their operations for over five days in Mumbai. The real challenge in naval network-centric operations does not lie in the sophistication of the platforms or the sophistication of their networked systems, but in the ability to create and sustain a 24/7 Maritime Domain Awareness (MDA) that has a credible real-time intelligence feed of information surveillance and reconnaissance. In the opacity of the high seas and the highly congested littoral waters, sustaining a 24/7 scanning of the crafts of opportunity that surface with lethal maritime terrorist threats is a formidable task.

Since then, India has enhanced its coastal security through various measures. In the aftermath of the Mumbai attacks, India's overall responsibility has been tasked with the Indian Navy and assisted by the Coast Guard, with coordinated assistance from the state police, state and central agencies. It has also created four joint operations centres (JOCs) established at each of the three naval commands at Mumbai, Vishakhapatnam, and Kochi, and the integrated theatre command at Andaman and Nicobar Islands, based at Port Blair.¹⁴

Human trafficking

Human trafficking is a primary concern in the Indian Ocean Region. The International Labour Organization (ILO) has revealed that there are at least 2.45 million victims of human trafficking worldwide, of which 1.36 million were in Asia and the Pacific.¹⁵ Illegal migration and smuggling in the Indian Ocean has increased due to organized criminal groups that have been controlling and trafficking people. In the days of the war in Sri Lanka and in the post war situation, the LTTE often resorted to these operations, although they did carry out the operations of taking out Tamil refugees from the Northern Provinces, and taking them as far as Australia. Human trafficking has been lucrative, and earns high profits and relative short prison sentences when compared

with narcotic dealers. Transnational crime networks have been intensely engaged in human trafficking in the Bay of Bengal, and the Arabian Sea. Human trafficking has also resulted in money laundering and counterfeit documentation which have been derivatives of these operations.¹⁶

Narcotics trafficking

Narcotics trafficking has been fuelling the Afghan and Sri Lankan ethnic conflicts as well as various conflicts in the Indian Ocean Region for some time. Besides contraband narcotics smugglers, insurgent and terrorist groups have been incessantly engaged in the cultivation and smuggling of narcotics throughout the littorals of Pakistan, Thailand, Myanmar, and Laos. The conflation between narcotics smuggling and small arms and light weapons smuggling has been very intense, and they have been directly linked to conflicts in the region.¹⁷ The end of the Afghan war and the repatriation of refugees have also boosted heroin production and, with Pakistan acting as the conduit, narcotics from Afghanistan finds a sea route through Karachi to various destinations. Narcotics smuggling interdiction operations have been conducted by the CTF-150,151 operating in the region.

Small Arms and Light Weapons trafficking

Small Arms and light weapons trafficking have been the consequence of increased transnational crime that has now proliferated throughout the littorals of the Indian Ocean region. The trafficking of weapons has resulted in high crime rates, and has seriously impacted the social and economic stability of the Indian Ocean region states. The prevalent insurgencies in India (the Naxalites and Maoists are good examples) and the various other terrorist groups have been the primary consumers of small arms, explosives, and light weapons. The conflation between narcotics traffickers and illicit arms dealers has been strong. Besides, copies of Chinese and Russian arms, along with various Western small arms and light weapons have been in increasing circulation. The

Afghan conflict—and earlier the end of the Cold War—had resulted in huge surpluses in the Asian markets, and the various sub-regions of the Indian Ocean Region are heavily infested with them.¹⁸ Besides, internal conflict and instabilities in the IOR have resulted in a greater demand for illegal arms, with more of these to be found in the high volume of inter-regional seaborne commerce traversing the IOR. Port Control laxity in many ports in the Indian Ocean evades detection, and thus the arms reach the hinterland, perennially fuelling conflicts.¹⁹ Besides, the porous coastal zones provide landing and transmitting platforms for this huge infusion of small and light weapons.

The networks of arms smuggling of small arms and light weapons (SALW) extend from Iran to Yemen, and onwards to the Eastern Mediterranean via the Suez Canal. They are routed between the Arabian Peninsula and the Horn of Africa.²⁰ The most common types of weapons that are in traffic in the IOR are anti-aircraft guns, anti-personnel mines, anti-tank guided missiles, anti-tank mines, assault rifles, C-4 plastic explosives, hand grenades, handguns/side arms, sniper rifles, and ammunition.²¹

The proliferation of small arms and light weapons has fuelled terrorism and insurgency. Terrorism and insurgency abetted by small arms and light weapons not only inflict direct deaths and injuries, but go beyond to undermine state security and economic development. Terrorism, insurgency and secessionist movements are rooted in extreme poverty, social inequality, and ethnic tensions that are neither adequately recognized nor managed effectively, since their root causes lie not only in conflicts but also in the uninterrupted flow of small arms and light weapons and the collapse of governance.²²

Climate Change in the Indian Ocean Region

Climate Change in the Indian Ocean Region is a stark reminder of how the corrosive effects of the peril are affecting the littorals of the

region. The region is yet struggling to evolve a suitable response to global warming and sea level rises that threaten to soon inundate low-lying coastal areas of the littorals and submerge the islands of the Indian Ocean.²³ Scientific studies reveal that climate change is likely to aggravate “inter-state” and “intra-state” competition in the region over natural resources, especially fresh water.²⁴ The India Ocean littorals feature nearly 40% of Asia’s four billion inhabitants living within 100 km of the coastline. The effects of sea-level rise are likely to be serious in the region.²⁵ Sea temperatures in the Indian Ocean are rising more rapidly than the global oceanic temperatures, and the compounding effect of melting glaciers and Himalayan snow are adding to rising sea levels, adversely affecting river flows in the region. Maldives, Kiribati and Tuvalu face the dire prospect of submergence. Similarly, projected sea-level rise could affect millions of people living in the low lying areas of Bangladesh, Pakistan, Sri Lanka, India, Vietnam, Myanmar and Indonesia.²⁶ Coastal erosion is now in the process of destroying beaches, mangroves and coastal wetlands. Weather changes in the Indian Ocean region are also resulting in unpredictable cyclones, floods, and tsunamis. Besides, increasing seismic activities are resulting in earthquakes that are the most devastating natural hazards which are hitting the region frequently.

In other words, climate change has aggravated environmental degradation, and has increased the competition for natural resources. All this is now complicating the security of the region, with major implications for the IOR littoral countries.²⁷

Depletion of Ocean Organic Resources

The depletion of organic resources in the IOR is both a human-induced non-traditional security threat as well as increasing ocean pollution that is destroying its organic resources. The consequences of global transnational illegal, unreported, and unregulated (IUU) fishing

operations are adversely affecting the important tuna-rich waters of Seychelles, Madagascar, Mauritius and Comoros in the Southern and South-West Indian Ocean.²⁸ IUU fishing has already decimated several species of fish, leaving nothing for the littoral countries and thereby depriving the livelihood of the fishing communities of the littoral countries. The colossal amounts of IUU fishing has gravely affected the food supply of the littoral communities, and has caused loss of economic benefits and livelihood for the island states. IUU fishing goes unchecked in the Exclusive Economic Zones of the coastal states that lack capacity and governance.²⁹ Thus, the fishing communities are depleted of their resources.

The Indian Ocean Region presents a picture of complex sub-regional geopolitical and geostrategic associations, driven by competing interests. While cooperation is feasible in areas of economy and trade, it suffers from a serious deficit in its security architecture and processes. The security deficit is due to the high levels of distrust, and the lack of will among states owing to competing and traditional security interests. In the non-traditional sector of security, this deficit is perilous as it would disrupt the good order at sea. Cooperative maritime security is, therefore, imperative in the common tasks of managing and mitigating disasters, providing humanitarian assistance, and limiting environmental security challenges. India's initiatives of Milan (1995) and the Indian Ocean Naval Symposium (IONS) (2007) have been consultative and cooperative efforts in the task to contend with various maritime asymmetric threats.³⁰ Initiatives and multilateral exercises like the "Komodo 2014" provide the operational value addition and capacity building for the navies and coast guards in the region.³¹

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Chapter IV

Naval Powers in the Indian Ocean Region: Current state of Play and Plans for the Future

The Indian Ocean region is no longer a regional security system. In the post-Cold War period and in the age of maritime globalization, given the continuum of the Asian landmass across the Indian and Pacific Oceans, the new security construct is Indo-Pacific. The Indo-Pacific is a World War II term which denotes the continuum of naval operations in the waters of the Indian and Pacific Oceans. Given the International Shipping Lanes that traverse these waters in terms of trade and energy routes, the Indo-Pacific security system is now a composite geographical concept that finds its employment in contemporary security analyses of the Indian Ocean.

In its second phase, the Cold War brought in the nuclear navies of the USA and the Soviet Union into the region even as Asia was the new strategic theatre of regional conflicts in West Asia, Southern Asia, and East Asia. Besides the USA and the Soviet Union, the European nuclear powers of France and the UK did maintain their miniscule presence, and continue to do so in the present with the two intervention wars (in Afghanistan 2001 and Iraq 2003) that were mainly Operational Manoeuvres from the Sea (OMFTS). Besides, the overseas territories of France and the UK and the various strategic engagements that the two European nuclear powers are engaged with, essentially terms them as resident powers of the Indian and Pacific Oceans.¹

The post-Cold war period has witnessed the high growth rates of Asia's economies, and it has spurred the rise of concomitant military expenditures.

Naval and air forces modernization in the Indian Ocean region have been in momentum since 2000, and it covers West Asia, Southern Asia, Southeast Asia and East Asia. It has been catalyzed by the military and strategic modernization of the regional powers, and influenced by extra-regional naval forces. The imperative for the naval-air capabilities build-up of the Indian Ocean countries is due to their maritime connectivity to the Indo-Pacific Oceans and the expansive archipelagic sea-space of the region that connect with Northeast Asia and the Far East. It brings the convergence of the great power navies into the region and their passage through South East Asian waters, funnelling in and out of the Indian and Pacific Oceans. In terms of the technological impact and operational effectiveness, the impact of defence transformation and the revolution in military affairs has induced critical synergies in force multipliers and network-centric warfare capabilities in the countries of the region. Naval and air defence transformation efforts are focused on rapid logistics, stealth platforms, precision strikes, Aerial Early Warning and combined warfare, with the naval forces providing the platforms for mobility and strike, and the air forces for reconnaissance and strike missions.

A second reason for the trend of modernization in naval and air forces has been the presence of extra-regional naval forces in the region, and their forward presence in the Indian Ocean Region, South China Sea, and the East Pacific. The forward presence of the US, Japanese, Chinese Indian, Australian as well as the token presence of the Western navies of the United Kingdom and France has its impact on naval force modernization in the region.

The third reason for naval and air forces modernization in the Indian Ocean region has been the impact of Chinese military modernization,

and its ripple effect on Southern Asia and Southeast Asia. The growing fleet and capabilities build-up of the PLA-Navy in terms of long-range endurance surface combatants as well as conventional and nuclear submarines are a critical factor. The PLA-Navy and the PLA-Naval Aviation have been expanding in terms of new surface combatants, maritime patrol craft, and naval aviation rotary and fixed wing aircraft deployed in the South Sea Fleet.

The fourth reason for naval and air forces modernization in the region has been the Global War on Terror and the synchronizing of the Indian Ocean region's armed forces to face asymmetric and low intensity conflicts. The role of special forces in conjunction with naval and air elements are optimal means in the combat of terrorism and insurgencies in the region. The armed forces have relied on naval and air elements in enhancing tactical mobility and effectiveness in the combat of terrorism.

The fifth reason for continuing naval and air forces modernization is evident in US cooperation and arms sales to the countries of the region to strengthen US efforts in the defence transformation process.

The sixth reason is the role and new relevance of regional alliances and bilateral engagements of Southern Asian and East Asian countries with the USA and the Five Powers Defence Arrangement. The Five Powers Defence Agreement had been reinvented. They are boosted by new grounds of cooperation among the naval and air forces of Malaysia, Singapore, Australia, New Zealand, United Kingdom, their security forces converging in the War against Terror.

The naval powers in the region could be divided into littoral naval powers and extra-regional powers. Littoral powers in the region have been in the process of naval and air modernization, have featured new operational doctrines and new platforms that has enhanced the operational synergies with cyber and space capabilities. India is the

dominant littoral power of the Indian Ocean region and has been in the throes of naval modernization, with several indigenous destroyer and frigate building programs. By 2022, India plans to have 160-plus ship navy, including three aircraft carriers, 60 major combatants, including submarines, and close to 400 aircraft of different types. This will make the Indian navy a formidable three dimensional force, with satellite surveillance and networking to provide force multiplication. The naval order of battle of the Indian Navy by 2020 would be: 3 carriers, 10 destroyers [3 Delhi + 3 Kolkata 15A + 4 Project 15B], 24 frigates [9 Krivak + 3 Brahmaputra + 3 Shivalik + 7 Project 17A + 2 Project 17B], 20 Corvettes [includes 12 Project 28 and 28A], besides 34 submarines, 3 ATV SSBN, 3 ATV SSGN/SSN, 2 Akula II improved, 6 U214 / S-80 / Marlin /Amur 1850, 6 Scorpene, 10 Kilo Improved and 4 U-209, and 400 naval fixed wing and rotary aircraft.² The Indian Navy would, however, be the primary fleet that would have its domain established in the region from the Straits of Hormuz up to Australia, with goodwill visits and fleet exercises with other South East Asian nations. India's lease of the Akula class (also known as the Nerpa class) nuclear attack submarines from Russia helps in the interim, with the training of crews and preparation for their operational readiness.

India's naval engagements in the region have experienced an enhancing effect with every exercise with the navies of the region as well as with those of East Asia. The composition of the Indian naval task forces and the regional partners has created an impact: the Indian naval presence is now perceived as being for the long haul and regular annual operations in the region. These factors have enabled India to elucidate its rights to trade and transit in the South China Sea and also create the space for its quest to access the Northeast Pacific and Eastern Pacific. India's naval engagements with the Pacific powers provide it the ambit and scope for its presence in the Indo-Pacific as a major player, with benign naval ties with all the major powers in the region. India's trade and commerce as well as its ambitions to build an Arctic presence

and bolster its Indo-Pacific presence motivate its eastward expansion and consolidation.³

Pakistan's Naval Modernization

Pakistan's naval modernization has been based on the Chinese transfer of warships and assistance to build them in Pakistan. The Pakistan Navy that had a predominant share of Gearing class destroyers, Brooke class and Garcia frigates on lease from the United States, had to return them after the lease term was over. For its submarines, it earlier relied on France for the supply of Daphne class and Agosta-90B class submarines. In the 1970s and later, it procured the advanced Agosta 90B from France. Two submarines were built and delivered by France, and the third was built in Pakistan. Pakistan had earlier procured Leander class frigates from the UK, and with their service retirement had been negotiating to procure 06 Amazon class Frigates. China has supplied Pakistan with most of its recent naval hardware.⁴

The present order of battle includes 11 frigates (four Chinese-designed F-22P Zulfiqar class, six obsolescent ex-RN Type 21 class, and a Oliver Hazard Perry class; five submarines (two elderly Agosta class and three Agosta 90-B). The Pakistan Navy has been keen for the purchase of four to seven ex-USN Oliver Hazard Perry class frigates or for the purchase of the four Batch 3 Type 42 class destroyers which the British Royal Navy is disposing off.⁵ The preferred future plans for the Pakistan Navy would be a preferred order of battle consisting of six to eight Perry class complete with a SAM system for at least point defence, and the four existing Zulfiqar class (F-22P) and four Type 54A (Jiangkai II) complete with its 32-cell HQ-16 VLS system.⁶ China is likely will sell the additional four F-22P (Zulfiqar) class ships that Pakistan ordered in late 2012, and also try for AAW-capable Type 54A class ships from China at attractive prices. China has also supplied 6 Yuan-335 class submarines and 10 F-22P Zulfiqar class frigates.⁷

The doctrinal-operational objectives of the Pakistan Navy so evident in its intents-capabilities, have been structured around the following principles: a) Deployment of Pakistani naval and naval-air power for an effective defence of Pakistan and secure limited sea-control in the Gulf-Arabian Sea area. This is essentially to secure Pakistani merchant shipping and sea-lanes in the region. b) Leverage Pakistani sea-denial capabilities built around its submarines, anti-ship missiles, and land attack cruise missiles to dent and limit India's naval power projection into Pakistan's littorals. c) Effectively deny any Indian naval compellence or coercive naval operations against Pakistan through the use of anti-ship missiles and a potent submarine force that would dent the sea-control operations of the Indian Navy. d) Develop robust interoperable operational roles with the PLA-Navy in the future for an anticipated combined attack/defence against the Indian Navy.

China

China is an Indian Ocean power given its deployment of the South China Sea Fleet in Hainan Island. China has now moved into the second island chain that would encompass the Indian Ocean East Africa as the zone of its operations. In geographical terms, China is an extra-regional naval power, but its deployment on a near permanent basis of its warships in the Northern Arabian Sea, the port calls to Gwadar and earlier to Colombo in Sri Lanka, gives its position as an Indian Ocean power. Pakistani naval support facility at Gwadar emerges as a vital access and basing point for PLA-Navy warships and submarines that would have an increased presence in the region as part of China's forward naval presence to secure the sea-lanes in the Northern Arabian Sea-Gulf of Aden.

China's naval order of battle in the Indian Ocean region would essentially be the South China Sea fleet. China's deployment of its Type 094 SSBN (Fleet Ballistic Missile Submarines) would be very

much deployed in the South China Sea. This would be the PLA-Navy's bastion of hosting its SSBNs which would be protected by its surface warships and SSNs and conventional submarines from the prying eyes and ears of US Anti-submarine warfare operations. The Julang-2 Submarine Launched Ballistic Missile (JL-2 SLBM) deployed on board the Type 094 SSBN has a range of over 7,400 kms and could cover the Indian Ocean littoral and the Indian subcontinent.⁸

China's current naval vision and development is debated between the lines of an aggressive forward-looking 'Mahanist' doctrine that calls for an expansionist naval posture of sea-control platforms like aircraft carriers and a surface fleet to support it with forward bases as well as the projection of power in the Asian littoral and the Indian Ocean. Access buildup is one of the significant issues in China's naval buildup.

China has been careful in building its access strategy in the Indian Ocean by cultivating close economic and security ties with several states in the littorals of Asia dotting the Indian Ocean. Access facilities offer China its potential forward location of its naval assets that could be used for a naval task force surge in an event of a crisis threatening to disrupt its energy and trade sea-lanes of communication. China's primary access diplomacy in the Indian Ocean region are the infrastructure buildup of Pakistan's Gwadar port that has substantial berthing facilities, aiding Pakistani and Chinese naval access and deployment.

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Chapter V

Extra-regional Naval Powers in the Indian Ocean Region

The USA

The USA has been maintaining a very robust naval air presence in the Indian Ocean Region, with massive firepower and intervention capabilities besides the deployment of Fast attack nuclear submarines and fleet ballistic missile submarines of the Ohio class that frequently patrol the region. The US Naval Support Facility in Diego Garcia houses prepositioned Army and Marine Corps brigade sets, long-range bomber operations, the replenishment of naval surface combatants, and the strike and special operations capabilities of guided-missile submarines (SSGN). Its location and relatively insular position enables US power projection throughout the Indian Ocean Littoral by long range US B-1 and B-52 Strategic Bombers, as well as through surface warships, including aircraft carriers, Cruisers, destroyers, Frigates and Fast Attack Nuclear submarines. It houses replenishment of naval surface combatants, and the strike and special operations capabilities of guided-missile submarines (SSGN).¹

The US military maintains stocks of equipment such as tanks, armoured infantry fighting vehicles, fuel, munitions, and spare parts on prepositioned ships at Diego Garcia. These vital strategic assets provide the US a genuine intervention capability and a tremendous crisis-response capability, enabling both an Army and a Marine Corps

brigade to mobilize within 24 hours, position assets anywhere within the theatre in a week, and operate without additional support for up to 30 days.²

A telecommunications station tracks satellites and relays fleet broadcasts to units in the area. Such shore relay stations serve a critical function in the US military's worldwide communications effort. Combined operations in the Indian Ocean rely upon secure tactical communications circuits maintained by shore radio operators at Diego Garcia. Finally, Diego Garcia hosts one of the nine tracking stations that the US Air Force uses to command military satellites, as well as one of the five ground antennas supporting the operation of the Global Positioning System. The United States is likely to hold on to this facility in coordination with the British control of the island for considerable period of time in the future.³ Diego Garcia also supports the Indian Ocean region's deployment of the US Conventional Global Prompt Strike elements, along with the offensive missile elements and the satellite tracking of the same.⁴

Japan

Japan's naval presence in the Indian Ocean was part of the US led coalition in Operation Enduring Freedom (2001) and the Iraq theatre of operations (2003). Japan has been deploying elements of its Maritime Self Defence Force in the Indian Ocean in support of US interventions.⁵ The JMSDF also participated in the Malabar 07-02 quadrilateral exercises along with the United States, India, Singapore and Australia that evoked a sharp official Chinese response. The MSDF and the Japanese Coast Guard have been conducting regular bilateral exercises with India in the Indian Ocean, and the Indian Navy Eastern Fleet has been regularly exercising with the MSDF in the Yokosuka Bay. The engagement of MSDF along with the US Navy and the Indian Navy has not been made owing to pressures of China's hostile reaction; however, Indian and Japanese navies and air forces have conducted

combined exercises. Japan established its naval access in Djibouti in 2011 with the aim to combat piracy in the Gulf of Aden; it is now transforming the access into a full-fledged and permanent multi-purpose base to cover its interests in Africa and the Middle East.⁶

The Japanese MSDF brings to the fore the state of the art guided missile destroyers, frigates, and conventional submarines. Its helicopter carriers have full interoperability with the US Navy and Air Force. Japan would continue to build its Indian Ocean presence, working with the Indian Navy, the Indian Coast Guard, and the Indian Air Force, transforming Djibouti into a full-fledged naval access that also co-hosts US and French naval assets in counter-piracy operations.

Australia

Australia is an Indian Ocean power, with its naval deployments fully supporting US interventions in Afghanistan and Iraq which had brought its warships into the region. The Royal Australian Navy's Western Command is the HMAS Stirling at Perth, and the Northern Command is at Darwin HMAS Coonawara.

Australia already hosts US naval and Marine Corps elements in Darwin. As part of the US rebalance into the Asia-Pacific, it has accepted the rotation of 2500 US Marines deployment in Darwin.⁷ Australia has also participated in the Malabar Exercises in 2007. India and Australia have been engaged in exercises (in India and Australia) named AUSINDEX, deploying P-3 anti-submarine reconnaissance aircraft, a *Collins*-class submarine, a tanker, and frigates. India will deploy assets which will include Boeing's P-8 long-range anti-submarine aircraft and a locally manufactured corvette. The exercise will have both sea and shore phases, and include table-top exercises, scenario planning, and while at sea, surface and anti-submarine warfare.⁸

Australia's Defence White Paper 2013 outlines the strategic vision of Australia's engagement in the Indian Ocean and the South West

Pacific. It elucidates four Principal Tasks for Australia's grand strategy. a) Principal Task One: deter and defeat armed attacks on Australia; b) Principal Task Two: contribute to stability and security in the South Pacific and Timor-Leste; c) Principal Task Three: contribute to military contingencies in the Indo-Pacific region, with priority given to South-East Asia; and d) Principal Task Four: contribute to International Peacekeeping Operations. Australia is strengthening the HMAS Stirling, (also known as Fleet Base West)—the largest base for the Royal Australian Navy. This opens up Australia's Indian Ocean presence. The Royal Navy's eleven fleet units are based at HMAS Stirling, including the headquarters of the Australian Submarine Squadron. HMAS Stirling would also be hosting US aircraft carriers on regular port calls.⁹

Australia has a forward presence in the Cocos (Keeling) islands, with two atolls and 27 islands about 3000 kilometres northwest of Perth. The islands serve as a logistical as well as a refuelling point for the forward deployed P-3 Orion fleet of the Royal Australian Air Force. The Orion surveillance fleet covers much of the Indian Ocean. The Cocos Islands base is being upgraded to support the latest generation P8-A Poseidon maritime patrol aircraft and the US-built Global Hawk.¹⁰

Principal Task Three envisages military contingencies in the Indo-Pacific region involving Australian Defence Forces for Out of Area Contingency Operations (OOACP). This task calls for increasing capacities and capabilities of the Australian Defence Forces in multi-national operations. The Defence White Paper 2013 focuses on the expanding Chinese naval, air and missile capabilities and the power projection of China in the Indo-Pacific which is identified as China's influence in the First Island Chain in East Asia. India's power projection into the South-West Pacific, and the continued forward base policy of the US in the region, supports Australia to consolidate its existing regional status quo and its own power projection capabilities with the help of the Western Fleet based in Perth.¹¹

Russia

Russia's interests in and engagement with the Indian Ocean Region in the post-Cold War period were driven by economic and geostrategic considerations. Russia's arms sales to several Indian Ocean Region states—particularly India—was predominant during the Cold War, and continues to be so today. India has always been its traditional regional geopolitical anchor point. Russia released its first post-Cold War maritime doctrine—Maritime Doctrine of the Russian Federation—in 2001¹² which envisaged closer engagement with the IOR. This includes: a) the expansion of Russian merchant shipping and fishing and, together with other states, to protect them from piracy; b) conduct research activities in the Antarctic, as the principal element of the implementation of state policy is aimed at preserving and consolidating Russia's position in the Antarctic region; c) conducting a course focused on the transformation of the Indian Ocean as a zone of peace, stability, and good neighbourly relations; and d) ensuring periodic Russian naval presence in the Indian Ocean. Russian interests have been focused on regional and international terrorism and counter-terrorism (CT) as well as maritime security, with a particular recent interest in combating piracy near the Horn of Africa.

Given the burgeoning militarization of the Indian Ocean region, Russia has been exploiting its niche naval and aerospace technology, thus boosting its economic and military power. It had sustained its keen interest in the security dynamics of the Indian Ocean, and the operational tempo of the Russian navy in the region is aimed at engaging in distant water operations and also in accomplishing its objectives as mentioned in the Maritime Document of 2020.¹³

Recent initiatives of the Russian navy include its participation in the 'Komodo 2014', focused on simulated disaster relief manoeuvres; port calls of the Russian naval ship *Moskva* at the Colombo port on a replenishment and goodwill visit; and the navies of Pakistan and Russia

conducting combined naval counter-narcotics exercise in the Arabian Sea in October 2014. Russian activities in the Indian Ocean have been exemplified by its participation in five combined exercises with India since 2003, known as the INDRA Project. In recent times, Russia has been participating in exercises with Pakistan, selling military hardware to Pakistan, as well as availing of its relationship with Pakistan for port calls to the Karachi port during its Indian Ocean deployments.¹⁴

France

France has a long-standing and substantial presence in the western Indian Ocean. In the post-colonial period, like Britain, France retained many of its island territories with the future strategic intent of access into the Indian Ocean region, and also to link up with their Antarctic territories. The total Exclusive Economic Zone territory of the French overseas possessions is 2.6 million square kilometres. France retains the territories of La Réunion, Mayotte and the French Southern and Antarctic Territories as part of the French homeland. Djibouti remains economically and militarily close to France, while France has built its relations with the United Arab Emirates, resulting in the hosting of a French military base in Abu Dhabi. The base encompasses three military camps: a land base which houses around 100 troops; a naval base; and an air base at nearby Al-Dhafra, which contains three Mirage 2000-5 multi-role combat aircraft. The French facility in Abu Dhabi base has increased French presence in the region to help ensure the stability of its energy security requirements from the Persian Gulf.¹⁵

France maintains a naval base (Pointe des Galets) on its island département of La Réunion, east of Madagascar. The naval units include three patrol vessels, a transport ship, and a frigate. This helps to ensure that there is a constant French naval base in the Southern Indian Ocean as well as in close proximity to the sea lines of communication off the southern and eastern coasts of Africa. The overseas département of

Mayotte is home to the 270-strong *Détachement de Légion étrangère de Mayotte* (Foreign Legion Detachment in Mayotte, or DLEM).¹⁶

Besides Djibouti, France opened its first foreign base in the Middle East, Camp de la Paix (Peace Camp), in Abu Dhabi, United Arab Emirates.¹⁷ The area of operations of the Camp de la Paix covers the southwestern section of the Indian Ocean containing France's Southern and Antarctic Territories and its former colonies.¹⁸

France has been in the forefront selling military hardware with several countries in the Indian Ocean region. In December 2010, France sold six Scorpène-class conventional diesel electric submarines to India for US\$5 billion; it was followed in 2005 with an order for six other Scorpènes from France. France and India signed a bilateral nuclear co-operation agreement in September 2008, which paved the way for co-operation in that field. A notable result of this agreement was a—Euro 7 Billion deal for France to build two nuclear power plants in India. The recent sale of 36 Rafale Fighters is yet another major defence hardware transfer to India.¹⁹ France is persistent about maintaining its continued presence in Djibouti, La Réunion, Mayotte and the establishment of the base in Abu Dhabi.

The United Kingdom

The Royal Navy had been the imperial navy that once dominated the Indian Ocean, preserving it as the “British Lake” until the late 1960s. With the ‘East of Suez’ exit in 1972, the Royal Navy has maintained a diminished presence commensurate to its power status. Moreover, the Royal Navy had to pull back its naval and air assets to the North Atlantic to bolster NATO security against the Soviet Navy's nuclear attack, as well as its guided missile submarine and surface warship fleets.²⁰ The British Indian Ocean Territory (BIOT) of Mauritius, Seychelles, and the Chagos archipelago remained. With the Exchange of Notes, the UK had transferred Diego Garcia to the United States Navy, and it had been maintaining its own miniscule presence.

In recent years, the UK has expanded its presence, with its participation in various US-NATO naval deployments, and the Combined Task Forces 150,151 in West Asia, Gulf Region. The UK has invested considerably in the Five Powers Defence Agreement in Southeast Asia and Far East, engaging with Singapore, Malaysia, Australia and New Zealand and continues to engage in combined exercises.

Britain presently has a 'strategic array' of overseas interests and assets: the BIOT military complex in Diego Garcia, in conjunction with the United States; an army barracks in Brunei, logistical and refuelling facility in Sembawang, Singapore; Gorkha recruitment centres in Nepal; a naval command post in Bahrain that connects the Gulf with its Mediterranean air and naval facilities. This creates a line of strategic array from the British homeland to the Indo-Pacific.²¹

Britain's array supports its Royal Air Force deployment in the Indian Ocean Region and the Pacific. In January 2013, the Royal Air Force deployed an expeditionary air wing to the UAE in support of the British pre-positioned forces in the Middle East. The British 'strategic array' supports the Royal Navy's permanent flotilla in the Middle East Gulf Region. It had been deploying helicopter platforms, amphibious warships, destroyers, and frigates to the Taurus 2009 in Southeast Asia.²²

Britain also deployed its warships and its air elements to the FPDA annual exercises in Southeast Asia (for example, Bersama Shield, Bersama Lima, Bersama Padu, etc.) In 2011, Eurofighter Typhoons of the Royal Air Force and support aircraft flew 11000 kms, refuelling in Jordan, Oman, and Sri Lanka to Malaysia (marking the 40th anniversary of the FPDA) and followed it in 2012 and 2013.²³ Significantly, Japan also evinced keen interest in participating in the FPDA. Japan and the United Kingdom signed several agreements in 2012 for industrial cooperation as well as for defence industrial production.²⁴ Besides

these, one of the Royal Navy's nuclear attack submarines and fleet ballistic missile submarines are on Continuous At Sea Deterrent patrol operations that provides for a global presence, with its patrols in the Indian Ocean region²⁵.

The EU Naval Force

The EU Naval Force has been the result of the evolution in the NATO navies in the post-Cold War period. The EU Naval Force has effectively reinvented with the need to project naval power into the Middle East-Gulf and Indian Ocean Regions ostensibly for constabulary and humanitarian missions. The EU Naval Forces came into operation with the US intervention in Afghanistan under Article V of the NATO Charter. NATO multinational force deployments in Afghanistan came in with the littoral support operations of NATO naval forces deployed from the European Command of the US in Europe.

After the full-scale engagement of NATO ground forces along with a very large commitment of US forces, NATO multinational naval deployments came in with the doctrinal aspects of the interoperability of NATO navies in the Indian Ocean. From October 2001 until the present, NATO deployments in Afghanistan have gained an institutional scope of multinational naval engagement. They have not only supported in the littoral dominance missions as well as naval-air support and logistical missions to ground deployments, but have also importantly crafted the constabulary missions of both NATO and European navies. With the US Navy in the lead, they have engaged with the littoral navies of the Indian Ocean region in tackling and containing the various asymmetric threats of piracy, maritime terrorism, human smuggling, as well as arms and narcotics smuggling in the region.

The formation of the Combined Maritime Forces in the formations of Combined Task Force 150, 151 with US and NATO involvement and the EU Naval Task Force (EUNAVFOR) has enabled in the forging

of maritime multilateralism in the region. As this multinational naval engagement has increased in its scope, the navies have evolved concepts of operations that have more to do with lateral operational synergies. Viewing the constabulary scope of operations of the NATO navies along with the active participation of the littoral navies reinforces the bonafide credentials of multinational benign naval missions. However, the employment of naval power with diversified assets that has very strong accents of offensive firepower platforms do also indicate that NATO naval forces (with US naval leadership) has offensive intents in the long-term domination of the Indian Ocean.

The EU Naval Task Force and the US-led CTFs have excellent interoperability as part of alliance responsibilities and theatre operations in the region. The USA has gained immensely in this regard, with a clear division of labour that it has evolved for its naval forces and the allocation of constabulary and humanitarian missions for the EU Naval Task Force. The EU Naval Task Force has also been able to expand the out-of-area operations into the Indian Ocean region with support of Japanese Maritime Self Defence Force, the Royal Australian Navy, and the Republic of Korean Navy. One of the clear benefits that the platforms of the EU Naval Task Force have been interoperability exercises.

The decade long operation and investment in dedicated platforms in constabulary missions in the Indian Ocean region has enabled the formation of a maritime security architecture that has manifold operational objectives. On the one hand, it has forged a valuable consensus on the expanding and forward movement of NATO, justifying the several years of investment in technology, operational versatility, and the conceptualization of multinational naval doctrines. On the other is the other important strategic derivative of the out-of-area deployment of NATO navies: their contribution to the gradual consolidation of the globalization drive that strengthens market-military linkages in the region. The long-term deployment of the EU

Naval Task Force as well as NATO platforms builds the compellence capabilities of the USA along with its western allies in a region that is abounding with hydrocarbon riches yet is also subject to high levels of destabilization.

Yet another rationale of sustained EU Naval Task Force deployments is the operational requirements for littoral dominance and the prosecution of counter-asymmetric war operations with a reinforcing capacity for a wide spectrum of coercive, compellence, and constabulary missions, smoothed by a variety of on-site humanitarian operations that has also accrued a lot of good will.

Israel

The Israeli Navy is predominantly deployed in the Mediterranean and Red Seas in terms of its sea control and sea denial operations, Haifa being the major naval base for their surface warships and submarines. Israel ventured into the Indian Ocean region in 2000 to test its 1500 kilometres Submarine Launched Cruise Missile (SLCM), which is a land attack missile from an undisclosed location.²⁶ These missiles are deployed on board its German Howaldtswerke-Deutsche Werft (HDW) built Dolphin class submarines. Israel has developed an indigenous cruise missile with a range of 320 kilometres, which could be a version of Rafael Armament Development Authority's Popeye turbo cruise missile that is also reported to have been deployed on board the German HDW Dolphin submarines. Yet another cruise missile that Israel has developed and has fitted into the 533 mm torpedo tubes of the Dolphin is the Gabriel 4LR, produced by Israel Aircraft Industries. It is similar to the Harpoon.²⁷

Israel has long maintained ambiguity on its nuclear weapons and their deployment. Israel's submarines are also intended to exercise control over the eastern Mediterranean Sea as well as secure its sea lines of communication.²⁸ There has been consistent speculation that Israel's

submarines could be refitted to carry missiles armed with nuclear warheads in order to maintain a survivable second-strike capability. Israel's conventional submarine based nuclear tipped submarine launched cruise missiles strongly indicate that Israel is compensating its lack of strategic depth with a type of sea-based deterrence given its relative invulnerability.²⁹ Specifically, the Israeli Navy's Dolphin class submarines have been covertly operating in the Red Sea and the Babel-Mandab straits as well as the Indian Ocean in patrol stations.³⁰

Iran's Navy

The Islamic Republic of Iran Navy (IRIN) is yet another regional navy that has a strong Gulf-Arabian Sea-Indian Ocean focus. Iranian naval power has grown considerably with new ships, submarines, UAVs, naval missiles, etc. Iran aims to bolster them both for deterrence as well as power projection. IRIN is preoccupied mainly with access denial. It conducts littoral warfare operations against the other Gulf navies, and asymmetric warfare tactics/strategy against the naval power of the USA and its allies that are forward deployed in the region. Iran's second navy—the Islamic Revolutionary Guards Corps Navy (IRGCN)—is known to be an asymmetric warfare centric naval arm of the Islamic Revolutionary Guards Corps. The two naval arms complement each other's operations.

Iran has a limited defence industrial base for indigenous naval construction using Russian and Chinese technologies. Iran had earlier commissioned three Russian origin 877 EKM Kilo—class diesel—electric submarines. It had also developed midget submarines of the Ghadir—class based on North Korean technology. These submarines have greater submerged endurance, and could be deployed in asymmetric submarine warfare operations as also against surface targets, using 'swarm tactics' to attack surface warships. Iran also has considerable mine warfare offensive capabilities, and is threatening

to mine the Strait of Hormuz and cripple international shipping in the Gulf region. Thus, the US Navy and allied navies have added additional minesweeping ships to counter this threat. The IRIN has also been doing port calls in the Indian Ocean to Colombo; they have also sailed to the South China Sea and the Mediterranean Sea for port calls and exercises.³¹ The Iranian Navy has undertaken deployments in the Red Sea and the Mediterranean, and made calls at friendly ports in Sudan, Libya and Syria. Iranian naval leadership has plans to deploy the navy in the Atlantic (off the US coast) and the South Indian Ocean (Antarctica) in the future. It participated in the Pakistan Navy's multinational exercises in Aman in 2007.

Southeast Asian Navies of Singapore, Malaysia and Indonesia

The Southeast Asian Navies of Singapore, Malaysia and Indonesia do have a westward Indian Ocean orientation. The fact is that these three maritime powers are known to be pivotal in Southeast Asia for having an Indo-Pacific focus, with their operational engagements in the Indian Ocean Region. Naval and air forces modernization have been in full steam since the past decade as these states have added naval platforms, built network centric capabilities, and have often worked with the USA and other Western navies.

Singapore

The Republic of Singapore Navy (RSN) has emerged from its early days of a post-independence fledgling naval unit into a robust, technology-centric, effects-based operations force of the twenty-first century. The RSN's drive towards high-technology, network centric, effects-based operations expeditionary naval force has been in tune with its littoral defence requirements, and for securing the contested sea-lanes and seas in the region. The Republic of Singapore Navy is a small naval force

but has robust and evolving network centric operational capabilities, evident in its potent stealth Lafayette class frigates as well as its submarine force with its new *Archer* class (Swedish ex-Vaastergotland-class) and the existing *Sjoormen* class vessels which are at the cutting edge in naval propulsion and in resilient submerged endurance. The Republic of Singapore Navy is a classic example of a small navy with the optimal network centric operational capabilities.

In its operational milieu, the RSN operates at a higher end of doctrinal evolution that looks into the expeditionary-amphibious capabilities with potent surface naval missile strike power and a formidable sub-surface anti-ship missile capability.³² It has integrated the unmanned and manned platforms in naval and aerial domains of operations with a potential to networking with the US proposed “Pacific Pool” of the US Broad Area Maritime Surveillance (BAMS) of Global Hawks RQ-4N UAV platforms that has ranges of 1,200 nautical miles (nm) from its operating base, with endurance to loiter for 24 hours. The UAV can stretch out beyond 5,000 nm to conduct pinpoint surveillance. Singapore’s participation in the “Pacific Pool” of the US proposed BAMS could involve Australia, Japan, Singapore, and Thailand for commonly funded and interoperable fleets that could either be nationally owned and or part of the US proposed pool, with an expansive partnership of securing the maritime commons of the region.

The RSN is the prime enabler in expeditionary operations, with substantive investments in its amphibious platforms of the *Endurance* class ships that provides robust mobility of its forces. Its expeditionary capabilities are well backed by its offensive firepower from its six *Victory* class corvettes and the six *La Fayette* class frigates, armed with anti-ship *Harpoon* missiles and an effective coverage of *MBDA Aster* naval surface to air missiles. Naval air power has been deployed in the form of the Sikorsky 70B naval helicopters on board the frigates, tasked with anti-

surface and anti-submarine combat systems, thus extending the ship's own surveillance and over-the-horizon targeting and anti-submarine warfare capabilities.

Singapore sinews of strategic strength and capability comes from its systematic interoperable experiences with other powers. Its operational synergies with the USA, the UK, France, Japan, Australia, India and South Korea have provided its navy with several peace-time operational experiences and know-how. Its technological collaboration with Israel, Germany, France, UK and the USA has been immensely valuable in its naval modernization programmes. The RSN's participation in the Five Powers Defence Agreement involving Malaysia, the UK, Australia and New Zealand have been revived since 2004, and has rejuvenated Singapore's interoperability with its allies as well as aided its efforts to develop multilateral links in the region. Singapore decision to offer the 'lily-pad access' to US forces in the aftermath of 9/11 attacks for naval and air elements has been an important decision that has enabled the USA to use the Changi naval base for access, and for surge into the Indian Ocean region.

The RSN's naval exercises with India—MILAN and SIMBEX—have been one of the most successful bilateral exercises that have been in steady growth since 1993. The scope and complexity of these exercises have been increasing. They have also included anti-submarine warfare exercises besides a host of other interoperable combined initiatives, including the sharing of maritime intelligence.

Malaysia

Malaysia's defence capabilities have been growing with transfers from Britain, France, Russia and United States. Malaysia has long been host to the Royal Air Force at Butterworth, and it has been one of the founding members of the Five Powers Defence Agreement. The Royal Malaysian Navy had been participating in the annual FPDA

exercises, and has gained operational experience with the navies of the UK, Australia, Singapore and New Zealand. Besides, the Royal Malaysian Navy has been exercising with the US Navy, and has been engaged in various humanitarian and disaster relief exercises. India-Malaysia defence ties have been growing with the service of Malaysia's MiG-29s by India, and the training of Royal Malaysian Navy officers in submarine operations. The Royal Malaysian Navy does patrol the eastern reaches of the Andaman & Nicobar Islands, and is engaged with the Indian Navy and the Coast Guard in various combined constabulary missions for antipiracy operations.

The Royal Malaysian Navy is now oriented to building its amphibious capabilities, and has been requesting the US assistance build its forces. Recent procurements of the RMN have been in terms of strengthening sea control capabilities with Offshore Patrol Vessels and Corvettes, and submarines for sea denial capabilities.³³ Malaysian naval arms buildup is also in response to South China Sea tensions although it does not have major disputes with China. Malaysia's naval engagements with USA, UK, India, and Australia have been major operational experiences that are augmenting its future roles in the region.

Indonesia

Indonesia's Ministry of Defence has laid out a new ideal defence posture outlining a Minimum Essential Force (MEF) in tune with President Jokowi's grand maritime strategy. The MEF is elucidated as the minimum and essential standard of standing forces for the Indonesian Navy—Tentara Nasional Indonesia-Angkatan Laut(TNI-AL)—that would be critical and fundamental to address actual threats. President Jokowi's idea of Indonesia as a global maritime axis lies in the building and enhancing inter-island connectivity as well as upgrading port infrastructure within the Indonesian archipelago—which spans several

thousands of islands and an area of 6 million square kilometres. President Jokowi's vision also contemplates erecting a defensive firewall in the form of an advanced navy to protect the country's maritime assets, sea-lanes, and territorial waters from both non-traditional security threats and external incursions. In this vision statement, Indonesia is projected as a maritime power in the region with its Indo-Pacific orientation as well as its focus of operations on the augmentation of Indonesia's naval capability.³⁴ The TNI-AL proposes an "integrated three-dimensional defence system" under a long-term, twenty-year strategic plan under the MEF 2005–2024 that sets forth a military modernization agenda, with a special emphasis on the modernization of the Indonesian navy and air force. Indonesia's naval buildup through increased procurement by 2020 under the MEF includes the goal of a five-fleet force totalling 274 ships with striking, patrolling, and supporting capabilities. The MEF envisages weapons procurement, the development of an indigenous defence industry, and the revamping of defence research facilities, thus augmenting the idea of maritime security and a strong navy. Thus, Indonesia is positioning its grand strategy on the maritime locus of the country's security, and hence focuses on a strong navy for a pre-emptive and preventive strategy to thwart any external incursion and safeguard its long coastline, thousands of islands, strategic choke points, inter-oceanic trading posts, and vast Exclusive Economic Zones.³⁵

Jokowi's grand maritime strategy focus underscores the growing militarization of the maritime space in both the Indian and Pacific Oceans, the escalation of hostilities in the South China Sea, and China's claim over Indonesia's Natuna islands. He plans to bring the Indian Ocean back into Indonesia's regional canvas, and projects Indonesia as a power straddling thousands of islands between two continents (Asia and Australia) and two Oceans (the Indian and Pacific). The Indian Ocean has emerged as one of the five priority agendas of regional cooperation as identified by Jokowi in his election manifesto. It revolves around engendering comprehensive maritime cooperation, and playing a pro-

active role within the Indian Ocean Rim Association. The inclusion of the Indian Ocean expands Indonesia's maritime canvas, and places the country, once again, at the epicentre of two maritime worlds and as a bridge between them.

Indonesia's naval development priorities in the coming years are as follows: to replace ageing ships by patrol and transport ships; to safeguard borders; enhance logistical capabilities and support HADR; revitalize domestic defence industry; the development of "transformational bridge" technology; and the decommissioning of ageing ships. The navy currently has a standing order for eight corvettes, two submarines, three LSTs and four patrol craft. By 2029, the navy aims to have a striking force of 110 vessels, a patrolling force of 66 vessels, and a supporting force of 98 vessels, divided into four fleets. However, given the chronic financial and budgetary crisis that Indonesia faces, the effective realization of these plans is going to be challenging.

In conclusion, the Indian Ocean region features several naval powers of all power capabilities. They represent how naval modernization and the strategic position of each power is informing the trajectory of future naval power dynamics.

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Chapter VI

Impact of the Growth of Naval Powers in the Indian Ocean Region

The Indian Ocean region has been witnessing five significant trends since 2000:

- Energy flows from the West Asia-Gulf Region have increased maritime energy traffic as well container shipping in and out of the region, giving importance to the security of energy sea-lanes, thus drawing various regional and extra-regional navies to safeguard maritime traffic.

- Conflicts in the region—mainly in the Horn of Africa, Somalia and West Asia—have intensified the militarization of the region; the two most important conflicts—the Afghan conflict and the Iraq War—intensified and drew in the USA in a massive way along with its allied partners in multinational military interventions, supported by multinational navies that aided hinterland warfare with naval and naval based air support.

- Regional powers like India, Pakistan, Israel, Iran and China (the geostrategic operational context of Southern Asia) intensified their naval, air and military modernization. Interestingly, all these powers have been pursuing the objectives of deploying nuclear weapons at sea in varying modes so to gain the relative sense of invulnerability. This has led to the nuclearisation of the Indian Ocean on a permanent scale, notwithstanding the standing naval forces of the USA, France, and the

UK that have continuous nuclear deployment of their nuclear powered attack, guided missile and fleet ballistic submarines operating in the Indian Ocean.

- Southeast Asian states and Southern Asian states have been responding to China's massive strategic modernization—specifically its naval air and missile modernization—by ramping their orders of battle as well as innovating on new operational doctrines—specifically maritime doctrines.

- China's massive maritime/naval expansion and its new initiative of the One Road One Belt, with its focus on maritime connectivity of the Maritime Silk Road (MSR), have vital geo-economic and geo-strategic implications across the trans-Asian and European continents. The Indian Ocean region would be a vital maritime corridor as China's MSR expands into the region unmatched by any power.

Access and Basing

One of the significant trends of the growth of naval power in the Indian Ocean is the competition for the extra-regional powers in the quest for naval access and basing. There are near permanent basing facilities like Diego Garcia (BIOT), now operational and occupied by the USA and the UK; Djibouti, operated by France as a naval base and co-shared by USA and Japan as a naval access resulting in China now competing for space; Mayotte, Reunion, Abu Dhabi and Al Dhafra occupied by France; Bahrain is occupied by the US Navy Fifth Command, with Britain enjoying naval access.

China has been aiding and building dual-use facilities of civilian port and naval access with piers construction in Gwadar in Pakistan and Hambantota in Sri Lanka. Its efforts are also underway in Marao in Maldives as part of its Maritime Silk Road diplomacy. China has also been probing for possible initiatives in Seychelles. Besides, China has been promising aid and probing for access in the Chittagong Sonadia

port, but has not been successful so far. The US and UK access to the Changi Naval Base and to Sembawang in Singapore are very strategic for extra-regional powers to have presence in the Indian and Pacific Oceans

Access and Basing would be a dominant trend for the growth of naval powers in the region: extra-regional powers covet access and would like to retain basing in the Indian Ocean region. Regional powers have been building access as part of expanding maritime infrastructure. India's solid efforts at Karwar, the Andaman & Nicobar Islands Integrated Command, the *INS Rambili* off Vishakhapatnam, *INS Ezhimala*, and *INS Zamorin* are all recent initiatives that have expanded India's maritime and naval basing infrastructure.

Military maritime infrastructure has also been in development throughout the region since the age of maritime globalization. Often they have been either co-located in the vicinity or have been in the same region. Commencing with the Andaman & Nicobar Islands Command, India's east has seen the vigorous growth of several military-naval outposts like the Changi Naval base, the Sanya Naval base on China's Hainan Island, the existing naval access facilities in Danang, the Subic naval facility, Yokosuka naval base and, to South, Port Darwin in Australia. These feature strategic naval access that offers the region and the extended region naval access for regional and extra-regional navies. The expansion of naval access has included the development of bases for naval aviation, as also basing for submarines.

The Indian Ocean Region and the Asian Littoral feature not only prospects of growing trade and commerce but also the tempo of military modernization, so solidly evident in the naval and air modernization which is now transforming the region. The duality of civilian economic growth and a high intensity of military modernization is an ironic combination which will no doubt determine the future of the Indian Ocean and Asia in the maritime realm.

Interoperability

Interoperability is one of the most articulated themes but least understood and practiced in naval operations. Geoffrey Till is of the opinion that, in the present context of maritime globalization, two navy models are evident: the national navy model reflecting the typical Westphalian state system with its military power, and the collaborative navy with an internationalist world outlook reflective of the current state of globalisation.¹

Interoperability is achieved by navies through the collaborative scope of operations, engagements in various operational exercises, and agreements signed by respective governments that foster technological and operational interoperability.

The US led NATO navies in the CTF-150,151 and the allied navies of Japan, Australia and Singapore do have standards of interoperability and doctrinal cohesion that coheres their operations in unison to achieve the highest operational efficiency at sea. Interoperability has been promoted by the various agreements that the USA has proposed and implemented—such as Logistics Support Agreement facilitating increased use of shared logistical services; the Basic Exchange and Cooperation Agreement for Geospatial Cooperation (BECA) providing for logistical support and exchanges of communication and related equipment. Communications Interoperability and Security Memorandum of Agreement (CISMOA) that require the supply of equipment constitute the “foundational agreements that the United States has with its NATO partners and its allies in Japan, Australia, South Korea and Singapore.”² India has also been in the process of evaluating the merits of these agreements, and have concluded some with the USA as that would serve its objective of gaining interoperability

Naval Network-centric operations in the Indian Ocean

Naval Network-centric operation in the Indian Ocean region is a growing technological and operational template in the operating

navies of the region. With the emphasis shifting from 'platform centric' operations to networked operations, force multiplier performance is now built with interoperable features into single platforms laterally networked for combined synergies. The integration of the 'sensor' and the 'shooter' is networked with surface, subsurface, and aerospace assets, providing real-time frames of information, intelligence, surveillance and reconnaissance in peace and war time operations. Evolution in 'Joint operations' and interoperability is now leveraging cutting edge technologies. Robust doctrines of land, maritime and aerospace operations are increasingly driving technology requirements that are transforming the character of combat as well as the constabulary missions of the contemporary military and specifically naval and air forces. US led NATO-style Combined Task Forces have an overall grasp of mission requirements that are built with a good understanding of naval platform architecture, roles, capabilities and performance. These operations augur greater and effective interoperability that seamlessly transforms peace-time exercises into combat operations.

The Chinese PLA-Navy and Informationalisation

The PLA-Navy has made substantial strides in terms of the Informationalisation.

The PLA, aiming at building an informationalised force and winning an information war, deepens its reforms, dedicates itself to innovation, improves its quality and actively pushes forward the RMA with Chinese characteristics with informationalisation at its core.³

'Informationalisation' is a fundamental goal, and in one sense, because the PLA was a late starter, it can take advantage of leapfrog technologies. C4ISR is crucial to China's blue-water naval presence, anti-access/area denial, and missile capability.⁴ As China deploys its warships and submarines in the Indian Ocean in fleet formation, it would be leveraging its strengths for network-centric warfare operations. It is likely that the PLA-Navy warships would also be in network centric

formations with the Pakistan Navy since the evolving Pakistan Navy frigates and submarines are supplied by China.

The Indian Navy

The Indian Navy is in the process of evolving its templates of technological and operational dimensions of the naval network centric operations. The Indian navy envisages creating and sustaining a three dimensional, technology enabled network centric system that would combine synergies towards it becoming a formidable sea power. The Indian Navy is harnessing the full potentials of such an advanced technology driven system in enhanced maritime domain awareness which is based on the availability of “satellite resources” on an uninterrupted basis.⁵ The radical shift in the strategic outlook of the Indian navy’s is clearly exemplified by the fact that it is aiming for a global reach—that is, away from being a regional sea power focused only on the threats from China and Pakistan. The Indian Navy is also boosting its strike capabilities, and is linking up its long range missiles, radars and air defence systems on all the sea bed assets to a centralised and a dedicated satellite network.

Nuclear Deterrence at Sea

Nuclear Deterrence at Sea will become the central evolving paradigm in the Indian Ocean region as extra-regional powers such as the USA, France and the UK continue with their nuclear platforms of nuclear attack (SSN), nuclear guided missile submarines (SSGNs), and nuclear fleet ballistic submarines (SSBNs) on the Continuous At Sea Deterrence (CASD) missions. The CASD missions provides for the relative invulnerable second-strike capability of these navies. This involves keeping a rotation of nuclear-armed submarines on patrol, undetected, and prepared for conflict at all times and signalling this to potential adversaries.⁶ With decades of experience operating these platforms, the USA, France and Britain have perfected their deployments in relatively

quiet nuclear platforms, and their ability to maintain them reflects an exceptional standard of human and technical infrastructure that has taken decades to develop.⁷ The emerging naval nuclear powers such as China, India and Pakistan are yet to build their nuclear technical infrastructure in terms of satellite constellation for Very Low Frequency (VLF) communication systems as well as the endurance of credible command structures. Survivable communications between SSBNs at sea and national command authorities are critical to their ability to provide a credible deterrent at Sea.⁸

China and India have been recently investing communications technology and infrastructure with their respective nuclear submarines. How survivable or reliable systems could these be is a moot question. The credible information on China's VLF capability is very limited. In recent years, China has been building upon a certain level of capability that it had in the early 1980s. With the expansion of their fleet of SSBNs, China has constructed several VLF transmission stations along its coastline.⁹ India has been expanding its submarine communication capability in the last several years, establishing a new VLF facility, *INS Kattabomman*, in South India.¹⁰

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Chapter VII

Regional Alliances and Maritime Partnerships

Regional Alliances and maritime partnerships have been evolving since the end of the Cold War.

India and the USA

One of the more significant recent engagements has been the Malabar India-US naval exercises—although these exercises can neither be called as an alliance nor a partnership. This bilateral engagement has been gaining momentum and strength since 1992. The Malabar exercises have been built on various capabilities and operational roles over the years. It has expanded with new partners like Japan, Singapore and Australia. Although India is not a part of the US alliance system in the Asia-Pacific, India's engagement with the USA and the various regional maritime and naval initiatives has resulted in a strategic partnership. Defence technology and hardware sales to India have been rising over the years, particularly in the naval sector. These have strengthened India's military operational and naval profile. Thus, India-US naval engagement displays all the salient features of a maritime partnership visible in US engagement with Japan, Australia, Singapore and South Korea. India and the USA are also engaged in the discussions and with India's request for information on the next-generation of aircraft carriers.¹ India and the US envisaged the Joint Strategic Vision for the Asia-Pacific and the Indian Ocean Region in the US Presidential visit

in January 2015 that elucidated the joint vision of the two countries and their navies in various missions that ranged from sea-lane security, cooperative maritime security, and the freedom of navigation in the seas in the Indo-Pacific region.²

India and Japan

India and Japan have been engaged in bilateral maritime exercises. Japan had also been associated with the India-US Malabar exercises from time to time. The India-Japan maritime partnership has been expanding. It has assumed much importance since 2008. With the Japanese participation in the anti-piracy patrols in the Arabian Sea and its access to Djibouti, the presence of Japanese Maritime Self Defence force destroyers have aided in securing sea-lane security and the energy security of Japanese shipping in the region. India and Japan have been regularly conducting exercises with their navies and their respective Coast Guards. Japan and India have already started a 2 + 2 dialogue (at the Secretary level) and an annual exercise called (JIMEX)³. It was the first time in 2012 that Japan participated in the Indian Ocean Naval Symposium (IONS).

Indian and Australia

The India-Australia naval partnership has been the most recent, with the Indian and Australian naval exercises in the Bay of Bengal AUSINDEX in September 2015. India and Australia have together envisaged the following: a) the beginning of maritime bilateral exercises with the two navies beginning 2015, with focus on anti-submarine warfare in Bay of Bengal and in Fremantle, Australia; b) conducting Bilateral Humanitarian and Disaster Relief (HADR) exercises. Other areas of cooperation have been envisaged in the areas of counter-Maritime Piracy and Maritime Domain Awareness.⁴ These have provided a substantial increase in cooperative security partnerships, and are considered as

some of the significant areas of current maritime cooperation between India and Australia. China's assertive rise has been a key mutual concern for the two powers, and Australia looks with interest in the patterns of cooperation between India and Southeast Asia.⁵ The recent visit of Prime Minister Narendra Modi is viewed as having been a significant catalyst to boost bilateral relations in trade and security cooperation⁶

The China-Pakistan Naval Partnership

The maritime partnership between China and Pakistan has been gaining credence. This partnership includes substantial Chinese equipping of the Pakistani navy with its surface warships, like frigates, missile corvettes, and conventional submarines as well as a variety of naval anti-ship and land attack cruise missiles. China-Pakistan naval exercises featuring surface warships and submarines in Pakistan Aman series of exercises and other manoeuvres in the Arabian Sea has reinforced this partnership. Extending to the naval-nuclear dimension is the possibility of retrofitting (with Chinese technical assistance) the Agosta-90B conventional submarines with the Babur Hatf-7 nuclear-tipped cruise missile.⁷

With the large and complete assistance to build Gwadar, China has been able to have naval access to Gwadar, and the prospect of PLA-N submarines accessing Gwadar in the future is a very real factor. It could include nuclear attack submarines with guided missiles with nuclear payloads or even conventional submarines with a variety of capabilities and weapons.

The US-led naval task forces in the Indian Ocean region would continue to remain and dominate the region. The US Fifth Fleet would continue in the future to lead French and British naval deployments that are both in the Combined Maritime Forces of CTF-150,151 as well the occasional deployment of warships from the European theatre into the Gulf-Arabian Sea and Indian region. The extra-regional naval

partnership of the US-led naval task forces do have several multilateral naval partnerships with the NATO navies, the European Union Naval Force (EU NAVFOR), and with regional countries of the Indian Ocean region such as Pakistan, Kenya, Seychelles and Singapore. The Indian Navy operates independently; but it also works in certain combined initiatives with the Combined Maritime Forces.

Benign and Humanitarian Missions

Benign and Humanitarian Missions in the Indian Ocean region would be the primary convergent factor that would bring the navies of the region and the extra-regional navies to cooperate and render assistance in Humanitarian and Disaster Relief (HADR). The Indian Ocean Tsunami 2004 was the first major multinational maritime convergence that provided very large scale relief and assistance for rehabilitation. Given the large presence of the US Navy, French and British Royal Navy along with the other naval deployments of the EU Naval Force and the Combined Maritime Forces, the role and scope of the benign and humanitarian maritime missions is likely to increase on the accents of cooperation. The Indian Maritime Doctrine 2009 espouses the importance of the benign and humanitarian operations in its elucidation. It also envisages the importance of Non-Combatant Evacuation Operations (NEOs) that the Indian Navy had been exercising in a variety of missions in the 2006 Lebanon War operations which saw the evacuation of more than 2000 persons of Indian, Nepalese, Sri Lankan origin. It saw the deployment of four Indian Navy warships. Besides, the Indian Navy played a predominant role in the 2004 Tsunami relief operations, and the 2008 Nargis cyclone relief operations. The 2009 Indian Maritime Doctrine has comprehensively accounted for the Navy's past credible record and has elucidated its conceptual and operational scope. The intensity of climate change impact and ocean rise is likely to increase in the future. This would lead to torrents of cyclones, tsunamis, sea-level rises, and submergence of low lying coasts triggered by geophysical seismic activities like earthquakes.

The Indian Navy's capacity for HADR and for benign missions maintaining good order at sea has been most extensive. It would play a lead role in future missions, and feature very significant capacity lending to multinational HADR relief efforts. Even as the competitive naval strategies continue to sharpen—with risks of conflict escalation and the heightened prospects of naval nuclear deployments in unstable operation formations—the prospect of navies converging for mitigating transnational disasters bring hope and promise that would be enduring.

Besides the natural disasters and calamities that have the naval forces working in cooperative missions, the increasing prospect of conflict in the West Asian-Gulf Region has seen frequent deployments of navies in rescue and transportation of expatriate people back to their homelands. Benign missions such as humanitarian rescue from conflict zones will be a very significant and frequent operational mission in the coming future.

Constabulary Missions

Constabulary Missions in the Indian Ocean will continue to predominate in the near and long term future. The frequencies of various asymmetric threats like piracy and maritime terrorism is likely to fluctuate. The Indian Ocean region is likely to see increasing role of Coast Guards of various countries deployed along with the navies to combat and manage various asymmetric threats. Constabulary missions have already brought in the Indian Coast Guard and the Japanese Coast Guard into operation in the region. Exercises featuring the navies and coast guards, along with their naval aviation, will have an important role in the maritime surveillance, intelligence, monitoring, and the buildup of Maritime Domain Awareness of the region.

The Combined Maritime Forces, the EU Naval Forces, the deployment of Russian and PLA-Navy fleets in the Indian Ocean Region

will continue their operational roles, both in terms of traditional power projection as well as counter-asymmetric operations. Extra-regional fleets deployment would be based on the rationale of combatting maritime asymmetric threats, engaging in cooperative maritime security for constabulary missions wherever feasible, and continuing to engage in power projection roles even as maritime trade, commerce and energy flows would be very vital in the sea-lanes of communication across the Indian Ocean Region.

China's Naval Power Projection

China's naval power projection will be a very significant dimension in the future Indian Ocean Region power balance. China's submarine and surface warships task forces would expand into the region with access at Gwadar, and will be operating in the Indian Ocean-Northern Arabian Sea. Operating in conjunction with the Pakistan Navy, China could deploy its newly emerging carrier task forces, along with destroyers and frigates with submarines, in the Indian Ocean region for exercises as well as for humanitarian missions like disaster relief and non-combatant evacuation, and perhaps for low-opposition interventions as well.⁸ The likelihood of nuclear powered submarines with nuclear tipped land attack cruise missiles being deployed in the Indian Ocean is very strong.⁹

China's naval deployments would be buttressed by access in Gwadar as well as port calls in Colombo and Male in the Arabian Sea. While China will continue to develop its naval offensive capabilities in the Pacific—and specifically Western Pacific—the Indian Ocean would be a second theatre where China vies to dominate the region, and emerge as the unipolar power in the Indian Ocean region.¹⁰ China would strive for being the predominant power in the Indian Ocean and, at the same time, use its global influence to assert its interests in the region. It has vital sea-bed mining rights in the Indian Ocean, and is deploying

its deep sea mining equipment to mine ore-deposits in the Indian Ocean. Its Africa connection is for its food supply and minerals that would have to be shipped into China, and its Gwadar (Pakistan) and Kyaukpyu (Myanmar) are for oil-feeder pipeline points into China.¹¹ In July 2011, China secured the permit of the International Seabed Authority (ISA) to undertake deep seabed mining in central Indian Ocean.¹² This would be the single important Chinese access in the Indian Ocean region.

China could also deploy its anti-access and area denial weaponry of its Anti-ship Ballistic Missiles (ASBMs) in a southward trajectory to target US and Indian aircraft carriers.¹³ China's deployment in the Indian Ocean region perhaps could also be a diversionary plan to relieve the US pressure on it in the Pacific, forcing the USA to offset Chinese naval deployments in the Indian Ocean region. Thus, stretching the US forces between the Pacific and Indian Oceans.

The future Chinese naval deployments in the Indian Ocean region could be used as double edged sword by China both in terms of Hard power and Soft power. In terms of Hard power, China would be interventionist in the region's conflicts; its naval deployments could be for naval coercion; it would be carrying naval exercises closer to Indian Ocean littorals for show of force; its energy diplomacy of acquiring offshore oil and natural gas exploration would be in disputed areas and would be backed by naval force; it would engage in arms exports to belligerent countries in conflict exploiting commercial motives, and would effectively shield covert transfer of Weapons of Mass Destruction in the Indian Ocean Region.¹⁴

Thus, the emergent scenario of naval power in the Indian Ocean region is diversified and complex, with a variety of challenges and threats to the region. While the promises of regional cooperation are being highlighted, the competitive templates of naval rivalry also run high. With a mixture of new evolving doctrines, operational templates,

and technological dynamics, the stakes of rivalry could have critical impact on regional stability.

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Chapter VIII

Recommended Approaches to address Strategic Competition

How does the region address strategic competition? What are the tangible measures and institutional mechanisms to address this competition? These are some of the moot questions that face the region and the regional states. Given the extreme complexity of the region, and the intensity of the strategic competition, certain approaches are recommended for addressing the challenges.

Maritime Multilateralism

Maritime Multilateralism is a credible avenue that would open the countries of the region to regional maritime cooperation even as strategic competition in the Indian Ocean region is rising and inducing instability. Maritime multilateralism envisages and advocates sectoral approaches to develop cooperative security, economic, trade, and commercial partnerships in the region. Among the initiatives that have gained credence over a period of time is the Indian Ocean Rim Association, now known as Indian Ocean Region Association for Regional Co-operation. Initiatives such as the Indian sponsored Milan, Indian Ocean Naval Symposium, and other regional initiatives like Malaysia, Singapore, Indonesia (MALSINDO), and Malacca Straits Coordinated Patrols have all gained impetus over the years since 2001. The IOR-ARC is the only pan-Indian Ocean regional initiative that spreads from East and South Africa, Asia and Australia that has been

addressing economic growth, trade, infrastructure development, and investment.

Given the high intensity of strategic competition, the IOR-ARC has done little to address this issue.¹ The imperative is to strengthen this multilateral initiative with more diplomatic resources, and strengthen national and regional commitment towards its effective working.

The Indian Ocean Naval Symposium has been in existence since 2007, and has grown to be a 35 member association that facilitates the exchange of views among naval professionals to evolve a common understanding of maritime security issues in the region. The IONS would be a very important institutional initiative that would anchor Track-1 and 1.5 dialogues, and work towards a series of credible transparency, and confidence building measures that would augment regional stability.

Milan is an Indian Navy sponsored initiative that has built a greater degree of understanding and has added stability to the region. Milan had drawn navies from Southeast Asia and the Indian Ocean to discuss issues of maritime security. Besides these, there are other sub-regional economic initiatives (like BIMSTEC) that have fostered regional cooperation.

However, the weakness of regional initiatives in the Indian Ocean region has been quite evident, in the prevalent security environment. It is evident that there is no region wide security arrangement to address strategic competition in the Indian Ocean region. Existing security arrangements are sub-regional security regimes which are weak; they do not have the ballast of economic interdependence and integration to substantiate their roles. Yet another characteristic feature that the predominantly US-Western oriented security architectures have is that they do not address the typical regional security issues and challenges

facing the region. Moreover, significantly, multilateralism is present in structure but absent in process since most relationships are bilateral rather than multilateral. Had they been multilateral relationships they could have supported multilateralism.² Thus, the evident weakness in multilateralism in Indian Ocean region continues to catalyze stronger extra-regional naval presence as well as heightened regional naval competition.

Maritime/Naval Risk Reduction Measures

Maritime/Naval Risk Reduction Measures are a time tested confidence building mechanism that could contribute and enhance regional stability in the Indian Ocean region. Maritime/Naval Risk Reduction Measures and Confidence Building Measures envisage the prospect of increasing the transparency and predictability of the navies in the region with regard to their operations and deployment. It would be particularly vital in the area of deployment of tactical nuclear weapons at sea. Efforts by Pakistan, Iran, and also by China and India for sea-based nuclear deterrence would be charting very tough maritime terrain in terms of operationalizing sea-based nuclear deterrence.

There is enormous potential of misperception and miscalculation resulting in the inadvertent use of such weapons in any conventional conflict, hence the imperative of Maritime/Naval Risk Reduction Measures. Declaratory Measures, such as ASEAN Treaty of Amity and Concord 1976, could be a viable model to establish conflict avoidance at sea. The importance of the UNCLOSS-III as a maritime confidence building measure is viable. Naval non-attack pledges, such as the one signed by India and Pakistan in 1971, have greater relevance and applicability in the present evolving contexts.³

Maritime/Naval Risk Reduction Measures also include the importance of Transparency measures that facilitates the exchange of information, communication, notification, observation, and inspection measures. These would instil greater stability in the regional balance

and operational deployments. The importance of Track-1, 1.5, and Track-2 dialogues would enhance greater transparency, and provide for better understanding and comprehension of the complex problems at sea. Agreements to avoid Incidents at High Seas is a very important and comprehensive agreement and protocol that would open for better stabilization measures.

The INCSEA agreement prescribes measures that envisage the prevention of ships from colliding, reduced interference in naval formations, fostering the prevention provocative manoeuvres and simulated attacks. The INCSEA agreement establishes navy-to-navy channels to resolve disputes; it expands and regularizes bilateral military communication. The INCSEA agreement provides for annual forums to serve as a consultative mechanism. The INCSEA's rules of engagement have stabilized naval operations, and have considerably reduced accidents in terms of their frequency by providing a mechanism for resolution when preventative measures have failed. The INCSEA agreement serves as a model for similar agreements involving over 30 navies⁴.

Maritime Economic and Infrastructure Development Initiatives

Region-wide maritime economic and infrastructure development initiatives would be a significant initiative that would enhance stability, and foster the growth of regional maritime infrastructure for inter-regional and intra-regional trade. The importance of economic development and the development of coastal/littoral regions of the Indian Ocean region are important as that would serve to enhance comprehensive development, fostering social and economic growth, and cater for regional economic interdependence and integration.

China's Maritime Silk Road (MSR) is now being touted as the peaceful economic development initiative that would augment

maritime trade, enhance port development and maritime connectivity, as well as the substantial Chinese investment in the Indian Ocean Region. The fact that all littoral countries of Southeast Asia, Southern Asia, East Africa, West Asia-Gulf region have signed for China's MSR enhances the prospect for maritime infrastructure development. It is a fact that China touts this initiative as a viable means of enhancing its regional maritime economic and security domain in the Indian Ocean. Similarly, the USA sponsored Trans Pacific Partnership (TPP) has been yet another pan-regional economic integration initiative that has fostered greater maritime economic integration of the countries in the region. China's MSR is aimed at the development of maritime nodes that would help enhance trade and sea-connectivity, as well as assist substantially in the development of local economies.⁵

China's projection of its MSR is that of an economic and strategic enabler that offers a wide range of commercial benefits. Therefore, the prospect of engaging in this initiative could confer 'obvious' benefits. This has been one of the reasons for the Southeast Asian, Southern Asian littoral countries to sign for the initiative. However, there has been no detailed information about the scope of this project as yet. On the other hand, for China, the MSR's essential rationale is the leveraging of Chinese soft-power. It apparently aims to project China's image as a benevolent state, keen on promoting economics, trade, as well as the commercial and infrastructure development of the Asian and Indian Ocean Region, with the sole objective of bolstering and establishing China's vital and legitimate interests in the Indian Ocean region.

India's Project Mausam also provides the new impetus for economic growth, and infrastructure development of the island states of the Indian Ocean region. It builds on the civilizational linkages between the countries of the region, combined with the contemporary requirements of economic growth, infrastructure development and investment in the economies of the countries.

Thus, the imperative for a combination of multilateral institutional initiatives, the operational milieu of maritime/naval risk reduction measures, confidence and security building measures, and the specific protocols for the prevention of Incidents at Sea agreements, along with region-wide maritime economic infrastructure development initiatives, provide a very substantial menu of initiatives and processes that would address strategic competition in the Indian Ocean region.

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Chapter IX

India's Maritime Strategy: The Changing Contexts of Conceptual and Operational Dynamics

In the context of this study on Growth of Naval Power in the Indian Ocean, one of the important transformative dimensions is how India has perceived and evolved the contexts of its Maritime Strategy since 1971. 1971 marked the important year of the USA's naval intervention by Task Force 74 of the *USS Enterprise*-led naval armada intervention in the India-Pakistan War of 1971. The *USS Enterprise* signalled US naval nuclear intentions in the region, and the growing salience it was attaching to the Indian Ocean region for its future presence in the British Indian Ocean Territory of Diego Garcia. It signalled the Second Cold War moving into the Indian Ocean theatre, and the commencement of USA's western naval nuclear presence for the long haul. India entered into a new phase where the once-Cinderella service—the Indian Navy—was emerging to be reckoned as a senior service of the three armed forces. 1998 saw the review of India's naval capabilities, with its eye set on possible naval nuclear deterrence, and the future options of a secure survivable nuclear deterrence.

As India entered the globalization era of its economic renewal and growth, the maritime component emerged as a premier constituent. India's economic and trade globalization saw the massive emergence of its maritime trade, and the expansion of its civilian and military maritime infrastructure, both in the mainland in Karwar, Kochi,

Vishakhapatnam as also—and significantly—in the Andaman & Nicobar Islands.

Successive conceptual and operational frameworks of India's maritime vision emerged with the 2001 Annual Report of Ministry of Defence.¹ It identified India's interests in the ocean swath from "Aden to Malacca", and beyond to Northern Australia. The Indian Navy began to address the specific maritime dimensions of India's Grand Strategy that has never been elucidated, neither in generic nor in specific terms. Through various levels of elucidation since 1989, the Indian Navy has articulated the shape of Maritime Military Strategy for India 1989–2014 (1998), Indian Maritime Doctrine (2004), and India's Maritime Military Strategy (2007). A significant elucidation has been the Navy's Maritime Capability Perspective Plan formulated in 2005 which represents more detailed planning. It is ambitious in envisaging a 160-ship navy, including 90 front-line combat platforms spread between aircraft carriers, destroyers, frigates, and corvettes.²

The first elucidation of India's Maritime strategy was the 1998 Maritime Military Strategy for India 1989–2014 that espoused for a limited framework of defensive limited coastal 'sea-denial'. However, the 2004 Indian Maritime Doctrine moved to a more assertive competitive strategy that aimed at power projection across the Indian Ocean region. The Indian Maritime Doctrine (2004) had the elements of "India's maritime destiny and maritime vision", which aimed to counter threats, local and distant, and protect the sea-lanes of communication and international shipping. It also envisaged Chinese attempts to encircle India, and address the offensive intents of China's maritime designs in the Indian Ocean.³

India's Maritime Military Strategy 2007 focuses on the period 2007–22. It identifies with 'power projection' as a salient feature of India's naval diplomacy, with a rich endorsement of the Mahanian Sea power framework for India. It emphasizes on deterrence with strong

offensive accents. This doctrine envisages for India's Ocean strategy with its primary focus of interest being in the Arabian Sea, Bay of Bengal, and Indian Ocean Littoral States, the Gulf, as well as the important International Shipping Lanes and their chokepoints leading to and from the Indian Ocean. The 2007 Maritime Military Strategy emphasizes Strategy for Force buildup. This is envisaged in peacetime as enabling a 'Strategy for Enabling Deterrence', a 'Strategy for Diplomatic Role', a 'Strategy for Constabulary Role', and a 'Strategy for Benign Role'—without an order of ranking. It also envisages a 'Strategy for Employment in Conflict'. In other words, spending allocations on the Navy for the purpose of fostering peacetime maintenance of order on India's terms, or if need be, the successful prosecution of war.⁴

The elucidation of India's Maritime Doctrines have been quite effective in their operational contexts as evident in a) Coercive, Compellance, Deterrence missions; ii) Benign and Constabulary missions; iii) Humanitarian and Disaster Relief missions; and iv) Multinational naval engagements that are being premised on new platforms, new operational capabilities, as well as the quest for interoperability in tasks and operations. India's multinational naval engagements with United States (Malabar), United Kingdom (Konkan), France (Varuna), Russia (INDRA), Japan (JIMEX), Australia (AUSINDEX), Singapore (SIMBEX) have been signature naval engagements that have adapted the salient features of the Indian Maritime Doctrines of 2004, 2006, 2007. Besides, the Milan and the IONS provide for India's convergent maritime diplomacy that has engaged various nations in cooperative maritime security exercises. India's Maritime Doctrines have been significant in the transformation of the Indian Navy from its modest defensive posture and limited scope of operations to an ambient and expanding service that is now engaging in a wide spectrum of operations, thus shaping India's strategic pathways.

Thus, India's Maritime Doctrines are a work in progress as they evolve within a highly dynamic global and regional maritime environment. The interplay of policy, strategy, technology, doctrines and operations; the increasing versatility of platform capabilities and processes that relate to the Navy's cyber space capabilities; and balancing all these with the growing complexity of tasks that range from the traditional to the asymmetric, from coercion to deterrence; benign and constabulary missions; humanitarian and disaster relief operations—all these have resulted in the engagement of the Indian Navy in the wider swath of the Indo-Pacific.

NOTES

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Chapter X

Assessment for the Future: Maritime and Naval Imperatives for India

India stands at a very critical strategic maritime threshold in the Indo-Pacific. With its growing economy, growing maritime infrastructure, the evolving maritime and naval power architecture and its expanding diplomatic influence in the Indo-Pacific region offers India prospects for power rise that would be the most important stabilizing influence in the region

Some maritime and naval imperatives that would serve to enhance India's power, influence, capabilities, and work to stabilize the region are given below.

- *Elucidating India's Grand Strategic thinking and its Maritime Strategic Vision* will be a vital factor of India's rise. India still lacks the institutional process of grand strategic thinking process and its documentation that envisages the essence of India's Grand Strategy in terms of its comprehensive national power and its human development vision. These are vital ingredients for constituting the Grand Strategic vision and its documentation for India. It is in this context that India needs a clear elucidation of its Grand Strategy in both the civilian and strategic spheres.

The elucidation of such a Grand Strategic thought would enable India to define, articulate and cohere with prevalent maritime doctrines

and vision statements. It is a fact that often states do not advertise their Grand Strategic ambitions. However, they do articulate the broad parameters of the same, and publish them as a Grand Strategic Vision and Strategy document. The imperative for this document would serve to augment India's military dimensions of this strategy. Thus, India's Maritime Strategic thought and the process of its current thinking need sustained nurturing by strategic policy analysis, academic analysis, operational thought and praxis, all of which would serve to enhance the nation's perspective on maritime affairs.

Having transited a long way from benign neglect in which India's maritime tradition and practices were given relatively secondary importance, today's imperative lies in its rejuvenation and sustained focus to enhance India's maritime power and profile. Think tanks like the National Maritime Foundation—the premier think tank on matters maritime and naval—need more capacity building in terms of dedicated research teams of serving and retired officers as well as academic and policy research specialists who would have terms of research endeavours in the institution. The same could be done for the Centre for Land Warfare Studies and the Centre for Airpower Studies. The proposed Indian National Defence University needs to focus on a body of research output based on rigorous standards of qualitative research.

- *Securing India's vital interests in the Indian Ocean region and island territories* is a vital priority mission for the Indian Navy as that constitutes the assurance of India's position in economic and strategic terms. Given the host of maritime asymmetric threats and challenges and possible perils to India's economic and strategic interests, the Indian Navy should be able to garner its capabilities and resources in securing these vital offshore economic, energy and sea-bed resources within India's Exclusive Economic Zone as well as in its island archipelagos on its western sea board (the Lakshadweep and Minicoy Islands) and on

the eastern seaboard (the Andaman and Nicobar Islands). Developing and deploying naval amphibious and expeditionary naval capabilities as well as its complement land based offensive airpower along with naval airpower would be paramount.

The proposed Indian Ocean maritime surveillance radar network consisting of eight surveillance radars in Mauritius, eight in Seychelles, six in Sri Lanka, and ten in Maldives, kinking to over 50 sites on the Indian coast and connected to an integrated analysis centre near Delhi, would vastly enhance India's Maritime Domain Awareness as well as enhanced monitoring for intelligence. With the sustained engagement of the Navy Coast Guard, and the backing of naval airpower, the task of securing India's vital interests in the region would be better served. Besides this, securing India's energy flows from the West Asia-Gulf Region and securing sea-lane security would be equally paramount tasks in the coming years for the Indian Navy. Enhancing network centric warfare capabilities of the Indian Navy, with its dedicated satellite networks, would serve to enhance the operational capabilities of the Navy in the securing of its vital interests and island territories in the Indian Ocean region.

- *Stabilizing economic growth and fostering regional economic cooperation* through regional economic multilateral aegis would be important. India's economic growth and development would be intertwined with the Indian Ocean neighbourhood of East Africa, South Africa, and Southeast Asia. Given the vast EEZ of India of 2.2 million sq. kilometres entails that India develops its Blue Economy of ocean resources. This would also secure its ecological balance, making it an important task for India. India should strengthen the IOR-ARC as well as other sub-regional economic cooperation arrangements as they would enhance economic growth and development, thus promoting regional trade and economic integration. Developing India's Blue economy would immensely value add to its resources and economic strengths.

India's investments in the island states of the Indian Ocean region and in East Africa, and strengthening its economic interdependence with Southeast Asia would greatly enhance its economic growth and trade.

This has become even more necessary given the high pitch of China's economic, commercial, as well as infrastructure diplomacy and initiatives in the region—especially with its much advertised Maritime Silk Road. India needs to discern China's strategic intent, and enable economic, commercial and infrastructure development initiatives that would augment its own future position in the Indian Ocean region.

- *Building, Equipping, and Expanding India's Maritime/Naval Infrastructure* would be a critical mission for India. Civilian and military access is vital, and India is blessed by the two island archipelagos on its two seaboard. Building and expanding India's maritime/ naval infrastructure would be an important priority as its Navy and merchant marine of the country expand. The Indian Ocean will no doubt see highly intense competition for naval access and basing from Djibouti to the Changi naval access. Thus, a purposeful exercise of India's naval power could come from its versatility in developing access capacities and operational capabilities from its littorals to its offshore island archipelagos. The enhancing of capabilities in the Andaman and Nicobar Islands as well as the maritime surveillance radar network in the Indian Ocean region to India's west would augment its capabilities.

India's maritime/naval infrastructure would greatly enhance India's varied naval operational missions projecting its power, and also provide the most feasible logistical solutions to its fleet and naval air deployments. India's growing maritime/naval infrastructure needs to multiply basing points for the fleet, and also to host maritime surveillance and reconnaissance assets that are vital in the region for contending with the various asymmetric threats and traditional security threats at sea.

- *Enhancing naval strategic deterrence and stabilizing India's maritime domain* is a critical requirement even as the nuclearization of the Indo-Pacific Oceans increases in momentum, both by contending regional littoral powers as well as by extra-regional powers who have been adding platforms and newer capabilities. India's Nuclear Doctrine envisages an assured retaliatory capability based on credible and survivable nuclear assets. India's emergent sea-based deterrence is now being built with the Arihant class submarines being commissioned. The fleet of ballistic missile submarines and the nuclear powered attack submarines would ideally provide India its credible and relatively invulnerable survivable nuclear capability based in the sea. As India expands its capabilities to the K-3, K-4 longer range submarine launched ballistic missile, it would also be able to provide realistic second strike assured capability. With the expansion of basing facilities in India's East, the littoral waters near the coastline as well as in the Andaman and Nicobar Islands could provide it with submarine bastions for its Fleet Ballistic Missile Submarines, similar to the Soviet bastions in the Far East protected by India's nuclear and conventional submarines.

Enhancing secured communication and robust C4ISR capabilities, and securing VLF communications with India's fleet ballistic and nuclear attack submarines would go a very long way to enhance strategic stability.

- *Expanding Engagement in Naval Diplomacy and operational engagements* would be the future anvil of the Indian Navy as it expands its great power naval engagement along with medium and small power navies. India is currently expanding naval engagement and its capacity building initiatives to smaller navies in the Indian Ocean region. This is proving to be invaluable for its naval diplomacy profile. Naval diplomacy would also be vital as the Indian Navy expands its engagement with regional and extra-regional navies based on its amphibious and expeditionary platforms as well as its surface and submarine assets, thus providing the full scope display of its operational capabilities.

Naval diplomacy with a variety of naval forces provides the Indian Navy with a wide spectrum of operational capabilities and experiences, thus building capacity for its operations. Naval diplomacy would also provide India with a wide range of strategic dialogues and interactions that would build India's maritime-strategic perspective of the Indo-Pacific region with a greater degree of comprehension and understanding.

- *Evolving Maritime Multilateralism with extra-regional powers* will be a very important dimension of India's naval strategy and diplomacy in the Indian and Pacific Oceans. The rationale behind such initiatives is based on the fact that India being a dominant power should be able to shape and influence the future discourse on the Indo-Pacific maritime order. On the one hand, maritime multilateralism builds institutions for economic cooperation, development and growth; on the other hand, it enhances India's soft power diplomacy to be exercised through a variety of initiatives—like capacity-building, investment, technical assistance, and development initiatives within the region. The engagement with extra-regional powers would reinforce the dominant stake that India has in the region, as is reflected by the standards of extra-regional naval exercises with Indian Navy. The annual maritime multilateral engagements with extra-regional powers would serve to augment India's experience with operational experience, fostering the basis for India's continued evolution of its naval doctrine and operations.

- *Emphasis on India's Indigenous R&D naval technology and production* would be a critical requirement even as the country develops its need for strong science and technology education as well as Research and Development. India's indigenous shipyards are building warships and also the nuclear submarine of the Arihant class. India's destroyer, frigates, and next generation aircraft carrier building technologies are being currently developed. Indigenous technology development and collaborative technology partnerships in R&D would continue

to build the indigenous warship building programme of India. In pursuit of its Grand Strategy, the emphasis on indigenous Science & Technology R&D is also imperative for nurturing and building the scientific and technological capital of India, so crucial to the various ship-building programmes that India has launched. In the long run, it is also imperative that India reduce defence hardware imports and its critical dependency on spares and services. India needs to increase its share of indigenous defence production and reliance on its spares and services, resulting in the better standardization of equipment.

- *Equipping and Expanding India's Benign, Constabulary, and Humanitarian Disaster Response capacities* would constitute an important dimension of the capacity-building of its naval capabilities for India's Benign, Constabulary and Humanitarian Disaster Responses. As India's expeditionary platforms increase in number and are equipped with varied capabilities for coercive missions, their employment for humanitarian disaster response capacities is also evident. Indian capacities for the benign, constabulary and humanitarian disaster relief missions would increase also because the Indian Ocean is likely to face the increasingly perilous prospect of natural disasters and climate change induced calamities and, at the same time, the peaking of various regional conflicts that could trigger the movement of Indian expatriates as well as other migrations within the region that would require larger capacities of rescue. Given the increase in maritime asymmetric conflicts and the fluctuation of piracy, the operational capacities of India's constabulary capabilities are also likely to increase. Thus, the expeditionary missions of the Indian Navy would go a long way in augmenting India's response patterns in the Indian Ocean region as also in the West Asia-Gulf Region.

- *Emphasis on building Multilateral Institutions in the Indian Ocean Region* should also be India's goal in the Indian Ocean region. Multi-lateral institutions enhance economic cooperation and interdependence

in the region. No doubt multilateral institutions may not be India's strategic preference as India would like to exercise its autonomy of its interest and power. However, viewing this from the perspective of the growing integration of India and Southeast Asia as well as with several littoral and island states of the Indian Ocean region, multilateralism would be an important plank on which India could exercise its effective regional role and leadership. India would also have the benefit of being a benign power whose diplomatic leadership as well as economic and strategic capabilities would aid multilateral institutions, strengthen the regional order, and work to prevent dominant hegemonic extra-regional influences in the long run.

In conclusion, the growth of naval power has various implications for the Indian Ocean region as well as the larger Indo-Pacific region. The emergence of a mixed picture of conflict, cooperation, and convergence informs the trajectory for their future. The coexistence of traditional power rivalries and asymmetric threats would continue; poverty, ecological devastation, climate changed induced disasters and calamities would also continue to rage in the region. However, the prospects of economic growth and development interspersed with conflict only compound the complexities facing the region. These will, inevitably, have immediate, medium term and long term implications for the power balance in the region.

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